

Section 16. Wire Management



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Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com



SKINTOP® SLN/SLRN

Construction: Liquid Tight, Non-Metallic Strain Relief Cable Gland with NPT Threads. **Body:** Polyamide. **Bushing:** CR.

Features:

Universally suited for all types of machinery & equipment, including automation, motion control, process control and robotics.

Applications:

Provides great pullout strength and very reliable strain relief. Superior integrated locking mechanism includes an internal ratchet for vibration proof protection. Multi-trapezoidal thread requires just one twist to tighten. Generous high quality neoprene bushing provides a liquid tight and dust proof, hermetic seal.

Technical Data:

Protection: 70 PSI. Seal: IP 68, 5 Bar (Exceeds NEMA 6/6P Pressure rating)



Temperature:

- Static: -40°C to +80°C
- Dynamic: -20°C to +80°C



Rated Voltage:

N/A

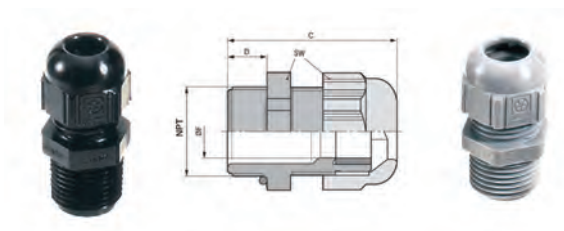


Color Code:

- Black (RAL 9005)
- UV Resistant
- Gray: (RAL 7001)



Approvals:



SKINTOP® SLN: Liquid Tight, Non-Metallic Strain Relief Cable Gland with NPT Threads

Black	Part Number	Gray	Thread Type & Size	UL Status	Clamping Range of inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
S2138	S1138	NPT-3/8"	R	.138 - 0.315	0.748	1.693	.591	100	2.00	
S2112	S1112	NPT-1/2"	L	.197 - 0.472	0.945	1.772	.591	100	2.50	
S2134	S1134	NPT-3/4"	L	.512 - 0.709	1.299	2.087	.591	50	5.50	
S2101	S1101	NPT-1"	L	.748 - 1.000	1.654	2.362	.591	25	9.00	

SKINTOP® SLRN: Liquid Tight, Non-Metallic Strain Relief Cable Gland with Reducer Bushing

Black	Part Number	Gray	Thread Type & Size	UL Status	Clamping Range of inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
S2238	S1238	NPT-3/8"	R	.079 - .236	0.748	1.693	.591	100	2.00	
S2212	S1212	NPT-1/2"	L	.157 - .354	0.945	1.772	.591	100	2.50	
S2234	S1234	NPT-3/4"	L	.354 - .630	1.299	2.087	.591	50	5.50	
S2201	S1201	NPT-1"	L	.551 - .827	1.654	2.362	.591	25	9.00	

NOTES:

1. Locknuts may be ordered separately.
2. UL Status: R = Recognized; L = Listed

Please contact your sales representative for detailed information at sales@lapptannehill.com



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SKINTOP® SL/SLR

Construction: Liquid Tight, Non-Metallic Strain Relief Cable Gland with PG Threads. **Body:** Polyamide. **Bushing:** CR. **Locknuts:** included.

Features:

Locknuts included. Universally suited for all types of machinery & equipment, including automation, motion control, process control and robotics.

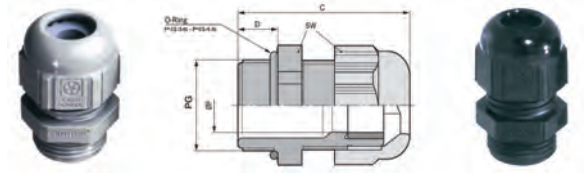
Applications:

The heavy duty SKINTOP® design provides great pullout strength and very reliable strain relief. Superior integrated locking mechanism includes an internal ratchet for vibration proof protection. Multi-trapezoidal thread requires just one twist to tighten. Generous high quality neoprene bushing provides a liquid tight and dust proof, hermetic seal.

Technical Data:

Protection: 70 PSI. Seal: IP 68, 5 Bar (Exceeds NEMA 6/6P Pressure rating)

	Temperature:		Rated Voltage:		Color Code:
	• Static: -40°C to +80°C • Dynamic: -20°C to +80°C		N/A		• Black (RAL 9005) UV Resistant • Gray: (RAL 7001)



SKINTOP® SL: Liquid Tight, Non-Metallic Strain Relief Cable Gland with PG Threads

Black	Part Number	Gray	Thread Type & Size	UL Status	Clamping Range of inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
	S2107	S1107	PG-7	R	0.098 - 0.256	0.591	1.260	.315	100	1.00
	S2109	S1109	PG-9	R	0.138 - 0.315	0.748	1.417	.315	100	1.50
	S2111	S1111	PG-11	R	0.157 - 0.394	0.866	1.496	.315	100	2.00
	S2113	S1113	PG-13	L	0.236 - 0.472	0.945	1.614	.354	100	2.50
	S2116	S1116	PG-16	L	0.354 - 0.551	1.063	1.732	.394	50	3.00
	S2121	S1121	PG-21	L	0.512 - 0.709	1.299	1.929	.433	50	5.00
	S2129	S1129	PG-29	R	0.551 - 0.984	1.654	2.205	.433	25	8.50
	S2136	S1136	PG-36	L	0.945 - 1.260	2.087	2.598	.512	10	17.50
	S2142	S1142	PG-42	R	1.378 - 1.496	2.362	2.677	.512	5	24.00
	S2148	S1148	PG-48	L	1.535 - 1.732	2.559	2.717	.551	5	29.00

SKINTOP® SLR: Liquid Tight, Non-Metallic Strain Relief Cable Gland with Reducer Bushing

Black	Part Number	Gray	Thread Type & Size	UL Status	Clamping Range of inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
	S2207	S1207	PG-7	R	0.059 - 0.197	0.591	1.260	.315	100	1.00
	S2209	S1209	PG-9	R	0.079 - 0.236	0.748	1.417	.315	100	1.50
	S2211	S1211	PG-11	R	0.079 - 0.276	0.866	1.496	.315	100	2.00
	S2213	S1213	PG-13	L	0.157 - 0.354	0.945	1.614	.354	100	2.50
	S2216	S1216	PG-16	L	0.236 - 0.472	1.063	1.732	.394	50	3.00
	S2221	S1221	PG-21	L	0.354 - 0.630	1.299	1.929	.433	50	5.00
	S2229	S1229	PG-29	R	0.433 - 0.787	1.654	2.205	.433	25	8.50
	S2236	S1236	PG-36	L	0.669 - 1.024	2.087	2.598	.512	10	17.50
	S2242	S1242	PG-42	R	0.866 - 1.220	2.362	2.677	.512	5	24.00
	S2248	S1248	PG-48	L	1.024 - 1.378	2.559	2.717	.551	5	29.00

NOTES:

UL Status: R = Recognized; L = Listed

Check out our complete inventory of products at www.lapptannehill.com



SKINTOP® SLM/SLRM

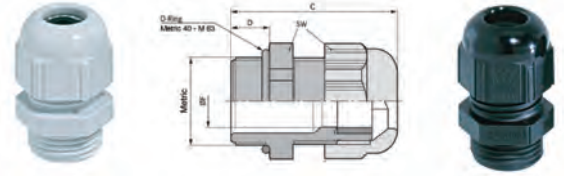
Construction: Liquid Tight, Non-Metallic Strain Relief Cable Gland with Metric Threads. **Body:** Polyamide. **Bushing:** CR. **Locknuts:** included.

Features:

SKINTOP® SLM/SLRM is a durable, liquid tight, easy to assemble strain relief cable gland with Metric threads that is universally suited for all types of machinery & equipment, including automation, motion control, process control and robotics.

Applications:

The heavy duty SKINTOP® design provides great pullout strength and very reliable strain relief. Superior integrated locking mechanism includes an internal ratchet for vibration proof protection. Multi-trapezoidal thread requires just one twist to tighten. Generous high quality neoprene bushing provides a liquid tight and dust proof, hermetic seal. Economical solution that covers a large clamping range with only 8 sizes.



Technical Data:

Protection: 70 PSI. Seal: IP 68, 5 Bar (Exceeds NEMA 6/6P Pressure rating), IP 69K



Temperature:

- Static: -40°C to +100°C
- Dynamic: -20°C to +100°C



Rated Voltage:

N/A



Color Code:

- Black (RAL 9005)
- UV Resistant
- Gray (RAL 7001)



Approvals:



SKINTOP® SLM: Liquid Tight, Non-Metallic Strain Relief Cable Gland with Metric Threads

Black	Part Number Gray	Thread Type & Size	UL Status	Clamping Range of inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
S2507	S1507	M-12X1.5	R	0.138 - 0.276	0.591	1.181	.315	100	1.00
S2509	S1509	M-16X1.5	R	0.177 - 0.394	0.748	1.339	.315	100	1.50
S2513	S1513	M-20X1.5	L	0.276 - 0.512	0.984	1.457	.354	100	2.50
S2516	S1516	M-25X1.5	L	0.354 - 0.669	1.181	1.575	.394	50	3.50
S2521	S1521	M-32X1.5	L	0.433 - 0.827	1.417	1.850	.394	25	6.00
S2529	S1529	M-40X1.5	L	0.748 - 1.102	1.811	2.047	.394	10	10.50
S2536	S1536	M-50X1.5	L	1.063 - 1.378	2.165	2.441	.472	5	17.50
S2542	S1542	M-63X1.5	L	1.339 - 1.772	2.598	2.795	.472	5	25.50

SKINTOP® SLRM: Liquid Tight, Non-Metallic Strain Relief Cable Gland with Reducer Bushing

Black	Part Number Gray	Thread Type & Size	UL Status	Clamping Range of inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
S2607	S1607	M-12X1.5	R	0.039 - 0.197	0.591	1.181	.315	100	1.00
S2609	S1609	M-16X1.5	R	0.079 - 0.276	0.748	1.339	.315	100	1.50
S2613	S1613	M-20X1.5	L	0.197 - 0.394	0.984	1.457	.354	100	2.50
S2616	S1616	M-25X1.5	L	0.236 - 0.512	1.181	1.575	.394	50	3.50
S2621	S1621	M-32X1.5	L	0.276 - 0.591	1.417	1.850	.394	25	6.00
S2629	S1629	M-40X1.5	L	0.591 - 0.906	1.811	2.047	.394	10	10.50
S2636	S1636	M-50X1.5	L	0.866 - 1.142	2.165	2.441	.472	5	17.50
S2642	S1642	M-63X1.5	L	1.102 - 1.535	2.598	2.795	.472	5	25.50

NOTES:

UL Status: R = Recognized; L = Listed

Complete catalog available online at: www.lapptannehill.com

SKINTOP® CLICK/CLICK-R

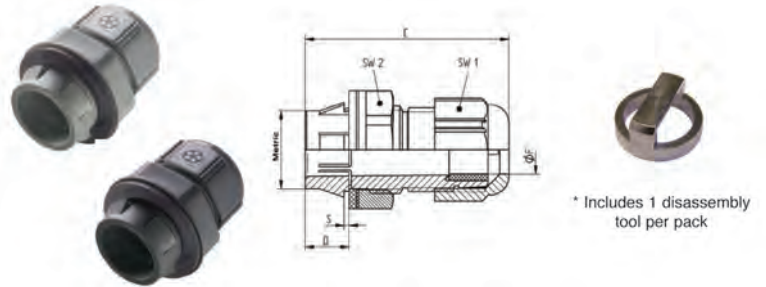
Construction: Liquid-Tight, Non-Metallic Strain Relief with Quick "Click" Insertion System. **Body:** Special Polyamide. **Seal:** Special Elastomer.

Features:

SKINTOP® CLICK/CLICK-R is an innovative cable insertion system that provides fast, highly flexible assembly. Easy snap in place installation results in fixed, centered, strain relief with maximum protection in seconds.

Applications:

Applications where locknut installation is difficult to reach or secure, such as dual wall enclosures and temperature controlled assemblies where insulation is used.



Technical Data:

Protection: IP 68, 5 Bar



Temperature:
-20°C to +100°C



Rated Voltage:
N/A



Color Code:
• Black (RAL 9005)
UV Resistant
• Gray: (RAL 7001)



Approvals:



SKINTOP® CLICK: Liquid Tight, Non-Metallic Strain Relief with Metric Threads

Black	Part Number	Gray	Thread Type & Size	UL Status	Clamping Range of inches	SW1/ SW2 Wrenching Flats inches	C Overall Length inches	D Thread Length inches	M Hole inches	S Wall Thickness inches	Standard Pack Size
53112923	53112921	M-12	R		.138 - .276	0.591/ 0.709	1.575	0.315	0.484 (-.008)	.039 - .157	50
53112882	53112876	M-16	R		.197 - .354	0.748/ 0.866	1.654	0.315	0.642 (-.008)	.039 - .157	50
53112883	53112877	M-20	L		.276 - .512	0.984/ 1.063	1.791	0.315	0.799 (-.008)	.039 - .157	25
53112884	53112878	M-25	L		.354 - .669	1.181/ 1.339	1.909	0.315	0.996 (-.008)	.039 - .157	25
53112924	53112922	M-32	L		.433 - .827	1.417/ 1.575	2.165	0.315	1.272 (-.008)	.039 - .157	25

SKINTOP® CLICK-R: Liquid Tight, Non-Metallic Strain Relief with Reducer Bushing & Metric Threads

Black	Part Number	Gray	Thread Type & Size	UL Status	Clamping Range of inches	SW1/ SW2 Wrenching Flats inches	C Overall Length inches	D Thread Length inches	M Hole inches	S Wall Thickness inches	Standard Pack Size
53112929	53112927	M-12	R		.039 - .197	0.591/ 0.709	1.575	0.315	0.484 (-.008)	.039 - .157	50
53112885	53112879	M-16	R		.157 - .276	0.748/ 0.866	1.654	0.315	0.642 (-.008)	.039 - .157	50
53112886	53112880	M-20	L		.197 - .394	0.984/ 1.063	1.791	0.315	0.799 (-.008)	.039 - .157	25
53112887	53112881	M-25	L		.236 - .512	1.181/ 1.339	1.909	0.315	0.996 (-.008)	.039 - .157	25
53112931	53112928	M-32	L		.276 - .591	1.417/ 1.575	2.165	0.315	1.272 (-.008)	.039 - .157	25

UL Status: R = Recognized; L = Listed

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SKINTOP® FLEX

Construction: Liquid Tight, Non-Metallic Spiral Strain Relief Cable Gland in NPT, PG & Metric Threads. **Body:** Polyamide. **Bushing:** CR.

Features:

Offers additional safety against overstress and conductor breakage. Ideally suited for hand held equipment, moving machinery and robotics.

Applications:

Superior bending protection for cable conservation and functional reliability. The heavy duty SKINTOP® design provides great pullout strength and very reliable strain relief. Superior integrated locking mechanism includes an internal ratchet for vibration proof protection. Multi-trapezoidal thread requires just one twist to tighten.

Technical Data:

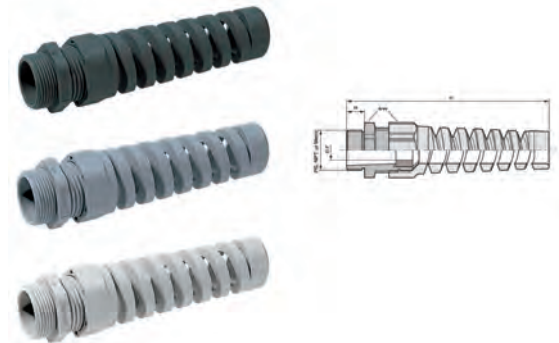
Protection: 70 PSI. Seal: IP 68, 5 Bar (Exceeds NEMA 6/6P Pressure rating)

Temperature:
• NPT & PG: -20°C to +80°C
• Metric: -20°C to +100°C

Rated Voltage:
N/A

Color Code:
• Black (RAL 9005)
UV Resistant
• Gray (RAL 7001)

Approvals:
PG & NPT



NPT THREADS

SKINTOP® SLN FLEX: Liquid Tight, Non-Metallic Spiral Strain Relief Cable Gland with NPT Threads

Black	Part Number	Gray	Thread Type & Size	UL Status	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
	S2338	S1338	NPT-3/8"	R	.138 - .315	0.748	3.228	.591	100	3.00
	S2312	S1312	NPT-1/2"	L	.197 - .472	0.945	4.094	.591	100	5.50
	S2334	S1334	NPT-3/4"	L	.512 - .709	1.299	5.236	.591	50	12.00

SKINTOP® SLRN FLEX: NPT Liquid Tight, Non-Metallic Strain Relief Cable Gland with Reducer Bushing

Black	Part Number	Gray	Thread Type & Size	UL Status	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
	S2438	S1438	NPT-3/8"	R	.079 - .236	0.748	3.228	.591	100	3.00
	S2412	S1412	NPT-1/2"	L	.157 - .354	0.945	4.094	.591	50	5.50
	S2434	S1434	NPT-3/4"	L	.354 - .630	1.299	5.236	.591	25	12.00

PG THREADS

SKINTOP® SL FLEX: Liquid Tight, Non-Metallic Spiral Strain Relief Cable Gland with PG Threads

Black	Part Number	Gray	Thread Type & Size	UL Status	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
	S2307	S1307	PG-7	R	.098 - .256	0.591	2.441	.315	100	1.50
	S2309	S1309	PG-9	R	.138 - .315	0.748	2.894	.315	100	2.50
	S2311	S1311	PG-11	R	.157 - .394	0.866	3.386	.315	100	3.25
	S2313	S1313	PG-13	L	.236 - .472	0.945	3.858	.354	50	4.00
	S2316	S1316	PG-16	L	.354 - .551	1.063	4.399	.394	25	5.50
	S2321	S1321	PG-21	L	.512 - .709	1.299	5.079	.433	25	10.00

SKINTOP® SLR FLEX: PG Liquid Tight, Non-Metallic Spiral Strain Relief Cable Gland with Reducer Bushing

Black	Part Number	Gray	Thread Type & Size	UL Status	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
	S2407	S1407	PG-7	R	.059 - .197	0.591	2.441	.315	100	1.50
	S2409	S1409	PG-9	R	.079 - .236	0.748	2.894	.315	100	2.50
	S2411	S1411	PG-11	R	.079 - .276	0.866	3.386	.315	100	3.25
	S2413	S1413	PG-13	L	.157 - .354	0.945	3.858	.354	50	4.00
	S2416	S1416	PG-16	L	.236 - .472	1.063	4.399	.394	25	5.50
	S2421	S1421	PG-21	L	.354 - .630	1.299	5.079	.433	25	10.00

METRIC THREADS

SKINTOP® SL-M FLEX: Liquid Tight, Non-Metallic Spiral Strain Relief Cable Gland with Metric Threads

Black	Part Number	Gray	Thread Type & Size	UL Status	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size	Weight 100 pcs. lbs.
	S2707	S1707	M-12X1.5	R	.138 - .276	0.591	2.520	.315	100	1.25
	S2709	S1709	M-16X1.5	R	.177 - .394	0.748	3.386	.315	100	2.50
	S2713	S1713	M-20X1.5	L	.276 - .512	0.984	3.976	.315	50	4.50
	S2716	S1716	M-25X1.5	L	.354 - .669	1.181	4.921	.354	25	8.00
	S2721	S1721	M-32X1.5	L	.433 - .827	1.417	5.866	.394	25	12.00

NOTES: UL Status: R = Recognized; L = Listed

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SKINTOP® CLICK FLEX

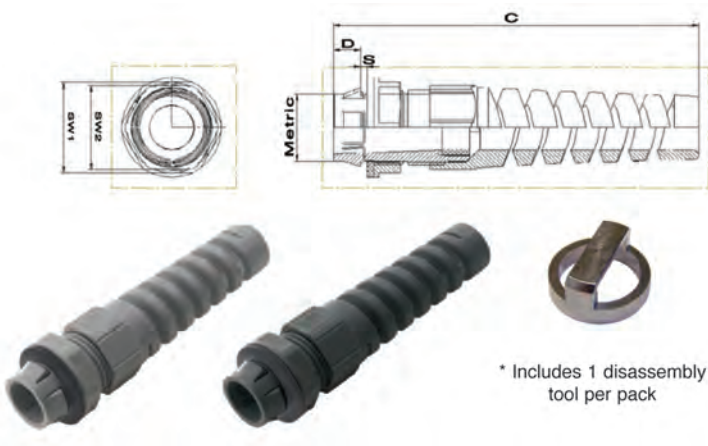
Construction: Liquid Tight, Non-Metallic Spiral Strain Relief with Quick “Click” Insertion System for Additional Bending Protection;

Body: Special Polyamide. **Seal:** Special Elastomer.

Features:
SKINTOP® CLICK FLEX is an innovative cable insertion system that provides fast, highly flexible assembly. Easy snap in place installation results in fixed, centered, strain relief with maximum protection in seconds.

Applications:
Up to 70% installation time savings due to innovative CLICK system. Ideal for hard to reach dual wall enclosures and limited access spaces. Reduced inventory as no locknuts are required. The heavy duty SKINTOP® design provides great pullout strength and very reliable strain relief. Superior integrated locking mechanism includes an internal ratchet for vibration proof protection.

Additional Information:
Liquid tight, spiral strain relief offers additional safety against over-stress and conductor breakage for applications such as hand held equipment, moving machinery and robotics.



Technical Data:

Protection: IP 68, 5 Bar

 **Temperature:**
-20°C to +100°C

 **Rated Voltage:**
N/A

 **Color Code:**
• Black (RAL 9005)
UV Resistant
• Gray: (RAL 7001)

 **Approvals:**



SKINTOP® CLICK FLEX: Liquid Tight, Non-Metallic Spiral Strain Relief with Metric Threads

Part Number		Thread Type & Size	UL Status	Clamping Range of inches	SW1/ SW2 Wrenching Flats inches	C Overall Length inches	D Thread Length inches	M Hole inches	S Wall Thickness inches	Standard Pack Size
Black	Gray									
53112936	53112934	M-12	R	.138 - .276	0.591/ 0.709	2.913	0.315	0.484 (-.008)	.039 - .157	50
53112909	53112906	M-16	R	.197 - .354	0.748/ 0.866	3.701	0.315	0.642 (-.008)	.039 - .157	50
53112911	53112907	M-20	L	.276 - .512	0.984/ 1.063	4.252	0.315	0.799 (-.008)	.039 - .157	25
53112912	53112908	M-25	L	.354 - .669	1.181/ 1.339	5.000	0.315	0.996 (-.008)	.039 - .157	25
53112937	53112935	M-32	L	.433 - .827	1.417/ 1.575	6.102	0.315	1.272 (-.008)	.039 - .157	25

UL Status: R = Recognized; L = Listed

Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com



SKINTOP® GMP-GL

Construction: Hexagonal Locknuts for NPT, PG & Metric Connectors.

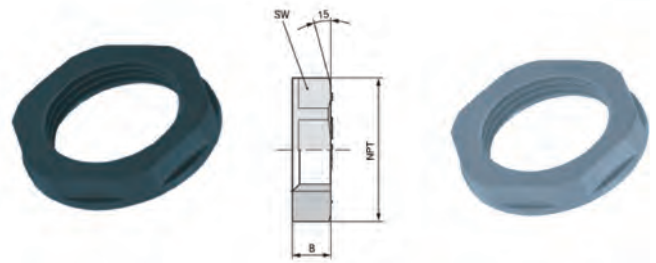
Body: Polyamide, glass fiber reinforced. Halogen-Free: Polyamide, UL 94 VO.

Features:

Designed for use with SKINTOP® cable glands with NPT, PG and Metric Threads.

Additional Information:

Halogen-free metric locknuts are also available.



Technical Data:

Temperature:
-20°C to +100°C

Rated Voltage:
N/A

Color Code:
• Black (RAL 9005)
UV Resistant
• Gray: (RAL 7001)
• Light Gray (RAL 7035)
Halogen-Free

Approvals:

SKINTOP® GMP-GL: NPT Nylon Locknuts

Part Number	Thread Type & Size	SW Wrenching Flats inches	B Nut Thickness inches	Standard Pack Size	Weight 100 pcs. lbs.
911370	NPT-3/8"	0.866	.198"	100	0.05
911371	NPT-1/2"	1.063	.236"	100	0.05
911372	NPT-3/4"	1.417	.276"	50	1.00
911373	NPT-1"	1.654	.276"	50	1.50

* NPT Locknuts- Black only

SKINTOP® GMP-GL: PG Nylon Locknuts

Black	Part Number	Gray	Thread Type & Size	SW Wrenching Flats inches	B Nut Thickness	Standard Pack Size	Weight 100 pcs. lbs.
53019200	53019000		PG-7	0.748	.197	100	0.25
53019210	53019010		PG-9	0.866	.197	100	0.50
53019220	53019020		PG-11	0.945	.197	100	0.50
53019230	53019030		PG-13	1.063	.236	100	0.50
53019240	53019040		PG-16	1.181	.236	100	0.75
53019250	53019050		PG-21	1.417	.276	50	1.00
53019260	53019060		PG-29	1.811	.276	50	1.50
53019270	53019070		PG-36	2.362	.315	25	3.25
53019280	53019080		PG-42	2.559	.315	25	3.25
53019290	53019090		PG-48	2.756	.315	25	3.50

SKINTOP® GMP-GL: Metric Nylon Locknuts

Black	Part Number	Light Gray Halogen Free	Thread Type & Size	SW Wrenching Flats inches	B Nut Thickness	Standard Pack Size	Weight 100 pcs. lbs.
53119100	53119000	53119200	M-12X1.5	0.669	.197	100	0.25
53119110	53119010	53119210	M-16X1.5	0.866	.197	100	0.50
53119120	53119020	53119220	M-20X1.5	1.063	.236	100	0.50
53119130	53119030	53119230	M-25X1.5	1.339	.236	100	0.75
53119140	53119040	53119240	M-32X1.5	1.614	.276	100	1.25
53119150	53119050	-	M-40X1.5	1.969	.276	25	1.75
53119160	53119060	-	M-50X1.5	2.362	.315	25	2.00
53119170	53119070	-	M-63X1.5	2.953	.315	25	3.00

Complete catalog available online at: www.lapptannehill.com



SKINTOP® CUBE

Construction: **Frame:** Glass fiber reinforced polyamide. **Frame seal:** CR.
Clip Module: Special polyamide. **Clip Module Seal:** LSE 2.

Features:
The simple design of the SKINTOP® CUBE multi-cable bushing system is made up of a SKINTOP® CUBE FRAME and flexible SKINTOP® CUBE MODULE options (clip sealing modules). The CUBE modules can effortlessly be attached to the appropriate assembled cable. The cable is then clicked into the frame and perfectly fixed in place, protected against vibrations, strain relieved and sealed in accordance with IP 64.

Additional Information:
Product Advantages: Easy assembly and disassembly, installation and repair savings, excellent strain relief and sealing protection, reduced parts inventory, durable industrial cable protection.



Technical Data:

Protection: IP 64

Temperature:
-20°C to +80°C

Rated Voltage:
N/A

Color Code:
Black

Approvals:

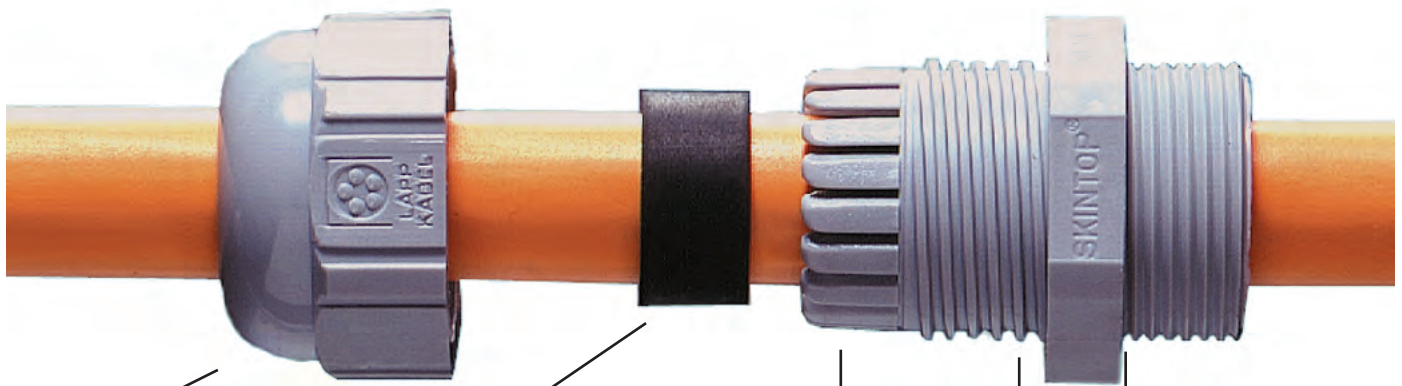
Part Number Black	Size	Clamping Range		Max # of Inserts	Standard Pack Size
		inches	mm		
SKINTOP® CUBE Frame					
52220000	16 Panel Cut-Out: (36 x 86 mm)			8	1
52220001	24 Panel Cut-Out: (36 x 112 mm)			10	1
SKINTOP® CUBE Clip Module					
52220004	20x20 Blank Module	.039 - .118	1 - 3		5
52220002	20x20 Small Module	.157 - .236	4 - 6		5
52220003	20x20 Large Module	.236 - .354	6 - 9		5
52220040	20x20 AS-I BUS	AS-I BUS Cable			5
52220005	40x40 Small Module	.354 - .472	9 - 12		5
52220006	40x40 Large Module	.472 - .629	12 - 16		5
52220007	40x40 Blank Module				5

Please contact your sales representative for detailed information at sales@lapptannehill.com



THREADING DIMENSIONS & TIGHTENING VALUES FOR SKINTOP® CABLE GLANDS

SKINTOP® Liquid Tight, Non-Metallic Strain Relief Cable Glands



Cap nut with ergonomically designed gripping grooves. The gripping surfaces are generously dimensioned for spanners. Integral locking feature for vibration-resistant assembly.

Neoprene sealing for a hermetic seal (IP68)*. Every SKINTOP® version is available with reducing seal insert for smaller cable diameters.

Lamellar design for optimum strain relief and protection of the cable. Widely variable clamping range, therefore only a few gland sizes are necessary.

Integral sealing ridges for a water tight junction with the housing.

Multiple trapezoidal thread for secure and instant assembly.

Shown here are the carefully matched components of the SKINTOP® screw-type cable glands. It is precisely these parts which guarantee optimum reliability.

Even more:

With SKINTOP® you can install the cable in an instant. Just feed it in, turn nut until tight - ready. Your cable is centered, hermetically sealed and completely strain relieved with a turn of the hand. If you do not wish to use your hands, you can work with a spanner wrench or SKINMATIC® RZ tool. Either way, with SKINTOP® you can achieve maximum reliability. SKINTOP® quality is continuously monitored to ensure a level of reliability that has resulted in many international approvals.

Resistance properties:

Rated Temperature: SKINTOP® NPT & PG
-20°C to +80°C
SKINTOP® Metric
static: -40°C to +100°C
dynamic: -20°C to +100°C

Chemical:

- +Alcohols
- +Aromatic Hydrocarbons
- +Ethers
- +Benzene
- o Chlorinated hydrocarbons
- +Esters
- +Grease, animal-vegetable
- +Fluorinated hydrocarbons
- +Keytones
- +Motor Fuels
- +Weak Alkali Solutions
- Strong Alkali Solutions
- +Petroleum Oils
- +Weak Acids
- Strong Acids
- +Trichlorethylene

+ = resistant
o = with limited resistance
- = non-resistant

Testing:

SKINTOP®
Incandescent wire test to IEC 695, Part 2-1
Test Temperature 750°C
Strain relief to DIN VDE 0619
Protection Class IP 68,
Test to DIN 40050 and 40052

International Approvals:

UL #E146370
CSA #LR50370-10
VDE #57986 (Metric)
SEV #100989

* All IP ratings are dependent on proper installation by the user.

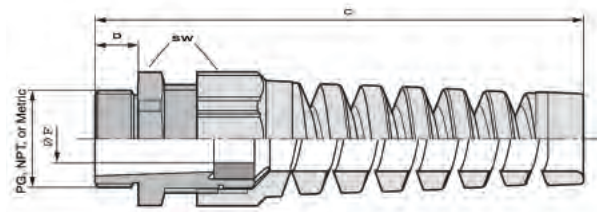
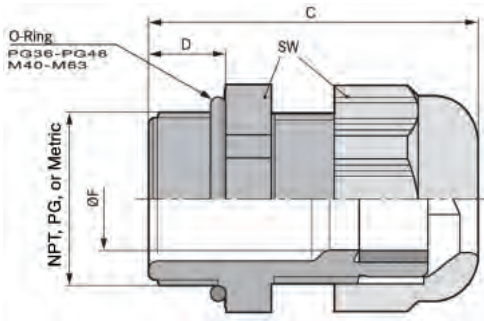


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THREADING DIMENSIONS & TIGHTENING VALUES FOR SKINTOP® CABLE GLANDS

SKINTOP® Strain Relief Cable Glands - Polyamide Style



Patented Security:
Patent # P-2631996

International Approvals:
UL # E146370 Metric: VDE # 57986
CSA # LR50370-10 SEV # 100989

TECHNICAL DATA:

Protection: Up to 70 PSI

Material: Polyamide — flame retardant,
self-extinguishing nylon with CR bushing

Rated
Temperature: PG & NPT: -20°C to +80°C, short term to +100°C
Metric: -20°C to +100°C

Seal: IP 68 (International Protection —
highest grade), comparable to NEMA 6
classification
First digit (0–6): Dust Protection
Second digit (0–8): Water Protection

Resistant to: Salt water, weak acids, weak alkalis,
alcohol, ester, ketones, ether, benzene, gas,
mineral oil, animal and vegetable oils,
gasoline, oil, grease and common solvents.

SKINTOP® meets the most stringent demands of
safety and operational reliability. SKINTOP® can be used in pan-
els, switches, control boxes, submersible pumps,
appliances and many machine tool applications.

SKINTOP® is both a strain relief and a liquid tight seal — all in
one connector.

Optimum Seal:

Complete liquid tightness is achieved with a uniquely designed
molded sealing ring and flange nut combined with a neoprene
bushing and domed sealing cap.

Unique Design:

SKINTOP® outperforms traditional connectors because the design
consists of three parts which do not require dismantling before
use.

The internal ratchet mechanism allows the cap to be tightened
without twisting the cord as it compresses, pushing the collet
fingers together to form a liquid-tight seal with the neoprene
compression bushing.

Vibration Proof Protection:

An integrated locking mechanism that includes an internal ratchet
inside the sealing portion of the cord grip provides a self locking
and vibration proof element that prevents the cap from loosening
even when subjected to severe vibration.

Quick Installation:

The multi-trapezoidal thread requires just one twist to tighten the
dome cap – automatically adjusting to the size of the cable and
providing optimum strain relief and liquid tight seal.

Durability:

SKINTOP® incorporates a heavy duty design that provides greater
pullout strength and very reliable strain relief.

Easier Handling:

Larger ergonomic design and ridges in the dome cap provide
easy gripping and mounting by hand or wrench.

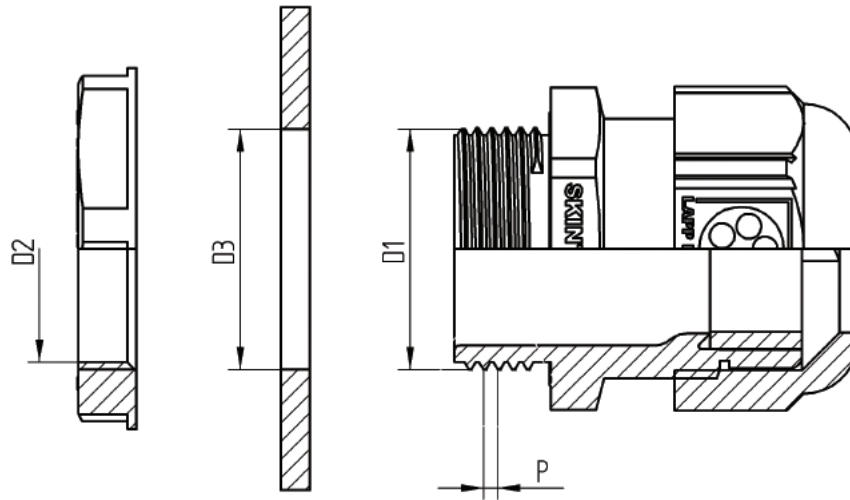
Larger Variable Clamping Range:

The uniquely designed collet, combined with the optional reducing
bushing accommodates a broad range of cords, and cable
diameters resulting in a reduction in the number of connectors
required in inventory.

Resistant to Impact at Low Temperatures:

The SKINTOP® can withstand impact at low temperatures of
-20°C.

THREADING DIMENSIONS & TIGHTENING VALUES FOR SKINTOP® CABLE GLANDS



All dimensions are in mm.

Metric Thread Technical Data for Assembly, EN 60423 (for cable glands EN 50 262)

METRIC THREAD	Core Diameter D1	Pitch P	Outside Diameter D2	Nominal thread Bore Diameter D3
M12 x 1.5	12	1.50	10.6	12.3 - 0.2
M16 x 1.5	16	1.50	14.6	16.3 - 0.2
M20 x 1.5	20	1.50	18.6	20.3 - 0.2
M25 x 1.5	25	1.50	23.6	25.3 - 0.2
M32 x 1.5	32	1.50	30.6	32.3 - 0.2
M40 x 1.5	40	1.50	38.6	40.4 - 0.3
M50 x 1.5	50	1.50	48.6	50.4 - 0.3
M63 x 1.5	63	1.50	61.6	63.4 - 0.3

PG Thread Technical Data for Assembly DIN 40430

PG-THREAD	Core Diameter D1	Pitch P	Outside Diameter D2	Nominal thread Bore Diameter D3
PG 7	12.5	1.270	11.3	13.0 ± 0.2
PG 9	15.2	1.410	13.9	15.7 ± 0.2
PG 11	18.6	1.410	17.3	19.0 ± 0.2
PG 13	20.4	1.410	19.1	21.0 ± 0.2
PG 16	22.5	1.410	21.2	23.0 ± 0.2
PG 21	28.3	1.558	26.8	28.8 ± 0.2
PG 29	37.0	1.558	35.5	37.5 ± 0.3
PG 36	47.0	1.558	45.5	47.5 ± 0.3
PG 42	54.0	1.558	52.5	54.5 ± 0.3
PG 48	59.3	1.558	57.8	59.8 ± 0.3

NPT Thread Technical Data for Assembly ASA B2.1-1945

NPT-THREAD	Core Diameter D1	Pitch P	Nominal thread Bore Diameter D3
NPT 1/4"	13.7	1.41	14.0 - 0.2
NPT 3/8"	17.1	1.41	17.4 - 0.2
NPT 1/2"	21.3	1.81	21.6 - 0.2
NPT 3/4"	26.7	1.81	27.0 - 0.2
NPT 1"	33.4	2.21	33.7 - 0.2
NPT 1 1/4"	42.2	2.21	42.5 - 0.2
NPT 1 1/2"	48.3	2.21	48.7 - 0.2
NPT 2"	60.3	2.21	60.7 - 0.2

THREADING DIMENSIONS & TIGHTENING VALUES FOR SKINTOP® CABLE GLANDS

Tightening Torque* Metric

Metric SKINTOP® recommended tightening torque for attainment of protection category IP 68-5 bar and strain relief category A acc. to EN 50262

METRIC THREAD	Tightening torque in Nm	
	Polymer	Metal
M12 x 1.5	1.5	8
M16 x 1.5	3.0	10
M20 x 1.5	6.0	12
M25 x 1.5	8.0	12
M32 x 1.5	10.0	18
M40 x 1.5	13.0	18
M50 x 1.5	15.0	20
M63 x 1.5	16.0	20
M63 Plus	--	30

Not for ATEX Glands

Tightening torque values to DIN/VDE 0619, Point 7. (PG & NPT Cable Glands)

PG THREAD	NPT THREAD	Torque for intermediary in Nm		Torque for cap nut	
		Polymer	Metal	Polymer	Metal
PG 7		2.5	6.25	1.7	4.2
PG 9	NPT 3/8"	3.75	6.25	2.5	4.2
PG 11		3.75	6.25	2.5	4.2
PG 13	NPT 1/2"	3.75	6.25	2.5	4.2
PG 16		5.0	7.50	3.3	5.0
PG 21	NPT 3/4"	7.5	10.0	5.0	6.7
PG 29	NPT 1"	7.5	10.0	5.0	6.7
PG 36		7.5	10.0	5.0	6.7
PG 42		7.5	10.0	5.0	6.7
PG 48		7.5	10.0	5.0	6.7

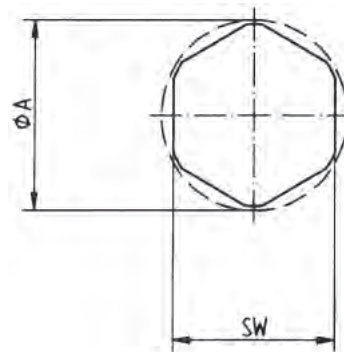
* Reference: Above values are tightening torques for the intermediary, as well as maximum tightening torques for the cap nuts. To prevent damage of the outer sheath, please note that the different cable materials require various torques.

Fitting dimensions and widths across flats

The diameter SW indicates the wrenching flats. The diameter A indicates the assembly space required for the relevant hexagon. This diameter corresponds to the width across the corner of the hexagon, plus an assembly tolerance.

Dimensions are in mm

SW	A	SW	A	SW	A
9	10.4	26	29.5	46	52.5
11	12.5	27	30.6	47	52.5
13	14.9	28	31.8	50	58.3
14	16.0	29	32.5	53	60.0
15	17.1	30	34.0	54	61.0
16	18.2	32	36.2	55	62.0
17	19.4	33	37.2	57	64.4
18	20.4	36	40.5	60	67.5
19	22.0	37	41.5	64	72.3
20	22.7	39	44.0	65	73.1
21	23.9	40	45.2	66	74.5
22	25.0	41	46.1	67	74.5
24	27.3	42	47.0		
25	28.3	45	51.2		



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SKINTOP® MS-NPT/MSR-NPT

Construction: Liquid Tight, Metallic Strain Relief Cable Gland with NPT Threads.

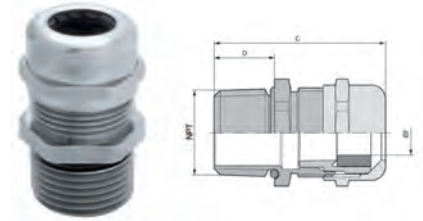
Body: Nickel-Plated Brass. **Insert:** Polyamide. **Bushing:** CR. **O-Ring:** Perbunan (NBR).

Features:

Superior quality, liquid tight, metallic cable gland intended for applications where ruggedness and durability are required. These cable glands are suitable for a wide range of applications from manufacturing machinery to measurement and control equipment, including automation and robotics.

Applications:

Suitable for use in areas with high demands on special mechanical and chemical stability. The heavy duty SKINTOP® design provides great pullout strength and very reliable strain relief. Extended temperature range due to the nickel-plated brass body. Generous high quality neoprene bushing and perbunan o-ring provide a liquid tight and dust proof, hermetic seal.



Technical Data:

Locknuts: Add NPT Metal Locknuts. Protection: IP 68, 5 Bar (Exceeds NEMA 6/6P Pressure rating)

Temperature:
-30°C to +100°C

Rated Voltage:
N/A

Approvals:



SKINTOP® MS-NPT: Liquid Tight, Metallic Strain Relief Cable Gland with NPT Threads

Part Number	Thread Type & Size	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size
53112004	NPT-1/4"	0.138 - 0.276	0.630	1.417	.591	100
53112014	NPT-3/8"	0.177 - 0.394	0.787	1.563	.591	100
53112024	NPT-1/2"	0.276 - 0.512	0.945	1.673	.591	50
53112034	NPT-3/4"	0.354 - 0.669	1.142	1.752	.591	25
53112044	NPT-1"	0.433 - 0.827	1.417	1.929	.591	25
53112054	NPT-1-1/4"	0.748 - 1.102	1.772	2.264	.669	10
53112064	NPT-1-1/2"	1.063 - 1.378	2.126	2.421	.669	5
53112074	NPT-2"	1.339 - 1.772	2.638	2.500	.669	5

SKINTOP® MSR-NPT: NPT Liquid Tight, Metallic Strain Relief Cable Gland with Reducer Bushing

Part Number	Thread Type & Size	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size
53112006	NPT-1/4"	0.039 - 0.197	0.630	1.417	.591	100
53112016	NPT-3/8"	0.079 - 0.276	0.787	1.563	.591	100
53112026	NPT-1/2"	0.197 - 0.394	0.945	1.673	.591	50
53112036	NPT-3/4"	0.236 - 0.512	1.142	1.752	.591	25
53112046	NPT-1"	0.276 - 0.591	1.417	1.929	.591	25
53112056	NPT-1-1/4"	0.591 - 0.906	1.772	2.264	.669	10
53112066	NPT-1-1/2"	0.866 - 1.142	2.126	2.421	.669	5
53112076	NPT-2"	1.102 - 1.535	2.638	2.500	.669	5

Not finding what you are looking for?
Please contact us at sales@lapptannehill.com, or visit our website at: www.lapptannehill.com

SKINTOP® MS/MSR

Construction: Liquid Tight, Metallic Strain Relief Cable Gland with PG Threads.

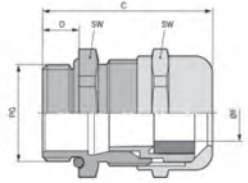
Body: Nickel-Plated Brass. **Insert:** Polyamide. **Bushing:** CR. **O-Ring:** Perbunan (NBR).

Features:

Superior quality, liquid tight metallic cable gland intended for applications where ruggedness and durability are required. These cable glands are suitable for a wide range of applications from manufacturing machinery to measurement and control equipment, including automation and robotics.

Applications:

Suitable for use in areas with high demands on special mechanical and chemical stability. The heavy duty SKINTOP® design provides great pullout strength and very reliable strain relief. Extended temperature range due to the nickel-plated brass body. Generous high quality neoprene bushing and perbunan o-ring provide a liquid tight and dust proof, hermetic seal.



Technical Data:

Locknuts: Add SM Locknuts. Protection: IP 68, 5 Bar (Exceeds NEMA 6/6P Pressure rating) when used with o-ring.



Temperature:
-30°C to +100°C



Rated Voltage:
N/A



Approvals:



SKINTOP® MS: Liquid Tight, Metallic Strain Relief Cable Gland with PG Threads

Part Number	Thread Type & Size	Clamping Range of inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size
52015700	PG-7	0.079 - 0.256	0.551	0.984	.197	100
52015710	PG-9	0.157 - 0.315	0.669	1.142	.236	100
52015720	PG-11	0.157 - 0.394	0.787	1.260	.236	50
52015730	PG-13	0.197 - 0.472	0.866	1.339	.256	50
52015740	PG-16	0.315 - 0.551	0.945	1.378	.256	50
52015750	PG-21	0.433 - 0.709	1.181	1.575	.276	25
52015760	PG-29	0.630 - 0.984	1.575	1.890	.315	25
52015765	PG-36	0.748 - 1.260	1.969	2.441	.591	10
52015766	PG-42	1.102 - 1.496	2.244	2.441	.591	5
52015767	PG-48	1.339 - 1.732	2.520	2.441	.591	5

SKINTOP® MSR: Liquid Tight, Metallic Strain Relief Cable Gland with Reducer Bushing & PG Threads

Part Number	Thread Type & Size	Clamping Range of inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size
52015770	PG-7	0.079 - 0.197	.551	0.984	.197	100
52015780	PG-9	0.079 - 0.236	.669	1.142	.236	100
52015790	PG-11	0.118 - 0.276	.787	1.260	.236	50
52015800	PG-13	0.157 - 0.354	.866	1.339	.256	50
52015810	PG-16	0.236 - 0.512	.945	1.378	.256	50
52015820	PG-21	0.315 - 0.630	1.181	1.575	.276	25
52015830	PG-29	0.413 - 0.787	1.575	1.890	.315	25
52015831	PG-36	0.748 - 1.024	1.969	2.441	.591	10
52015832	PG-42	0.945 - 1.220	2.244	2.441	.591	5
52015833	PG-48	1.102 - 1.378	2.520	2.441	.591	5

Complete catalog available online at: www.lapptannehill.com



SKINTOP® MS-M/MSR-M

Construction: Liquid Tight, Metallic Strain Relief Cable Gland in Metric Sizes to Meet the European Union Standards.

Body: Nickel-Plated Brass. **Insert:** Polyamide. **Bushing:** CR. **O-Ring:** Perbunan (NBR).

Features:

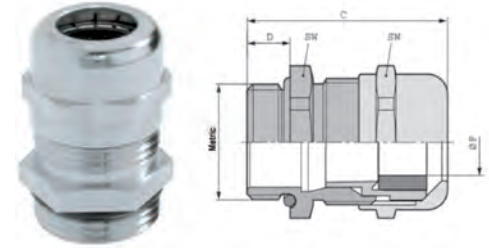
SKINTOP® MS-M/MSR-M is a superior quality, liquid tight, metallic cable gland intended for applications where ruggedness and durability are required. These cable glands are suitable for a wide range of applications from manufacturing machinery to measurement and control equipment, including automation and robotics.

Applications:

Suitable for use in areas with high demands on special mechanical and chemical stability.

Additional Information:

SKINTOP® sizes M75X1.5 to M11X2.0 feature the innovative, double lamella gasket for easier assembling of cables with larger diameters. Now with IP 69K protection for the harshest cleaning procedures of industrial machinery with high pressure cleaners and hot water.



Technical Data:

Locknuts: Add SM-M Locknuts. Protection: 70 PSI, Seal: IP 68, 10 Bar (Exceeds NEMA 6/6P Pressure rating), IP 69K

Temperature:
-30°C to +100°C

Rated Voltage:
N/A

Approvals:
UL US, CSA, CE, VDE, RoHS

SKINTOP® MS-M: Liquid Tight, Metallic Strain Relief Cable Gland with Metric Threads

Part Number	Thread Type & Size	Clamping Range of inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size
53112000	M-12X1.5	0.118 - 0.276	0.630	1.043	0.256	100
53112010	M-16X1.5	0.177 - 0.394	0.787	1.260	0.276	100
53112020	M-20X1.5	0.276 - 0.512	0.945	1.398	0.315	50
53112030	M-25X1.5	0.354 - 0.669	1.142	1.476	0.315	25
53112040	M-32X1.5	0.433 - 0.827	1.417	1.661	0.354	25
53112050	M-40X1.5	0.748 - 1.102	1.772	1.949	0.354	10
53112060	M-50X1.5	1.063 - 1.378	2.126	2.047	0.394	5
53112070	M-63X1.5	1.339 - 1.772	2.638	2.413	0.591	5
53112080	M-63X1.5, plus	1.732 - 2.165	2.953	2.579	0.591	5
53112510	M-75X1.5	2.283 - 2.677	3.740	4.134	0.591	1
53112512	M-90X2.0	2.598 - 3.071	4.528	5.354	0.787	1
53112514	M-110X2.0	3.386 - 3.858	5.315	6.063	0.984	1

SKINTOP® MSR-M: Liquid Tight, Metallic Strain Relief Cable Gland with Reducer Bushing & Metric Threads

Part Number	Thread Type & Size	Clamping Range of inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size
53112100	M-12X1.5	0.039 - 0.197	0.630	1.043	0.256	100
53112110	M-16X1.5	0.079 - 0.276	0.787	1.260	0.276	100
53112120	M-20X1.5	0.197 - 0.394	0.945	1.398	0.315	50
53112130	M-25X1.5	0.236 - 0.512	1.142	1.476	0.315	25
53112140	M-32X1.5	0.276 - 0.591	1.417	1.661	0.354	25
53112150	M-40X1.5	0.591 - 0.906	1.772	1.949	0.354	10
53112160	M-50X1.5	0.866 - 1.142	2.126	2.047	0.394	5
53112170	M-63X1.5	1.102 - 1.535	2.638	2.413	0.591	5
53112511	M-75X1.5	2.087 - 2.480	3.740	4.134	0.591	1
53112515	M-110X2.0	2.992 - 3.465	5.315	6.063	0.984	1

Please note:

IP 69K & DNV pending on size M75

*UL, CSA, DNV, VDE, and IP 69K pending on sizes M90 and M110

Please contact your sales representative for detailed information at sales@lapptannehill.com



SKINTOP® MS-SC/MS-SCL

Construction: Liquid Tight, Metallic Strain Relief for EMC Shielding Cable Gland with NPT, PG & Metric Threads.

Body: Nickel-Plated Brass. **Insert:** Polyamide. **Bushing:** CR. **O-Ring:** Perbunan (NBR).

Features:

Uniquely designed to address EMC considerations with its simplified grounding feature. In a few easy steps, the cable is grounded, strain relieved and sealed from moisture and dust in accordance with IP 68. The cable gland's contact springs establish a continuous electrical path from the shield of the cable to equipment ground, creating a secure shield connection.

Applications:

Optimal EMC protection. Suitable for braid shielded cable. Minimal assembly steps. The contact springs' unique design can accept cable diameters with wide dimensional tolerances. Available in both standard and long length threads for heavy-wall applications.

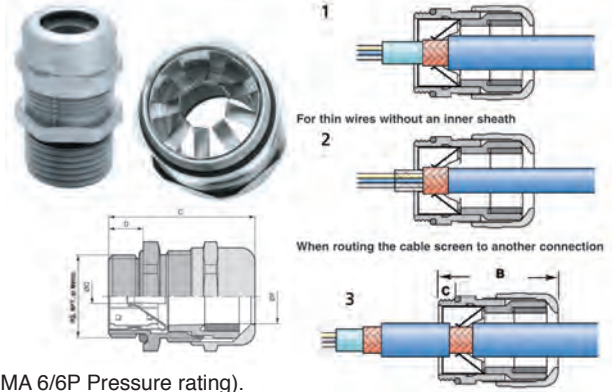
Technical Data:

Locknuts: Add SM-PE Locknuts. Seal: IP 68, 5 Bar - when used with o-ring (Exceeds NEMA 6/6P Pressure rating).

 **Temperature:**
-30°C to +100°C

 **Rated Voltage:**
N/A

 **Approvals:** PG & NPT



NPT THREADS SKINTOP® MS-SC: Liquid Tight, Metallic Strain Relief Cable Gland with NPT Threads

Part Number	Thread Type & Size	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size
53112910	NPT-3/8"	0.177 - 0.354	0.787	1.563	.591	100
53112920	NPT-1/2"	0.276 - 0.492	0.945	1.673	.591	50
53112930	NPT-3/4"	0.354 - 0.650	1.142	1.752	.591	25
53112940	NPT-1"	0.433 - 0.827	1.417	1.929	.669	25
53112950	NPT-1-1/4"	0.748 - 1.102	1.772	2.264	.669	10
53112960	NPT-1-1/2"	1.063 - 1.375	2.126	2.126	.669	5

PG THREADS SKINTOP® MS-SC: Liquid Tight, Metallic Strain Relief Cable Gland with PG Threads

Part Number	Thread Type & Size	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Min ø above braiding	Standard Pack Size
53112210	PG-9	.118 - .315	0.669	1.142	.236	.157	50
53112220	PG-11	.157 - .394	0.787	1.260	.236	.157	50
53112230	PG-13	.197 - .472	0.866	1.339	.256	.157	25
53112240	PG-16	.315 - .551	0.945	1.378	.256	.236	25
53112250	PG-21	.433 - .689	1.181	1.575	.276	.315	25
53112260	PG-29	.630 - .984	1.575	1.890	.315	.512	10
53112270	PG-36	.748 - 1.260	1.969	2.441	.591	.630	5

SKINTOP® MS-SCL: Liquid Tight, Metallic Strain Relief Cable Gland with Extended PG Threads

Part Number	Thread Type & Size	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Min ø above braiding	Standard Pack Size
53112310	PG-9	.118 - .315	0.669	1.378	.472	.157	50
53112320	PG-11	.157 - .394	0.787	1.496	.472	.157	50
53112330	PG-13	.197 - .472	0.866	1.555	.472	.157	25
53112340	PG-16	.315 - .551	0.945	1.594	.472	.236	25
53112350	PG-21	.433 - .689	1.181	1.772	.472	.315	25
53112360	PG-29	.630 - .984	1.575	2.047	.591	.512	10

METRIC THREADS SKINTOP® MS-SC-M: Liquid-Tight, Metallic Strain Relief Cable Gland with Metric Threads

Part Number	Thread Type & Size	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size
53112610	M-12X1.5	0.138 - 0.276	0.630	1.043	.256	50
53112620	M-16X1.5	0.177 - 0.354	0.787	1.299	.276	50
53112630	M-20X1.5	0.276 - 0.492	0.945	1.457	.315	25
53112640	M-25X1.5	0.354 - 0.650	1.142	1.516	.315	25
53112650	M-32X1.5	0.433 - 0.827	1.417	1.791	.354	25
53112660	M-40X1.5	0.748 - 1.102	1.772	1.890	.354	10
53112670	M-50X1.5	1.063 - 1.378	2.126	2.185	.394	5

SKINTOP® MS-SC-M-XL: Liquid-Tight, Metallic Strain Relief Cable Gland with Extended Metric Threads

Part Number	Thread Type & Size	Clamping Range øF inches	SW Wrenching Flats inches	C Overall Length inches	D Thread Length inches	Standard Pack Size
53112625	M-16X1.5	0.177 - 0.354	0.787	1.496	.472	50
53112635	M-20X1.5	0.276 - 0.492	0.945	1.614	.472	25
53112645	M-25X1.5	0.354 - 0.650	1.142	1.673	.472	25
53112655	M-32X1.5	0.433 - 0.827	1.417	2.028	.591	25
53112665	M-40X1.5	0.748 - 1.102	1.772	2.126	.591	10
53112675	M-50X1.5	1.063 - 1.378	2.126	2.382	.591	5



SKINTOP® MS-M BRUSH

Construction: Liquid Tight, Metallic Strain Relief for EMC Shielding Applications, Easy to Assemble Cable Gland with Metric Threads.

Body: Nickel-Plated Brass. **Insert:** Polyamide. **Bushing:** Special Elastomer. **O-Ring:** Special Elastomer.

Features:

The SKINTOP® MS-M BRUSH provides centered, fixed strain relief with a liquid tight and dust proof seal (IP68), all in one step. Simply insert the cable, push the screen braid under the innovative EMC brush, tighten and the connection is made.

Applications:

Faster, easier, reliable screen contact. Maximum assembly and adjustment possibilities. 360°C contact area allows for optimal low-resistance current return ground path.

Additional Information:

SKINTOP® sizes M75X1.5 to M110X2.0 feature the innovative, double lamella gasket for easier assembling of cables with larger diameters.

Technical Data:

Seal: IP 68, and IP 69K sizes M25–M63. IP 68 for M68 plus. (Exceeds NEMA 6/6P Pressure rating).

 **Temperature:**
-30°C to +100°C

 **Rated Voltage:**
N/A

 **Approvals:**



SKINTOP® MS-M BRUSH: Liquid Tight, Metallic Strain Relief for EMC Shielding Applications

Part Number	Thread Type & Size	Clamping Range inches	SW Wrenching Flats inches	Minimum ø above braiding inches	Thread Length inches	Standard Pack Size
53112676	M-25X1.5	0.354 - 0.669	1.142	0.236	0.315	10
53112677	M-32X1.5	0.433 - 0.827	1.417	0.315	0.354	1
53112678	M-40X1.5	0.748 - 1.102	1.772	0.394	0.354	1
53112679	M-50X1.5	1.063 - 1.378	2.126	0.551	0.394	1
53112680	M-63X1.5	1.339 - 1.772	2.638	0.787	0.591	1
53112681	M-63X1.5, plus	1.732 - 2.165	2.953	0.984	0.591	1
53112501	M-75X1.5	2.087 - 2.480	3.740	1.378	0.591	1
53112500	M-75X1.5, plus	2.283 - 2.677	3.740	1.378	0.591	1
53112503	M-90X2.0	2.598 - 3.071	4.528	1.772	0.787	1
53112505	M-110X2.0	2.992 - 3.465	5.315	2.165	0.984	1
53112504	M-110X2.0, plus	3.386 - 3.858	5.315	2.165	0.984	1

Please note:

*UL CSA, DNV, and VDE approvals pending on sizes M90X1.5 to M110X2.0

Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com

SKINDICHT® SM LOCK NUTS

Construction: Metal Lock Nuts for NPT, PG and Metric Threaded Products.

Features:

SKINDICHT® SM Lock Nuts are required wherever NPT, PG or Metric cable glands must be fastened to a housing, and tapped holes cannot be provided.

Technical Data:

Materials: NPT: Stamped Steel. PG & Metric: Nickel-Plated Brass.



Temperature:
N/A



Rated Voltage:
N/A



Approvals:



**NPT
Version**



**PG & Metric
Versions**



NPT Zinc-Plated Steel Locknuts

Part Number	Thread Type & Size	Wrenching Flats inches	Nut Thickness inches	Standard Pack Size
811092*	NPT- 3/8"	0.945	.138	100
811093	NPT- 1/2"	1.102	.157	100
811094	NPT- 3/4"	1.378	.157	50
811095	NPT- 1"	1.693	.157	50

* Product features a hex design.

SKINDICHT® SM: PG Brass Lock Nuts

Part Number	Thread Type & Size	Wrenching Flats		Nut Thickness		Standard Pack Size
		inches	mm	inches	mm	
52003490	PG-7	0.591	15	.110	2.8	100
52003500	PG-9	0.709	18	.110	2.8	100
52003510	PG-11	0.827	21	.118	3.0	100
52003520	PG-13	0.906	23	.118	3.0	100
52003530	PG-16	1.024	26	.118	3.0	100
52003540	PG-21	1.260	32	.138	3.5	50
52003550	PG-29	1.614	41	.157	4.0	50
52003560	PG-36	2.008	51	.197	5.0	25
52003570	PG-42	2.362	60	.197	5.0	25
52003580	PG-48	2.520	64	.217	5.5	25

SKINDICHT® SM-M: Metric Brass Lock Nuts

Part Number	Thread Type & Size	Wrenching Flats		Nut Thickness		Standard Pack Size
		inches	mm	inches	mm	
52103000	M-12X1.5	0.591	15	0.118	3.0	100
52103010	M-16X1.5	0.748	19	0.118	3.0	100
52103020	M-20X1.5	0.945	24	0.138	3.5	100
52103030	M-25X1.5	1.181	30	0.157	4.0	100
52103040	M-32X1.5	1.417	36	0.157	4.0	100
52103050	M-40X1.5	1.811	46	0.197	5.0	50
52103060	M-50X1.5	2.362	60	0.197	5.0	50
52103070	M-63X1.5	2.756	70	0.197	5.0	25
52103071	M-75X1.5	2.953	75	0.315	8.0	5
52103072	M-90X2.0	4.016	102	0.394	10.0	1
52103073	M-110X2.0	4.882	124	0.472	12.0	1

Complete catalog available online at: www.lapptannehill.com



LAPP GROUP



SKINDICHT® SM-PE LOCK NUTS

Construction: Nickel-Plated Brass Grounding Lock Nuts for PG and Metric Threaded Products.

Features:

SKINDICHT® SM-PE Lock Nuts are required wherever varnished, anodized and powder coated housings are used. When the lock nut is tightened, the raised edges cut through the insulating layer, guaranteeing optimum contact.

Applications:

Ideal for use with MS-SC cable grounding cable glands.

Technical Data:



Temperature:
N/A



Rated Voltage:
N/A



Approvals:



SKINDICHT® SM-PE: PG Brass Lock Nuts

Part Number	Thread Type & Size	Wrenching Flats		Nut Thickness		Standard Pack Size
		inches	mm	inches	mm	
52103200	PG-7	0.590	15	.185	4.7	100
52103210	PG-9	0.709	18	.185	4.7	100
52103220	PG-11	0.827	21	.185	4.7	100
52103230	PG-13	0.906	23	.185	4.7	100
52103240	PG-16	1.024	26	.185	4.7	100
52103250	PG-21	1.260	32	.205	5.2	50
52103260	PG-29	1.614	41	.224	5.7	50
52103270	PG-36	2.008	51	.264	6.7	50

SKINDICHT® SM-PE-M: Metric Brass Lock Nuts

Part Number	Thread Type & Size	Wrenching Flats		Nut Thickness		Standard Pack Size
		inches	mm	inches	mm	
52103300	M-12X1.5	0.591	15	0.138	3.5	100
52103310	M-16X1.5	0.748	19	0.138	3.5	100
52103320	M-20X1.5	0.945	24	0.146	3.7	100
52103330	M-25X1.5	1.181	30	0.165	4.2	50
52103340	M-32X1.5	1.417	36	0.185	4.7	50
52103350	M-40X1.5	1.811	46	0.217	5.5	25
52103360	M-50X1.5	2.362	60	0.217	5.5	10
52103370	M-63X1.5	2.756	70	0.276	7.0	10
52103371	M-75X1.5	2.953	75	0.315	8.0	5
52103372	M-90X2.0	4.016	102	0.394	10.0	1
52103373	M-110X2.0	4.882	124	0.472	12.0	1

Check out our complete inventory of products at www.lapptannehill.com



LAPP GROUP

Wire Management



LAPP TANNERHILL

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SKINDICHT® MR-Reducers

Construction: Nickel-Plated Brass.

Features:

Reducers and Enlargers in PG & Metric Combinations.

Technical Data:

 **Temperature:**
-60°C to +200°C

 **Rated Voltage:**
N/A

 **Approvals:**
 



SKINDICHT® MR Reducers-PG

Part Number	Thread Type & Size Male to Female	Standard Pack Size	Part Number	Thread Type & Size Male to Female	Standard Pack Size
52003750	PG-9 to 7	100	52003870	PG-21 to 16	50
52003760	PG-11 to 7	100	52003880	PG-29 to 13	50
52003770	PG-11 to 9	100	52003890	PG-29 to 16	50
52003780	PG-13 to 7	100	52003900	PG-29 to 21	50
52003790	PG-13 to 9	100	52003910	PG-36 to 16	25
52003800	PG-13 to 11	100	52003920	PG-36 to 21	25
52003810	PG-16 to 7	100	52003930	PG-36 to 29	25
52003820	PG-16 to 9	100	52003940	PG-42 to 29	10
52003830	PG-16 to 11	100	52003950	PG-42 to 36	10
52003840	PG-16 to 13	100	52003970	PG-48 to 36	10
52003850	PG-21 to 11	50	52003980	PG-48 to 42	10
52003860	PG-21 to 13	50			

SKINDICHT® MR-M Reducers-Metric

Part Number	Thread Type & Size Male to Female	Standard Pack Size	Part Number	Thread Type & Size Male to Female	Standard Pack Size
52104310	M-16 to 12	100	52104317	M-40 to 25	50
52104311	M-20 to 12	100	52104318	M-40 to 32	25
52104312	M-20 to 16	100	52104319	M-50 to 32	25
52104313	M-25 to 16	50	52104320	M-50 to 40	10
52104314	M-25 to 20	50	52104321	M-63 to 40	10
52104315	M-32 to 20	50	52104322	M-63 to 50	10
52104316	M-32 to 25	50			

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SKINDICHT® KU Reducers

Construction: Polyamide glass fiber reinforced.

Technical Data:



Temperature:
-40°C to +100°C



Rated Voltage:
N/A



Color Code:
RAL 7035:
Light Gray



Approvals:



SKINDICHT® KU Reducers-PG

Part Number	Thread Type & Size Male to Female	Standard Pack Size	Part Number	Thread Type & Size Male to Female	Standard Pack Size
51730010	PG-11 to 7	50	52025150	PG-36 to 21	25
52025100	PG-13 to 7	50	52025050	PG-36 to 29	25
52025110	PG-16 to 9	50	52025160	PG-42 to 21	25
52025120	PG-21 to 11	25	52025170	PG-42 to 29	25
51730040	PG-21 to 13	25	52025060	PG-42 to 36	25
52025130	PG-29 to 13	25	52025180	PG-48 to 29	25
51730050	PG-29 to 16	25	52025190	PG-48 to 36	25
52025140	PG-36 to 16	25	52025070	PG-48 to 42	25

SKINDICHT® KUS Reducers-PG

Part Number	Thread Type & Size Male to Female	Standard Pack Size
52025040	PG-9 to 7	50
51730060	PG-11 to 9	50
51730070	PG-13 to 11	50
51730080	PG-16 to 13	50

SKINDICHT® ME-Enlargers

Construction: Nickel-Plated Brass. **O-Ring:** NBR.

Technical Data:



Temperature:
-60°C to +200°C



Rated Voltage:
N/A



Approvals:



ME-Enlargers-PG

Part Number	Thread Type & Size Male to Female	Standard Pack Size	Part Number	Thread Type & Size Male to Female	Standard Pack Size
52003990	PG-7 to 9	100	52004060	PG-13 to 21	50
52004000	PG-9 to 11	100	52004070	PG-16 to 21	50
52004010	PG-9 to 13	100	52004080	PG-16 to 29	50
52004020	PG-11 to 13	100	52004090	PG-21 to 29	50
52004030	PG-11 to 16	100	52004100	PG-29 to 36	50
52004040	PG-11 to 21	100	52004110	PG-36 to 42	10
52004050	PG-13 to 16	100	52004120	PG-42 to 48	10

ME-Enlargers-Metric

Part Number	Thread Type & Size Male to Female	Standard Pack Size	Part Number	Thread Type & Size Male to Female	Standard Pack Size
52104450	M-12 to 16	100	52104458	M-32 to 40	50
52104452	M-16 to 20	100	52104460	M-40 to 50	25
52104454	M-20 to 25	100	52104462	M-50 to 63	25
52104456	M-25 to 32	50			

SKINDICHT® Perbunan® O-Rings

Construction: Perbunan (NBR) Ozone & UV Resistant.

Features:

Perbunan® O-Rings provide safe sealing against oil, dust and water when placed on the fastening threads of the connector.

Part Number	Thread Type & Size	Inner Diameter		Thickness		Standard Pack Size
		inches	mm	inches	mm	
53001010	PG-7	0.394	10	.059	1.5	100
53102011	PG-9	0.512	13	.059	1.5	100
53001020	PG-11	0.630	16	.059	1.5	100
52005740	PG-13	0.709	18	.059	1.5	100
53001030	PG-16	0.787	20	.059	1.5	100
52005750	PG-21	1.024	26	.079	2.0	100
53001040	PG-29	1.339	34	.079	2.0	50
52005760	PG-36	1.732	44	.079	2.0	50
53001050	PG-42	1.969	50	.079	2.0	50
52005770	PG-48	2.165	55	.079	2.0	50

Perbunan® is a registered trademark of BAYER AG



Technical Data:

Perbunan (NBR) Ozone & UV Resistant

Temperature:
-20°C to +100°C

Rated Voltage:
N/A

Approvals:



SKINDICHT® JT PTFE O-Rings

Construction: PTFE.

Features:

JT PTFE O-rings provide safe sealing against oil, water, alkalis, acids, solvents and virtually all chemicals when placed on the fastening threads of a connector. They are suitable for food and dairy applications and have a wide temperature range.

Part Number	Thread Type & Size	Inner Diameter		Thickness		Standard Pack Size
		inches	mm	inches	mm	
53801035	PG-7	0.492	0.650	.079	2	100
53801045	PG-9	0.598	0.748	.079	2	100
53801055	PG-11	0.732	0.886	.079	2	100
53801065	PG-13	0.803	0.984	.079	2	100
53801075	PG-16	0.886	1.063	.079	2	100
53801085	PG-21	1.114	1.319	.118	3	50
53801095	PG-29	1.457	1.713	.118	3	50
53801105	PG-36	1.850	2.165	.118	3	25
53801115	PG-42	2.126	2.480	.118	3	25
53801125	PG-48	2.335	2.717	.118	3	25



Technical Data:

Temperature:
-120°C to +250°C
short term up to +300°C

Rated Voltage:
N/A

Approvals:



SKINDICHT® VITON® O-Rings

Construction: FKM Fluoroelastomer (Green).

Features:

VITON® O-rings provide safe sealing against oil, water, alkalis, acids, solvents and virtually all chemicals when placed on the fastening threads of a connector. They are also suitable for food and dairy applications and have a wide temperature range.

Part Number	Thread Type & Size	Inner Diameter		Thickness		Standard Pack Size
		inches	mm	inches	mm	
52023607	PG-7	.394	10	.059	1.5	100
52122011	PG-9	.512	13	.059	1.5	100
52023602	PG-11	.630	16	.059	1.5	100
52023601	PG-13	.709	18	.059	1.5	100
52023603	PG-16	.787	20	.059	1.5	50
52023604	PG-21	1.024	26	.079	2.0	50
52023606	PG-29	1.339	34	.079	2.0	50
52023608	PG-36	1.732	44	.079	2.0	25
52023609	PG-42	1.969	50	.079	2.0	25
52023611	PG-48	2.165	55	.079	2.0	25

Viton® is a registered trademark of DuPont de Nemour



Technical Data:

Temperature:
-20°C to +200°C

Rated Voltage:
N/A

Approvals:



SKINTOP® DIX BUSHINGS

Construction: Multiple Cable Sealing Bushing for PG & NPT SKINTOP® Cable Glands. **Body:** Silicone.

Features:

SKINTOP® DIX is a multiple hole sealing bushing designed to allow several cables to be inserted through one cable gland. This results in a reduction of space and cost, as a separate cable gland is not required for each cable.

Applications:

SKINTOP® Cable Glands

Technical Data:



Temperature:
-30°C to +100°C



Rated Voltage:
N/A



Color Code:
Natural



Approvals:
IP 54
IP 68 when all holes are optimally filled



Part Number	Thread Type & Size	Thread Type & Size	# of Holes	Size of Holes		Standard Pack Size
				inches	mm	
53607225	PG-7	-	2	.098	2.5	100
53607417	PG-7	-	4	.067	1.7	100
53609230	PG-9	NPT-3/8"	2	.118	3.0	100
53611225	PG-11	-	2	.098	2.5	100
53611240	PG-11	-	2	.157	4.0	100
53611330	PG-11	-	3	.118	3.0	100
53611430	PG-11	-	4	.118	3.0	100
53613250	PG-13	NPT-1/2"	2	.197	5.0	100
53613340	PG-13	NPT-1/2"	3	.157	4.0	100
53613440	PG-13	NPT-1/2"	4	.157	4.0	100
53616140	PG-16	-	1	.157	4.0	50
53616225	PG-16	-	2	.098	2.5	50
53616240	PG-16	-	2	.157	4.0	50
53616260	PG-16	-	2	.236	6.0	50
53616340	PG-16	-	3	.157	4.0	50
53616350	PG-16	-	3	.197	5.0	50
53616356	PG-16	-	3	.220	5.6	50
53616360	PG-16	-	3	.236	6.0	50
53616440	PG-16	-	4	.157	4.0	50
53616450	PG-16	-	4	.197	5.0	50
53616540	PG-16	-	5	.157	4.0	50
53621270	PG-21	NPT-3/4"	2	.276	7.0	50
53621280	PG-21	NPT-3/4"	2	.315	8.0	50
53621370	PG-21	NPT-3/4"	3	.276	7.0	50
53621380	PG-21	NPT-3/4"	3	.315	8.0	50
53621460	PG-21	NPT-3/4"	4	.236	6.0	50
53621550	PG-21	NPT-3/4"	5	.197	5.0	50
53621640	PG-21	NPT-3/4"	6	.157	4.0	50
53629290	PG-29	NPT-1"	2	.354	9.0	50
53629390	PG-29	NPT-1"	3	.354	9.0	50
53629470	PG-29	NPT-1"	4	.276	7.0	50
53629480	PG-29	NPT-1"	4	.315	8.0	50
53629490	PG-29	NPT-1"	4	.354	9.0	50
53629556	PG-29	NPT-1"	5	.220	5.6	50
53629570	PG-29	NPT-1"	5	.276	7.0	50
53629675	PG-29	NPT-1"	6	.295	7.5	50

SKINTOP® DIX-DV INSERTS

Construction: Inserts for SKINTOP® DIX NPT, PG & Metric. **Body:** Polyamide.

Features:

SKINTOP® DIX-DV inserts are designed to seal unused positions in SKINTOP® DIX bushings, which need to be closed to ensure the proper class protection.

Part Number	Diameter		Length		Standard Pack Size
	inches	mm	inches	mm	
53100003	.118	3.0	.354	9	100
53100004	.157	4.0	.354	9	100
53100005	.197	5.0	.433	11	100
53100006	.236	6.0	.551	14	100
53100007	.276	7.0	.551	14	100
53100008	.315	8.0	.551	14	100
53100009	.354	9.0	.551	14	100



SILVYN® RILL PA 6

Construction: Non-Metallic Flexible Quick Connect Conduit Systems.

Body: Polyamide, Halogen & Silicone Free, UL4 VO.

Features:

A flexible, non-metallic corrugated conduit suitable for use in various industrial applications. It is resistant to liquids, oils and gases, and highly resistant to acids and solvents.

Applications:

Halogen-free, flame retardant and self extinguishing. Durable, long lasting conduit that is rugged yet flexible. For use in controls, moving machine parts, motor and internal connections, as well as industrial, medical and electrical applications.

Technical Data:

IP Protection: IP 68

 **Temperature:**
-40°C to +115°C

 **Rated Voltage:**
N/A

 **Color Code:**
Black or Gray

 **Approvals:**



Part Number Black	Part Number Gray	Outer Diameter		Inner Diameter		Bend Radius		Conduit Coil Put-Ups Feet	NPT	Thread Type & Size for Fittings	
		inches	mm	inches	mm	inches	mm			PG	Metric
61746935	61746939	.394	10.0	.256	6.5	.512	13	164	NPT-1/4"	PG-7	M-10X1.0
61746945	61746940	.512	13.0	.394	10.0	.787	20	164	NPT-1/4"	PG-9	M-12X1.5
61746955	61746950	.622	15.8	.472	12.0	1.378	35	164	NPT-3/8"	PG-11	M-16X1.5
61747015	61747010	.728	18.5	.563	14.3	1.575	40	164	--	PG-13	--
61746965	61746960	.835	21.2	.650	16.5	1.772	45	164	NPT-1/2"	PG-16	M-20X1.5
61746975	61746970	1.122	28.5	.906	23.0	2.165	55	164	NPT-3/4"	PG-21	M-25 X1.5
61746985	61746980	1.358	34.5	1.142	29.0	2.559	65	82	NPT-1"	PG-29	M-32X1.5
61746995	61746990	1.673	42.5	1.417	36.0	3.543	90	82	NPT-1-1/4"	PG-36	M-40X1.5
61747005	61747000	2.146	54.5	1.890	48.0	3.937	100	82	NPT-1-1/2"	PG-48	M-50X1.5

* Fittings available in NPT, PG, and Metric

SILVYN® RILL PA 12

Construction: Non-Metallic Highly Flexible Quick Connect Conduit Systems.

Body: Polyamide, Halogen & Silicone Free, UL 94 V2.

Features:

A continuous flex non-metallic, corrugated conduit. It is resistant to liquids, oil and gas, and highly resistant to acids and solvents.

Applications:

Halogen-free, flame retardant and self-extinguishing. High flexibility makes it an excellent choice for applications such as machine and plant construction where frequent flexing and bending is required. Durable, long lasting conduit that is rugged yet extremely flexible. For use in controls, moving machine parts, motor and internal connections, as well as industrial, medical and electrical applications.

Technical Data:

IP Protection: IP 68

 **Temperature:**
-50°C to +100°C

 **Rated Voltage:**
N/A

 **Color Code:**
Black or Gray

 **Approvals:**



Part Number Black	Part Number Gray	Outer Diameter		Inner Diameter		Bend Radius		Conduit Coil Put-Ups Feet	NPT	Thread Type & Size for Fittings	
		inches	mm	inches	mm	inches	mm			PG	Metric
61815105	61815100	.394	10.0	.256	6.5	.512	13	164	NPT-1/4"	PG-7	M-10X1.0
61815115	61815110	.512	13.0	.394	10.0	.591	15	164	NPT-1/4"	PG-9	M-12X1.5
61815125	61815120	.622	15.8	.472	12.0	.866	22	164	NPT-3/8"	PG-11	M-16X1.5
61815185	61815180	.728	18.5	.563	14.3	1.063	27	164	--	PG-13	--
61815135	61815130	.835	21.2	.650	16.5	1.378	35	164	NPT-1/2"	PG-16	M-20X1.5
61815145	61815140	1.122	28.5	.906	23.0	1.772	45	164	NPT-3/4"	PG-21	M-25X1.5
61815155	61815150	1.358	34.5	1.142	29.0	1.969	50	82	NPT-1"	PG-29	M-32X1.5
61815165	61815160	1.673	42.5	1.417	36.0	3.150	80	82	NPT-1-1/4"	PG-36	M-40X1.5
61815175	61815170	2.146	54.5	1.890	48.0	3.937	100	82	NPT-1-1/2"	PG-48	M-50X1.5

* Fittings available in NPT, PG, and Metric

 **LAPP GROUP**

SILVYN® FPS Conduit

Construction: Continuous Flex Spiral Steel Reinforced PVC Conduit.

Body: Flexible PVC with an insulated spiral steel spring.

Features:

Designed with an insulated spiral steel spring with a PVC jacket which creates a continuous flexing conduit.

Applications:

Strong and durable conduit that is rugged yet extremely flexible. Silicone free, UV and chemical resistant. Airtight and watertight. Excellent for applications where abrasion resistance is a concern.

Technical Data:

IP Protection: IP 68



Temperature:
-20° to +80°C



Rated Voltage:
N/A



Color Code:
Gray



Approvals:



SILVYN®
USK



SILVYN®
LKI

Part Number	Outer Diameter		Inner Diameter		Bend Radius		Conduit Coil Put-Ups Feet	PG	Thread Type & Size for Fittings	
	inches	mm	inches	mm	inches	mm			Metric LKI-M	Metric USK
61711550	.394	10	.276	7	.315	8	82	PG-7	M-12X1.5	M-10X1.5
61711590	.551	14	.394	10	.394	10	82	PG-9	M-16X1.5	M-12X1.5
61711630	.669	17	.512	13	.512	13	82	PG-11	M-20X1.5	M-16X1.5
61711670	.748	19	.591	15	.591	15	82	PG-13	---	---
61711710	.827	21	.630	16	.669	17	82	PG-16	M-25X1.5	M-20X1.5
61711750	1.063	27	.866	22	.787	20	82	PG-21	M-32X1.5	M-25X1.5
61711790	1.417	36	1.142	29	.984	25	82	PG-29	M-40X1.5	M-32X1.5
61711830	1.772	45	1.496	38	1.417	36	82	PG-36	M-50X1.5	M-40X1.5
61711910	2.205	56	1.890	48	1.575	40	82	PG-48	M-63X1.5	M-50X1.5

* Fittings available in PG and Metric

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SILVYN® KLICK-GN, KLICK-GP, and KLICK-GM

Construction: Conduit Connectors for SILVYN® RILL PA 6 & PA 12 Conduit.

Body: Polyamide-Silicone Free.

Features:

The SILVYN® KLICK-G series is available in NPT, PG and Metric threads.

Applications:

This straight conduit gland is used to create a quick, secure connection to the SILVYN® RILL conduit.



Technical Data:

IP Protection: IP 68, IP 69K according to DIN 40050 T.9



Temperature:
-30°C to 100°C



Rated Voltage:
N/A



Color Code:
Black or Gray



Approvals:



SILVYN® KLICK-GN: NPT Conduit Connectors

Part Number Black	Thread Type & Size	Conduit Outer Diameter		Thread Length		For SILVYN® RILL PA 6 Conduit		For SILVYN® RILL PA 12 Conduit		Standard Pack Size
		inches	mm	inches	mm	Black	Gray	Black	Gray	
61800705	NPT-1/4"	.394	10.0	.453	11.5	61746935	61746939	61815105	61815100	50
61800715	NPT-3/8"	.512	13.0	.472	12.0	61746945	61746940	61815115	61815110	50
61800725	NPT-3/8"	.622	15.8	.472	12.0	61746955	61746950	61815125	61815120	50
61800745	NPT-1/2"	.835	21.2	.472	12.0	61746965	61746960	61815135	61815130	50
61800755	NPT-3/4"	1.122	28.5	.551	14.0	61746975	61746970	61815145	61815140	25
61800765	NPT-1"	1.358	34.5	.630	16.0	61746985	61746980	61815155	61815150	25
61800775	NPT-1-1/4"	1.673	42.5	.709	18.0	61746995	61746990	61815165	61815160	25
61800785	NPT-2"	2.146	54.5	.827	21.0	61747005	61747000	61815175	61815170	10

SILVYN® KLICK-GP: PG Conduit Connectors

Part Number Black	Part Number Gray	Thread Type & Size	Conduit Outer Diameter		Thread Length		For SILVYN® RILL PA 6 Conduit		For SILVYN® RILL PA 12 Conduit		Standard Pack Size
			inches	mm	inches	mm	Black	Gray	Black	Gray	
61800865	61800860	PG-7	.394	10.0	.394	10.0	61746935	61746939	61815105	61815100	50
61800875	61800870	PG-9	.512	13.0	.394	10.0	61746945	61746940	61815115	61815110	50
61800885	61800880	PG-11	.622	15.8	.394	10.0	61746955	61746950	61815125	61815120	50
61800855	61800850	PG-13	.728	18.5	.433	11.0	61747015	61747010	61815185	61815180	50
61800895	61800890	PG-16	.835	21.2	.472	12.0	61746965	61746960	61815135	61815130	50
61800905	61800900	PG-21	1.122	28.5	.472	12.0	61746975	61746970	61815145	61815140	25
61800915	61800910	PG-29	1.358	34.5	.472	12.0	61746985	61746980	61815155	61815150	25
61800925	61800920	PG-36	1.673	42.5	.453	11.5	61746995	61746990	61815165	61815160	25
61800935	61800930	PG-48	2.146	54.5	.571	14.5	61747005	61747000	61815175	61815170	10

SILVYN® KLICK-GM: Metric Conduit Connectors

Part Number Black	Part Number Gray	Thread Type & Size	Conduit Outer Diameter		Thread Length		For SILVYN® RILL PA 6 Conduit		For SILVYN® RILL PA 12 Conduit		Standard Pack Size
			inches	mm	inches	mm	Black	Gray	Black	Gray	
55501005	55501000	M-10X1.0	.394	10.0	.453	11.5	61746935	61746939	61815105	61815100	50
55501015	55501010	M-12X1.5	.512	13.0	.472	12.0	61746945	61746940	61815115	61815110	50
55501035	55501030	M-16X1.5	.622	15.8	.453	11.5	61746955	61746950	61815125	61815120	50
55501055	55501050	M-20X1.5	.835	21.2	.512	13.0	61746965	61746960	61815135	61815130	50
55501065	55501060	M-25X1.5	1.122	28.5	.512	13.0	61746975	61746970	61815145	61815140	25
55501075	55501070	M-32X1.5	1.358	34.5	.591	15.0	61746985	61746980	61815155	61815150	25
55501085	55501080	M-40X1.5	1.673	42.5	.591	15.0	61746995	61746990	61815165	61815160	25
55501095	55501090	M-50X1.5	2.146	54.5	.610	15.5	61747005	61747000	61815175	61815170	10



LAPP GROUP



SILVYN® KLICK-W Series KLICK-WN, KLICK-WP, and KLICK-WM

Construction: Conduit Connectors for SILVYN® RILL PA 6 & PA 12 Conduit.

Body: Polyamide-Silicone Free.

Features:

The SILVYN® KLICK-W series is available in NPT, PG, and Metric threads.

Applications:

This 90°C angled conduit gland is used to create a quick, secure connection to the SILVYN® RILL conduit.



Technical Data:

IP Protection: IP 67, IP69K according to the DIN 40050 T.9

Temperature:
-30°C to + 100°C

Rated Voltage:
N/A

Color Code:
Black or Gray

Approvals:



RoHS

SILVYN® KLICK-WN: NPT Conduit Connectors

Part Number		Thread Type & Size	Conduit Outer Diameter		Thread Length		For SILVYN® RILL PA 6 Conduit		For SILVYN® RILL PA 12 Conduit		Standard Pack Size
Black	Gray		inches	mm	inches	mm	Black	Gray	Black	Gray	
61800015	55502600	NPT-1/4"	.394	10.0	.394	10.0	61746935	61746939	61815105	61815100	50
61800025	55502610	NPT-1/4"	.512	13.0	.453	11.5	61746945	61746940	61815115	61815110	50
61800035	55502620	NPT-3/8"	.622	15.8	.472	12.0	61746955	61746950	61815125	61815120	50
61800045	55502630	NPT-1/2"	.835	21.2	.472	12.0	61746965	61746960	61815135	61815130	50
61800055	55502640	NPT-3/4"	1.122	28.5	.551	14.0	61746975	61746970	61815145	61815140	25
61800065	55502650	NPT-1"	1.358	34.5	.630	16.0	61746985	61746980	61815155	61815150	10
61800075	55502660	NPT-1-1/4"	1.673	42.5	.709	18.0	61746995	61746990	61815165	61815160	10
61800085	55502670	NPT-1-1/2"	2.146	54.5	.709	18.0	61747005	61747000	61815175	61815170	5

SILVYN® KLICK-WP: PG Conduit Connectors

Part Number		Thread Type & Size	Conduit Outer Diameter		Thread Length		For SILVYN® RILL PA 6 Conduit		For SILVYN® RILL PA 12 Conduit		Standard Pack Size
Black	Gray		inches	mm	inches	mm	Black	Gray	Black	Gray	
61801025	61801020	PG-9	.512	13.0	.394	10	61746945	61746940	61815115	61815110	50
61801035	61801030	PG-11	.622	15.8	.394	10	61746955	61746950	61815125	61815120	50
56000105	56000100	PG-13	.728	18.5	.433	11	61747015	61747010	61815185	61815180	50
61801045	61801040	PG-16	.835	21.2	.472	12	61746965	61746960	61815135	61815130	50
61801055	61801050	PG-21	1.122	28.5	.472	12	61746975	61746970	61815145	61815140	25
61801065	61801060	PG-29	1.358	34.5	.472	12	61746985	61746980	61815155	61815150	10
61801075	61801061	PG-36	1.673	42.5	.472	12	61746995	61746990	61747085	61714200	10
61801085	61801062	PG-48	2.146	54.5	.551	14	61747005	61747000	61747095	61714210	5

SILVYN® KLICK-WM: Metric Conduit Connectors

Part Number		Thread Type & Size	Conduit Outer Diameter		Thread Length		For SILVYN® RILL PA 6 Conduit		For SILVYN® RILL PA 12 Conduit		Standard Pack Size
Black	Gray		inches	mm	inches	mm	Black	Gray	Black	Gray	
55501115	55501110	M-10X1.0	.394	10.0	.433	11	61746935	61746939	61815105	61815100	50
55501125	55501120	M-12X1.5	.512	13.0	.472	12	61746945	61746940	61815115	61815110	50
55501145	55501140	M-16X1.5	.622	15.8	.472	12	61746955	61746950	61815125	61815120	50
55501165	55501160	M-20X1.5	.835	21.2	.512	13	61746965	61746960	61815135	61815130	50
55501185	55501180	M-25X1.5	1.122	28.5	.512	13	61746975	61746970	61815145	61815140	25
55501205	55501200	M-32X1.5	1.358	34.5	.591	15	61746985	61746980	61815155	61815150	10
55501225	55501220	M-40X1.5	1.673	42.5	.591	15	61746995	61746990	61815165	61815160	10
55501245	55501240	M-50X1.5	2.146	54.5	.630	16	61747005	61747000	61815175	61815170	5



LAPP GROUP



SILVYN® LKI/LKI-M

Construction: Conduit Connectors for SILVYN® FD-PU and SILVYN® FPS Conduit.

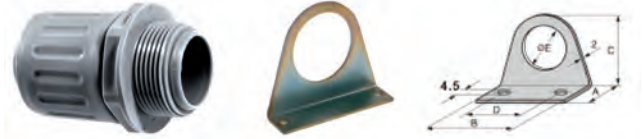
Body: Polypropylene.

Features:

The SILVYN® LKI is a swivel connector designed to allow the conduit to rotate freely without damage to the conduit or the connection. It is tension and vibration resistant, providing a high quality connection between the protective conduit and the machine.

Applications:

The SILVYN® LKI is for use with both the SILVYN® FPS and SILVYN® FD-PU. The SILVYN® BW is a special mounting bracket to be used with the SILVYN LKI to provide the proper sealing protection. Locknuts are available in the SKINTOP® GMP-GL Series.



Technical Data:

IP Protection: IP 54

Temperature:
-10°C to +110°C

Rated Voltage:
N/A

Color Code:
Gray

Approvals:



SILVYN® LKI: PG Conduit Connectors

Part Number	Thread Type & Size	Conduit Outer Diameter		Thread Length		For SILVYN® FPS Conduit	For SILVYN® FD-PU Conduit	Standard Pack Size
		inches	mm	inches	mm			
55000000	PG-7	.394	10	.394	10	61711550	64453662	50
55000010	PG-9	.551	14	.394	10	61711590	64453672	50
55000020	PG-11	.669	17	.394	10	61711630	64453682	50
55000030	PG-13	.748	19	.394	10	61711670	64453692	50
55000040	PG-16	.827	21	.433	11	61711710	64453702	50
55000050	PG-21	1.063	27	.433	11	61711750	64453712	25
55000060	PG-29	1.417	36	.472	12	61711790	64453721	25
55000070	PG-36	1.772	45	.472	12	61711830	64453731	25
55000090	PG-48	2.205	56	.591	15	61711910	64453751	10

SILVYN® LKI-M: Metric Conduit Connectors

Part Number	Thread Type & Size	Conduit Outer Diameter		Thread Length		For SILVYN® FPS Conduit	For SILVYN® FD-PU Conduit	Standard Pack Size
		inches	mm	inches	mm			
55501400	M-12X1.5	.394	10	.394	10	61711550	64453612	50
55501410	M-16X1.5	.551	14	.394	10	61711590	64453672	50
55501420	M-20X1.5	.669	17	.394	10	61711630	64453682	50
55501430	M-25X1.5	.827	21	.433	11	61711710	64453702	50
55501440	M-32X1.5	1.063	27	.472	12	61711750	64453712	25
55501450	M-40X1.5	1.417	36	.472	12	61711790	64453721	25
55501460	M-50X1.4	1.772	45	.472	12	61711830	64453731	25
55501470	M-63X1.5	2.205	56	.591	15	61711910	64453751	10

SILVYN® BW: PG Brackets

Part Number	Thread Type & Size	A		B		C		D		E		Standard Pack Size
		inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	
55000540	PG-16	.787	20	1.969	50	1.496	38	1.575	40	.906	23.0	25
55000550	PG-21	.787	20	2.362	60	1.850	47	1.969	50	1.142	29.0	25
55000560	PG-29	.787	20	2.756	70	2.244	57	2.362	60	1.476	37.5	25
55000570	PG-36	.787	20	3.150	80	2.638	67	2.756	70	1.870	47.5	25

EPIC® Rectangular Connectors

Features:

EPIC® Connectors provide a safe, cost-effective solution for your industrial wiring requirements.

Applications:

EPIC® Rectangular Connectors are designed to meet the power and control connectivity needs and requirements of your business.

Additional Information:

Watertight IP65

WATERTIGHT IP65

				INSERTS		SINGLE LEVER PANEL MOUNT BASE		DOUBLE LEVER PANEL MOUNT BASE
								
INSERT/ HOUSING TYPE	OPERATING VOLTAGE	OPERATING CURRENT	NUMBER OF CONTACT	MALE PLUG	FEMALE RECEPTACLE	WITHOUT COVER	WITH COVER	WITHOUT COVER
HBE6	600V	16A	6	10190000	10191000	100030C0	100040C0	-
HBE10	600V	16A	10	10192000	10193000	10032900	10033900	100320C0
HBE16	600V	16A	16	10194000	10195000	10072900	10073900	100720C0
HBE24	600V	16A	24	10196000	10197000	10102900	10103900	101020C0

WATERTIGHT IP65

TOP ENTRY HOOD W/ SINGLE LEVER BOLTS					TOP ENTRY HOOD W/ DOUBLE LEVER BOLTS	
						
INSERT/ HOUSING TYPE	PG13.5	PG16	PG21	PG29	PG21	PG29
HBE6	100110R	-	700202	-	-	-
HBE10	-	100409	-	-	-	-
HBE16	-	-	100809	-	100800	100900
HBE24	-	-	101219	101119	101210	101110

WATERTIGHT IP65

SIDE ENTRY HOOD W/ SINGLE LEVER BOLTS			SIDE ENTRY HOOD W/ DOUBLE LEVER BOLTS		
					
INSERT/ HOUSING TYPE	PG16	PG21	PG16	PG21	PG29
HBE6	100220	-	-	-	-
HBE10	100429	-	100420	-	-
HBE16	-	100829	-	100820	100920
HBE24	-	-	-	101110	-



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EPIC® Connectors

Construction: Pin & Sleeve IEC60309-1 & -2

Features: EPIC® Connectors provide a safe, cost-effective solution for your industrial wiring requirements.

Applications: EPIC® Pin & Sleeve Connectors are designed to meet the power connectivity needs and requirements of your business.

Additional Information: MULTIMAX pin and sleeve connectors have a unique patented design that can be assembled in under 20 seconds thus saving money through reduced downtime and installation savings; they are also a sensible alternative to twist lock connectors in many applications.

Standards: IEC60309-1 & -2; UL1682 & 1686

Technical Data:



Approvals:

- Conform to IEC 60309-1 and -2 standards; 
- Watertight IP67, Splashproof IP44

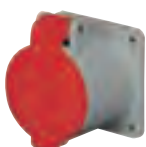
CEE AND ULYSEE

WATERTIGHT IP67

		CEE STRAIGHT MALE PLUG WITH CABLE GLAND	CEE STRAIGHT FEMALE CONNECTOR WITH CABLE GLAND	CEE FEMALE ANGLED PANEL MOUNT RECEPTACLE	ULYSSE SWITCHED SOCKET OUTLET WITH FUSEHOLDER
					
CURRENT RATING (AMPS)	NUMBER OF WIRES/ VOLTS	477513FX	473513FX	471573FX	400137FX
20	4 / 480V	477516FX	473516FX	471577FX	400237FX
30	4 / 480V				

MULTIMAX AND CEE

SPLASHPROOF IP44

		MULTIMAX MALE PLUG W/CABLE SLEEVE	MULTIMAX FEMALE CONNECTOR W/CABLE SLEEVE	CEE FEMALE STRAIGHT PANEL MOUNT RECEPTACLE	CEE FEMALE 75 DEGREE INTERNAL SURFACE MOUNT RECEPTACLE
					
20	3 / 125V	700124FX	720124FX	431611FX	471372FX
	4 / 250V	700139FX	720139FX	441622FX	471572FX
	4 / 480V	700137FX	720137FX	441650FX	
30	3 / 250V	700226FX	720226FX	433222FX	471576FX
	4 / 480V	700237FX	720237FX	443250FX	

Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com



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EPIC® Circular Connectors

Construction: EPIC® Circular Connectors: LS1.

Features: Rugged nickel-plated, die-cast zinc body. Positive vibration protection for use with motor drives and moving assemblies. Integral EMC cable gland provides strain-relief, IP67/68 protections, and 360° shielding.

No. of Contacts: 5+PE, 3+PE+4

Materials:

Housing: Nickel Plated Zinc. Insert: PA, PBT, UL94 V-0. Contacts: gold plated copper alloy. Gaskets & Seals: FPM

Standards: DIN EN 61984

Technical Data:



Temperature:
-25°C to +125°C



Rated Voltage:
• VDE: 630V (2mm contacts)
250V (1mm contacts)
• UL: 600V



Rated Current:
• 22 amps (2mm contacts)
• 7 amps (1mm contacts)



Impulse Voltage:
• 6kV (2mm contacts)
• 4kV (1mm contacts)



Contact Resistance:
<5m Ohms



Mating Cycles:
500



Approvals:



Watertight IP67/68 (10h, 1m)

LS1 CIRCULAR CONNECTORS

WATERTIGHT IP67/68 (10h, 1m)

			STRAIGHT PANEL MOUNT INLET	ANGLED, ROTATABLE PANEL MOUNT INLET	CABLE COUPLER	CABLE CONNECTOR
						
OPERATING VOLTAGE	OPERATING CURRENT	CONTACT CONFIGURATION				
600V	22A	5+PE	76003000	24420058*	76133000	76123000
600V	22A	3+PE+4	76004000	24420056*	76134000	76124000

*IP65

Check out our complete inventory of products at www.lapptannehill.com

EPIC® Circular Connectors

Construction: Rugged Nickel-plated, die-cast Zinc Body.

Features: EPIC® Circular Connectors M23. Positive vibration protection for use with motor drives and moving assemblies. Integral EMC cable gland provides strain-relief, IP67/IP68 protection, and 360 degree shielding.

Applications: The M23 connectors have many inherent features which offer application advantages and provide significant benefits for the customer. These features make it one of the most application friendly connectors available, and insure quick and easy assembly, high reliability, and long, uninterrupted service life in tough industrial environments.

No. of Contacts: 6,7,8+1, 9,12,16,17

Materials:

Housing: Nickel Plated Zinc. **Insert:** PA, PBT, UL94 V-0. **Contacts:** gold plated copper alloy. **Gaskets & Seals:** FPM.

Standards: DIN EN 61984

Technical Data:

Rated Voltage: • 6,7,8+1,9 poles-150 volts. • 12 & 16 poles-100 volts. • 17 poles-50 volts.	Impulse Voltage: 0.8kV	Approvals:  Watertight IP67/68 (10h, 1m)
Rated Current: • 6&7 pole: 14 amps; 8+1, 9,12,16,17 • pole: 7 amps	Contact Resistance: <5m Ohms	
	Mating Cycles: 100 minimum	

M23 CIRCULAR CONNECTORS - HOUSINGS

WATERTIGHT IP67/68 (10h, 1m)

STRAIGHT MOUNT PANEL BASE	STRAIGHT THRU-HOLE MOUNT PANEL BASE	ANGLED, ROTATABLE FLANGE MOUNT PANEL BASE	CABLE COUPLER	CABLE CONNECTOR
				
72004000	44420046	24420055*	44420040	44420037

*IP65

Insert Configurations

Features: Connector inserts will accept both male and female contacts. A complete connection requires one E-Type insert and one P-Type insert.

M23 CIRCULAR CONNECTORS - INSERTS

			E-TYPE INSERT W/FEMALE SOLDER CONTACTS	E-TYPE INSERT W/MALE SOLDER CONTACTS	P-TYPE INSERT W/FEMALE SOLDER CONTACTS	P-TYPE INSERT W/MALE SOLDER CONTACTS
OPERATING VOLTAGE	OPERATING CURRENT	NUMBERS OF CONTACTS				
100V	7A	12	73002722	73002720	73002716	73002714
100V	7A	16	-	73002708	73002704	-
50V	7A	17	-	73028500	73018000	-

EPIC® Rectangular Connectors HA 3/4 Inserts

Construction:

HA Plug & Receptacles: Screw Terminated Inserts.

Features: The small HA 3/4 inserts are used whenever space is limited. The HA 3-48 screw terminated inserts fit into HA Series Housings. A modified Housing can fit 64 contacts.

No. of Contacts: 3,4,10,16,32,48,64 (+PE)

Termination: Screw

Wire Size: AWG 20-14 (0.5-2.5mm²)

Technical Data:

 **Rated Voltage:**
600V

 **Rated Current:**
• 10A (HA 3/4)
• 14A (HA 10-64)

 **Approvals:**

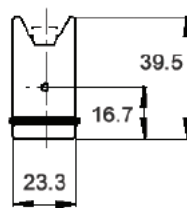


HA 3/4 Inserts

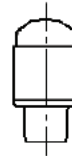
HA 3



Plug

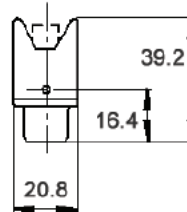


All dimensions
are in mm.

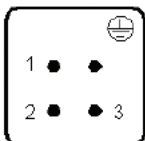


Receptacle

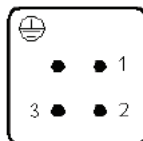
HA 4



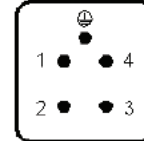
Plug



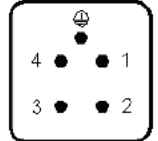
Receptacle



Plug



Receptacle



These inserts fit in
the HA 3/4 Series
Housings.

Description	Plug	Receptacle
HA 3	10420000	10421000
HA 4	10431000	10432000



Coding Pin:
10451400

Complete catalog available online at: www.lapptannehill.com

EPIC® Rectangular Connectors HA 10 Inserts

Construction:
HA Plug & Receptacles: Screw Terminated Inserts.
Features: The HA 10-48 screw terminated inserts fit into HA Series housings. A modified Housing can fit 64 contacts.
No. of Contacts: 10,16,32,48,64 (+PE)
Termination: Screw
Wire Size: AWG 20-14 (0.5-2.5mm2)

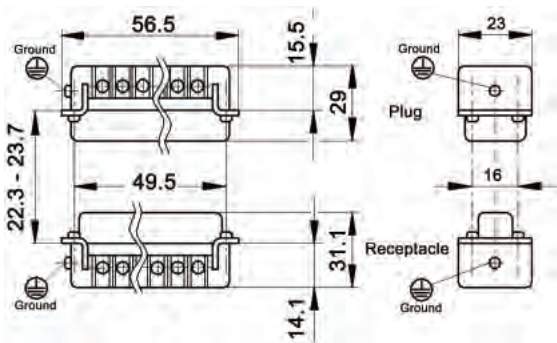
Technical Data:

Rated Voltage:
600V

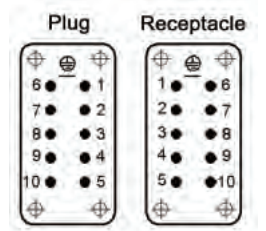
Rated Current:
14A (HA 10-64)

Approvals:

HA 10 Inserts



View from cable side



All dimensions are in mm.



Description	Plug	Receptacle
HA 10 with Wire Protection	10440100	10441100
HA 10 without Wire Protection	10440000	10441000

Not finding what you are looking for?
Please contact us at sales@lapptannehill.com, or visit our website at: www.lapptannehill.com



EPIC® Rectangular Connectors HA 3/4 Housings: Single Lever on Base

Construction: Die cast zinc, powder coated/Thermoplastic flame retardant material rated UL 94 V-O.

Temperature Range: >-40°C to +125°C

Specification: DIN 43652

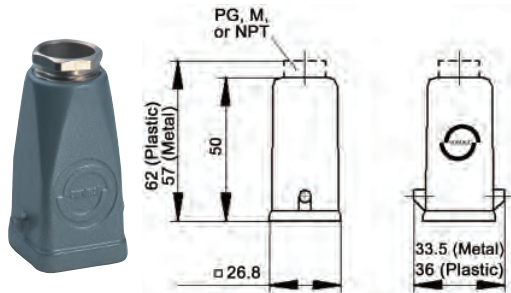
Protection class: NEMA 4, NEMA 12, IP65



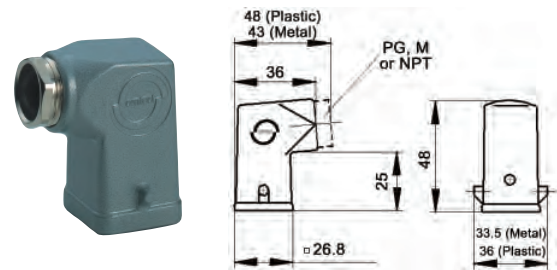
LAPP GROUP

TOP & SIDE ENTRY HOODS

TOP ENTRY



SIDE ENTRY



All dimensions are in mm.

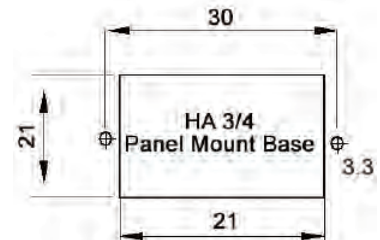
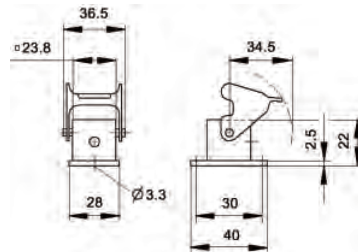
Top Entry Hoods

Material	Size of Entry			Without Cable Gland		With Cable Gland	
	PG	NPT	Metric	NPT	Metric	PG	Metric
Zinc Die Cast	11	1/2"	20	105121NP	-	10426500	19426500
Black Plastic	11	1/2"	20	104255NP	19425500	10426700	-
Grey Plastic	11	1/2"	20	104260NP	19426000	10426400	-

Side Entry Hoods

Material	Size of Entry			Without Cable Gland		With Cable Gland	
	PG	NPT	Metric	NPT	Metric	PG	Metric
Zinc Die Cast	11	1/2"	20	105123NP	-	10427500	19427500
Black Plastic	11	1/2"	20	104273NP	19427300	10620600	-
Grey Plastic	11	1/2"	20	104270NP	19427000	10427100	-

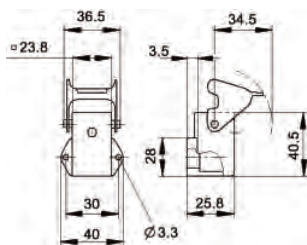
PANEL MOUNT BASES



All dimensions are in mm.

Gray Metal	Black Plastic	Gray Plastic
10422500	10422200	10422000

ANGLED PANEL MOUNT BASES



Gray Metal	Black Plastic	Gray Plastic
10423500	10423100	10423000



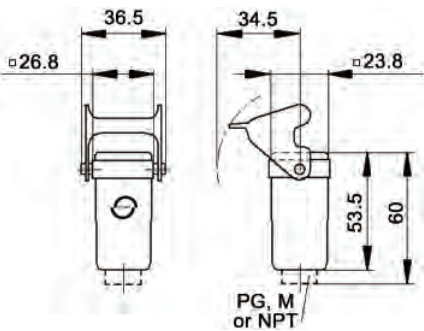
Cable Coupler Hoods

Construction: Metal or Plastic.

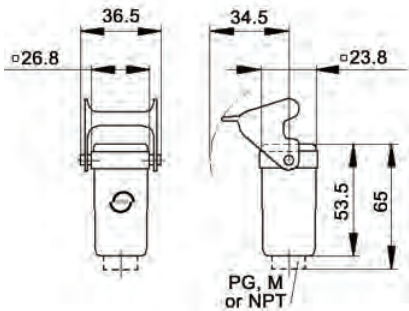


CABLE COUPLER HOODS

METAL



PLASTIC



All dimensions are in mm.

Material	Size of Entry			Without Cable Gland		With Cable Gland	
	PG	NPT	Metric	NPT	Metric	PG	Metric
Zinc Die Cast	11	1/2"	20	105129NP	19512900	10429500	19429500
Black Plastic	11	1/2"	20	104292NP	19429200	10620300	-
Grey Plastic	11	1/2"	20	104290NP	19429000	10429100	-

Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com



EPIC® Rectangular Connectors

Construction: HA 10 Housings: Single Lever on Base.

Specification: DIN 43652.

Temperature Range: -40°C to +125°C.

Protection Class: NEMA 4, NEMA 12, IP65.

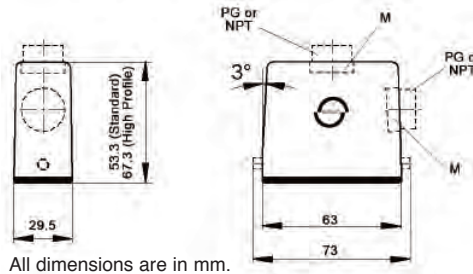
Material: Aluminum alloy, powder coated.

Additional information: Top Entry Metric hoods do not come with a neck.



TOP & SIDE ENTRY HOODS

TOP ENTRY



All dimensions are in mm.

SIDE ENTRY



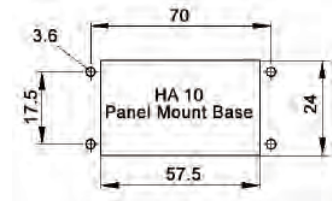
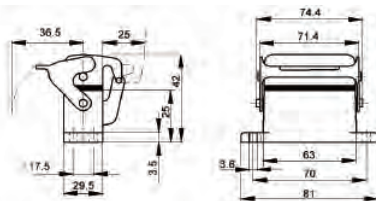
STANDARD PROFILE

Position of Cable Entry	Size of Entry			Part Numbers			Complete your installation with a SKINTOP®			
	PG	NPT	Metric	PG	NPT	Metric	PG- Nylon	PG- Metal	Metric- Nylon	Metric-Metal
Top Entry	13	1/2"	20	104460	104460NP	19446000	53015130	52015730	53111020	53112020
	16	1/2"	25	104461	104461NP	19446100	53015140	52015740	53111030	53112030
Side Entry	16	1/2"	20	104450	104450NP	19445000	53015140	52015740	53111020	53112020
	21	3/4"	25	104455	104455NP	19445500	53015150	52015750	53111030	53112030

Panel Mount Bases



PANEL MOUNT BASES



Without Dust Cover	With Dust Cover
104420C0	704440C0

All dimensions are in mm.

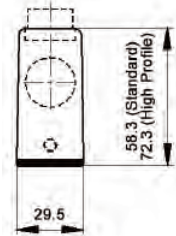
EPIC® Rectangular Connectors

Construction: HA 16 Housings: Single Lever on Base.

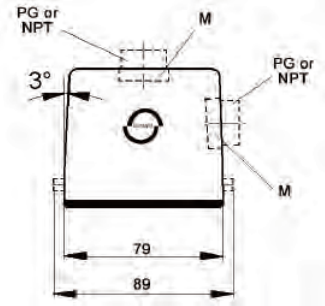
Additional information: Top Entry Metric hoods do not come with a neck.



TOP ENTRY



HOODS



SIDE ENTRY



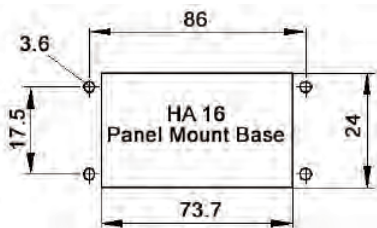
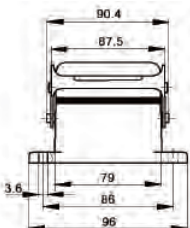
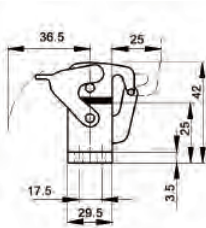
STANDARD PROFILE

Position of Cable Entry	Size of Entry			Part Numbers			Complete your installation with a SKINTOP®			
	PG	NPT	Metric	PG	NPT	Metric	PG- Nylon	PG- Metal	Metric- Nylon	Metric-Metal
Top Entry	16	1/2"	20	105650	105650NP	19565000	53015140	52015740	53111020	53112020
	21	3/4"	25	105652	105652NP	19565300	53015150	52015750	53111030	53112030
Side Entry	16	1/2"	20	105640	105640NP	19564000	53015140	52015740	53111020	53112020
	21	3/4"	25	105645	105645NP	19564500	53015150	52015750	53111030	53112030

EPIC® Rectangular Connectors-Panel Mount Base



PANEL MOUNT BASE



Without Dust Cover	With Dust Cover
104620C0	704740C0

Please contact your sales representative for detailed information at sales@lapptannehill.com



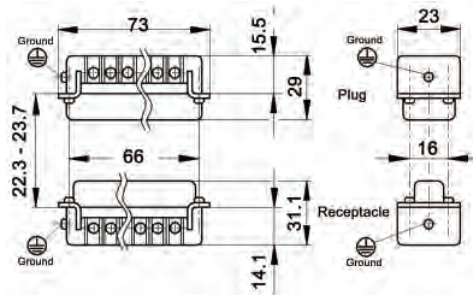
EPIC® Rectangular Connectors

Construction: HA Plug & Receptacles

Termination: Screw Terminated.

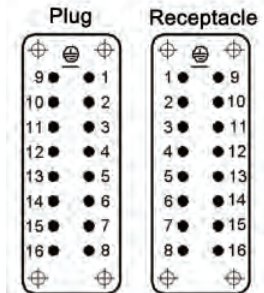


HA 16 Inserts



All dimensions are in mm.

View from cable side



Description	Plug	Receptacle
HA 16 with Wire Protection	10530000	10531000
HA 16 without Wire Protection	10532000	10533000

EPIC® Rectangular Connectors

Construction: HBVE Series.

Features: The HBVE series inserts are high voltage inserts which are equipped with switch contacts. The switch contacts lag when inserted and lead when separated. They can be used in an electrical interlock to prevent mating and unmating under power.

Termination: HBVE 3 Screw Terminated Inserts

Wire Size: 0.5-2.5mm² AWG: 20-14



Technical Data:

Temperature:
-40°C to 125°C

Test Voltage:
6kV

Contacts:
Copper alloy, silver plated

Contact Resistance:
<2mOhm

Mating Cycles:
100 (higher mating cycles depend on the application)

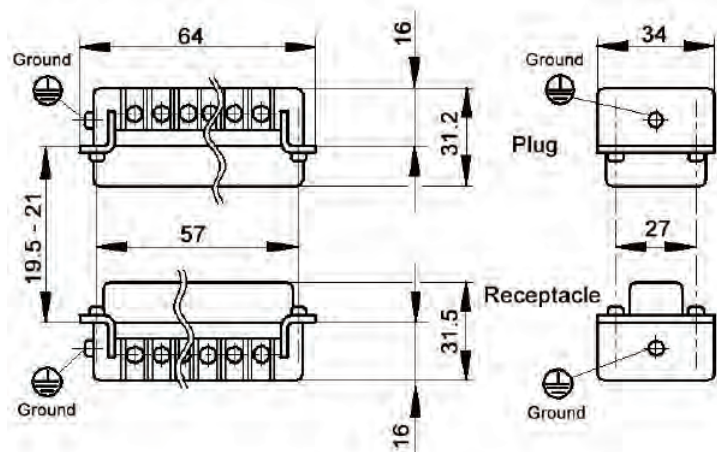
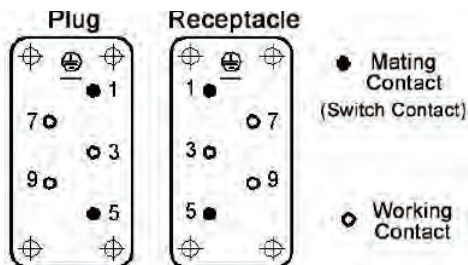
Rated Voltage Type:
600V

Rated Current:
16 amps

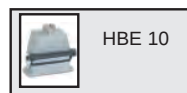
HBVE 3 SCREW TERMINATED INSERTS



View from cable side



All dimensions are in mm.



Description	Plug	Receptacle
With wire protection	10210010	10211010
Without wire protection	10210110	10211110



EPIC® Rectangular Connectors

Construction: Mixed Power Series.

Features: The Mixed Power series inserts provide contacts for power or a combination of power and signal in one insert. These inserts fit into the HBE series housings. Also available: 4 power/2 signal & 4 power/8 signal.

Contact Material: Copper alloy, hard silver plated.

Molding Material: Thermoplastic resin, fiberglass reinforced.

Termination Type: Screw.

Wire Size: Screw termination: up to 6 AWG, 16 mm² for power contacts. Screw termination: up to 14 AWG, 2.5 mm² for signal contacts.

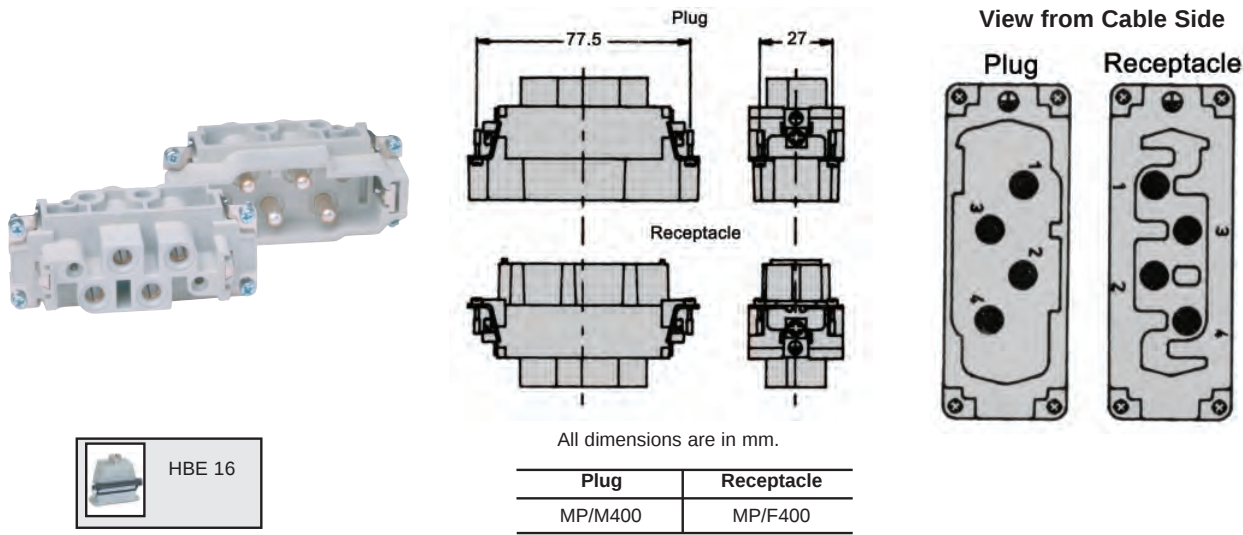
Contact Resistance: <0.3mOhm (Principle); <1mOhm (Auxiliary).



Technical Data:

Temperature: -40°C to 125°C	Test Voltage: • 6kV (4x0) • 6kV/4kV (4x2) • 4kV (4x8)	Rated Current: • 80 amps power • 16 amps signal
Rated Voltage: 600V UL/CSA		

4 POWER/ 0 SIGNAL MIXED POWER INSERTS



Not finding what you are looking for?
Please contact us at sales@lapptannehill.com, or visit our website at: www.lapptannehill.com



EPIC® Rectangular Connectors

Construction: HBS Series.

Features: The HBS series inserts are characterized by their high current carrying capacity. A secure electrical connection can be made by simple screw termination for cables up to 10 AWG.

Termination Type: Screw termination: 0.5-6mm² AWG: 20-10.

Contacts: 6, 12 (+PE), Copper alloy, silver plated.

Contact Resistance: <2mOhm.

Mating Cycles: 100 (higher mating cycles depends on the application).



Technical Data:

Temperature:
-40°C to 125°C

Test Voltage:
6kV

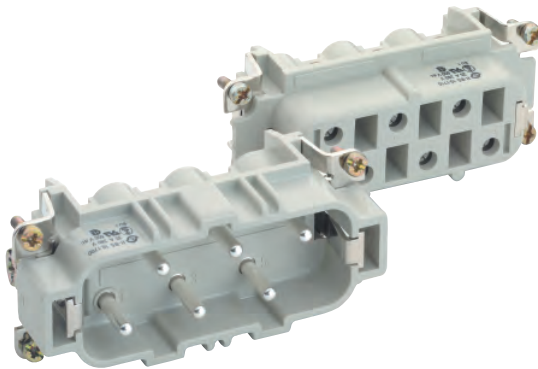
Rated Voltage:

- VDE: 400V EPIC HBS 6-12,
- UL: 600V EPIC HBS 6-12,
- CSA: 600V EPIC HBS 6-12

Rated Current:
35 amps

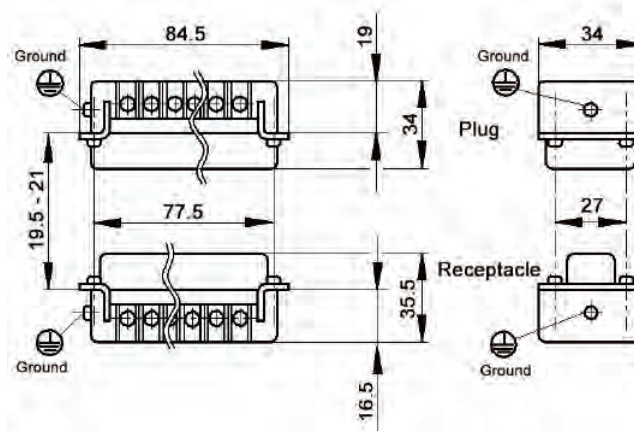
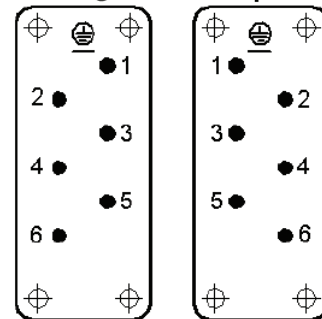
HBS 6 SCREW TERMINATED INSERTS

View from cable side

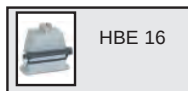


Plug

Receptacle



All dimensions are in mm.



Description	Plug	Receptacle
#1-6	10170000	10171000

Polyethylene Corrugated Loom



Construction: Black slit with no stripe. **Insulation:** Polyethylene. **Jacket:** Black

Features:

The convoluted tubing protects against mechanical aggressions. It has excellent crush and abrasion resistance.

Applications:

Applications that require the ability to drain moisture from cable assemblies. Excellent for marine, industrial, automotive, or agricultural use.

Additional Information:

Available in slit and non-slit versions.

Technical Data:



Temperature:
-40°F to 200°F



Color Code:
Black slit with no stripe

POLYETHYLENE

LAPP PART #	NOMINAL ID	UPS / BULK BOX QUAN.	PART DESCRIPTION
LOOM-1/8-0	.177"	20,000 FT. <i>BULK ONLY</i>	1/8" ID POLY BLK SLIT
LOOM-1/4-0-BX LOOM-1/4-0	.244"	2,500 FT. 10,000 FT.	1/4" / 6MM ID POLY BLK SLIT
LOOM-3/8-0-BX LOOM-3/8-0	.344"	1,500 FT. 7,000 FT.	3/8" / 9MM ID POLY BLK SLIT
LOOM-7/16-0-BX LOOM-7/16-0	.409"	1,200 FT. 5,000 FT.	7/16" / 10MM ID POLY BLK SLIT
LOOM-1/2-0-BX LOOM-1/2-0	.518"	900 FT. 3,500 FT.	1/2" / 13MM ID POLY. BLK SLIT
LOOM-5/8-0-BX LOOM-5/8-0	.618"	700 FT. 2,500 FT.	5/8" / 16MM ID POLY BLK SLT
LOOM-3/4-0-BX LOOM-3/4-0	.744"	500 FT. 2,000 FT.	3/4" / 19MM ID POLY. BLK SLIT
LOOM-7/8-0-BX LOOM-7/8-0	.878"	250 FT. 1,500 FT.	7/8" / 22MM ID POLY. BLK SLIT
LOOM-1-0-BX LOOM-1-0	1.031"	200 FT. 1,000 FT.	1" / 25MM ID POLY. BLK SLIT
LOOM-1 1/4-0-BX LOOM-1 1/4-0	1.201"	200 FT. 800 FT.	1.25" / 30MM ID POLY. BLK SLIT 1.25" / 30MM ID POLY. BLK SLIT
LOOM-1-1/2-0-BX LOOM-1-1/2-0	1.484"	100 FT 500 FT	1 1/2" ID POLY BLK SLIT
LOOM-2-0	1.87"	300 FT. <i>BULK ONLY</i>	2"(1.88") ID POLY. BLK SLIT

UPS BOXES SMALLER QUAN. AS SHOWN PER EACH SIZE

BULK = 1/2 GAYLORDS, 2 PER PALLET FOR CUBED OUT SKID APPROX 4' X 4' X 2' H

Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com



Polypropylene black slit with green stripe

Construction: Polypropylene. **Jacket:** Black slit with green stripe.

Features:

The convoluted tubing protects against mechanical aggressions. It has excellent crush and abrasion resistance.

Applications:

Excellent for marine, industrial, automotive, or agricultural use.

Additional Information:

Available in UPS boxes and bulk.

Technical Data:



Temperature:
-40°F to 275°F



Color Code:
Black slit with green stripe



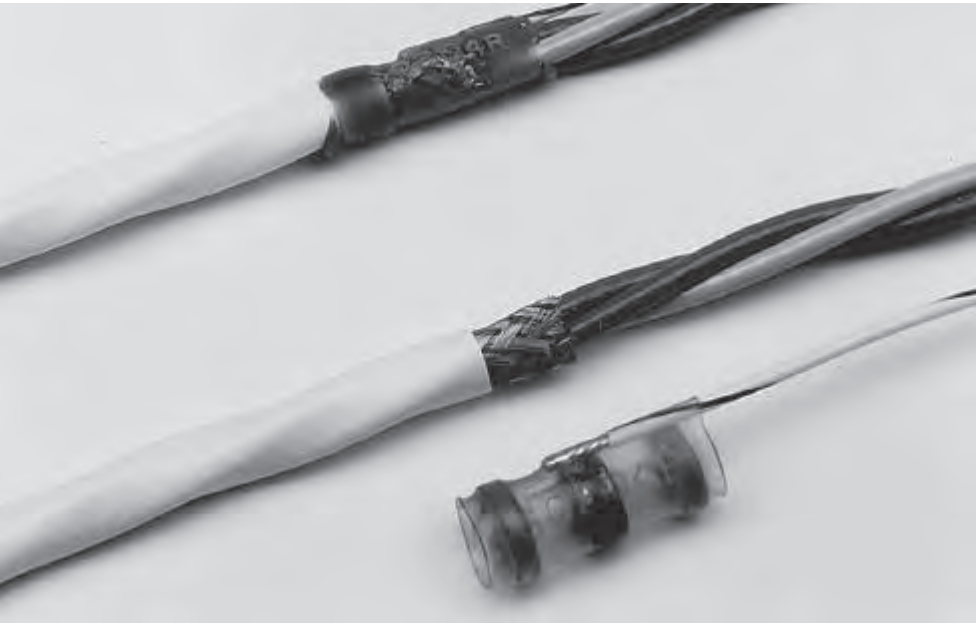
POLYETHYLENE BLACK SLIT W/ GREEN STRIPE - TEMP. RANGE -40 TO 275F			
LAPP PART #	NOMINAL ID	UPS / BULK BOX QUAN.	PART DESCRIPTION
LOOM-1/4-OPP-BX	.244"	2,500 FT.	1/4" / 6MM ID PP BLK SLT GRN STRP
LOOM-1/4-OPP		10,000 FT.	
LOOM-3/8-OPP-BX	.344"	1,500 FT.	3/8" / 9MM ID PP BLK SLT GRN STRP
LOOM-3/8-OPP		7,000 FT.	
LOOM-1/2-OPP-BX	.518"	900 FT.	1/2" / 13MM ID PP BLK SLT GRN STRP
LOOM-1/2-OPP		3,500 FT.	
LOOM-5/8-OPP	.618"	2,500 FT.	5/8" / 16MM ID PP BLK SLT GRN STRP
	<i>BULK ONLY</i>		
LOOM-3/4-OPP-BX	.744"	500 FT.	3/4" / 19MM ID PP BLK SLT GRN STRP
LOOM-3/4-OPP		2,000 FT.	
LOOM-7/8-OPP	.878"	1,500 FT.	7/8" / 22MM ID PP BLK SLT GRN STRP
	<i>BULK ONLY</i>		
LOOM-1-OPP-BX	1.031"	200 FT.	1" / 25MM ID PP BLK SLT GRN STRP
LOOM-1-OPP		1,000 FT.	
LOOM-1 1/4-OPP	1.201"	800 FT.	1 1/4" / 30MM ID PP BLK SLT GRN STRP
	<i>BULK ONLY</i>		
LOOM-1 1/2-OPP	1.484"	500 FT.	1 1/2" ID PP BLK SLT GRN STRP
	<i>BULK ONLY</i>		
LOOM-2-OPP	1.87"	300 FT.	2" ID PP BLK SLT GRN STRP
	<i>BULK ONLY</i>		

Complete catalog available online at: www.lapptannehill.com



Shield Termination

SolderSleeve Shield Terminators

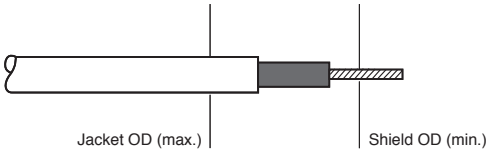


Product Selection Process

1. Select product series from the Product Options table below.

2. Determine cable dimensions.

3. Optional: Select pre-installed wire lead type (see Table G on page 8-47 for type descriptions).
4. Select part number (use the selection table indicated for your product series in the Product Options table below).



Product Options

Product Series	System Oper. Temperature (Max.)	Used on Cables Rated (Min.)	Environmental Protection	Solder Alloy	Flux Type	Insulation Material	Part No. Selection Table
CWT	125°C [257°F]	85°C [185°F]	Splash resistant	Cd18	RA	Polyolefin	A
SO63*	150°C [302°F]	125°C [257°F]	Immersion resistant	Sn63	RMA	Polyvinylidene fluoride	B
S01/S02**, S03	150°C [302°F]	125°C [257°F]	Immersion resistant	Sn63	RMA	Polyvinylidene fluoride	C, D
SO96***	175°C [347°F]	150°C [302°F]	Immersion resistant	Sn96	RA	Polyvinylidene fluoride	E
SO175****	175°C [347°F]	150°C [302°F]	Immersion resistant	Sn96	RA	Polyvinylidene fluoride	F

*Meets performance requirements of SAE-AS83519 (formerly MIL-S-83519) and NAS 1747, supplied with BiAlloy temperature indicator.
**Qualified to SAE-AS83519 (formerly MIL-S-83519), supplied with thermochromic temperature indicator.
***Meets performance requirements of SAE-AS83519 (formerly MIL-S-83519) and NAS 1747, supplied with thermochromic temperature indicator.
****Meets performance requirements of SAE-AS83519 (formerly MIL-S-83519), supplied with BiAlloy temperature indicator.
Note: Cadmium-free option (B-152 series) is available for operating temperature of 125°C [257°F]. Consult Tyco Electronics for details.



Raychem, TE Connectivity, TE connectivity (logo) and TE (logo) are trademarks

CWT Solder Sleeve Shield Terminators

Insulation: Radiation-crosslinked, transparent heat-shrinkable polyolefin, **Jacket:** Solder Alloy: Cd18. Flux Type: RA.

Features:

Transparent insulation sleeve provides encapsulation, inspectability, strain relief, and insulation. Prefluxed solder preform provides a controlled soldering process. One-piece design offers easy installation and lower installed cost. Optional preinstalled ground leads provide convenience and ease of installation.

Applications:

Used for shield-to-ground termination.

Additional Information:

Environmental Protection: Splash resistant. Preinstalled lead (optional). Solder sleeve one-step terminators insulate, strain relieve, and protect terminations from environmental damage in a wide spectrum of low-temperature electrical interconnection applications. They are-as their name says-one-step solutions.

Technical Data:



Temperature:

-55°C to +125°C, 257°F

Used on Cables Rated 85°C (min).



Approvals:

UL File E87681

Raychem Specification D-5023

CWT Series

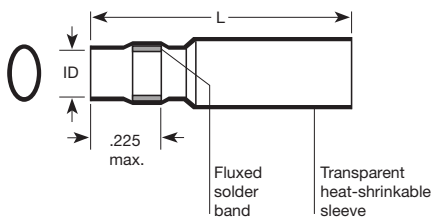
Cable OD		Part Nos.	
Jacket OD Max.	Shield OD Min.	No Preinstalled Lead	With Preinstalled Lead (22AWG/0.38 mm ² green)
1.7 [.065]	0.9 [.035]	CWT-3801	—
1.95 [.075]	1.1 [.043]	CWT-3802	—
2.7 [.105]	1.5 [.059]	CWT-3	CWT-3-W122-5
4.5 [.180]	2.0 [.079]	CWT-5	CWT-5-W122-5
6.0 [.235]	3.3 [.130]	CWT-6	CWT-6-W122-5
7.0 [.275]	3.3 [.130]	CWT-7	CWT-7-W122-5
8.7 [.340]	4.5 [.177]	CWT-9	CWT-9-W122-5
10.7 [.420]	4.5 [.177]	CWT-11	CWT-11-W122-5
13.0 [.510]	7.0 [.276]	CWT-13	CWT-13-W122-5

Note: The CWT series is suitable for applications using low-temperature wires (typically rated at 85°C [185°F] to 125°C [257°F]) with bare copper or tin plating.

Product dimensions and part number system (dimensions in inches)

CWT -15XX Series*

Terminating wires to component terminals
(pin, post, tab)

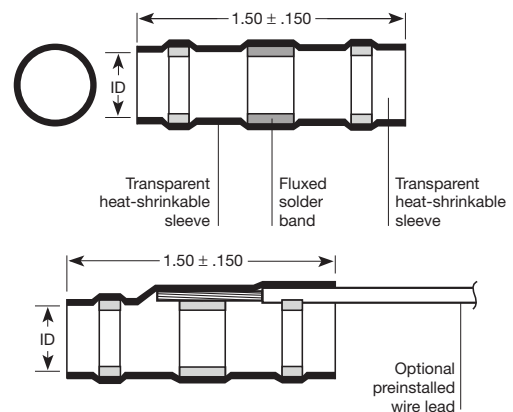


Raychem, TE Connectivity, TE connectivity (logo) and TE (logo) are trademarks

Part number	Minimum	
	inside diameter (ID)	Length (L)
CWT-1501	0.060	0.575 ± 0.060
CWT-1502	0.090	0.575 ± 0.060
CWT-1503	0.110	0.575 ± 0.060
CWT-1504	0.150	0.575 ± 0.060
CWT-1505	1.102	1.00 ± 0.060

CWT -38XX Series

Terminating ground wire to cable shield
Terminating coaxial cable
Wire-to-wire splicing



Part number	Minimum	
	inside diameter (ID)	
CWT-3801	0.065	
CWT-3802	0.075	
CWT-3803	0.105	
CWT-3805	0.180	
CWT-3806	0.235	
CWT-3807	0.275	
CWT-3809	0.340	
CWT-3811	0.420	
CWT-3813	0.510	

SO63 Series—BiAlloy Temperature Indication System

Construction: Heat-shrinkable thermoplastic sleeve contains a precisely engineered, fluxed solder band that is visible through the sleeve;
Insulation: The band provides exactly the amount of solder and flux required to terminate the ground lead to the cable shield,
Jacket: Encircling the band is a small temperature indicator ring.

Features:
This ring melts only when the surfaces to be joined have reached the correct soldering temperatures, thus ensuring a properly soldered connection. Process control is built into each sleeve.

Applications:
Used for shield-to-ground termination.

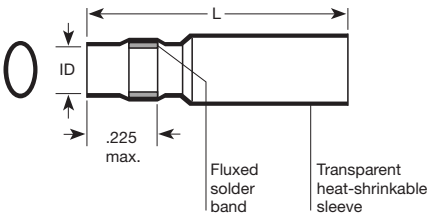
Additional Information:
The SO63 series is immersion resistant, features the Raychem BiAlloy temperature indication system, and meets the performance requirements of SAE-AS83519 (formerly MIL-S-83519),

Technical Data:

Approvals:
NAS 1747
RT-1404

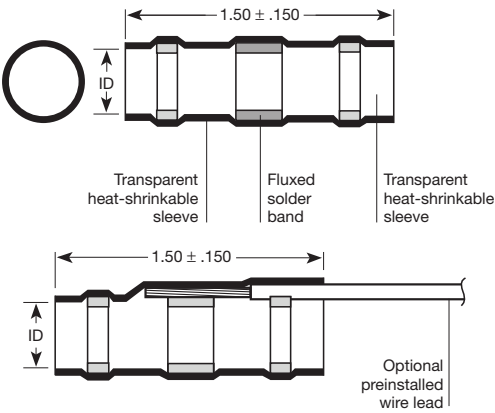
Product dimensions and part number system (dimensions in inches)

CWT -15XX Series*
Terminating wires to component terminals
(pin, post, tab)



Raychem, TE Connectivity, TE connectivity (logo) and TE (logo) are trademarks

CWT -38XX Series
Terminating ground wire to cable shield
Terminating coaxial cable
Wire-to-wire splicing



Part number	Minimum	Length (L)
	inside diameter (ID)	
CWT-1501	0.060	0.575 ± 0.060
CWT-1502	0.090	0.575 ± 0.060
CWT-1503	0.110	0.575 ± 0.060
CWT-1504	0.150	0.575 ± 0.060
CWT-1505	1.102	1.00 ± 0.060

Part number	Minimum
	inside diameter (ID)
CWT-3801	0.065
CWT-3802	0.075
CWT-3803	0.105
CWT-3805	0.180
CWT-3806	0.235
CWT-3807	0.275
CWT-3809	0.340
CWT-3811	0.420
CWT-3813	0.510

Table B. SO63 Series

Cable OD			Part Nos.					
Jacket OD Max.	Shield OD Min.	No Preinstalled Lead	Preinstalled Lead Option*				Braid Strap	
			20 AWG	22 AWG	24 AWG	26 AWG	Nickel Plated	Tin Plated
1.95 [0.075]	0.90 [.035]	SO63-1-00	SO63-1-55-20-90	SO63-1-55-22-90	SO63-1-55-24-90	SO63-1-55-26-90	SO63-1-01	SO63-1-9030
2.7 [0.105]	1.40 [.055]	SO63-2-00	SO63-2-55-20-90	SO63-2-55-22-90	SO63-2-55-24-90	SO63-2-55-26-90	SO63-2-01	SO63-2-9030
4.3 [0.170]	2.15 [.085]	SO63-3-00	SO63-3-55-20-90	SO63-3-55-22-90	SO63-3-55-24-90	SO63-3-55-26-90	SO63-3-01	SO63-3-9030
6.0 [0.235]	3.30 [.130]	SO63-4-00	SO63-4-55-20-90	SO63-4-55-22-90	SO63-4-55-24-90	SO63-4-55-26-90	SO63-4-01	SO63-4-9030
7.0 [0.275]	4.30 [.170]	SO63-5-00	SO63-5-55-20-90	SO63-5-55-22-90	SO63-5-55-24-90	SO63-5-55-26-90	SO63-5-01	SO63-5-9030

*See Table G for lead description. Color of wire lead is denoted by the last two digits of the part number as follows:
90 = White with a black stripe 9 = White 0 = Black 6 = Blue (24 AWG only) 5 = Green (20, 22, 24 AWG)

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are U.S. equivalents.
Dimensions are shown for reference purposes only. Specifications subject to change.

S01/S02 M83519 Series—Thermochromic Temperature Indicator

Construction: The M83519 (S01 and S02) series terminators contain a colored thermochromic temperature indicator that exhibits a distinct color change when surfaces have reached wetting temperature.

Features:

This color change gives both manufacturing and Quality Control an aid in the inspection of the completed termination.

Additional Information:

M83519 is the qualified product listed in SAE-AS83519 (formerly MIL-S-83519). The series features a thermochromic temperature indicator to assist in termination and inspection. The Raychem part number is permanently marked on the sleeve.

Technical Data:

 **Approvals:**
MIL-S-83519/1&2
RT-1404

Table C. S01/S02 M83519 Series

Cable OD		Part No. (MIL Part Number and Raychem Part No.) by Lead Option					
Jacket OD Max	Shield OD Min	No Preinstalled Lead		Preinstalled Lead Option*			
		MIL	Raychem	20 AWG		22 AWG	
				MIL	Raychem	MIL	Raychem
1.95 [0.075]	0.9 [.035]	M83519/1-1	S01-01-R	M83519/2-1	S02-01-R	M83519/2-6	S02-06-R
2.7 [0.105]	1.40 [.055]	M83519/1-2	S01-02-R	M83519/2-2	S02-02-R	M83519/2-7	S02-07-R
4.3 [0.170]	2.15 [.085]	M83519/1-3	S01-03-R	M83519/2-3	S02-03-R	M83519/2-8	S02-08-R
6.0 [0.235]	3.30 [.130]	M83519/1-4	S01-04-R	M83519/2-4	S02-04-R	M83519/2-9	S02-09-R
7.0 [0.275]	4.30 [.170]	M83519/1-5	S01-05-R	M83519/2-5	S02-05-R	M83519/2-10	S02-10-R
Jacket OD Max.	Shield OD Min.	Preinstalled Lead Option*					
		24 AWG		26 AWG			
1.95 [0.075]	0.9 [.035]	M83519/2-11	S02-11-R	M83519/2-16	S02-16-R		
2.7 [0.105]	1.40 [.055]	M83519/2-12	S02-12-R	M83519/2-17	S02-17-R		
4.3 [0.170]	2.15 [.085]	M83519/2-13	S02-13-R	M83519/2-18	S02-18-R		
6.0 [0.235]	3.30 [.130]	M83519/2-14	S02-14-R	M83519/2-19	S02-19-R		
7.0 [0.275]	4.30 [.170]	M83519/2-15	S02-15-R	M83519/2-20	S02-20-R		

*See Table G for lead description.

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are U.S. equivalents.
Dimensions are shown for reference purposes only. Specifications subject to change.

S03 Series

Construction: The S03 series terminators contain a colored thermochromic temperature indicator that exhibits a distinct color change when surfaces have reached wetting temperature.

Features:

This color change gives both Manufacturing and Quality Control an aid in the inspection of the completed termination.

Applications:

Used for shield-to-ground termination.

Table D. S03 Series

Cable OD		Part No.	
Jacket OD Max.	Shield OD Min.	Preinstalled Lead Option*	
		Tin plated Braid Strap	Nickel plated Braid Strap
1.95 [0.075]	0.9 [.035]	S03-01-R	S03-06-R
2.7 [0.105]	1.40 [.055]	S03-02-R	S03-07-R
4.3 [0.170]	2.15 [.085]	S03-03-R	S03-08-R
6.0 [0.235]	3.30 [.130]	S03-04-R	S03-09-R
7.0 [0.275]	4.30 [.170]	S03-05-R	S03-10-R

*See Table G for lead description.

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are U.S. equivalents.
Dimensions are shown for reference purposes only. Specifications subject to change.



Raychem, TE Connectivity, TE connectivity (logo) and TE (logo) are trademarks

SO96 Series—Thermochromic Temperature Indicator

Construction: The SO96 series terminators contain a colored thermochromic temperature indicator that exhibits a distinct color change when surfaces have reached wetting temperature.

Features:
This color change gives both Manufacturing and Quality Control an aid in the inspection of the completed termination.

Applications:
The SO96 series is designed for high-temperature applications with operating temperature requirements up to 200°C.

Additional Information:
This series features a thermochromic temperature indicator and meets performance requirements of SAE-AS83519 (formerly MIL-S-83519). The solder SO96 with RA flux compatible with nickel-plated shields.

Technical Data:

 **Temperature:**
175°C (347°F)

Table E. SO96 Series
(175°C [34°F] rated)

Cable OD		No Preinstalled Lead	Part No.	
Jacket OD Max.	Shield OD Min.		Preinstalled Lead Option*	
			22 AWG	Braid Strap
1.95 [0.075]	0.90 [.035]	SO96-1-00	SO96-1-55-22-90	SO96-1-01
2.7 [0.105]	1.40 [.055]	SO96-2-00	SO96-2-55-22-90	SO96-2-01
4.3 [0.170]	2.15 [.085]	SO96-3-00	SO96-3-55-22-90	SO96-3-01
6.0 [0.235]	3.30 [.130]	SO96-4-00	SO96-4-55-22-90	SO96-4-01
7.0 [0.275]	4.30 [.170]	SO96-5-00	SO96-5-55-22-90	SO96-5-01

*See Table G for lead description.

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are U.S. equivalents.
Dimensions are shown for reference purposes only. Specifications subject to change.

Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com



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SO96 Series—Thermochromic Temperature Indicator

Table H. NAS, M83519, and Raychem Cross-Reference

NAS Part No.	Raychem D Series Part No.	NAS Comment
1744-1	D-1744-01	
1744-2	D-1744-02	
1744-3	D-1744-03	
1744-4	D-1744-04	
1744-5	D-1744-05	
1744-6	D-1744-06	
1744-7	D-1744-07	
1744-8	D-1744-08	
1745-1	D-144-25	Inactive, Use SAE-AS83519/1-1 (formerly MIL-S-83519)
1745-2	D-100-00	Inactive, Use SAE-AS83519/1-2 (formerly MIL-S-83519)
1745-3	D-101-00	Inactive, Use SAE-AS83519/1-3 (formerly MIL-S-83519)
1745-4	D-103-00	Inactive, Use SAE-AS83519/1-5 (formerly MIL-S-83519)
1745-5	D-144-26	
1745-6	D-100-31	
1745-7	D-101-31	
1745-8	D-103-31	
1745-9		Obsolete - Use NAS1745-13
1745-10		Obsolete - Use NAS1745-14
1745-11		Obsolete - Use NAS1745-15
1745-12		Obsolete - Use NAS1745-16
1745-13	D-142-83	Inactive, Use SAE-AS83519/1-1 (formerly MIL-S-83519)
1745-14	D-142-50	Inactive, Use SAE-AS83519/1-2 (formerly MIL-S-83519)
1745-15	D-142-51	Inactive, Use SAE-AS83519/1-3 (formerly MIL-S-83519)
1745-16	D-142-52	Inactive, Use SAE-AS83519/1-5 (formerly MIL-S-83519)
1745-17	D-107-00	Inactive, Use SAE-AS83519/1-4 (formerly MIL-S-83519)
1745-18	D-104-00	
1745-19	D-105-00	
1745-20	D-107-31	
1745-21	D-104-31	
1745-22	D-105-31	
1745-23	D-142-56	Inactive, Use SAE-AS83519/1-4 (formerly MIL-S-83519)
1745-24	D-142-65	
1745-25	D-142-66	
1746-1	D-144-25	Inactive, Use SAE-AS83519/1-1 (formerly MIL-S-83519)
1746-2	D-144-00	Inactive, Use SAE-AS83519/1-2 (formerly MIL-S-83519)
1746-3	D-144-01	Inactive, Use SAE-AS83519/1-3 (formerly MIL-S-83519)
1746-4	D-144-02	Inactive, Use SAE-AS83519/1-5 (formerly MIL-S-83519)
1746-5	D-144-26	
1746-6	D-144-03	
1746-7	D-144-04	
1746-8	D-144-05	
1746-9	D-144-46	Inactive, Use SAE-AS83519/1-4 (formerly MIL-S-83519)
1746-10	D-144-37	
Military Part No.	Raychem S01/S02 Series* Part No.	Raychem S063 Series** Part No.
M83519/1-1	S01-01-R	SO63-1-00
M83519/1-2	S01-02-R	SO63-2-00
M83519/1-3	S01-03-R	SO63-3-00
M83519/1-4	S01-04-R	SO63-4-00
M83519/1-5	S01-05-R	SO63-5-00
M83519/2-1	S02-01-R	SO63-1-55-20-90
M83519/2-2	S02-02-R	SO63-2-55-20-90
M83519/2-3	S02-03-R	SO63-3-55-20-90
M83519/2-4	S02-04-R	SO63-4-55-20-90
M83519/2-5	S02-05-R	SO63-5-55-20-90
M83519/2-6	S02-06-R	SO63-1-55-22-90
M83519/2-7	S02-07-R	SO63-2-55-22-90
M83519/2-8	S02-08-R	SO63-3-55-22-90
M83519/2-9	S02-09-R	SO63-4-55-22-90
M83519/2-10	S02-10-R	SO63-5-55-22-90
M83519/2-11	S02-11-R	SO63-1-55-24-90
M83519/2-12	S02-12-R	SO63-2-55-24-90
M83519/2-13	S02-13-R	SO63-3-55-24-90
M83519/2-14	S02-14-R	SO63-4-55-24-90
M83519/2-15	S02-15-R	SO63-5-55-24-90
M83519/2-16	S02-16-R	SO63-1-55-26-90
M83519/2-17	S02-17-R	SO63-2-55-26-90
M83519/2-18	S02-18-R	SO63-3-55-26-90
M83519/2-19	S02-19-R	SO63-4-55-26-90
M83519/2-20	S02-20-R	SO63-5-55-26-90

* QPL listed to SAE-AS83519 (formerly MIL-S-83519)

** Meets performance requirements of SAE-AS83519 (formerly MIL-S-83519)



Raychem, TE Connectivity, TE connectivity (logo) and TE (logo) are trademarks

Dimensions are in millimeters and inches unless otherwise specified. Values in brackets are U.S. equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.



3M™ Specialty Bagged Terminals

Features:

Effective and reliable performance. A wide variety of types, sizes and materials meeting a broad application range, as well as the demands of temperature and weather. Design features that assure the easy installation of 3M products-positive and easy wire insertion, elimination of strand hang-ups and wire twisting and easy insulation entry.

3M™ Nylon Insulated Closed End Connectors

UPC/Product # (054007)	Description	Wire Range (AWG)	Qty/Bag
94813	722-N-A	22-14	50
94796	718-N-A	18-10	50



3M™ Heat Shrink Seamless Butt Connectors

UPC/Product # (054007)	Description	Wire Range (AWG)	Qty/Bag
94861	MH18BCX	22-18	25
94857	MH14BCX	16-14	25
94850	MH10BCX	12-10	25



3M™ Nylon Insulated Seamless Butt Connectors



UPC/Product # (054007)	Description	Wire Range (AWG)	Qty/Bag
94786	61-SN-A	22-18	100
94789	62-SN-A	16-14	100
94792	63-SN-A	12-10	50



3M™ Nylon Insulated with Insulation Grip Butt Connectors



UPC/Product # (054007)	Description	Wire Range (AWG)	Qty/Bag
94784	61-NB	22-18	100
94787	62-NB	16-14	100
94790	63-NB	12-10	50



3M™ Vinyl Insulated Brazed Seam Butt Connectors



UPC/Product # (054007)	Description	Wire Range (AWG)	Qty/Bag
94793	64-WP	8	25
94795	66-WP	4	15



3M™ Vinyl Insulated Butted Seam Butt Connectors



UPC/Product # (054007)	Description	Wire Range (AWG)	Qty/Bag
94785	61-P	22-18	100
94788	62-P	16-14	100
94791	63-P	12-10	50



3M™ Nylon Fully Insulated with Insulation Grip Female Disconnects



UPC/Product # (054007)	Description	Wire Range (AWG)	Male Tab Width (W) x Thickness	Qty/Bag
94798	71F-187-20-NBL	22-18	0.187 x 0.020	100
94802	71F-250-32-NBL	22-18	0.250 x 0.032	100
94815	72F-187-20-NBL	16-14	0.187 x 0.020	100
94819	72F-250-32-NBL	16-14	0.250 x 0.032	100
94831	73F-250-32-NBL	12-10	0.250 x 0.032	50



3M™ Nylon Insulated with Insulation Grip Female Disconnects



UPC/Product # (054007)	Description	Wire Range (AWG)	Male Tab Width (W) x Thickness	Qty/Bag
94797	71F-187-20-NB	22-18	0.187 x 0.020	100
94801	71F-250-32-NB	22-18	0.250 x 0.032	100
94814	72F-187-20-NB	16-14	0.187 x 0.020	100
94818	72F-250-32-NB	16-14	0.250 x 0.032	100
94830	73F-250-32-NB	12-10	0.187 x 0.020	50



3M™ Nylon Fully Insulated Butted Seam Female Disconnects



UPC/Product # (054007)	Description	Wire Range (AWG)	Male Tab Width (W) x Thickness	Qty/Bag
94799	71F-187-20-NL	22-18	0.187 x 0.020	100
94803	71F-250-32-NL	22-18	0.250 x 0.032	100
94816	72F-187-20-NL	16-14	0.187 x 0.020	100
94820	72F-250-32-NL	16-14	0.250 x 0.032	100
94832	73F-250-32-NL	12-10	0.250 x 0.032	50



3M™ Vinyl Insulated Butted Seam Female Disconnects



UPC/Product # (054007)	Description	Wire Range (AWG)	Male Tab Width (W') x Thickness	Qty/Bag
94800	71F-187-20-P	22-18	0.187 x 0.020	100
94804	71F-250-32-P	22-18	0.250 x 0.032	100
94817	72F-187-20-P	16-14	0.187 x 0.020	100
94821	72F-250-32-P	16-14	0.250 x 0.032	100
94830	73F-250-32-NB	12-10	0.187 x 0.020	50
94833	73F-250-32-P	12-10	0.250 x 0.032	50



3M™ Nylon Insulated with Insulation Grip Bullet Style Female Disconnects

UPC/Product # (054007)	Description	Wire Range (AWG)	Qty/Bag
94838	81F-156-NBL-A	22-18	100
94839	81F-180-NBL-A	22-18	100
94842	82F-156-NBL-A	16-14	100



3M™ Nylon Insulated Butted Seam Bullet Style Female Disconnects

UPC/Product # (054007)	Description	Wire Range (AWG)	Male Tab Width (W')	Qty/Bag
94843	82F-180-NL-A	16-14	0.180	100



3M™ Nylon Fully Insulated with Insulation Grip Male Disconnects



UPC/Product # (054007)	Description	Wire Range (AWG)	Male Tab Width (W') x Thickness	Qty/Bag
94806	71M-187-20-NBL	22-18	0.187 x 0.020	100
94810	71M-250-32-NBL	22-18	0.250 x 0.032	100
94823	72M-187-20-NBL	16-14	0.187 x 0.020	100
94827	72M-250-32-NBL	16-14	0.250 x 0.032	100
94835	73M-250-32-NBL	12-10	0.250 x 0.032	50



Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com



3M™ Nylon Insulated with Insulation Grip Male Disconnects



UPC/Product # (054007)	Description	Wire Range (AWG)	Male Tab Width (W) x Thickness	Qty/Bag
94805	71M-187-20-NB	22-18	0.187 x 0.020	100
94809	71M-250-32-NB	22-18	0.250 x 0.032	100
94822	72M-187-20-NB	16-14	0.187 x 0.020	100
94826	72M-250-32-NB	16-14	0.250 x 0.032	100
94834	73M-250-32-NB	12-10	0.250 x 0.032	50



3M™ Nylon Fully Insulated Butted Seam Male Disconnects



UPC/Product # (054007)	Description	Wire Range (AWG)	Male Tab Width (W) x Thickness	Qty/Bag
94807	71M-187-20-NL	22-18	0.187 x 0.020	100
94811	71M-250-32-NL	22-18	0.250 x 0.032	100
94824	72M-187-20-NL	16-14	0.187 x 0.020	100
94828	72M-250-32-NL	16-14	0.250 x 0.032	100
94836	73M-250-32-NL	12-10	0.250 x 0.032	50



3M™ Vinyl Insulated Butted Seam Male Disconnects



UPC/Product # (054007)	Description	Wire Range (AWG)	Male Tab Width (W) x Thickness	Qty/Bag
94808	71M-187-20-P	22-18	0.187 x 0.020	100
94812	71M-250-32-P	22-18	0.250 x 0.032	100
94825	72M-187-20-P	16-14	0.187 x 0.020	100
94829	72M-250-32-P	16-14	0.250 x 0.032	100
94837	73M-250-32-P	12-10	0.250 x 0.032	50



3M™ Nylon Insulated with Insulation Grip Bullet Style Male Disconnects

UPC/Product # (054007)	Description	Wire Range (AWG)	Mating Snap Diameter	Qty/Bag
94840	81M-156-NB-A	22-18	0.156	100
94841	81M-180-NB-A	22-18	0.180	100
94844	82M-156-NB-A	16-14	0.156	100
94845	82M-180-NB-A	16-14	0.180	100



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Wire Management

3M™ Heat Shrink Brazed Seam Ring Tongue Terminals 22-18 AWG

UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94859	MH18-6R/L	22-18	6	25
94860	MH18-8R/L	22-18	8	25
94858	MH18-10R/L	22-18	10	25



3M™ Heat Shrink Brazed Seam Ring Tongue Terminals 16-14 AWG

UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94855	MH14-6R/L	16-14	6	25
94856	MH14-8R/L	16-14	8	25
94851	MH14-10R/L	16-14	10	25
94852	MH14-14R/S	16-14	1/4	25
94853	MH14-38R/S	16-14	3/8	25



3M™ Heat Shrink Brazed Seam Ring Tongue Terminals 12-10 AWG

UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94846	MH10-10R	12-10	10	25
94847	MH10-14R	12-10	1/4	25
94848	MH10-38R	12-10	3/8	25



3M™ Nylon Insulated with Insulation Grip Ring Tongue Terminals 22-18 AWG

SP UL				
UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94724	11-6S-NB	22-18	6	100
94726	11-8-NB	22-18	8	100
94716	11-10-NB	22-18	10	100
94718	11-14S-NB	22-18	1/4	100
94722	11-56S-NB	22-18	5/16	100
94720	11-38-NB	22-18	3/8	100



Complete catalog available online at: www.lapptannehill.com



3M™ Nylon Insulated with Insulation Grip Ring Tongue Terminals 16-14 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94738	12-8-NB	16-14	8	100
94728	12-10-NB	16-14	10	100
94730	12-14S-NB	16-14	1/4	100
94734	12-56S-NB	16-14	5/16	100
94732	12-38-NB	16-14	3/8	100



3M™ Nylon Insulated with Insulation Grip Ring Tongue Terminals 12-10 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94750	13-6S-NB	12-10	6	50
94752	13-8-NB	12-10	8	50
94740	13-10-NB	12-10	10	50
94742	13-14S-NB	12-10	1/4	50
94748	13-56S-NB	12-10	5/16	50
94744	13-38-NB	12-10	3/8	50
94746	13-500-NB	12-10	1/2	50



3M™ Vinyl Insulated Butted Seam Ring Tongue Terminals 22-18 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94725	11-6S-P	22-18	6	100
94727	11-8-P	22-18	8	100
94717	11-10-P	22-18	10	100
94719	11-14S-P	22-18	1/4	100



3M™ Vinyl Insulated Butted Seam Ring Tongue Terminals 16-14 AWG



UPC/Product #	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94736	12-6S-P	16-14	6	100
94739	12-8-P	16-14	8	100
94729	12-10-P	16-14	10	100
94731	12-14S-P	16-14	1/4	100
94735	12-56S-P	16-14	5/16	100
94733	12-38-P	16-14	3/8	100



Wire Management

3M™ Vinyl Insulated Butted Seam Ring Tongue Terminals 12-10 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94751	13-6S-P	12-10	6	50
94753	13-8-P	12-10	8	50
94741	13-10-P	12-10	10	50
94743	13-14S-P	12-10	1/4	50
94749	13-56S-P	12-10	5/16	50
94745	13-38-P	12-10	3/8	50
94747	13-500-P	12-10	1/2	50



3M™ Nylon Insulated Brazed Seam Ring Tongue Terminals 8 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94754	14-14S-WN	8	1/4	25
94757	14-56-WN	8	5/16	25
94755	14-38-WN	8	3/8	25
94756	14-500S-WN	8	1/2	25



3M™ Nylon Insulated Brazed Seam Ring Tongue Terminals 6 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94758	15-14S-WN	6	1/4	25
94761	15-56-WN	6	5/16	25
94759	15-38-WN	6	3/8	25
94760	15-500S-WN	6	1/2	25



3M™ Nylon Insulated Brazed Seam Ring Tongue Terminals 4 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94762	16-14-WN	4	1/4	10
94764	16-500S-WN	4	1/2	10



Please contact your sales representative for detailed information at
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3M™ Nylon Insulated with Insulation Grip Locking Fork Terminals 22-18 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94864	SS-31-6-NB	22-18	6	100
94866	SS-31-8-NB	22-18	8	100
94862	SS-31-10-NB	22-18	10	100



3M™ Nylon Insulated with Insulation Grip Locking Fork Terminals 16-14 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94872	SS-32-6-NB	16-14	6	100
94874	SS-32-8-NB	16-14	8	100
94868	SS-32-10-NB	16-14	10	100
94870	SS-32-14-NB	16-14	1/4	100



3M™ Nylon Insulated with Insulation Grip Locking Fork Terminals 12-10 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94880	SS-33-6-NB	12-10	6	50



3M™ Vinyl Insulated Butted Seam Locking Forks Terminals 22-18 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94865	SS-31-6-P	22-18	6	100
94867	SS-31-8-P	22-18	8	100
94863	SS-31-10-P	22-18	10	100



3M™ Vinyl Insulated Butted Seam Locking Forks Terminals 16-14 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94873	SS-32-6-P	16-14	6	100
94875	SS-32-8-P	16-14	8	100
94869	SS-32-10-P	16-14	10	50
94871	SS-32-14-P	16-14	1/4	100



3M™ Vinyl Insulated Butted Seam Locking Forks Terminals 12-10 AWG

UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94881	SS-33-6-P	12-10	6	50
94883	SS-33-8-P	12-10	8	50
94877	SS-33-10-P	12-10	10	50
94879	SS-33-14-P	12-10	1/4	50



3M™ Nylon Insulated with Insulation Grip Block Fork Terminals 22-18 AWG

UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
95360	BS-31-6-NB	22-18	6	100
95631	BS-31-8-NB	22-18	8	100
95359	BS-31-10-NB	22-18	10	100



3M™ Nylon Insulated with Insulation Grip Block Fork Terminals 16-14 AWG

UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
95363	BS-32-6-NB	16-14	6	100
95364	BS-32-8-NB	16-14	8	100
95362	BS-32-10-NB	16-14	10	100



3M™ Nylon Insulated with Insulation Grip Block Fork Terminals 12-10 AWG

UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
95366	BS-33-6-NB	12-10	6	50
95667	BS-33-8-NB	12-10	8	50
95365	BS-33-10-NB	12-10	10	50



3M™ Vinyl Insulated Butted Seam Block Fork Terminals 22-18 AWG

UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
95351	BS-31-6-P	22-18	6	100
95352	BS-31-8-P	22-18	8	100
95350	BS-31-10-P	22-18	10	100



3M™ Vinyl Insulated Butted Seam Block Fork Terminals 16-14 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
95354	BS-32-6-P	16-14	6	100
95355	BS-32-8-P	16-14	8	100
95353	BS-32-10-P	16-14	10	100



3M™ Vinyl Insulated Butted Seam Block Fork Terminals 12-10 AWG



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
95357	BS-33-6-P	12-10	6	50
95358	BS-33-8-P	12-10	8	50
95356	BS-33-10-P	12-10	10	50



3M™ Nylon Insulated with Insulation Grip Standard Fork Terminals



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94768	31-6-NB	22-18	6	100
94770	31-8-NB	22-18	8	100
94774	32-6-NB	16-14	6	100
94776	32-8-NB	16-14	8	100
94772	32-10-NB	16-14	10	100
94780	33-6-NB	12-10	6	50
94778	33-10-NB	12-10	10	50



3M™ Vinyl Insulated Butted Seam Standard Fork Terminals



UPC/Product # (054007)	Description	Wire Range (AWG)	Stud Size	Qty/Bag
94769	31-6-P	22-18	6	100
94771	31-8-P	22-18	8	100
94767	31-10-P	22-18	10	100
94775	32-6-P	16-14	6	100
94777	32-8-P	16-14	8	100
94773	32-10-P	16-14	10	100
94781	33-6-P	12-10	6	100
94783	33-8-P	12-10	8	100
94779	33-10-P	12-10	10	100





3M™ ELECTRICAL TAPES

3M™ Vinyl Electrical Tapes

Scotch® Super 33+™ Professional Grade Vinyl Electrical Tape

Construction: 3M Vinyl Electrical Tape

Features: Insulates splices up to 600V. Repairs cable jacketing. Resists UV rays, abrasion, corrosion, alkalies and acids. Flame retardant.

Thickness	Max. Temperature	Roll Size
7 mil	105°C 221°F	3/4" x 66' (19 mm x 20,1 m) 3/4" x 44' (19 mm x 13,4 m) 3/4" x 20' (19 mm x 6,0 m) 3/4" x 36 yd (19 mm x 32,9 m) 1" x 36 yd (25,4 mm x 32,9 m) 1-1/2" x 36 yd (38 mm x 32,9 m)

Technical Data:



Approvals:

UL Listed and CSA Certified



Scotch® Heavy Duty Grade Vinyl Electrical Tape Super 88

Construction: 3M Vinyl Electrical Tape

Features: Thick, heavy duty vinyl protects cable and provides faster build-up. Insulates splices up to 600V. Repairs cable jacketing. Resists abrasion, corrosion, alkalies and acids. Flame retardant.

Thickness	Max. Temperature	Roll Size
8.5 mil	105°C 221°F	3/4" x 44' (19 mm x 13,4 m) 3/4" x 36 yd (19 mm x 32,9 m) 1" x 36 yd (25,4 mm x 32,9 m) 1-1/2" x 36 yd (38 mm x 32,9 m) 1-1/2" x 44' (38 mm x 13,4 m) 2" x 36 yd (51 mm x 32,9 m)

Technical Data:



Approvals:

UL Listed and CSA Certified



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Scotch® Professional Grade Color Coding Vinyl Electrical Tape 35

Construction: 3M Vinyl Electrical Tape

Features: 9 fade-resistant colors identify and mark phases/cables. Insulate splices up to 600V. Repair cable jacketing. Resists abrasion, corrosion, alkalies and acids. Flame retardant.

Thickness	Max. Temperature	Roll Size
7 mil	105°C 221°F	3/4" x 60' (19 mm x 18,2 m) 1/2" x 20' (12 mm x 6,1 m) 3/4" x 66' (19 mm x 20,1 m) 1/2" x 20' (12 mm x 6,1 m)

Technical Data:

- ✓ **Approvals:**
UL Listed and
CSA Certified



Scotch® Extra Heavy Duty Grade Vinyl Electrical Tape 22

Construction: 3M Vinyl Electrical Tape

Features: Extra-thick, heavy duty vinyl protects cable and provides faster build-up. Insulates splices up to 600V. Repairs cable jacketing. Resists abrasion, corrosion, alkalies and acids. Flame Retardant.

Thickness	Max. Temperature	Roll Size
10 mil	80°C 176°F	1/2" x 36 yd (13 mm x 32,9 m) 3/4" x 36 yd (19 mm x 32,9 m) 1" x 36 yd (25,4 mm x 32,9 m) 1-1/2" x 36 yd (38 mm x 32,9 m) 2" x 36 yd (51 mm x 32,9 m)

Technical Data:

- ✓ **Approvals:**
UL Listed and
CSA Certified



3M™ Highland™ Medium Grade Vinyl Electrical Tape

Construction: 3M Vinyl Electrical Tape

Features: Bundles cable and pull wire. Insulate splices up to 600V. Flame retardant.

Thickness	Max. Temperature	Roll Size
7 mil	80°C 176°F	3/4" x 60' (19 mm x 20,1 m) 3/4" x 66' (19 mm x 20,1 m)

Technical Data:

- ✓ **Approvals:**
UL Listed and
CSA Certified



3M™ Temflex™ Economy Grade Vinyl Electrical Tape 1700

Construction: 3M Vinyl Electrical Tape

Features: Bundle cable, wire pull and repair cable jacketing. Flame retardant.

Thickness	Max. Temperature	Roll Size
7 mil	80°C 176°F	3/4" x 60' (19 mm x 18,2 m) 3/4" x 36 yd (19 mm x 32,9 m) 1" x 66' (25,5 mm x 20,1 m)

Technical Data:

- ✓ **Approvals:**
UL Listed and
CSA Certified



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3M™ Temflex™ Mining Grade Vinyl Electrical Tape 1700P

Construction: 3M Vinyl Electrical Tape

Features: Insulate and repair mining cable jacketing. Flame retardant. Printed for use in MSHA-approved splicing kits.

Thickness	Max. Temperature	Roll Size
7 mil	80°C 176°F	3/4" x 66' (19 mm x 20,1 m) 1-1/2" x 44' (38 mm x 13,4 m) 1-1/2" x 66' (38 mm x 20,1 m)



Scotch® Professional Grade Linerless Rubber Splicing Tape 130C

Construction: 3M Insulating and Splicing Tapes

Features: Insulate and splice solid dielectric cables through 69kV. Linerless, high-voltage insulating, thermally conductive, self-bonding rubber.

Thickness	Max. Temperature	Roll Size
30 mil	continuous: 90°C / 194°F short-term: 130°C / 266°F	1" x 30' (25 mm x 9,1 m) 3/4" x 30' (19 mm x 9,1 m) 1-1/2" x 30' (38 mm x 9,1 m) 2" x 30' (50 mm x 9,1 m) 1" x 10' (25 mm x 3,05 m) 1" x 15' (25 mm x 4,6 m)



Scotch® Professional Grade Semi-Conducting Tape 13

Construction: 3M Insulating and Splicing Tapes

Features: Rubber tape, semi-conductive. Compatible with cable semi-conducting jackets. Electrically ground high-voltage connections. Provides cable shield continuation

Thickness	Max. Temperature	Roll Size
30 mil	continuous: 90°C / 194°F short-term: 130°C / 266°F	3/4" x 15' (19 mm x 4,5 m) 1-1/2" x 66' (38 mm x 20,1 m)



Scotch® Professional Grade Lined Rubber Splicing Tape 23

Construction: 3M Insulating and Splicing Tapes

Features: Insulate and splice solid dielectric cables through 69kV. Lined, insulating, thermally conductive, self-bonding rubber.

Thickness	Max. Temperature	Roll Size
30 mil	continuous: 90°C / 194°F short-term: 130°C / 266°F	3/4" x 30' (19 mm x 9,1 m) 1" x 20' (19 mm x 25 m) 1" x 30' (25 mm x 9,1 m) 1-1/2" x 30' (38 mm x 9,1 m) 2" x 30' (50 mm x 9,1 m)



Please contact your sales representative for detailed information at sales@lapptannehill.com



Scotch® Professional Grade Shielding Tape 24

Construction: 3M Insulating and Splicing Tapes

Features: All-metal open-weave shielding braid, conformable, temperature stable. Continue electrostatic shielding across splice.

Thickness	Max. Temperature	Roll Size
30 mil	N/A	1" x 15' (25 mm x 4,5 m)
	N/A	1" x 100' (25 mm x 30,5 m)
		2" x 10' (51 mm x 3,05 m)



Scotch® Professional Grade Grounding Tape 25

Construction: 3M Insulating and Splicing Tapes

Features: All-metal woven braid; high current carrying capacity of 6AWG wire. Solderable. Conformable ground braid for splices and terminations.

Thickness	Max. Temperature	Roll Size
N/A	N/A	1/2" x 15' (12 mm x 4,57 m)



Scotch® Professional Grade Silicone Rubber Tape 70

Construction: 3M Insulating and Splicing Tapes

Features: Protects and overwraps high-voltage cable terminations and serves as base layer to provide clean reentry into connections. Arc and track resistant. Self-fusing, longlasting, silicone rubber.

Thickness	Max. Temperature	Roll Size
12 mil	180°C 356°F	1" x 30' (25 mm x 9,14 m)



Scotch® Professional Grade Heavy Duty Triangular Silicone Rubber Tape 70HDT

Construction: 3M Insulating and Splicing Tapes

Features: Protects and overwraps high-voltage cable terminations, and serves as base layer to provide clean reentry into connections. Arc and track resistant. Self-fusing, long-lasting, thick silicone rubber, with a triangular tapered edge profile and a blue guideline for half-lapping.

Thickness	Max. Temperature	Roll Size
20 mil center, 8 mil edge	180°C 356°F	1" x 30' (25 mm x 9,14 m)



Scotch® Fire and Electric Arc Proof Tape 77

Construction: 3M Insulating and Splicing Tapes

Features: Protects cable until limiting devices can interrupt faulted current.

Thickness	Max. Temperature	Roll Size
30 mil	N/A	1-1/2" x 20' (38 mm x 6,1 m)
		3" x 20' (76 mm x 6,1 m)



Scotch® Medium Grade Linerless Rubber Splicing Compound 2242

Construction: 3M Insulating and Splicing Tapes

Features: Splice and insulate cables and connections. General purpose, linerless rubber insulating tape.

Thickness	Max. Temperature	Roll Size
30 mil	continuous: 90°C / 194°F short-term: 130°C / 266°F	3/4" x 15' (19 mm x 4,56 m) 1-1/2" x 15' (38 mm x 4,56 m) 2" x 15' (51 mm x 4,56 m)



3M™ Temflex™ Lined Rubber Splicing Tape 2155

Construction: 3M Insulating and Splicing Tapes

Features: Economical, low-voltage, lined rubber insulating tape. Up to 600 volts.

Thickness	Max. Temperature	Roll Size
30 mil	80°C 176°F	3/4" x 22' (19 mm x 6,7 m) 1-1/2" x 22' (38 mm x 6,7 m)



3M Scotchfil® Electrical Insulation Putty

Construction: 3M Insulating and Splicing Tapes

Features: Black, self-fusing, insulating putty in tape form.

Thickness	Max. Temperature	Roll Size
125 mil	80°C 176°F	1-1/2" x 60" (38 mm x 1,53 m)



Scotch® Varnished Cambric Tape 2510 and 2520

Construction: 3M Insulating and Splicing Tapes

Features: Yellow, varnish coated cotton cloth 2510: no adhesive; 2520: adhesive.

Thickness	Max. Temperature	Roll Size
2510 is 7 mil 2520 is 8 mil	105°C 220°F	3/4" x 60' (19 mm x 18,3 m) 3/4" x 36 yd (19 mm x 33 m) 1" x 36 yd (25 mm x 33 m) 1-1/2" x 36 yd (38 mm x 33 m) 2" x 36 yd (51 mm x 33 m) 36" x 25 yd (914,4 mm x 22,9 m) 2510 only



Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com



Scotch® Professional Grade Vinyl Mastic Sealing Tapes 2200, 2210, 06147, and 06149

Construction: 3M Sealing and Insulating Tapes

Features: Provides excellent environmental and moisture seal. Conformable and durable mastic for sealing high-voltage cables and accessories. "Built-in" vinyl backing for fast application and abrasion resistance.

Thickness	Max. Temperature	Roll Size
2200 is 125 mil	80°C	6-1/2" x 4-1/2" (165 mm x 114 mm) pads
2210 is 90 mil	176°F	3-1/4" x 4-1/2" (82 mm x 114 mm) pads
6147 is 45 mil		4" x 10' (101 mm x 3,04 m)
6149 is 45 mil		2-1/2" x 10' (63 mm x 3,04 m)
		2-1/2" x 2-1/2" (63 mm x 63 mm) pads

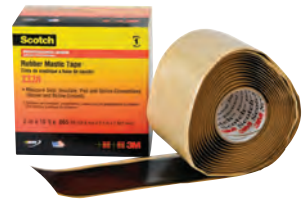


Scotch® Professional Grade Rubber Mastic Sealing Tape 2228

Construction: 3M Sealing and Insulating Tapes

Features: Provides excellent environmental and moisture seal. Extra-conformable and durable rubber-backed mastic for sealing high-voltage cables and accessories "Built-in" rubber backing for added conformability. Overwrap with vinyl.

Thickness	Max. Temperature	Roll Size
65 mil	90°C / 194°F emergency overload of 130°C / 266°F	2" x 3' (50 mm x 0,9 m) 1" x 10' (25 mm x 3,0 m) 2" x 10' (51 mm x 3,05 m)



3M™ Scotch-Seal™ Professional Grade Mastic Sealing Tapes 2229

Construction: 3M Sealing and Insulating Tapes

Features: Provides excellent environmental and moisture seal. Conformable and durable accessories. Overwrap with vinyl.

Thickness	Max. Temperature	Roll Size
125 mil	80°C 176°F	3-3/4" x 10' (95 mm x 3,0 m) 1" x 10' (25 mm x 3,05 m)



Scotch® Cable Jacket Repair Tape 2234

Construction: 3M Sealing and Insulating Tapes

Features: Tough, black, self-healing, abrasion-resistant backing for jacket repair on industrial cables. UL recognized 220°F (105°C) temperature rating.

Thickness	Max. Temperature	Roll Size
TBD	105°C 220°F	2" x 6' (51 mm x 1,82 m)



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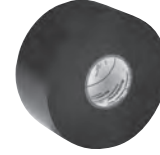


3M™ Scotchrap™ Professional Grade Corrosion Protection Tapes 50 and 51

Construction: 3M Corrosion Protection Tapes

Features: Protect pipe, conduits and fittings from corrosion. All-weather performance and corrosion resistance. Abrasion and impact-resistant.

Thickness	Max. Temperature	Roll Size
50 is 10 mil	80°C	1" x 100' (25 mm x 30,5 m)
51 is 20 mil	176°F	2" x 100' (51 mm x 30,5 m)
		3" x 100' (76 mm x 30,5 m)
		4" x 100' (102 mm x 30,5 m)
		6" x 100' (152 mm x 30,5 m)



3M™ Scotchrap™ Professional Grade Pipe Primer

Construction: 3M Corrosion Protection Tapes

Features: Quick-dry, non-sag rubber base primer that prepares metal surfaces for tape application. For use with Scotchrap Tapes 50 & 51, Temflex Tapes 1100 & 1200.

Thickness	Max. Temperature	Roll Size
N/A	80°C 176°F	1 gallon can (3,79 liters)

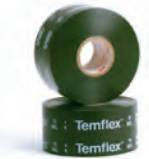


3M™ Temflex™ Economy Grade Corrosion Tape 1100 and 1100P

Construction: 3M Corrosion Protection Tapes

Features: General purpose corrosion tape.

Thickness	Max. Temperature	Roll Size
10 mil	80°C 176°F	2" x 100' (51 mm x 30, 5 m)



3M™ Temflex™ Economy Grade Corrosion Tape 1200 and 1200P

Construction: 3M Corrosion Protection Tapes

Features: General purpose corrosion tape.

Thickness	Max. Temperature	Roll Size
20 mil	80°C 176°F	2" x 100' (51 mm x 30, 5 m)



Scotch® Heavy Duty Mining Tape 31

Construction: 3M Special Use Tapes

Features: Tough, abrasion-resistant backed and flexible tape for jacket repair on mining cables.

Thickness	Max. Temperature	Roll Size
60 mil	90°C 194°F	2" x 6' (51 mm x 1,8 m)
		2" x 8.5' (51 mm x 2,6 m)
		2" x 10' (51 mm x 3,05 m)



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Scotch® Thread Sealant and Lubricant Tape 48

Construction: 3M Special Use Tapes

Features: Pipe thread sealant that provides a leakproof seal. Leakproof seal helps prevent cross threading on pipe threads.

Thickness	Max. Temperature	Roll Size
3 mil	260°C 500°F	1/4" x 260" (6,3 mm x 7 m) 1/2" x 260" (13 mm x 7 m) 1/2" x 520" (13 mm x 13 m) 1/2" x 1296" (13 mm x 33 m)



Scotch® Glass Cloth Tape 27 and 69

Construction: 3M Special Use Tapes

Features: Woven insulating glass cloth; high temperature resistance. High mechanical strength.

Thickness	Max. Temperature	Roll Size
27 is 7 mil 69 is 7.5 mil	27 is Class B temp (130°C / 266°F) 69 is class H temp (180°C / 356°F)	1/2" x 66' (12 mm x 20,1 m) 3/4" x 66' (19 mm x 20,1 m) 3/4" x 60 yd (19 mm x 54,8 m) 1" x 60 yd (25 mm x 54,8 m) 1-1/2" x 60 yd (38 mm x 54,8 m) 1/2" x 36 yd (13 mm x 33 m) 3/4" x 36 yd (19 mm x 33 m) 1" x 36 yd (25 mm x 33 m)



Scotch® Barricade Tape 300

Construction: 3M Special Use Tapes

Features: Durable polyethylene plastic, bold 2" letters, long roll length, will not tear easily, attracts attention. Barricade applicable in both large and small areas.

Thickness	Max. Temperature	Roll Size
3 mil	N/A	3" x 300' (76 mm x 91,4 m) 3" x 1000' (76 mm x 304,8 m)



3M™ Duct Tape 6969

Construction: 3M Special Use Tapes

Features: Extra heavy duty duct tape, excellent adhesion, tears easily. Silver.

Thickness	Max. Temperature	Roll Size
10.7 mil	93°C 200°F	1-7/8" x 60 yd (48 mm x 54,8 m) 2-13/16" x 60 yd (72 mm x 54,8 m)



3M™ Duct Tape 2929

Construction: 3M Special Use Tapes

Features: Utility grade, conformable cloth duct tape.

Thickness	Max. Temperature	Roll Size
6 mil	93°C 200°F	1-7/8" x 50 yd (48 mm x 45.7 m) 2-13/16" x 50 yd (72 mm x 45.7 m)



3M™ Outdoor Masking and Stucco Tape 5959

Construction: 3M Special Use Tapes

Features: Construction, marine and maintenance, 90 day UV resistant waterproof backing.

Thickness	Max. Temperature	Roll Size
12 mil	93°C 200°F	1-7/8" x 45 yd (48 mm x 41.1 m)



3M™ Value Duct Tape 1900

Construction: 3M Special Use Tapes

Features: Light duty sealing and holding for non-critical uses, water resistant.

Thickness	Max. Temperature	Roll Size
5.8 mil	93°C 200°F	1-7/8" x 50 yd (48 mm x 45.7 m) 2-13/16" x 50 yd (72 mm x 45.7 m)



3M™ Performance Plus Duct Tape 8979

Construction: 3M Special Use Tapes

Features: High performance tape that removes cleanly up to six months after exposure to sunlight and temperature extremes. Aggressive adhesive and high tensile strength for demanding applications.

Thickness	Max. Temperature	Roll Size
12.6 mil	93°C 200°F	1" x 60 yd (24 mm x 54, 8 m) 2" x 60 yd (51 mm x 54,8 m)



3M™ Temflex™ Cotton Friction Tape 1755

Construction: 3M Special Use Tapes

Features: Provides extra abrasion resistance for splices and connections.

Thickness	Max. Temperature	Roll Size
15 mil	80°C 176°F	3/4" x 60' (19 mm x 18,28 m) 3/4" x 82-1/2' (19 mm x 25 m) 1-1/2" x 82-1/2' (38 mm x 25 m)



Scotch® Performance Masking Tape 232

Construction: 3M Special Use Tapes

Features: Premium grade masking tape.

Thickness	Max. Temperature	Roll Size
6.3 mil	Up to 121°C 250°F	3/4" x 60 yd (18 mm x 54.8 m) 1" x 60 yd (24 mm x 54.8 m) 2" x 60 yd (48 mm x 54.8 m)



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Scotch® General Purpose Masking Tape 234

Construction: 3M Special Use Tapes

Features: General purpose masking tape.

Thickness	Max. Temperature	Roll Size
6.0 mil	Up to 121°C 250°F	3/4" x 60 yd (18 mm x 54.8 m) 1" x 60 yd (24 mm x 54.8 m) 2" x 60 yd (48 mm x 54.8 m)



3M™ Paper Tape 200

Construction: 3M Special Use Tapes

Features: Utility purpose paper tape.

Thickness	Max. Temperature	Roll Size
4.5 mil	93°C 200°F	1/2" x 60 yd (12 mm x 54.8 m) 3/4" x 60 yd (18 mm x 54.8 m) 1" x 60 yd (24 mm x 54.8 m) 1-1/2" x 60 yd (36 mm x 54.8 m) 2" x 60 yd (48 mm x 54.8 m) 3" x 60 yd (72 mm x 54.8 m) 4" x 60 yd (96 mm x 54.8 m)



3M™ Duct Tape 3939

Construction: 3M Special Use Tapes

Features: Heavy duty duct tape; good adhesion, strong backing. Silver.

Thickness	Max. Temperature	Roll Size
9 mil	65°C 150°F	.94" x 60 yd (24 mm x 54.8 m) 1.88" x 60 yd (48 mm x 54.8 m) 2.83" x 60 yd (72 mm x 54.8 m) 3.77" x 60 yd (96 mm x 54.8 m)



Scotch® Heavy Duty All-Weather Duct Tape 2245

Construction: 3M Special Use Tapes

Features: Resists harsh outdoor conditions and stays pliable.

Thickness	Max. Temperature	Roll Size
9.5 mil	Up to 66°C 150°F	1.88" x 45 yd (48 mm x 40 m)



Scotch® Professional HVAC Duct Tape 133DC

Construction: 3M Special Use Tapes

Features: Aggressive adhesive for air and moisture, light industrial, and HVAC applications.

Thickness	Max. Temperature	Roll Size
10 mil	93°C 200°F	1.88" x 60 yd (48 mm x 54.8 m)

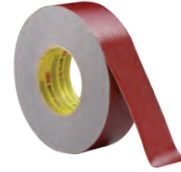


3M™ Performance Plus Duct Tape 8979N-Nuclear

Construction: 3M Special Use Tapes

Features: 6 month clean removal duct tape. Sunlight resistant, leaves behind no sticky residue.

Thickness	Max. Temperature	Roll Size
12.6 mil	93°C 200°F	1.88" x 60 yd (48 mm x 54.8 m) 2.83" x 60 yd (72 mm x 54.8 m)



Scotch® Transparent Duct Tape 2120-A

Construction: 3M Special Use Tapes

Features: Transparent, resistant to water and UV rays.

Thickness	Max. Temperature	Roll Size
9 mil	173°F	1.88" x 20 yd (48 mm x 18 m)



Scotch® Electricians Bundling Tape 2000

Construction: 3M Special Use Tapes

Features: General purpose easy tear vinyl duct tape.

Thickness	Max. Temperature	Roll Size
6 mil	N/A	2" x 50 yd (51 mm x 46 m)



3M™ Duct Tape 3900

Construction: 3M Special Use Tapes

Features: Multi-purpose duct tape. Available in seven colors for color-coding jobs.

Thickness	Max. Temperature	Roll Size
7.7 mil	93°C 200°F	1.88" x 60 yd (48 mm x 54.8 m)



3M™ Cloth Gaffers Tape 6910

Construction: 3M Special Use Tapes

Features: High tack, easy tear coated cloth tape.

Thickness	Max. Temperature	Roll Size
12 mil	Up to 93°C 200°F	1.88" x 60 yd (48 mm x 54.8 m)



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3M™ Vinyl Duct Tape 3903

Construction: 3M Special Use Tapes

Features: Low-medium adhesion for all around jobs. Available in seven color for color coding.

Thickness	Max. Temperature	Roll Size
6.2 mil	Up to 121°C 250°F	1.97" x 50 yd (50 mm x 45.7 m)



Scotch® Premium Heavy Duty Box Sealing Tape 3750

Construction: 3M Packaging and Palletizing Tapes

Features: Superior performance packaging tape used for heavy duty packaging applications.

Thickness	Max. Temperature	Roll Size
3.2 mil	Short term: 65°C 151°F	1-4/5" x 54 yd (48 mm x 50 m)



Scotch® Printed Box Sealing Tape 3732 and 3734

Construction: 3M Packaging and Palletizing Tapes

Features: 3732- "If seal is broken check"
3734- "Fragile handle with care"
Tan with red printing

Thickness	Max. Temperature	Roll Size
N/A	N/A	1-4/5" x 109 yd (48 mm x 100 m)



3M™ Highland™ Commercial Box Sealing Tape 3710

Construction: 3M Packaging and Palletizing Tapes

Features: Commercial grade box sealing tape.

Thickness	Max. Temperature	Roll Size
2 mil	Short term: 65°C 151°F	1-4/5" x 54 yd (48 mm x 50 m) 1-4/5" x 109 yd (48 mm x 100 m)



Scotch® Box Sealing Hand Dispensers H-122

Construction: 3M Packaging and Palletizing Tapes

Features: Box sealing Hand Dispensers

Thickness	Max. Temperature	Roll Size
N/A	N/A	2" (50.8 mm)



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Scotch® Series Printed Box Sealing Tape 3770

Construction: 3M Packaging and Palletizing Tapes

Features: 3771- "If Seal is Broken Check Contents Before Accepting"
3772- "Fragile Handle with Care"
3773- "Rush, Rush, Rush"
3775- "Mixed Merchandise"

Thickness	Max. Temperature	Roll Size
1.9 mil	N/A	1-9/10" x 104 yd (48 mm x 100m)

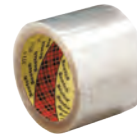


Scotch® Box Sealing Tape 371

Construction: 3M Packaging and Palletizing Tapes

Features: Industrial packaging tape.

Thickness	Max. Temperature	Roll Size
1.9 mil	N/A	2-4/5" x 54.6 yd (72 mm x 50 mm) 2-4/5" x 109.3 yd (72 mm x 100 mm)



Scotch® Box Sealing Roll-on Dispensers H-180

Construction: 3M Packaging and Palletizing Tapes

Features: Box sealing Roll-on Dispensers.

Thickness	Max. Temperature	Roll Size
N/A	N/A	2" (50.8 mm)



Scotch® Industrial Grade Filament Tape 893

Construction: 3M Packaging and Palletizing Tapes

Features: Industrial grade filament and packaging tape that is abrasion and moisture resistant.

Thickness	Max. Temperature	Roll Size
6 mil	Short term: 65°C 151°F	1/2" x 60 yd (13 mm x 55 m) 3/4" x 60 yd (19 mm x 55 m) 1" x 60 yd (25 mm x 55 m)



Scotch® Commercial Grade Filament Tape 897

Construction: 3M Packaging and Palletizing Tapes

Features: Commercial grade filament tape with synthetic rubber resin adhesive.

Thickness	Max. Temperature	Roll Size
6 mil	50°C 120°F	1/2" x 60 yd (13 mm x 55 m) 3/4" x 60 yd (19 mm x 55 m) 1" x 60 yd (25 mm x 55 m)



Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com



Scotch® Filament Tape Dispensers H-10

Construction: 3M Special Use Tapes

Features: Filament Tape Dispensers.

Thickness	Max. Temperature	Roll Size
N/A	N/A	1" (25 mm)



Scotch® Film Tape 8210

Construction: 3M Special Use Tapes

Features: Lightly pink tinted label.

Thickness	Max. Temperature	Roll Size
2.5 mil	N/A	4" x 72 yd (10 cm x 66 m)



Scotch® Pouch Tape 8240

Construction: 3M Special Use Tapes

Features: Pressure sensitive tape with rectangular window and orange border.

Thickness	Max. Temperature	Roll Size
2.5 mil	N/A	5" x 6" (13 cm x 15 cm)



Scotch® Commercial Label Protection Tape 3565

Construction: 3M Special Use Tapes

Features: Utility grade label protection tape.

Thickness	Max. Temperature	Roll Size
1.9 mil	N/A	3-7/10" x 104 yd (96 mm x 95 m)



Scotch® Stretchable Tape 8884 and 8886

Construction: 3M Special Use Tapes

Features: High performance transparent stretchable tape.

Thickness	Max. Temperature	Roll Size
8884- 5 mil 8886- 7 mil	N/A	1-3/10" x 60 yd (36 mm x 55 m)



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3M™ Cable Ties

Construction: Molded from 6/6 nylon

Features:

3M Cable Ties are used to secure wire bundles and harness components quickly. The flexible design allows the user to slip ties easily under and around cables and harnesses. These ties can be used with most standard tensioning/cutoff tools for fast production line fastening.

Additional Information:

3M™ Cable Ties are available in a variety of sizes and styles, including weather resistant black for outdoor use.

Technical Data:



Temperature:

<-40°F (-40°C) to 185°F (85°C).



Approvals:

- Products which are UL Listed as noted in the Typical Data section meet UL Standard 1565 for Wire Positioning Devices and are suitable for use in Air Handling Spaces in accordance with Section 300.22 of the National Electric Code.
- U.L. File # E116841
- Products which are UL Recognized are suitable for use in enclosures.
- The 36 and 48 inch cable ties are UL Listed 181B-C mechanical fasteners for use with flexible air ducts.



3M™ Cable Ties Family of Product

3M™ Miniature Cable Ties

Features:

Bent tips, Flame retardant; fungus inert; resistant to solvents, alkalies and grease.

Advantages:

Easy insertion, long life. Saves time and money.



Miniature Cable Ties

Part Number	Length in (mm)	Width in (mm)	Max Bundle Dia. in (mm)	Tensile lb (kg)	Thickness in (mm)	Temperature Rating	Bag Quantity	Color	Description
CT4BK18-C	4.1 (104)	.1 (3)	.75 (19)	18 (8)	.04 (1,0)	185°F (85°C)	100	Black	UV Resistant
CT4BK18-M	4.1 / 104	.1 (3)	.75 (19)	18 (8)	.04 (1,0)	185°F (85°C)	1000	Black	UV Resistant
CT4NT18-C	4.1 / 104	.1 (3)	.75 (19)	18 (8)	.04 (1,0)	185°F (85°C)	100	Natural	Standard
CT4NT18-M	4.1 / 104	.1 (3)	.75 (19)	18 (8)	.04 (1,0)	185°F (85°C)	1000	Natural	Standard
CT6BK18-C	6.1 / 155	.1 (3)	1.25 (32)	18 /(8)	.05 (1,3)	185°F (85°C)	100	Black	UV Resistant
CT6NT18-C	6.1 / 155	.1 (3)	1.25 (32)	18 /(8)	.05 (1,3)	185°F (85°C)	100	Natural	Standard
CT6NT18-M	6.1 / 155	.1 (3)	1.25 (32)	18 /(8)	.05 (1,3)	185°F (85°C)	1000	Natural	Standard
CT8BK18-C	8.1 / 206	.1 (3)	2 (51)	18 (8)	.05 (1,3)	185°F (85°C)	100	Black	UV Resistant
CT8BK18-M	8.1 / 206	.1 (3)	2 (51)	18 (8)	.05 (1,3)	185°F (85°C)	100	Black	UV Resistant
CT8NT18-C	8.1 / 206	.1 (3)	2 (51)	18 (8)	.05 (1,3)	185°F (85°C)	100	Natural	Standard
CT8NT18-M	8.1 / 206	.1 (3)	2 (51)	18 (8)	.05 (1,3)	185°F (85°C)	100	Natural	Standard

Complete catalog available online at: www.lapptannehill.com



3M™ Intermediate Cable Ties

Features:

Bent tips, Flame retardant; fungus inert; resistant to solvents, alkalies and grease.

Advantages:

Easy insertion, long life. Saves time and money.

Intermediate Cable Ties



Part Number	Length in (mm)	Width in (mm)	Max Bundle Dia. in (mm)	Tensile lb (kg)	Thickness in (mm)	Temperature Rating	Bag Quantity	Color	Description
CT6BK40-C	5.8 (147)	.14 (3,6)	1.25 (32)	40 (18)	.05 (1,3)	185°F (85°C)	100	Black	UV Resistant
CT6BK40-M	5.8 (147)	.14 (3,6)	1.25 (32)	40 (18)	.05 (1,3)	185°F (85°C)	1000	Black	UV Resistant
CT6NT40-C	5.8 (147)	.14 (3,6)	1.25 (32)	40 (18)	.05 (1,3)	185°F (85°C)	100	Natural	Standard
CT6NT40-M	5.8 (147)	.14 (3,6)	1.25 (32)	40 (18)	.05 (1,3)	185°F (85°C)	1000	Natural	Standard
CT8BK40-C	8.9 (226)	.14 (3,6)	2 (51)	40 (18)	.05 (1,3)	185°F (85°C)	100	Black	UV Resistant
CT8BK40-M	8.9 (226)	.14 (3,6)	2 (51)	40 (18)	.05 (1,3)	185°F (85°C)	1000	Black	UV Resistant
CT8NT40-C	8.9 (226)	.14 (3,6)	2 (51)	40 (18)	.05 (1,3)	185°F (85°C)	100	Natural	Standard
CT8NT40-M	8.9 (226)	.14 (3,6)	2 (51)	40 (18)	.05 (1,3)	185°F (85°C)	1000	Natural	Standard

3M™ Standard Cable Ties

Features:

Bent tips, Flame retardant; fungus inert; resistant to solvents, alkalies and grease.

Advantages:

Easy insertion, long life. Saves time and money.

Standard Cable Ties



Part Number	Length in (mm)	Width in (mm)	Max Bundle Dia. in (mm)	Tensile lb (kg)	Thickness in (mm)	Temperature Rating	Bag Quantity	Color	Description
CT8BK50-C	7.6 (193)	.18 (4,6)	2 (51)	50 (23)	.05 (1,3)	185°F (85°C)	100	Black	UV Resistant
CT8BK50-M	7.6 (193)	.18 (4,6)	3 (76)	50 (23)	.05 (1,3)	185°F (85°C)	1000	Black	UV Resistant
CT8NT50-C	7.6 (193)	.18 (4,6)	3 (76)	50 (23)	.05 (1,3)	185°F (85°C)	100	Natural	Standard
CT8NT50-M	7.6 (193)	.18 (4,6)	3 (76)	50 (23)	.05 (1,3)	185°F (85°C)	1000	Natural	Standard
CT11BK50-C	11.1 (282)	.18 (4,6)	3 (76)	50 (23)	.05 (1,3)	185°F (85°C)	100	Black	UV Resistant
CT11BK50-D	11.1 (282)	.18 (4,6)	3 (76)	50 (23)	.05 (1,3)	185°F (85°C)	500	Black	UV Resistant
CT11NT50-C	11.1 (282)	.18 (4,6)	3 (76)	50 (23)	.05 (1,3)	185°F (85°C)	100	Natural	Standard
CT11NT50-D	11.1 (282)	.18 (4,6)	3 (76)	50 (23)	.05 (1,3)	185°F (85°C)	500	Natural	Standard
CT15BK50-C	14.6 (371)	.18 (4,6)	4 (102)	50 (23)	.05 (1,3)	185°F (85°C)	100	Black	UV Resistant

Please contact your sales representative for detailed information at sales@lapptannehill.com



Wire Management

3M™ Heavy Duty Cable Ties

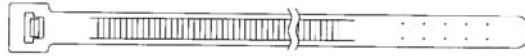
Features:

Bent tips, Flame retardant; fungus inert; resistant to solvents, alkalies and grease.

Advantages:

Easy insertion, long life. Saves time and money.

Heavy Duty Cable Ties



Part Number	Length in (mm)	Width in (mm)	Max Bundle Dia. in (mm)	Tensile lb (kg)	Thickness in (mm)	Temperature Rating	Bag Quantity	Color	Description
CT8BK120-L	9 (229)	.30(7,6)	2 (51)	120 (54)	.07 (1,8)	185°F (85°C)	50	Black	UV Resistant
CT8NT120-L	9 (229)	.30(7,6)	2 (51)	120 (54)	.07 (1,8)	185°F (85°C)	50	Natural	Standard
CT15BK120-C	15 (381)	.30(7,6)	4 (102)	120 (54)	.07 (1,8)	185°F (85°C)	100	Black	UV Resistant
CT15BK120-D	15 (381)	.30(7,6)	4 (102)	120 (54)	.07 (1,8)	185°F (85°C)	500	Black	UV Resistant
CT15NT120-C	15 (381)	.30(7,6)	4 (102)	120 (54)	.07 (1,8)	185°F (85°C)	100	Natural	Standard
CT15NT120-D	15 (381)	.30(7,6)	4 (102)	120 (54)	.07 (1,8)	185°F (85°C)	500	Natural	Standard

3M™ Extra Heavy Duty Cable Ties

Features:

Bent tips, Flame retardant; fungus inert; resistant to solvents, alkalies and grease.

Advantages:

Easy insertion, long life. Saves time and money.

Extra Heavy Duty Cable Ties



†UL Listed 181B-C
**UL Recognized where noted

Part Number	Length in (mm)	Width in (mm)	Max Bundle Dia. in (mm)	Tensile lb (kg)	Thickness in (mm)	Temperature Rating	Bag Quantity	Color	Description
CT24BK175-L	24(610)	.34 (8,6)	7.2 (183)	175 (79)	.09 (2,3)	185°F (85°C)	50	Black	UV Resistant
CT24NT175-L	24 (610)	.34 (8,6)	7.2 (183)	175 (79)	.09 (2,3)	185°F (85°C)	50	Natural	Standard
CT36BK175-L	36 (914)	.34 (8,6)	11 (279)	175 (79)	.09 (2,3)	185°F (85°C)	50	Black	† UV Resistant
CT36NT175-L	36 (914)	.34 (8,6)	11 (279)	175 (79)	.09 (2,3)	185°F (85°C)	50	Natural	† Standard
CT48BK175-L	47.9 (1217)	.36 (9,1)	14.7 (373)	175 (79)	.07 (1,8)	185°F (85°C)	50	Black	** †UV Resistant
CT48NT175-L	47.9 (1217)	.36 (9,1)	14.7 (373)	175 (79)	.07 (1,8)	185°F (85°C)	50	Natural	** † Standard

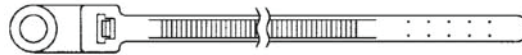
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3M™ Mounting Cable Ties, Screw Mount

Screw Mount Ties



Part Number	Length in (mm)	Width in (mm)	Max Bundle Dia. in (mm)	Tensile lb (kg)	Thickness in (mm)	Temperature Rating	Bag Quantity	Color	Description
CT8BK50S-C	8.6 (218)	.18 (4,6)	2 (51)	50 (23)	.06 (1,5)	185°F (85°C)	100	Black	UV Resistant # 10 stud
CT8BK50S-M	8.6 (218)	.18 (4,6)	2 (51)	50 (23)	.06 (1,5)	185°F (85°C)	1000	Black	UV Resistant # 10 stud
CT8NT50S-C	8.6 (218)	.18 (4,6)	2 (51)	50 (23)	.06 (1,5)	185°F (85°C)	100	Natural	Standard # 10 stud
CT8NT50S-M	8.6 (218)	.18 (4,6)	2 (51)	50 (23)	.06 (1,5)	185°F (85°C)	1000	Natural	Standard # 10 stud
CT15NT50S-L	15.1 (384)	.18 (4,6)	4 (102)	50 (23)	.06 (1,5)	185°F (85°C)	50	Natural	Standard #10 stud
CT15NT50S-D	15.1 (384)	.18 (4,6)	4 (102)	50 (23)	.06 (1,5)	185°F (85°C)	500	Natural	Standard #10 stud
CT15NT120S-L	15.7 (399)	.30 (7,6)	4 (102)	120 (54)	.07 (1,8)	185°F (85°C)	50	Natural	Standard #10 stud
CT15NT120S-D	15.7 (399)	.30 (7,6)	4 (102)	120 (54)	.07 (1,8)	185°F (85°C)	500	Natural	Standard #10 stud

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Wire Management

3M™ Cable Tie Bases

Features:

3M Cable Tie Bases 06290 Series makes mounting wire and cable a quick, easy and secure process. The bases are available in four styles and five sizes. They are designed so they can be screw-mounted, and eight of the 10 have an adhesive backing for extra easy application.

Advantages:

Every 3M cable tie can be mounted using one of these cable tie bases.

Technical Data:

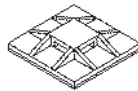
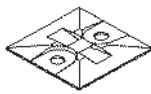
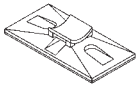


Temperature:

<-40°F to 185°F (-40°C to 85°C)

Mounting Bases:

Part Number	Dimensions LxWxH in (mm)	Slot Width in (mm)	Slot Height in (mm)	Color	Mount Type	Bag Quantity	Material
06294	.74x.74x.22 (19x19x5,6)	.21 (5,1)	.06 (1,5)	Natural	Foam Backed Adhesive	100	Nylon
06295	.74x.74x.22 (19x19x5,6)	.21 (5,1)	.06 (1,5)	UV Resistant black	Foam Backed Adhesive	100	Nylon
06296	.99x.99x.22 (25x25x5,6)	.21 (5,1)	.06 (1,5)	Natural	Foam Backed Adhesive	100	Nylon
06297	.99x.99x.22 (25x25x5,6)	.21 (5,1)	.06 (1,5)	UV Resistant black	Foam Backed Adhesive	100	Nylon
06290	2.0x1.0x.35 (51x25x8,9)	.21 (5,1)	.18 (4,5)	Ivory	Foam Backed Adhesive	100	ABS
06291	2.0x1.0x.35 (51x25x8,9)	.21 (5,1)	.18 (4,5)	Ivory	Foam Backed Adhesive	250	ABS
06292	1.0x1.2x.15 (25x25x3,8)	.21 (5,1)	.06 (1,5)	Ivory	Foam Backed Adhesive / Screw Mount	100	ABS
06293	1.0x1.0x.15 (25x25x3,8)	.21 (5,1)	.06 (1,5)	Ivory	Foam Backed Adhesive / Screw Mount	250	ABS
06298	.60x.41x.28 (15x10x7,0)	.27 (7)	.08 (2,0)	Natural	Screw Mount	100	Nylon
06299	.87x.62x.38 (22x16x10)	.51 (13)	.08 (2,0)	Natural	Screw Mount	100	Nylon



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Pneumatic Cable Tie Installation Tools

Features:

- Lightweight ergonomic design is comfortable and easy to use, reducing operation fatigue and the potential for repetitive motion injuries.
- Fast, consistent installation of Subminiature through Heavy cross section cable ties.
- Tension and cut-off mechanism maintains desired tension and provides flush cable tie cut-off, preventing damage to adjacent wire bundles and protecting workers' hands and arms.
- Beveled tie entry allows quick side entry of tie into tool which speeds installation.
- Controlled tip ejection allows operator to quickly and safely remove excess cut-off material, eliminating the need to clean-up work area after completion of installation.
- Narrow nose permits easy access to confined areas, maximizing application flexibility.
- Quick connect fitting allows the operator to easily connect tool to any air supply source, improving portability.
- Two retractable hangers allow for hanging the tool in the work area for easy access and for safe storage of tool when not in use.
- Two adjustment knobs (coarse and fine) allow precision tension settings for consistent, reliable results.
- Tension setting label displays easy-to-read instruction right on the tool for operator convenience.



Easy Tension Adjustment

Tool Technical Data

Part Number	PTS	PTH
Weight	17.3 oz. (490g)	32.0 oz. (907g)
Used with Cable Ties	Subminiature through Standard	Standard through Heavy
Air Supply	Operates on 70-90 psig (4.8-6.1 bar), non-lubricated air	Operates on 70-100 psig (4.8-6.8 bar), non-lubricated air
Tension Setting	Adjustable	
Optional Tool Accessories	PL289N1 Filter/Regulator PPH10 Hose Assembly – 10 ft. (3 m) PHCAQ and PHCAT Adapter Fittings for Hose KPTSTL Tension Locking Kit	
	KGTSBLD – Blade Replacement Kit	KPTHBLD – Blade Replacement Kit

If compressed air is not readily available, consult factory to discuss optional portable air system kit.

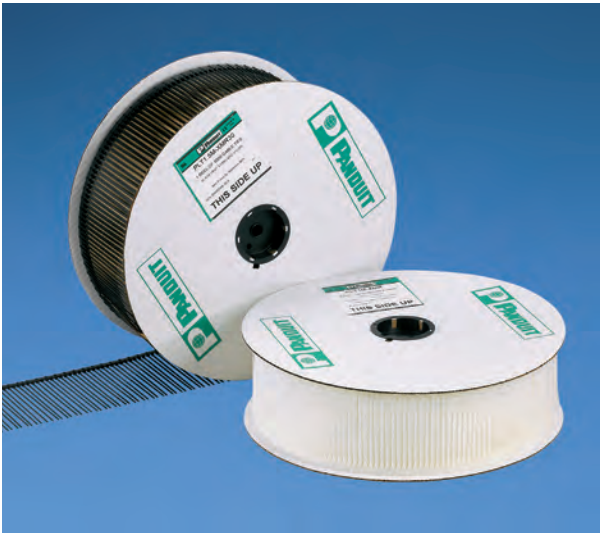
Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com

Reel-Fed Cable Ties-Multiple Styles and Sizes

Construction: Continuously molded cable ties (up to 5,000 ties per reel) provide continuous feeding for high productivity and reduced downtime due to fewer reel changes. Available in a full range of tensile strengths, styles, sizes and materials to suit a variety of applications.

Features:
All-Nylon Tie: Reel-fed cable ties in all-nylon (one-piece) locking ties with 18 lbs. minimum loop tensile strength. Available in a variety of colors and materials. Maximum bundle diameter up to .82 in. for the PLT1M-XMR and 1.31 in. for the PLT1.5M-XMR. Barbed Tie (BT1M-XMR and BT1.5M-XMR) Miniature Cross Section. Reel-fed cable ties with exclusive stainless steel locking barb and 30 lbs. demanding applications. Metal locking bar and tie body design provide greater bundle tightness, reducing both rotational and lateral movement of the tie. Maximum bundle diameter up to .82 in. for the BT1M-XMR and 1.31 in. for the BT1.5M-XMR. All-Nylon Tie: (PLT2S-VMR) Standard Cross Section. Reel-fed cable ties in all nylon (one-piece)locking ties with 50 lbs. Minimum loop tensile strength. Maximum bundle diameter up to 2.00 in. Standard cross section cable ties (2,500 ties per reel).

Applications:
Continuously molded cable ties (up to 5,000 ties per reel) provide continuous feeding for high productivity and reduced downtime due to fewer reel changes.



Reel-fed Cable Ties Technical Data

Material	Color	Styles Available	Continuous Use Temperature
Nylon 6.6	Natural	PLT1M-XMR, PLT1.5M-XMR,	-75°F to 185°F (-59°C to 85°C)
Weather Resistant Nylon 6.6	Black	BT1M-XMR, BT1.5M-XMR,	-75°F to 185°F (-59°C to 85°C)
Heat Stabilized Nylon 6.6	Black	PLT2S-VMR	-75°F to 239°F (-59°C to 115°C)
Flame Retardant Nylon 6.6*	Natural	BT1.5M-XMR	-75°F to 212°F (-59°C to 100°C)
Military Grade WR Nylon 6.6	Black	PLT1M-XMR, PLT1.5M-XMR	-75°F to 185°F (-59°C to 85°C)

Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com

PANDUCT® Wiring Duct

Construction: High quality, innovative wiring duct products used to route, protect and conceal wiring in a wide variety of industrial control and telecommunications applications.

Features:

Smooth corners and edges will not abrade wiring or irritate hands. Integrated nonskid liner and unique cover designs insure the duct cover will not slide once installed or during vibration. Scorelines for easy removal of duct fingers and sidewalls. Accessories and tools that increase productivity and lower the installed cost.

Applications:

Routing and concealing wiring in electrical control panels provides a liquid tight and dust proof, hermetic seal.

Technical Data:

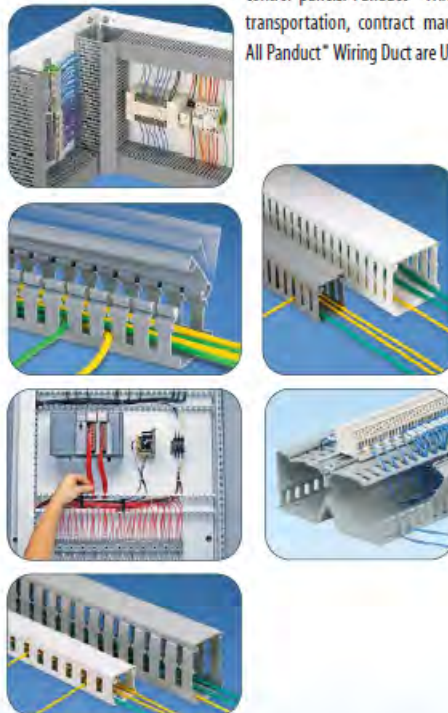


Approvals:

UL Recognized as meeting the requirements of UL Standard 1565 for Positioning Devices. CE compliant for panels that are to be exported to Europe. Specially formulated PVC material meets the NFPA79: 2002 flame retardance requirements for nonmetallic duct in industrial equipment

WIRING DUCT

From the smallest wall mounted panels to the largest integrated turnkey systems Panduit® Panduct® Wiring Duct is the premium wire management solution for routing and concealing wiring in electrical control panels. Panduct® Wiring Duct provide solutions for the original equipment manufacturing, transportation, contract manufacturing, maintenance and repair and communications markets. All Panduct® Wiring Duct are UL Recognized and CSA Certified and most carry the CE mark.



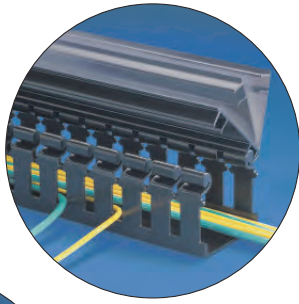
Some of the features and benefits found in Panduct® Wiring Duct include:

- Smooth corners and edges that will not abrade wiring or irritate hands
- Integrated nonskid liners and unique cover designs insure the duct cover will not slide once installed or during vibration
- Specially formulated lead-free PVC material meets the NFPA79: 2007 flame retardancy requirements and carries a UL 94V-0 flammability rating
- Scorelines for easy removal of duct fingers and sidewalls
- Accessories and tools that increase productivity and lower the installed cost

Panduit continues to develop new Panduct® Wiring Duct solutions to satisfy the challenges facing our customers worldwide. Maximize the utilization of enclosure space with PanelMax™ Corner Wiring Duct, DIN Rail Wiring Duct, and Noise Shield. PanelMax™ Corner Wiring Duct fits into unused space in the corner of enclosures providing up to 20% enclosure space savings*. Integrate component mounting with wire management with PanelMax™ DIN Rail Wiring Duct for up to 30% enclosure space savings. PanelMax™ Noise Shield provides noise mitigation between noisy and sensitive cabling and can reduce air space requirements within the enclosure.

*Versus panel layouts using conventional wiring duct.

PANDUCT® Wiring Duct



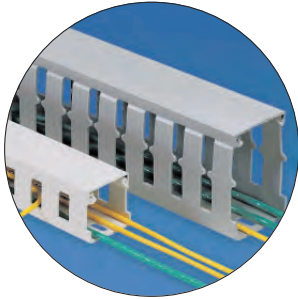
Type H – Hinged Cover Wiring Duct

Designed for wire management applications where frequent moves, adds, changes or equipment upgrades require repeated, easy and quick access to duct channel.



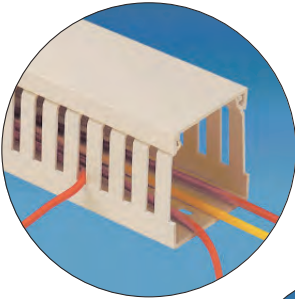
Type FL – Flexible Wiring Duct

Designed to route and protect wires installed in control panel applications that require flexibility.



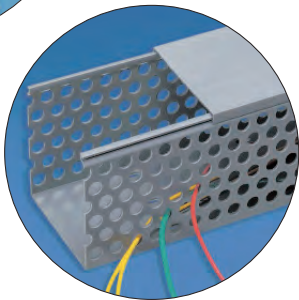
Type NNC – Halogen Free Metric Wiring Duct

Designed for panel applications where high temperatures or halogen free requirements exist.



Type TMC – Low Smoke/Low Toxicity Wiring Duct

Designed for wire management applications in public transportation.



Flush Cover Type D – Round Hole Wiring Duct

Improved profile design provides greater wirefill capacity.

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Pan-Lug™ Compression Connectors

Construction: Made from high strength, high conductivity electrolytic copper and aluminum alloy materials to provide optimum connectivity for power and grounding applications.

Features:

Functional product information is marked directly on the connector, facilitating the identification, orderings, and usage of the compression connector. Color-coded to facilitate quick identification of the proper crimping die.

Applications:

Technical Data: Panduit® Pand-Lug™ Compression Connectors are designed for use with many different code and flex conductor types and are available in a broad range of styles and sizes including copper one-hole, two-hole, and blank tongue lugs and splices, aluminum one-hole and two-hole lugs and splices, and copper in-line reducing splices.

Technical Data:

Wide assortment of manual, controlled cycle, battery operated hydraulic and pneumatic crimping tools for reliable connections at the lowest installed cost.



Approvals:

UL Listed or Recognized, CSA Certified, ABS Type Approved and tested by Telcordia-meets NEBS Level 3, as noted. Terminations using Panduit® Pan-Lug™ Compression Connectors are also UL Listed and CSA Certified with specified competitor tools.

PAN-LUG™ COMPRESSION CONNECTORS

Panduit® Pan-Lug™ Compression Connectors provide permanent terminations for a variety of power and grounding applications, with innovation, highest reliability, and lowest installed cost. Panduit offers the first and only copper compression lugs and splices that meet Network Equipment-Building Systems (NEBS) Level 3 requirements as tested by Telcordia Technologies. NEBS Level 3 assures that product performance is suitable for equipment applications that demand minimal service interruptions over the life span of the equipment.



- Functional product information is marked directly on the connector, facilitating the identification, ordering, and usage of the compression connector
- Color-coded to facilitate quick identification of the proper crimping die
- Made from high strength, high conductivity electrolytic copper and aluminum alloy materials to provide optimum connectivity for power and grounding applications
- UL Listed or Recognized, CSA Certified, ABS Type Approved and tested by Telcordia – meets NEBS Level 3, as noted
- Terminations using Panduit® Pan-Lug™ Compression Connectors are also UL Listed and CSA Certified with specified competitor tools
- Wide assortment of manual, controlled cycle, battery operated hydraulic and pneumatic crimping tools for reliable connections at the lowest installed cost

Panduit® Pan-Lug™ Compression Connectors are designed for use with many different code and flex conductor types and are available in a broad range of styles and sizes including copper one-hole, two-hole, and blank tongue lugs and splices; aluminum one-hole and two-hole lugs and splices; and copper in-line reducing splices. Panduit offers a wide assortment of Pan-Lug™ Power Connectors to meet customer needs and today's application requirements.

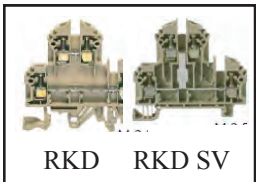
Feed Through Terminal Blocks



Cat. No.	Type	Ratings	Color	Dimensions	Wire Size
1001.2	RK 2.5-4	600V 40A	Beige	L 48mm W 6mm H 51mm	AWG 22-11
1005.2	RK 6-10	600V 65A	Beige	L 48mm W 8mm H 51.5mm	AWG 22-8
1050.2	RK 16	600V 65A	Beige	L 48mm W 8mm H 63mm	AWG 10-6
1052.2	RK 35	600V 110A	Beige	L 58mm W 16mm H 76mm	AWG 12-2

Dual Level Feed Through Terminal Blocks

Dual Level Feed Through Terminal Blocks PA6.6 UL-V2;



Cat. No.	Type	Ratings	Color	Dimensions	Wire Size
1206.2	RKD 2.5	300V 20A	Beige	L 59mm W 5mm H 61mm	AWG 22-14
1209.2	RKD 2.5 SV	300V 20A	Beige	L 59mm W 5mm H 61mm	AWG 22-14
1020.2	RKD 4	300V 30A	Beige	L 60mm W 6mm H 65.5mm	AWG 22-12
1027.2	RKD 4 SV	300V 30A	Beige	L 48mm W 6mm H 65.5mm	AWG 22-12

TS DIN Rails

Features:

The design of the **TS** DIN rail complies with the European norm DIN EN 60715. The steel DIN rail is galvanized and has a coating of blue chromate that is at least 10 μ m thick. We place extra importance on maintaining a high degree of dimensional accuracy. The steel DIN rails can be used as protective-earth busbars (with PE function) in compliance with DIN VDE 0611 part 3. Please note the following when using the rail as a PEN busbar:

- Only one E-Cu rail should be used.
- The short-circuit currents and the rated thermal currents must be observed.

The DIN rails are delivered in standard lengths of 2 meters. All DIN rails are also available in prepared (cut to length) versions, but all types are available pre-cut to customers requirements.



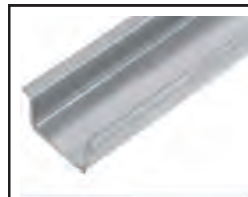
Cat. No. 2094.0
2 Meter Length
Slot Size 18x6.3mm
Galvanized Steel



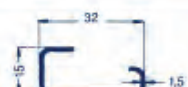
Cat. No. 2026.0
2 Meter Length
Galvanized Steel



Cat. No. 2095.0
2 Meter Length
Slot Size 18x6.3mm
Galvanized Steel



Cat. No. 2027.0
2 Meter Length
Galvanized Steel



Cat. No. 2093.0
2 Meter Length
Slot size 18x6.3mm
Galvanized Steel



Complete catalog available online at:
www.lapptannehill.com

Feed Through Spring Clamp Terminal Blocks

PA6.6 UL-VO; 2 Spring Clamps



Cat. No.	Type	Ratings	Color	Dimensions	Wire Size
3500.2	ZRK 2.5/2A	600V 27A	Beige	L 59mm W 5.1mm H 39mm	AWG 20-12
3515.2	ZRK 4/2A	600V 35A	Beige	L 64mm W 6.1mm H 42mm	AWG 20-10
3581.2	ZRK 6/2A	600V 50A	Beige	L 65mm W 8.1mm H 47.5mm	AWG 22-8
3597.2	ZRK 10/2A	500V 55A	Beige	L 74mm W 10.1mm H 50.5mm	AWG 16-6
3636.2	ZRK 16/2A	1000V 65A	Beige	L 82mm W 12.1mm H 51.5mm	AWG 14-4

PA6.6 UL-VO; 3 Spring Clamps



Cat. No.	Type	Ratings	Color	Dimensions	Wire Size
3501.2	ZRK 2.5/3A	600V 27A	Beige	L 71.3mm W 5.1mm H 39mm	AWG 20-12
3516.2	ZRK 4/3A	600V 35A	Beige	L 78.5mm W 6.1mm H 42mm	AWG 20-10

PA6.6 UL-VO; 4 Spring Clamps



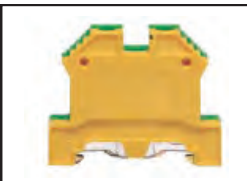
Cat. No.	Type	Ratings	Color	Dimensions	Wire Size
3502.2	ZRK 2.5/4A	600V 27A	Beige	L 83.6mm W 5.1mm H 39mm	AWG 20-12
3503.2	ZRK 2.5/2x2A	600V 27A	Beige	L 83.6mm W 5.1mm H 39mm	AWG 20-12
3517.2	ZRK 4/4A	600V 35A	Beige	L 93mm W 6.1mm H 42mm	AWG 20-10
3518.2	ZRK 4/2x2A	600V 35A	Beige	L 93mm W 6.1mm H 42mm	AWG 22-10

xx/2x2A 2 clamps each side not connected to opposite side

Accessories Spring Clamp Terminal Blocks

Block Type	End-Plate	Block Type	End-Plate	Block Type	End-Plate	Block Type	End-Plate	Block Type	End-Plate
ZRK 2.5/2A	3700.2	ZRK 4/2A	3703.2	ZRK 6/2A	3760.2	ZSL 2.5/2A	3700.1	ZSL 6/2A	3760.1
ZRK 2.5/3A	3701.2	ZRK 4/3A	3704.2	ZRK 10/2A	3788.2	ZSL 2.5/3A	3701.1	ZSL 10/2A	3788.1
ZRK 2.5/4A	3702.2	ZRK 4/4A	3705.2	ZRK 16/2A	3799.2	ZSL 2.5/4A	3702.1	ZSL 16/2A	3799.1
ZRK 2.5/2x2A	3702.2	ZRK 4/2x2A	3705.2			ZSL 4/2A	3703.1		
						ZSL 4/3A	3704.1		
						ZSL 4/4A	3705.1		

Ground Terminal Blocks



Cat. No.	Type	Ratings	Color	Dimensions	Wire Size
1056.2	SL 2.5/35	—	Green/Yellow	L 52mm W 6mm H 47mm	AWG 22-12
1212.2	SL 4/35	—	Green/Yellow	L 56mm W 8mm H 47mm	AWG 22-11
1213.2	SL 10/35	—	Green/Yellow	L 56mm W 10mm H 47mm	AWG 20-6
1197.2	SL 16/35	—	Green/Yellow	L 50mm W 12mm H 58.5mm	AWG 10-4
1199.2	SL 35/35	—	Green/Yellow	L 58mm W 16mm H 71.5mm	AWG 12-2

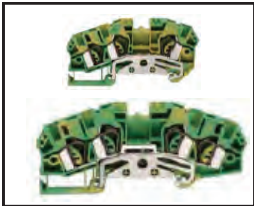
Check out our complete inventory of products at
www.lapptannehill.com

CONTA CLIP

Ground Spring Clamp Terminal Blocks



Cat. No.	Type	Color	Dimensions	Wire Size
3510.2	ZSL 2.5/2A	Green/Yellow	L 59mm W 5.1mm H 39mm	AWG 20-12
3525.2	ZSL 4/2A	Green/Yellow	L 64mm W 6.1mm H 42mm	AWG 20-10
3589.2	ZSL 6/2A	Green/Yellow	L 65mm W 8.1mm H 47.5mm	AWG 22-8
3598.2	ZSL 10/2A	Green/Yellow	L 74mm W 10.1mm H 50.5mm	AWG 16-6
3637.2	ZSL 16/2A	Green/Yellow	L 82mm W 12.1mm H 51.5mm	AWG 14-4



Cat. No.	Type	Color	Dimensions	Wire Size
3511.2	ZSL 2.5/3A	Green/Yellow	L 71.3mm W 5.1mm H 39mm	AWG 20-12
3522.2	ZSL 4/3A	Green/Yellow	L 78.5mm W 6.1mm H 42mm	AWG 20-10
3512.2	ZSL 2.5/4A	Green/yellow	L 83.6mm W 5.1mm H 39mm	AWG 20-12
3527.2	ZSL 4/4A	Green/Yellow	L 93mm W 6.1mm H 42mm	AWG 20-10

End Stops



Screw Type
Cat. No. 2005.2
Type ES 35
Light to Medium
Applications



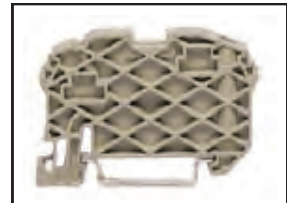
Screw Type
Cat. No. 2826.2
Type ES 35/2/K
Medium To Heavy
Applications



Screw Type
Cat. No. 2761.0
Type HES 35 ST
Heavy
Applications



Screw Less Type
Cat. No. 3811.2
Type ZES 35/2
Light
Applications



Screw Less Type
Cat. No. 3748.2
Type ZES 35
Light to Medium
Applications

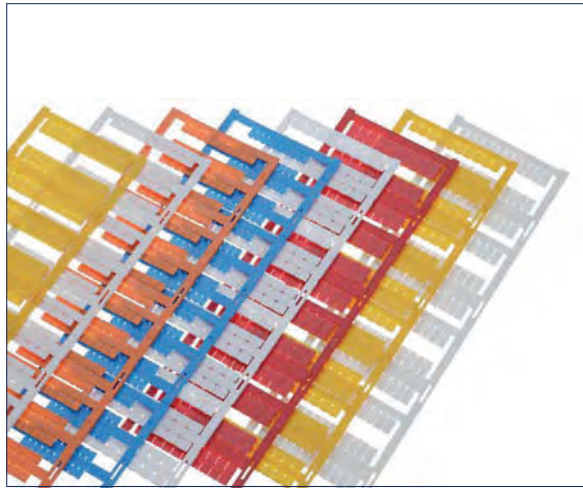
Fuse Terminal Blocks



Cat. No.	Type	Ratings	Color	Dimensions	Wire Size
2190.2	STK 1	600V 16A	Beige	L 57.5mm W 8mm H 45.5mm	AWG 22-12
2462.2	STK 1 LED	115V -	Beige	L 57.5mm W 8mm H 45.5mm	AWG 22-12
1078.2	STK 2	600V 16A	Beige	L 51.4mm W 8mm H 43.5mm	AWG 22-12
1079.2	STKD 1	600V 16A	Beige	L 67.0mm W 8mm H 60.0mm	AWG 22-12

Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com

Terminal Block Marking Tags



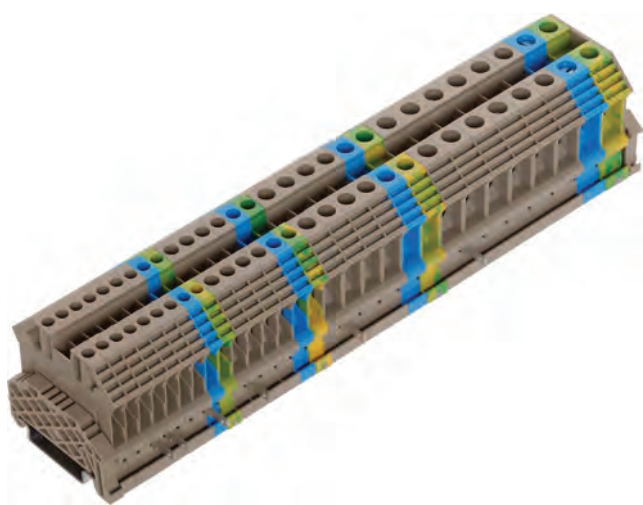
Please Select by the “W” Dimension of the Terminal Blocks

PMC SB 5 FW		PMC SB 5 FS		PMC SB 6 FW		PMC SB 6 FS	
Type	Cat. No.	Type	Cat. No.	Type	Cat. No.	Type	Cat. No.
PMC SB 5/50 FW 1-10	4601.7	PMC SB 5/50 FS 1-10	4636.7	PMC SB 6/50 FW 1-10	4703.7	PMC SB 6/50 FS 1-10	4738.7
PMC SB 5/50 FW 11-20	4602.7	PMC SB 5/50 FS 11-20	4637.7	PMC SB 6/50 FW 11-20	4704.7	PMC SB 6/50 FS 11-20	4739.7
PMC SB 5/50 FW 21-30	4603.7	PMC SB 5/50 FS 21-30	4638.7	PMC SB 6/50 FW 21-30	4705.7	PMC SB 6/50 FS 21-30	4740.7
PMC SB 5/50 FW 31-40	4604.7	PMC SB 5/50 FS 31-40	4639.7	PMC SB 6/50 FW 31-40	4706.7	PMC SB 6/50 FS 31-40	4741.7
PMC SB 5/50 FW 41-50	4605.7	PMC SB 5/50 FS 41-50	4640.7	PMC SB 6/50 FW 41-50	4707.7	PMC SB 6/50 FS 41-50	4742.7
PMC SB 5/50 FW 51-60	4606.7	PMC SB 5/50 FS 51-60	4641.7	PMC SB 6/50 FW 51-60	4708.7	PMC SB 6/50 FS 51-60	4743.7
PMC SB 5/50 FW 61-70	4607.7	PMC SB 5/50 FS 61-70	4642.7	PMC SB 6/50 FW 61-70	4709.7	PMC SB 6/50 FS 61-70	4744.7
PMC SB 5/50 FW 71-80	4608.7	PMC SB 5/50 FS 71-80	4643.7	PMC SB 6/50 FW 71-80	4710.7	PMC SB 6/50 FS 71-80	4745.7
PMC SB 5/50 FW 81-90	4609.7	PMC SB 5/50 FS 81-90	4644.7	PMC SB 6/50 FW 81-90	4711.7	PMC SB 6/50 FS 81-90	4746.7
PMC SB 5/50 FW 91-100	4610.7	PMC SB 5/50 FS 91-100	4645.7	PMC SB 6/50 FW 91-100	4712.7	PMC SB 6/50 FS 91-100	4747.7

Please contact your sales representative for detailed information at sales@lapptannehill.com

CONTACTCLIP

Screw Connection System SRK



New Series Feed Through Terminal Blocks



Cat. No.	Type	Ratings	Color	Dimensions	Wire Size
17100.2	SRK2.5/2A	600V 20A	Beige	L 48mm W 5mm H 47mm	AWG 22-12
17104.2	SRK 4/2A	600V 30A	Beige	L 48mm W 6mm H 47mm	AWG 22-11
17108.2	SRK 6/2A	600V 50A	Beige	L 48mm W 8mm H 47mm	AWG 22-8
17112.2	SRK 10/2A	600V 65A	Beige	L 48mm W10mm H 47mm	AWG 10-6

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Accessories specific to the Screw Connection System. End Plates / Visual Separation

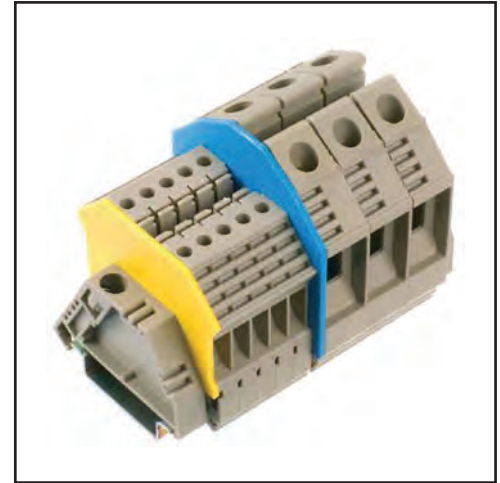
Description:

AP end plates are usually inserted at the end of a clamp point. If work is carried out within a terminal block with different/various sized terminal blocks, end plates must also be inserted in order to ensure contact protection and the safety of the fingers. The outer dimensions of the end plates correspond to the dimensions of the terminal blocks.

Coloured end plates are often inserted in order to mark a clear distinction between different power circuits or voltage levels. In addition, the use of end plates lengthens the airways and leakage paths, which in turn influence the rated voltage.

Rapid installation of the end plates is enabled by notched plugs.

Due to the special construction of the RK series, no end plates must be inserted for adjacent QI cross connectors with different potentials.



Accessories

Block Type	End-Plate Cat. No.	Block Type	Internal Screw Jumper	Cat. No.	Block Type	Internal Screw Jumper	Cat. No.	Block Type	External Jumper	Cat. No.
RK 2.5-4	2001.2	RK 2.5-4	2 Pole	2019.0	RKD 2.5	2 Pole	2567.0	STK 1	2 Pole	2067.0
RK 6-10	2001.2	RK 2.5-4	3 Pole	2020.0	RKD 2.5	3 Pole	2568.0	STK 1	3 Pole	2068.0
RK 16	2104.2	RK 2.5-4	4 Pole	2021.0	RKD 2.5	4 Pole	2569.0	STK 1	4 Pole	2069.0
RK 35	2116.2	RK 2.5-4	10 Pole	2022.0	RKD 2.5	10 Pole	2570.0	STK 1 LED	2 Pole	2067.0
RKD 2.5	2101.2	RK 6-10	2 Pole	2060.0	RKD 2.5 SV	2 Pole	2567.0	STK 1 LED	3 Pole	2068.0
RKD 2.5 SV	2101.2	RK 6-10	3 Pole	2061.0	RKD 2.5 SV	3 Pole	2568.0	STK 1 LED	4 Pole	2069.0
RKD 4	2101.2	RK 6-10	4 Pole	2062.0	RKD 2.5 SV	4 Pole	2569.0	STK 2	2 Pole	2067.0
RKD 4 SV	2101.2	RK 6-10	10 Pole	2063.0	RKD 2.5 SV	10 Pole	2570.0	STK 2	3 Pole	2068.0
IKD ALL	2699.2	RK 16	2 Pole	2112.0	IKD 2.5/Q	2 Pole	2422.0	STK 2	4 Pole	2069.0
STK 1	2046.2	RK 16	3 Pole	2113.0	IKD 2.5/Q	3 Pole	2423.0	STKD 1	2 Pole	2067.0
STK1 LED	2046.2	RK 16	4 Pole	2114.0	IKD 2.5/Q	4 Pole	2424.0	STKD 1	3 Pole	2068.0
STK 2	2186.2	RK 16	10 Pole	2115.0	IKD 2.5/Q	10 Pole	2525.0	STKD 1	4 Pole	2069.0
STKD 1	2187.2	RK 35	2 Pole	2164.0	IKD 2.5/F/Q	2 Pole	2422.0	SK 1/35 ALL	2 Pole	2366.0
SK1/35 ALL	2047.2	RK 35	3 Pole	2165.0	IKD 2.5/F/Q	3 Pole	2423.0	SK 1/35 ALL	3 Pole	2367.0
		RK 35	4 Pole	2166.0	IKD 2.5/F/Q	4 Pole	2424.0	SK 1/35 ALL	4 Pole	2368.0
		RK 35	10 Pole	2167.0	IKD 2.5/F/Q	10 Pole	2425.0	SK 1/35 ALL	10 Pole	2369.0

Conta Strips™

Construction: **Insert:** Nickel Plated Copper Alloy. **Screw:** Zinc-Yellow Chromate Plated Steel.

Features:

- Side Wire Entry
- Housing: Polyamide 6.6
- Wire Protector/Center Barrier: Stainless Steel

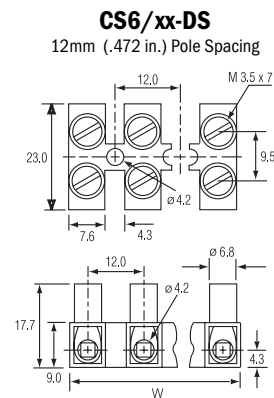
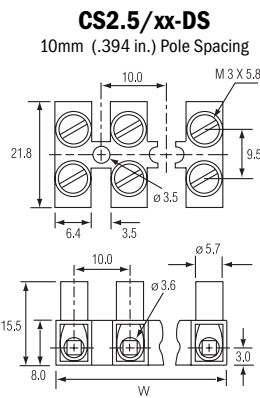
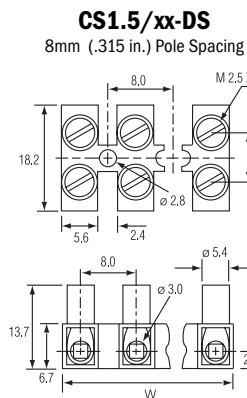


Applications:

Developed for quick and efficient wire-to-wire connections in lighting, appliances, HVAC and industrial equipment/devices where low cost, wire terminations are needed. Conta-Strips™ are modern replacements for traditional Double Row Barrier Style Terminal Blocks. Unlike Barrier Blocks, they feature a touch-proof design with totally recessed metal parts which eliminate any chance of accidental shorts and minimize the possibility of electrical shock. Easy to use, Conta-Strips™ are supplied with open clamps ready for immediate wire hookup. Simply, strip the wire, insert and tighten the screw for a reliable electrical connection. Conta-Strips™ eliminate the need for costly and labor intensive wire preparations associated with the use of spade or ring lugs. Conta-Strips™ are available in 12 Pole Strips which can be readily cut to any pole position using a saw or a utility knife. Or, they can be ordered pre-cut to the required number of poles. Use versions with a flat base and a 300V Rating for Commercial and General Industrial Applications where Industrial Control Equipment is not present.

Technical Data:

Color:
White, Translucent



Ordering Information: xx= No. of Poles	Cat. No.	Width - W mm (in.)	Std. Pack	Cat. No.	Width - W mm (in.)	Std. Pack	Cat. No.	Width - W mm (in.)	Std. Pack
2	27001.3	13.6 (.54)	100	27097.3	17.0 (.67)	100	27193.3	20.0 (.79)	100
3	27002.3	21.5 (.85)	100	27098.3	27.0 (1.06)	100	27194.3	32.0 (1.26)	100
4	27003.3	29.5 (1.16)	100	27099.3	37.0 (1.46)	100	27195.3	44.0 (1.73)	100
5	27004.3	37.4 (1.47)	100	27100.3	47.0 (1.85)	100	27196.3	56.0 (2.21)	100
6	27005.3	45.4 (1.79)	50	27101.3	57.0 (2.24)	50	27197.3	68.0 (2.68)	50
7	27006.3	53.3 (2.10)	50	27102.3	67.0 (2.64)	50	27198.3	80.0 (3.15)	50
8	27007.3	61.3 (2.41)	50	27103.3	77.0 (3.03)	50	27199.3	92.0 (3.62)	50
9	27008.3	69.2 (2.72)	50	27104.3	87.0 (3.43)	50	27200.3	104.0 (4.10)	50
10	27009.3	77.2 (3.04)	50	27105.3	97.0 (3.82)	50	27201.3	116.0 (4.57)	25
11	27010.3	85.1 (3.35)	50	27106.3	107.0 (4.21)	50	27202.3	128.0 (5.04)	25
12	27011.3	93.0 (3.66)	50	27107.3	117.0 (4.61)	50	27203.3	140.0 (5.51)	25

Electrical Ratings:									
IEC 947-7-1	400V / 18A / 1.5mm ²			400V / 26A / 4mm ²			400V / 40A / 6mm ²		
CSA LR 703305	300V / 15A / 22-16 AWG			300V / 30A / 18-12 AWG			300V / 40A / 18-10 AWG		
E196136	300V / 20A / 22-12 AWG			300V / 30A / 22-10 AWG			300V / 40A / 20-8 AWG		
Insulation Stripping Length mm (in.)	5 (.20)			6 (.24)			7 (.28)		
Tightening Torque Nm (lbf.-in.)	.75 (6.5)			.85 (7.5)			.85 (7.5)		
Screw Hole Diameter mm (in.)	3.0 (.12)			3.5 (.14)			4.0 (.16)		
Mounting Hole Diameter mm (in.)	2.8 (.110)			3.5 (.138)			4.2 (.165)		
Accessories:									
External Insulated Jumpers:*									
2 Pole	Cat.No. 27435.4	Std.Pack 50		Cat.No. 27447.4	Std.Pack 50		Cat.No. 27459.4	Std.Pack 50	
3 Pole	Cat.No. 27436.4	Std.Pack 50		Cat.No. 27448.4	Std.Pack 50		Cat.No. 27460.4	Std.Pack 50	
4 Pole	Cat.No. 27437.4	Std.Pack 50		Cat.No. 27449.4	Std.Pack 50		Cat.No. 27461.4	Std.Pack 50	
12 Pole†	Cat.No. 27445.4	Std.Pack 10		Cat.No. 27457.4	Std.Pack 10		Cat.No. 27469.4	Std.Pack 10	
Marking Plates:									
Blank				Cat.No. 27495.7	Std.Pack 25		Cat.No. 27496.7	Std.Pack 25	
Numbered 1 - 12				Cat.No. 27498.7	Std.Pack 25		Cat.No. 27500.7	Std.Pack 25	
Numbered 13 - 24				Cat.No. 27499.7	Std.Pack 25		Cat.No. 27501.7	Std.Pack 25	

* For Electrical Ratings see corresponding Conta-Strips

† Other Pole Positions available, contact Conta-Clip, Inc.

Note: Dimensions on Diagrams are shown in mm. Metric Conversion: in. = mm x 0.03937

Conta Strips™

Construction: **Insert:** Nickel Plated Copper Alloy. **Screw:** Zinc-Yellow Chromate Plated Steel.

Features:

- Side Wire Entry
- Housing: Polyamide 6.6
- Wire Protector/Center Barrier: Stainless Steel



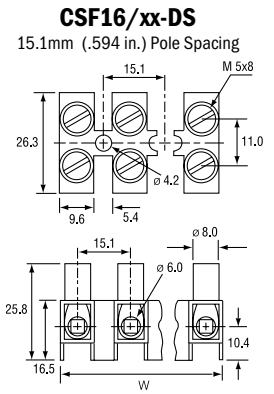
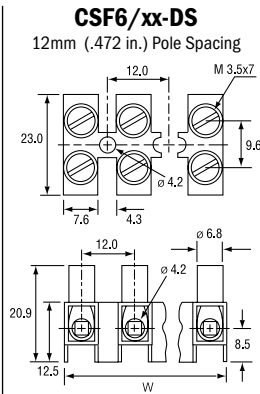
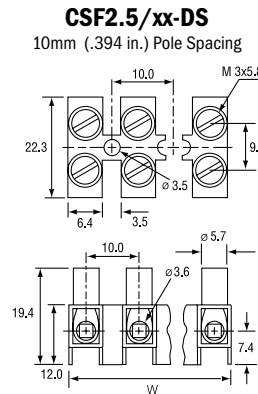
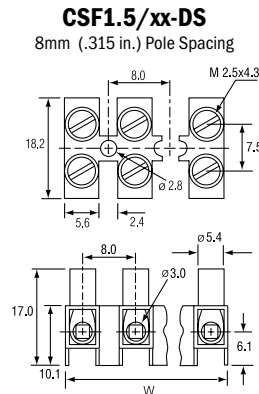
Applications:

Developed for quick and efficient wire-to-wire connections in lighting, appliances, HVAC and industrial equipment/devices where low cost, wire terminations are needed. Conta-Strips™ are modern replacements for traditional Double Row Barrier Style Terminal Blocks. Unlike Barrier Blocks, they feature a touch-proof design with totally recessed metal parts which eliminate any chance of accidental shorts and minimize the possibility of electrical shock. Easy to use, Conta-Strips™ are supplied with open clamps ready for immediate wire hookup. Simply, strip the wire, insert and tighten the screw for a reliable electrical connection. Conta-Strips™ eliminate the need for costly and labor intensive wire preparations associated with the use of spade or ring lugs. Conta-Strips™ are available in 12 Pole Strips which can be readily cut to any pole position using a saw or a utility knife. Or, they can be ordered pre-cut to the required number of poles. Use versions with a flat base and a 300V Rating for Commercial and General Industrial Applications where Industrial Control Equipment is not present.

Technical Data:



Color:
White, Translucent



Ordering Information: xx= No. of Poles	Cat. No.	Width - W mm (in.)	Std. Pack	Cat. No.	Width - W mm (in.)	Std. Pack	Cat. No.	Width - W mm (in.)	Std. Pack	Cat. No.	Width - W mm (in.)	Std. Pack
2	27025.3	13.6 (.54)	100	27121.3	17.0 (.67)	100	27217.3	20.0 (.79)	100	27289.3	25.0 (.98)	50
3	27026.3	21.5 (.85)	100	27122.3	27.0 (1.06)	100	27218.3	32.0 (1.26)	100	27290.3	40.0 (1.58)	50
4	27027.3	29.5 (1.16)	100	27123.3	37.0 (1.46)	100	27219.3	44.0 (1.73)	100	27291.3	55.0 (2.17)	50
5	27028.3	37.4 (1.47)	100	27124.3	47.0 (1.85)	100	27220.3	56.0 (2.21)	100	27292.3	70.0 (2.76)	50
6	27029.3	45.4 (1.79)	50	27125.3	57.0 (2.24)	50	27221.3	68.0 (2.68)	50	27293.3	86.0 (3.39)	25
7	27030.3	53.3 (2.10)	50	27126.3	67.0 (2.64)	50	27222.3	80.0 (3.15)	50	27294.3	101.0 (3.98)	25
8	27031.3	61.3 (2.41)	50	27127.3	77.0 (3.03)	50	27223.3	92.0 (3.62)	50	27295.3	116.0 (4.57)	25
9	27032.3	69.2 (2.72)	50	27128.3	87.0 (3.43)	50	27224.3	104.0 (4.10)	50	27296.3	131.0 (5.16)	25
10	27033.3	77.2 (3.04)	50	27129.3	97.0 (3.82)	50	27225.3	116.0 (4.57)	25	27297.3	146.0 (5.75)	10
11	27034.3	85.1 (3.35)	50	27130.3	107.0 (4.21)	50	27226.3	128.0 (5.04)	25	27298.3	161.0 (6.34)	10
12	27035.3	93.0 (3.66)	50	27131.3	117.0 (4.61)	50	27227.3	140.0 (5.51)	25	27299.3	176.0 (6.93)	10

Electrical Ratings: IEC 947-7-1	400V / 18A / 1.5mm ²	400V / 26A / 4mm ²	400V / 44A / 6mm ²	800V / 82A / 16mm ²
CSA LR 703305	300V / 15A / 22-16 AWG	600V / 30A / 18-12 AWG	600V / 40A / 18-10 AWG	600V / 65A / 18-6 AWG
E196136	600V / 20A / 22-12 AWG	600V / 30A / 22-10 AWG	600V / 40A / 20-8AWG	600V / 63A / 14-6 AWG
Insulation Stripping Length mm (in.)	5 (.20)	6 (.24)	7 (.28)	8 (.32)
Tightening Torque Nm (lbf.-in.)	.75 (6.5)	.85 (7.5)	.85 (7.5)	2.4 (21.0)
Screw Hole Diameter mm (in.)	3.0 (.12)	3.5 (.14)	4.0 (.16)	5.5 (.22)
Mounting Hole Diameter mm (in.)	2.8 (.110)	3.5 (.138)	4.2 (.165)	4.2 (.165)

Accessories:				
External Insulated Jumpers:*				
2 Pole	Cat.No. 27435.4	Std.Pack 50	Cat.No. 27447.4	Std.Pack 50
3 Pole	Cat.No. 27436.4	Std.Pack 50	Cat.No. 27448.4	Std.Pack 50
4 Pole	Cat.No. 27437.4	Std.Pack 50	Cat.No. 27449.4	Std.Pack 50
12 Pole†	Cat.No. 27445.4	Std.Pack 10	Cat.No. 27457.4	Std.Pack 10
Marking Plates:				
Blank			Cat.No. 27495.7	Std.Pack 25
Numbered 1 - 12			Cat.No. 27498.7	Std.Pack 25
Numbered 13 - 24			Cat.No. 27499.7	Std.Pack 25
Isolation Partition:			Cat.No. 27487.4	Std.Pack 10
Mounting Pins:			Cat.No. 27490.4	Std.Pack 100

			Cat.No. 27459.4	Std.Pack 50
			Cat.No. 27460.4	Std.Pack 50
			Cat.No. 27461.4	Std.Pack 50
			Cat.No. 27469.4	Std.Pack 10
			Cat.No. 27496.7	Std.Pack 25
			Cat.No. 27500.7	Std.Pack 25
			Cat.No. 27501.7	Std.Pack 25
			Cat.No. 27487.4	Std.Pack 10
			Cat.No. 27490.4	Std.Pack 100
			Cat.No. 27497.7	Std.Pack 25
			Cat.No. 27502.7	Std.Pack 25
			Cat.No. 27503.7	Std.Pack 25
			Cat.No. 27491.4	Std.Pack 100

* For Electrical Ratings see corresponding Conta-Strips

† Other Pole Positions available, contact Conta-Clip, Inc.

Note: Dimensions on Diagrams are shown in mm. Metric Conversion: in. = mm x 0.03937



Wire Management

Tinned Copper Tubular Braid

Construction: All Tinned Copper Tubular Braids are made with the individual ends of wire that conforms to ASTM-B 33 specification.

Features:

Braid is formed to maintain coverages of 90% shielding over the nominal diameters specified. (70% for .078" and smaller).

Applications:

As required by all Allied Mil-Specs and other industrial specifications.



Technical Data: **Approvals:**
• ASTM-B 33 specification

Part No.	AA59569	QQB575	Nominal I.D.	AWG of Individual Ends	No. of Strands (Carriers)	No. of Wires per Strand	Total No. of Wires	Approx. AWG Equivalent	Nom. Circular Mills	Calculated Amperage	Approx. Shipping Weight (Lbs/1000 Ft)
110	AA59569R32T0062	QQB575R32T0062	1/16"	32	16	1	16	20	1,011	9	6
112	AA59569R32T0109	QQB575R32T0109	7/64"	32	16	2	32	17	2,023	18	9
114	AA59569R32T0125	QQB575R32T0125	1/8"	32	24	2	48	15	3,034	25	13
116	AA59569R32T0171	QQB575R32T0171	11/64"	32	24	3	72	14	4,551	32	18
118	AA59569R32T0203	QQB575R32T0203	13/64"	32	24	5	120	11	7,585	46	28
120	AA59569R32T0375	QQB575R32T0375	3/8"	32	48	3	144	11	9,102	46	38
122	AA59569R32T0500	QQB575R32T0500	1/2"	32	48	4	192	9	12,136	62	45
124	AA59569R32T0781	QQB575R32T0781	25/32"	32	48	7	336	7	21,239	88	53
132	AA59569R34T0062	QQB575R34T0062	1/16"	34	16	2	32	19	1,272	11	8
134	AA59569R34T0109	QQB575R34T0109	7/64"	34	16	4	64	16	2,544	19	12
136	AA59569R34T0125	QQB575R34T0125	1/8"	34	24	3	72	16	2,862	19	12
137	Not on spec	Not on spec	9/64"	34	24	4	96	15	3,816	26	17
138	AA59569R34T0171	QQB575R34T0171	11/64"	34	24	5	120	14	4,770	32	20
140	Not on spec	Not on spec	3/16"	34	24	6	144	13	5,724	38	22
142	Not on spec	Not on spec	1/4"	34	24	7	168	12	6,678	41	26
144	Not on spec	Not on spec	3/8"	34	24	8	192	11	7,632	46	30
145	AA59569R34T0375	QQB575R34T0375	3/8"	34	48	5	240	10	9,740	53	38
146	AA59569R34T0500	QQB575R34T0500	1/2"	34	48	7	336	9	13,356	62	53
148	Not on spec	Not on spec	5/8"	34	48	8	384	8	15,264	64	56
150	Not on spec	Not on spec	11/16"	34	48	10	480	7	19,080	81	67
152	AA59569R34T0781	QQB575R34T0781	25/32"	34	48	11	528	7	20,988	85	77
153	Not on spec	Not on spec	13/16"	34	48	12	576	7	22,896	90	85
160	AA59569R36T0031	QQB575R36T0031	1/32"	36	24	1	24	22	600	7	5
162	AA59569R36T0062	QQB575R36T0062	1/16"	36	24	2	48	19	1,200	11	7
163	AA59569R36T0078	QQB575R36T0078	5/64"	36	24	3	72	18	1,800	16	9
164	AA59569R36T0109	QQB575R36T0109	7/64"	36	24	4	96	16	2,400	19	11
166	AA59569R36T0125	QQB575R36T0125	1/8"	36	24	5	120	15	3,000	25	13
167	AA59569R36T0156	QQB575R36T0156	5/32"	36	24	10	240	12	6,000	40	24
168	AA59569R36T0171	QQB575R36T0171	11/64"	36	24	7	168	14	4,200	32	17
170	AA59569R34T0203	QQB575R34T0203	13/64"	34	24	8	192	11	7,630	46	31
170/1	AA59569R36T0203	QQB575R36T0203	13/64"	36	24	13	312	11	7,800	46	31
171	AA59569R36T0250	QQB575R36T0250	1/4"	36	24	16	384	10	9,600	53	38
171/1	AA59569R30T0281	QQB575R30T0281	9/32"	30	24	5	120	9	12,060	60	47
171/2	AA59569R30T0375	QQB575R30T0375	3/8"	30	24	7	168	8	16,880	75	62
172	AA59569R36T0375	QQB575R36T0375	3/8"	36	48	8	384	10	9,600	53	40
173	AA59569R30T0437	QQB575R30T0437	7/16"	30	24	10	240	6	24,120	90	85
173/1	AA59569R30T0500	QQB575R30T0500	1/2"	30	24	15	360	5	36,180	120	122
174	AA59569R36T0500	QQB575R36T0500	1/2"	36	48	11	528	9	13,200	62	53
175	AA59569R30T0562	QQB575R30T0562	9/16"	30	48	10	480	3	48,240	145	156
175/1	AA59569R30T0656	QQB575R30T0656	21/32"	30	48	16	768	1	77,180	190	259
176	AA59569R36T0781	QQB575R36T0781	25/32"	36	48	18	864	7	21,600	88	79
177	AA59569R30T0875	QQB575R30T0875	7/8"	30	48	7	336	5	33,770	100	123
178	AA59569R30T1000	QQB575R30T1000	1"	30	48	8	384	4	38,600	120	140
179	AA59569R30T1125	QQB575R30T1125	1-1/8"	30	48	9	432	4	43,420	130	155
180	Not on spec	Not on spec	1-1/4"	30	48	10	480	3	48,240	145	168
181	AA59569R30T1375	QQB575R30T1375	1-3/8"	30	48	11	528	3	53,060	145	185
182	AA59569R30T1500	QQB575R30T1500	1-1/2"	30	48	12	576	3	57,890	145	200
183	AA59569R30T2000	QQB575R30T2000	2"	30	48	14	672	2	67,540	180	230
184	Not on spec	Not on spec	2-1/4"	30	48	16	768	1	77,180	190	260

Tinned Copper Flat Braids

Construction: A specific number of ends of tinned copper wire, braided with a specific number of carriers (strands) which is subsequently mill-rolled for specific width and thickness.

Applications:

A flat braid has a specific current-carrying capacity. High currents are easily carried at low voltages. Typically used as a flexible ground strap where flexibility, strange configurations and solderability are of prime importance.



Part No.	AA59569	QQB575	Nominal Flat Width	Nominal Thickness	AWG of Individual Ends	No. of Strands (Carriers)	No. of Wires per Strand	Total No. of Wires	Approx. AWG Equivalent	Nom. Circular Mills	Calculated Amperage	Approx. Shipping Weight (Lbs/1000 Ft)
221	Not on spec	Not on spec	.025"	.015"	36	8	1	8	27	200	4	3
222	Not on spec	Not on spec	.031"	.020"	36	16	1	16	24	400	6	4
223	AA59569F36T0031	QQB575F36T0031	.046"	.020"	36	24	1	24	22	600	7	5
224	Not on spec	Not on spec	.094"	.020"	36	16	3	48	19	1,200	11	7
225	AA59569F36T0062	QQB575F36T0062	.093"	.031"	36	24	2	48	19	1,200	11	7
226	Not on spec	Not on spec	.109"	.020"	36	16	4	64	18	1,800	16	8
229	AA59569F36T0078	QQB575F36T0078	.125"	.020"	36	24	3	72	18	1,800	16	9
229/1	AA59569F36T0109	QQB575F36T0109	.156"	.031"	36	24	4	96	16	2,400	19	11
230	AA59569F36T0125	QQB575F36T0125	.187"	.020"	36	24	5	120	15	3,000	25	13
231	AA59569F36T0171	QQB575F36T0171	.250"	.030"	36	24	7	168	14	4,200	32	17
231/1	AA59569F36T0156	QQB575F36T0156	.250"	.046"	36	24	10	240	12	6,000	40	24
231/2	AA59569F36T0203	QQB575F36T0203	.281"	.046"	36	24	13	312	11	7,800	46	31
232	Not on spec	Not on spec	.375"	.030"	36	48	6	288	12	7,200	40	28
232/1	Not on spec	Not on spec	.375"	.045"	30	24	5	120	9	12,060	60	47
233	AA59569F36T0375	QQB575F36T0375	.625"	.030"	36	48	8	384	10	9,600	53	40
233/1	AA59569F36T0500	QQB575F36T0500	.625"	.046"	36	48	11	528	9	13,200	62	53
233/2	Not on Spec	Not on Spec	.500"	.030"	36	48	8	384	10	9,600	53	39
234	AA59569F36T0781	QQB575F36T0781	.750"	.040"	36	48	18	864	7	20,800	88	79
235	Not on spec	Not on spec	1.000"	.045"	36	48	18	864	7	20,800	85	75
236	Not on spec	Not on spec	.812"	.045"	36	48	19	912	7	22,800	93	80
236/1	Not on spec	Not on spec	.875"	.050"	36	48	22	1,056	6	26,400	105	95
237	Not on spec	Not on spec	.750"	.040"	36	24	67	1,608	4	40,200	125	140
238	Not on spec	Not on spec	1.625"	.080"	36	48	84	4,032	Jan-00	100,800	230	359
240	AA59569F30T0437	QQB575F30T0437	.500"	.093"	30	24	10	240	6	24,120	90	85
242	AA59569F30T0500	QQB575F30T0500	.625"	.093"	30	24	15	360	5	36,180	120	122
244	Not on spec	Not on spec	.750"	.110"	30	24	20	480	3	48,000	145	170
246	Not on spec	Not on spec	.875"	.120"	30	24	24	576	3	57,600	165	193
248	Not on spec	Not on spec	.937"	.130"	30	24	26	624	2	62,400	170	210
250	Not on spec	Not on spec	.937"	.130"	30	24	27	648	2	64,800	175	225
252	Not on spec	Not on spec	1.000"	.140"	30	24	32	768	1	76,800	195	270
260	Not on spec	Not on spec	.750"	.050"	30	48	5	240	6	24,000	93	88
262	AA59569F30T0875	QQB575F30T0875	1.375"	.050"	30	48	7	336	5	33,770	100	123
264	Not on spec	Not on spec	1.000"	.070"	30	48	8	384	4	38,400	120	137
266	Not on spec	Not on spec	1.250"	.080"	30	48	10	480	3	48,000	145	168
268	AA59569F30T1375	QQB575F30T1375	1.500"	.060"	30	48	11	528	3	53,060	145	185
270	Not on spec	Not on spec	.875"	.090"	30	48	12	576	2	57,600	150	200
272	Not on spec	Not on spec	1.375"	.090"	30	48	14	672	2	67,200	165	230
274	Not on spec	Not on spec	1.500"	.100"	30	48	16	768	1	76,800	180	265
276	Not on spec	Not on spec	1.625"	.110"	30	48	18	864	1	86,400	200	283
278	Not on spec	Not on spec	1.375"	.120"	30	48	22	1,056	Jan-00	105,600	235	362
279	Not on spec	Not on spec	1.750"	.130"	30	48	26	1,248	Feb-00	124,800	250	430
280	Not on spec	Not on spec	2.000"	.130"	30	48	28	1,344	Feb-00	134,400	255	464
282	Not on spec	Not on spec	2.000"	.140"	30	48	32	1,536	Mar-00	153,600	290	530
284	Not on spec	Not on spec	2.000"	.150"	30	48	35	1,680	Mar-00	168,000	320	570
286	Not on spec	Not on spec	2.375"	.175"	30	48	44	2,112	Apr-00	211,200	370	730
287	Not on spec	Not on spec	3.000"	.190"	30	48	47	2,256	Apr-00	225,600	390	780
288	Not on spec	Not on spec	2.500"	.190"	30	48	52	2,496	250 MCM	249,600	410	900

Large Flat Tinned Copper Flat Braids

Construction: A specific number of ends of tinned copper wire, braided with a specific number of carriers (strands) which is subsequently mill-rolled for specific width and thickness.

Applications:

A flat braid has a specific current-carrying capacity. High currents are easily carried at low voltages. Typically used as a flexible ground strap where flexibility, strange configurations and solderability are of prime importance.



CCC NO.	NOMINAL FLAT WIDTH	NOMINAL THICKNESS	AWG. OF INDIV ENDS	NO. OF STRANDS (CARRIER)	NO. OF WIRES PER STRAND	TOTAL NO. OF INDIV. WIRES	APPROX. AWG. EQUIV.	NOMINAL CIRCULAR MILLS	CURRENT CARRYING CAPACITY (AMPS)	APPROX. SHIPPING WEIGHT LBS.
240 *	1/2"	0.08	30	24	10	240	6	24000	93	83
242 *	5/8"	0.085	30	24	15	360	5	36000	120	121
244	3/4"	0.11	30	24	20	480	3	48000	145	170
246	7/8"	0.12	30	24	24	576	3	57600	165	193
248	15/16"	0.13	30	24	26	624	2	62400	170	210
250	15/16"	0.13	30	24	27	648	2	64800	175	225
252	1"	0.14	30	24	32	768	1	76800	195	270
260	3/4"	0.05	30	48	5	240	6	24000	93	88
262 *	1-3/8"	0.06	30	48	7	336	5	33600	100	129
264	1"	0.07	30	48	8	384	4	38400	120	137
266	1-1/4"	0.08	30	48	10	480	3	48000	145	168
268 *	1-1/2"	0.045	30	48	11	528	3	52800	145	192
270	7/8"	0.09	30	48	12	576	2	57600	150	200
272	1-3/8"	0.09	30	48	14	672	2	67200	165	230
274	1-1/2"	0.1	30	48	16	768	1	76800	180	265
276	1-5/8"	0.11	30	48	18	864	1	86400	200	283
278	1-3/8"	0.12	30	48	22	1056	1/0	105600	235	362
279	1-3/4"	0.13	30	48	26	1248	2/0	124800	250	430
280	2"	0.13	30	48	28	1344	2/0	134400	255	464
282	2"	0.14	30	48	32	1536	3/0	153600	290	530
284	2"	0.15	30	48	35	1680	3/0	168000	320	570
286	2 3/8"	0.175	30	48	44	2112	4/0	211200	370	730
287	3"	0.19	30	48	47	2256	4/0	225600	390	780
288	2 1/2"	0.19	30	48	52	2496	250 MCM	249600	410	900

* Denotes QQB575 construction

NOTE: When bare copper is required add (B) to our part #

EXAMPLE - 240B



025" PVC Solid & SR-PVC Stranded Microzip Ribbon

Construction: This Microzip consists of 30 AWG solid bare or stranded tinned copper. Conductors are then fully extruded with PVC insulation. A red polarity stripe is added to the first conductor for easy identification. Standard color is gray. **Insulation:** PVC.

Features:

Tight tolerances on 0.025" pitch flat ribbon cable. Solid conductor construction for lower cost alternative with improved impedance performance over stranded. 80 Conductor Ultra ATA 100 Compliant.

Applications:

Ultra ATA 33, 66, 100 and 133. High density interconnect.

Technical Data:



Temperature:

- UL Temp: 105°C
- CSA Temp: 105°C



Rated Voltage:

150V



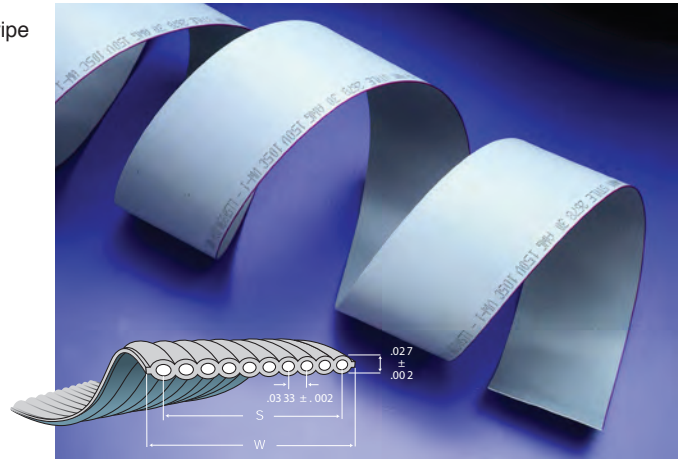
Color Code:

Standard color is gray



Approvals:

- UL Style: 2678.
- CSA Style: AWM I A/B FT-1



Series No.	Conductor AWG Stranding Coating	Insulation	Conductor Resistance Ω/Mft. @ 20°C	Capacitance		Impedance		Propagation Delay	
				pF/ft. (G-S)	pF/ft. (G-S-G)	(G-S-G) (Ohms) SE	(G-S) (Ohms) Diff.	ns/ft.	Skew ns/ft. (Max.)
23129	30 AWG 1/30 BC	PVC	104	14.2	25	80	130	1.52	0.036
23113	30 AWG 7/38 TC	PVC	106	15.8	23.30	75	110	1.62	0.030



Part No.	Insulation	No. of Conductors	Width "W"	Span "S"	Pitch Tolerance	Standard Put-ups
23129-20-P-00100	PVC	20	0.500"	0.475" ± 0.005"	± 0.0016"	100'
23129-25-P-00100	PVC	25	0.625"	0.600" ± 0.005"	± 0.0016"	100'
23129-26-P-00100	PVC	26	0.650"	0.625" ± 0.005"	± 0.0016"	100'
23129-34-P-00100	PVC	34	0.850"	0.825" ± 0.005"	± 0.0016"	100'
23129-40-P-00100	PVC	40	1.000"	0.975" ± 0.005"	± 0.0016"	100'
23129-50-P-00100	PVC	50	1.250"	1.225" ± 0.005"	± 0.0016"	100'
23129-60-P-00100	PVC	60	1.500"	1.475" ± 0.005"	± 0.0016"	100'
23129-68-P-00400	PVC	68	1.700"	1.675" ± 0.005"	± 0.0016"	400'
23129-80-P-00400	PVC	80	2.000"	1.975" ± 0.005"	± 0.0016"	400'
23129-100-P-00100	PVC	100	2.500"	2.475" ± 0.007"	± 0.0016"	100'
23113-10-P-00100	PVC	10	0.250"	0.225" ± 0.005"	± 0.0016"	100'
23113-16-P-00100	PVC	16	0.400"	0.375" ± 0.005"	± 0.0016"	100'
23113-20-P-00100	PVC	20	0.500"	0.475" ± 0.005"	± 0.0016"	100'
23113-26-P-00100	PVC	26	0.650"	0.625" ± 0.005"	± 0.0016"	100'
23113-30-P-00100	PVC	30	0.750"	0.725" ± 0.005"	± 0.0016"	100'
23113-34-P-00100	PVC	34	0.850"	0.825" ± 0.005"	± 0.0016"	100'
23113-40-P-00100	PVC	40	1.000"	0.975" ± 0.005"	± 0.0016"	100'
23113-50-P-00100	PVC	50	1.250"	1.225" ± 0.005"	± 0.0016"	100' & 500'
23113-60-P-00100	PVC	60	1.500"	1.475" ± 0.005"	± 0.0016"	100'
23113-80-P-00400	PVC	80	2.000"	1.975" ± 0.005"	± 0.0016"	400'
23113-100-P-00100	PVC	100	2.500"	2.475" ± 0.007"	± 0.0016"	100'

Other conductor counts available upon request. 20030 28 AWG 7/36 also available. All data is for reference only and is subject to change.
Note: 23113 thickness is 0.025 ± 0.002.

025" PVC Stranded Micro Quick-Twist

Construction: Micro Quick-Twist is built with 30 AWG stranded tinned copper. Each conductor is individually extruded with PVC. Conductors are pulled into pairs then bonded into flat sections for IDC termination points. No lamination tapes are used on the flat sections for 23195 and 20050.0. **Insulation:** PVC.

Features:

Excellent noise and cross talk reduction characteristics. Ideal for IDC termination with High-Density connectors. Great alternative to FEP and TPO cables when higher performance is demanded of a stranded cable.

Applications:

SCSI, Fast-XX, SPI-2 and SPI-3

Technical Data:

 **Temperature:**
105°C

 **Rated Voltage:**
150V



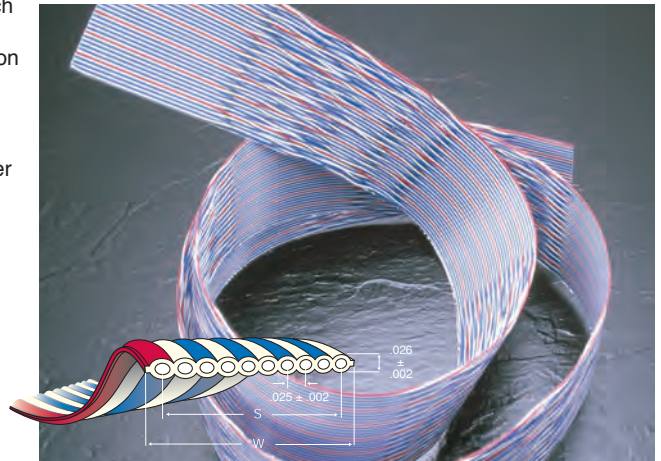
Color Code:

Standard multicolor is Red, White, Blue, White, Blue, White, Blue, White, Blue, White, repeat. All data is for reference only and is subject to change.

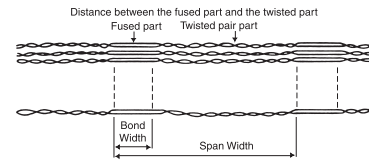


Approvals:

- UL/cUL Listing: 20528
- UL/cUL Flame Rating: VW-1



TYPICAL THICKNESS FOR 20098 AND 20099. THICKNESS FOR 20050 AND 23195 IS .024 ± .002.



Eco-Index: RoHS Values				
<90ppm	<5ppm	<5ppm	<5ppm	<1000ppm
Pb	Cd	Cr+6	Hg	PBDE's PPB's



Series No.	Conductor AWG Stranding Coating	Insulation	Conductor Resistance Ω/Mft. @ 20°C	Capacitance		Impedance		Propagation Delay	
				pF/ft. (G-S)	pF/ft. (G-S-G)	(G-S-G) (Ohms) SE	(G-S) (Ohms) Diff.	ns/ft.	Skew ns/ft. (Max.)
23195	30 AWG 7/38 TC	PVC	106	14.9	18.9	91	117	1.56	0.035
20050				14.6	19.2	82	113	1.52	0.035
20098	30 AWG 7/38 TC	SR-PVC Dual Laminated	106	17.0	22.0	81	106	1.56	0.035
20099				17.9	23.0	74	100		

Part No.	Insulation	No. of Pairs	Width "W"	Span "S"	Pitch Tolerance	Span Length Inch (mm)	Bond Length Inch (mm)
23195-26-P-00200	PVC	13	0.650"	0.625"	± 0.002"	9.84 (250)	1.57 (40)
23195-34-P-00200	PVC	17	0.850"	0.825"	± 0.002"	9.84 (250)	1.57 (40)
23195-50-P-00200	PVC	25	1.250"	1.225"	± 0.002"	9.84 (250)	1.57 (40)
23195-68-P-00200	PVC	34	1.700"	1.675"	± 0.002"	9.84 (250)	1.57 (40)
23195-80-P-00200	PVC	40	2.000"	1.975"	± 0.002"	9.84 (250)	1.57 (40)
23195-100-P-00200	PVC	50	2.500"	2.475"	± 0.002"	9.84 (250)	1.57 (40)
20050-68-P-00200	PVC	34	1.700"	1.675"	± 0.002"	4.92 (125)	1.57 (40)
20098-68-P-00200	SR-PVC	34	1.700"	1.675"	± 0.002"	9.84 (250)	1.57 (40)
20099-26-P-00200	SR-PVC	13	0.650"	0.625"	± 0.002"	4.92 (125)	1.57 (40)
20099-68-P-00200	SR-PVC	34	1.700"	1.675"	± 0.002"	4.92 (125)	1.57 (40)

0.050" Rainbow Ribbon

Construction: Ribbon cable is constructed with 28 AWG (7/36) tinned copper. Each conductor is first extruded with SR-PVC and then all conductors are pulled in parallel and extruded in clear PVC. No lamination tapes that can impede IDC termination are used.

Features:

Individually color coded conductors for easy identification. Fully extruded construction. No lamination tapes to impede termination. Zip construction. Symmetrically round conductors improve IDC termination.

Applications:

Internal wiring of electronic equipment.

Technical Data:



Temperature:

- UL Temp: 105°C
- CSA Temp: 105°C



Rated Voltage:

300V



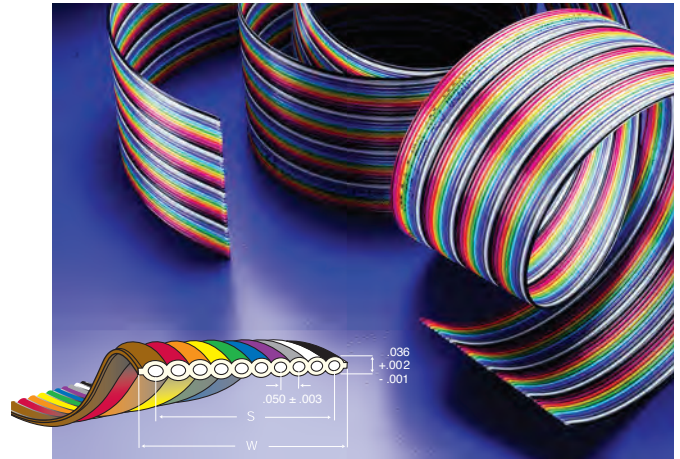
Color Code:

Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White, Black and repeat.



Approvals:

- UL Style: 20932
- CSA listing: AWM I A/B FT-1



Eco-Index: RoHS Values				
<90ppm	<5ppm	<5ppm	<5ppm	<1000ppm
Pb	Cd	Cr+6	Hg	PBDE's PPB's

Series No.	Conductor AWG Stranding Coating	Insulation	Conductor Resistance Ω/Ω/Mft. @ 20°C	Capacitance		Impedance		Propagation Delay	
				pF/ft. (G-S)	pF/ft. (G-S-G)	(G-S-G) (Ohms) SE	(G-S) (Ohms) Diff.	ns/ft.	Skew ns/ft. (Max.)
23026	28 AWG 7/36 TC	SR-PVC PVC	67.5	7.48	14.05	98	135	1.45	0.086

Part No.	Conductors	No. of Conductors	Width "W"	Span "S"	Pitch Tolerance	Standard Put-ups
23026-09-P-00100	SR-PVC/PVC	9	0.450"	0.400" ± 0.006"	± 0.003"	100'
23026-10-P-00100	SR-PVC/PVC	10	0.500"	0.450" ± 0.006"	± 0.003"	100'
23026-14-P-00100	SR-PVC/PVC	14	0.700"	0.650" ± 0.006"	± 0.003"	100'
23026-15-P-00100	SR-PVC/PVC	15	0.750"	0.700" ± 0.006"	± 0.003"	100'
23026-16-P-00100	SR-PVC/PVC	16	0.800"	0.750" ± 0.008"	± 0.003"	100'
23026-20-P-00100	SR-PVC/PVC	20	1.000"	0.950" ± 0.008"	± 0.003"	100'
23026-24-P-00100	SR-PVC/PVC	24	1.200"	1.150" ± 0.008"	± 0.003"	100'
23026-25-P-00100	SR-PVC/PVC	25	1.250"	1.200" ± 0.008"	± 0.003"	100'
23026-26-P-00100	SR-PVC/PVC	26	1.300"	1.250" ± 0.008"	± 0.003"	100'
23026-34-P-00100	SR-PVC/PVC	34	1.700"	1.650" ± 0.011"	± 0.003"	100'
23026-37-P-00100	SR-PVC/PVC	37	1.850"	1.800" ± 0.011"	± 0.003"	100'
23026-40-P-00100	SR-PVC/PVC	40	2.000"	1.950" ± 0.011"	± 0.003"	100'
23026-50-P-00100	SR-PVC/PVC	50	2.500"	2.450" ± 0.011"	± 0.003"	100'
23026-60-P-00100	SR-PVC/PVC	60	3.000"	2.950" ± 0.011"	± 0.003"	100'
23026-64-P-00100	SR-PVC/PVC	64	3.200"	3.150" ± 0.011"	± 0.003"	100'

Other conductor counts available upon request. Available in 26 AWG (20002) and 30 AWG (20042). All data is for reference only and is subject to change.

Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com

0.050" TPO Stranded Flat Ribbon

Construction: This 0.050" flat ribbon cable is constructed with 28 AWG stranded tinned copper then fully extruded with a Thermoplastic Olefin (TPO). A red co-extruded stripe is applied in lieu of ink to prevent flaking;

Insulation: Thermoplastic Olefin (TPO).

Features:

TPO insulated for superior electrical performance, i.e. high impedance and low capacitance. Outstanding low temperature characteristics. Improved heat aging over conventional PVC. Alternate gauges also available.

Applications:

Ideal for higher controlled impedance environments.

Technical Data:



Temperature:

- UL Temp: 105°C
- CSA Temp: 105°C



Color Code:

Gray with a red co-extruded stripe



Rated Voltage:

300V



Approvals:

- UL Style: 20346
- CSA Listing: AWM I A/B FT-1



RED POLARITY STRIPE ON #1 COND EDGE.



Eco-Index: RoHS Values				
<90ppm	<5ppm	<5ppm	<5ppm	<1000ppm
Pb	Cd	Cr+6	Hg	PBDE's PPB's

Series No.	Conductor AWG Stranding Coating	Insulation	Conductor Resistance Ω/Mft. @ 20°C	Capacitance		Impedance		Propagation Delay	
				pF/ft. (G-S)	pF/ft. (G-S-G)	(G-S-G) (Ohms) SE	(G-S) (Ohms) Diff.	ns/ft.	Skew ns/ft. (Max.)
23065	28 AWG 7/36 TC	TPO	67.5	5.60	9.70	145	106	1.26	0.020

Part No.	Insulation	No. of Conductors	Width "W"	Span "S"	Pitch Tolerance	Standard Put-ups
23065-20-P-00100	TPO	20	1.000"	0.950" ± 0.008"	± 0.002"	100'
23065-34-P-00100	TPO	34	1.700"	1.650" ± 0.011"	± 0.002"	100'
23065-40-P-00100	TPO	40	2.000"	1.950" ± 0.011"	± 0.002"	100'
23065-50-P-00100	TPO	50	2.500"	2.450" ± 0.011"	± 0.002"	100'

Other conductor counts available upon request. Other variations include 24 AWG and 26 AWG cables. All data is for reference only and is subject to change.

Please contact your sales representative for detailed information at sales@lapptannehill.com



Round to Flat Ribbon

Construction: Cable core consists of slit and bonded flat gray ribbon cable. Core is folded and twisted into a round format before being taped with either Polyester (23149) or Aluminum/Polyester (23122) tape (A side out). For dual shielded versions, cable is then braided. The core is jacketed in Black PVC. **Jacket:** Black PVC.

Features:

Chooses from Shielded or Unshielded. Shielded cable includes an aluminum tape and braid shield. Cable core features .050" pitch gray ribbon cable for use with popular IDC connectors. Core is slit 1.50" then bonded 0.75" for ease of termination.

Applications:

Appliance wire and consumer products.

Technical Data:



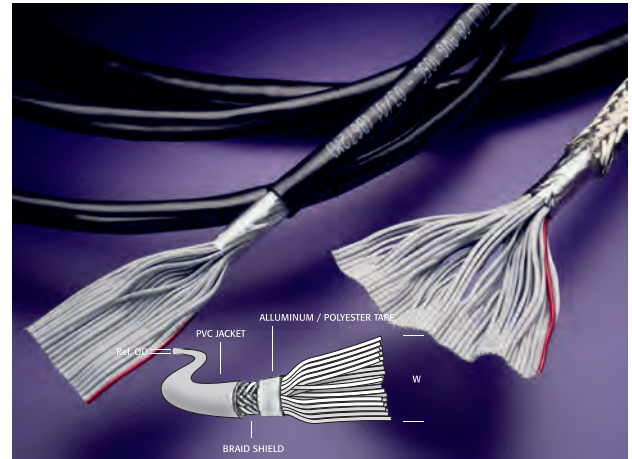
Temperature:
UL/CSA: 105°C



Rated Voltage:
300V



Approvals:
• UL Style 20381
• CSA Style: AWM IIB



Eco-Index: RoHS Values				
<90ppm	<5ppm	<5ppm	<5ppm	<1000ppm
Pb	Cd	Cr+6	Hg	PBDE's PPB's

Series No.	Conductor AWG Stranding Coating	Insulation	Shielding	Conductor Resistance Ω /Mft. @ 20°C	Capacitance (G-S-G) pF/ft.	Impedance (G-S-G) (Ohms)	Prop. Delay ns/ft.	Jacket
23122	28 AWG 7/36	PVC	AL/PET Tape & Braid	67.5	24.5	65	1.62	PVC*
23149	TC		None		17.3	90		

Part No.	No. of Conductors	Jacket OD (Ref.)		Width "W"	Span "S"
		inches	mm		
23122-16-P-00660	16	0.275	6.985	0.800"	0.750"
23122-20-P-00660	20	0.309	7.849	1.000"	0.950"
23122-25-P-00660	25	0.313	7.950	1.250"	1.200"
23122-26-P-00660	26	0.318	8.077	1.300"	1.250"
23122-34-P-00660	34	0.363	9.220	1.700"	1.650"
23122-37-P-00660	37	0.351	8.915	1.850"	1.800"
23122-40-P-00660	40	0.413	10.490	2.000"	1.950"
23122-50-P-00660	50	0.438	11.125	2.500"	2.450"
23122-60-P-00660	60	0.458	11.633	3.000"	2.950"
23149-16-P-00660	16	0.268	6.807	0.800"	0.750"
23149-20-P-00660	20	0.289	7.341	1.000"	0.950"
23149-26-P-00660	26	0.298	7.569	1.250"	1.200"
23149-40-P-00660	40	0.347	8.814	2.000"	1.950"
23149-50-P-00660	50	0.409	10.389	2.500"	2.450"

Other conductor counts available upon request. This product is available in 30 AWG solid and stranded constructions. Please consult with factory for more information. *Standard jacket color is Black. Other colors are available by special request. All data is for reference only and is subject to change.

0.050" Quick-Twist Cable

Construction: 0.050" Quick Twist cable is built with 28AWG (7/35 stranded TC). Conductors are individually extruded with one of eleven different PVC colors. The cable consists of twist and flat sections at regular intervals of 1.57" bonded (flat) and 18.11" twisted.

Features:
Packaged on 100' Reels. 0.050" Pitch for use with today's low cost IDC connectors. Multi-color for easy channel identification. Twisted pairs for reduced cross talk.

Applications:
Internal wiring of appliances, electronic computers and business equipment.

Technical Data:

- **Temperature:**
UL Temp: 80°C
- **Rated Voltage:**
300V
- **Color Code:**
Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray, White, Black (repeat), Tan (common).
- **Approvals:**
UL Style: 20012



<1000ppm	<100ppm	<1000ppm	<1000ppm	<1000ppm
Pb	Cd	Cr+6	Hg	PBDE's/PPB's



Series No.	Conductor AWG	Insulation	Conductor Resistance Ω/km at 20°C (Max.)	Insulation Resistance MΩ- km at 20°C (Min.)
23220	28 7/38 TC	Heat Resistant PVC	228	100

Part No.	No. of Pairs	Width Inches	Span Inches	Approx Wgt Lbs/reel
23220-10-P-00100	5	0.500	0.450	1.2
23220-20-P-00100	10	1.000	0.950	2.5
23220-34-P-00100	17	1.700	1.650	4.2
23220-50-P-00100	25	2.500	2.450	6.2
23220-60-P-00100	30	3.000	2.950	7.4
23220-64-P-00100	32	3.200	3.150	7.8

Notes: Other conductor counts available upon request. All data is for reference only and subject to change.

Check out our complete inventory of products at www.lapptannehill.com

NEMA Configurations Chart

North American Locking Plugs and Receptacles

VOLTAGE	NEMA	15 AMPERE		20 AMPERE		30 AMPERE		50 AMPERE		60 AMPERE	
		RECEPTACLE	PLUG	RECEPTACLE	PLUG	RECEPTACLE	PLUG	RECEPTACLE	PLUG	RECEPTACLE	PLUG
125V	L1	 L1-15R	 L1-15P								
250V	L2			 L2-20R	 L2-20P						
125V	L5	 L5-15R	 L5-15P	 L5-20R	 L5-20P	 L5-30R	 L5-30P				
250V	L6	 L6-15R	 L6-15P	 L6-20R	 L6-20P	 L6-30R	 L6-30P				
277V	L7	 L7-15R	 L7-15P	 L7-20R	 L7-20P	 L7-30R	 L7-30P				
480V	L8			 L8-20R	 L8-20P	 L8-30R	 L8-30P				
600V	L9			 L9-20R	 L9-20P	 L9-30R	 L9-30P				
125/ 250V	L10			 L10-20R	 L10-20P	 L10-30R	 L10-30P				
3Ø250V	L11			 L11-20R	 L11-20P	 L11-30R	 L11-30P				
3Ø480V	L12			 L12-20R	 L12-20P	 L12-30R	 L12-30P				
3Ø600V	L13					 L13-30R	 L13-30P				
125/ 250V	L14			 L14-20R	 L14-20P	 L14-30R	 L14-30P				

NEMA Configurations Chart

North American Locking Plugs and Receptacles

VOLTAGE	NEMA	15 AMPERE		20 AMPERE		30 AMPERE		50 AMPERE		60 AMPERE	
		RECEPTACLE	PLUG	RECEPTACLE	PLUG	RECEPTACLE	PLUG	RECEPTACLE	PLUG	RECEPTACLE	PLUG
3Ø250V	L15			 L15-20R	 L15-20P	 L15-30R	 L15-30P				
3Ø480V	L16			 L16-20R	 L16-20P	 L16-30R	 L16-30P				
3Ø600V	L17					 L17-30R	 L17-30P				
3ØY 120/208V	L18	 L18-20R		 L18-20P		 L18-30R	 L18-30P				
3ØY 277/480V	L19	 L19-20R		 L19-20P		 L19-30R	 L19-30P				
3ØY 347/600V	L20	 L20-20R		 L20-20P		 L20-30R	 L20-30P				
3ØY 120/208V	L21	 L21-20R		 L21-20P		 L21-30R	 L21-30P				
3ØY 277/480V	L22	 L22-20R		 L22-20P		 L22-30R	 L22-30P				
3ØY 347/600V	L23	 L23-20R		 L23-20P		 L23-30R	 L23-30P				
347V	L24			 L24-20R	 L24-20P						

Complete catalog available online at: www.lapptannehill.com

Lacing Tape A-A-52080 Type 1 (MIL-T-43435B Type I)

Construction: Flat braid made from high tenacity continuous nylon yarn.

Features:

- High tensile strength,
- Good chemical resistance,
- Excellent abrasion resistance,
- Excellent knot retention.

Temperature: 55° C to +121°C

Elongation: 40% max

Finish weight (impregnated % of material by weight):

- Finish A (natural)
- Finish B (wax): 15% – 32%
- Finish C (synthetic rubber/ elastomer): 7% – 17%
- Finish E (synthetic resin/vinyl): 15% – 30%

Finishes:

A. Natural, No finish

B. Wax: A microcrystalline wax with a melting point above 54°C compounded with a fungicide that does not contain either copper or mercuric materials. Excellent knot retention, yet the finish does not have too great a “waxy” feel to the user. Microcrystalline wax is soft, pliable, and easy to tie.

C. Synthetic Rubber or Elastomer: A special continuous coating of fungistatic synthetic rubber containing no corrosive compounding ingredients. Knots tied with this finish will not slip. This finish will not flake or dust.

D. Glass/TFE: The glass/TFE combination has excellent tensile strength and abrasion resistance. Also resists fungus, acids and flames.

E. Synthetic Resin or Vinyl: A thermoplastic synthetic resin with a melting point above 177°C for use where a “wax free” type is specified. It is a non-dusting or flaking, dry finish with good knot tying qualities.



Part No.	Finish	Color	Width, Nom		Thickness, Nom.		Break Strength, Min.		Availability*	
			Inch	mm	Inch	mm	lb	kg	Yd	m
801530W	A	Natural	0.050	1.27	0.010	0.25	15	6.8	500	457
801536B	B	Black	0.050	1.27	0.010	0.25	15	6.8	500	457
801536W	B	Natural	0.050	1.27	0.010	0.25	15	6.8	500	457
802534B	B	Black	0.060	1.52	0.012	0.30	25	11.3	500	457
802534W	B	Natural	0.060	1.52	0.012	0.30	25	11.3	500	457
LC-134	B	Black, White	0.060	1.52	0.012	0.30	25	11.3	500	457
805032B	E	Black	0.085	2.16	0.014	0.36	50	22.7	500	457
805032W	E	Natural	0.085	2.16	0.014	0.36	50	22.7	500	457
805036B	B	Black	0.085	2.16	0.014	0.36	50	22.7	500	457
805036W	B	Natural	0.085	2.16	0.014	0.36	50	22.7	500	457
805040B	C	Black	0.085	2.16	0.014	0.36	50	22.7	500	457
805040W	C	Natural	0.085	2.16	0.014	0.36	50	22.7	500	457
LC-143	E	Black, White	0.085	2.16	0.014	0.36	50	22.7	500	457
808036B	B	Black	0.110	2.79	0.015	0.38	80	36.3	250	228
808036W	B	White	0.110	2.79	0.015	0.38	80	36.3	250	228

*Bobbins/tubes may contain multiple lengths.

Specifications subject to change. For complete specifications and availability visit www.lapptannehill.com



A-A-52081 (formerly MIL-T-43435B Type II)

Construction: Flat braid made from high-tenacity continuous polyester yarn.

Temperature: 73°C to +177°C

Elongation: 40% max

Finish weight (impregnated % of material by weight):

- Finish A (natural)
- Finish B (wax): 15% – 32%
- Finish C (synthetic rubber/elastomer): 7% – 17%
- Finish E (synthetic resin/vinyl): 15% – 30%

Part No.	Finish	Color	Width, Nom.		Thickness, Nom.		Break Strength, Min.		Availability*	
			Inch	mm	Inch	mm	lb	kg	Yd	m
801566B	C	Black	0.050	1.27	0.010	0.25	15	6.8	500	457
802566B	C	Black	0.060	1.52	0.012	0.30	25	11.3	500	457
C164	B	Black, White	0.062	1.57	0.010	0.25	25	11.3	500	457
805058B	E	Black	0.085	2.16	0.014	0.36	50	22.7	500	457
805058W	E	Natural	0.085	2.16	0.014	0.36	50	22.7	500	457
805060B	A	Black	0.085	2.16	0.014	0.36	50	22.7	500	457
805062B	B	Black	0.085	2.16	0.014	0.36	50	22.7	500	457
805062W	B	Natural	0.085	2.16	0.014	0.36	50	22.7	500	457
805066W	C	Natural	0.085	2.16	0.014	0.36	50	22.7	500	457
C162	B	Black, White	0.085	2.16	0.014	0.36	50	22.7	500	457
808060W	A	Natural	0.110	2.79	0.015	0.38	80	36.3	500	457
808058B	E	Black	0.110	2.79	0.015	0.38	80	36.3	250	228
C160	B	Black, White	0.200	5.08	0.016	0.41	135	61.2	250	228

*Bobbins/tubes may contain multiple lengths.

A-A-52083 (formerly MIL-T-43435B Type IV)

Construction: Flat braid made from continuous filament glass yarn coated with PTFE before braiding.

Temperature: Glass maintain strength and stability to 427°C.

Elongation: 5% max

Finish weight (impregnated % of material by weight):

Finish D (glass/TFE): 10% – 20%

Part No.	Finish	Color	Width, Nom.		Thickness, Nom.		Break Strength, Min.		Availability*	
			Inch	mm	Inch	mm	lb	kg	Yd	m
807510W	D	Natural	0.085	2.16	0.016	0.41	75	34.0	500	457
810010W	D	Natural	0.110	2.79	0.016	0.41	100	45.3	250	228

*Bobbins/tubes may contain multiple lengths.



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A-A-52084 (formerly MIL-T-43435B Type V)

Construction: Flat braid made from continuous filament aramid yarn.

Temperature: -55°C to +260°C

Elongation: 40% max

Finish weight (impregnated % of material by weight):

- Finish C (synthetic rubber/elastomer): 7% – 17%

Part No.	Finish	Color	Width, Nom.		Thickness, Nom.		Break Strength, Min.		Availability*	
			Inch	mm	Inch	mm	lb	kg	Yd	m
803554	C	Natural	0.075	1.91	0.012	0.30	35	15.9	500	457

*Bobbins/tubes may contain multiple lengths.

MIL-DTL-713 Type P

Construction: Twisted nylon cord made from high-tenacity continuous filament yarn.

Temperature: 55° C to +121°C

Elongation: 20% min.

Finish weight (impregnated % of material by weight):

- Finish B (wax): 20% – 32%

Part No.	Finish	Color	Diameter, Nom.		Break Strength, Min.		Availability*	
			Inch	mm	lb	kg	lb	kg
803215B	B	Black	0.023	0.58	32	14.5	1	0.45
803215W	B	Natural	0.023	0.58	32	14.5	1	0.45
804812W	A	Natural	0.025	0.64	48	21.8	1	0.45
804814B	B	Black	0.025	0.64	48	21.8	1	0.45
804814W	B	Natural	0.025	0.64	48	21.8	1	0.45
807013B	B	Black	0.040	1.02	70	31.7	1	0.45
807013W	B	Natural	0.040	1.02	70	31.7	1	0.45

*Weight per spool; bobbins/tubes may contain multiple lengths.

Telecommunications-Grade Polyester Yarn

Construction: Round, twisted polyester cord made from high-tenacity industrial polyester fiber.

Melt Temperature: 121°C

Elongation: 17% – 27%

Finish weight (impregnated % of material by weight):

- 9 ply: 7% – 17%
- 12 ply: 35%

Part No.	Finish	Color	Diameter, Nom.		Break Strength, Min.		Plies	Availability*	
			Inch	mm	lb	kg		lb	kg
812030W	Wax	Natural	0.030	0.76	32	14.5	9	0.5	0.22
815040W	Wax	Natural	0.030	0.76	32	14.5	12	0.5	0.22

*Weight per tube; bobbins/tubes may contain multiple lengths.



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