8525 Series
EN3646

SOURIAU



EN3646 Qualified Connectors

SOURIAU is now the first manufacturer to offer all EN3646 qualified connectors.

A wide range
- Shell sizes 08 to 24.
  3 platings available for aluminum connector.
  Hermetic stainless steel version.

Time saving
- Bayonet locking system: one of the quickest in the aerospace connectors market.

Proven technology
- Used on many applications: aerospace, railway, nuclear, telecom/datacom infrastructures.

Customizable
- Fuel tank version.
  Various PC tail contacts lengths.
  Can be delivered with backshells.

Esterline
Connection Technologies

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Description

- Bayonnet coupling
- Intermateable with MIL-C 26482 Series I and II
- RFI shielding plug
- Gold plated crimp contacts #20, #16, #12
- Minicoax contacts #16
- Hermetic version available

Technical features

Mechanical

- **Shell & plating:**
  . Aluminum:
  - Black anodized
  - Nickel
  - Olive green cadmium
  . Passivated stainless steel (hermetic)
- **Insulator:**
  . Thermoplastic
  . Glass sealed (hermetic)
- **Seal:** Silicone elastomer
- **Contact:**
  . Copper alloy
  . Gold plated ferrous alloy (hermetic)
- **Contact plating:** Gold
- **Endurance:**
  . 500 mating cycles for models A and Y
  . 250 mating cycles for models RS and WS
- **Shock:**
  Model Y, as per EN3646, 100 m/s² (10g) during 6 ms in the X, Y and Z axis
- **Vibration:**
  From 10 to 2000 Hz - acceleration: 20G
- **Contact retention in insert:**
  . size 20: 90 N
  . size 16: 115 N
  . size 12: 136 N

Electrical

- **Contact resistance:**
  . size 20: ≤ 1 mΩ
  . size 16: ≤ 0.55 mΩ
  . size 12: ≤ 0.35 mΩ
- **Insultation resitance:**
  ≥ 5000 MΩ at 500 Vdc
- **Max current rating per contact:**

	Size 20	Size 16	Size 12
Standard	7.5 A	13 A	23 A
Hermetic	5 A	10 A	17 A

- **Shell continuity:**
  5 mΩ, plug with grounding ring and receptacle
  50 mΩ, plug with grounding ring and hermetic receptacle
- **Dielectric withstanding voltage:**

Service	sea level	at 21000 m
I	1500 Vrms	375 Vrms
II	2300 Vrms	550 Vrms

Environmental

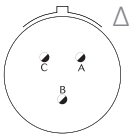
- **Temperature range:**
  -65°C to +175°C class WS
  -65°C to +200°C class A, RS and Y
- **Damp heat:** 56 days
- **Salt spray:**
  . 500 hours, class A, WS, Y
  . 48 hours, class RS
- **Leakage:** Low pressure immersion 33mbar
- **Corrosion resistance:** as per EN3646-001
- **Fluid resistance:** as per EN3646-001

Downloaded from Arrow.com.

Contact layouts

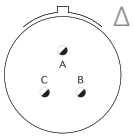
08

3A/98



3#20
Service I

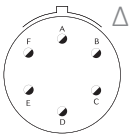
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3#20
Service I

10

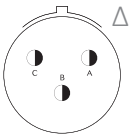
06



6#20
Service I

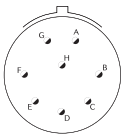
12

03



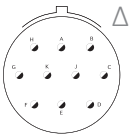
3#16
Service II

08



8#20
Service I

10

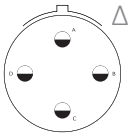


10#20
Service I

Contact #20
Contact #16
Contact #12
△ Hermetic version available

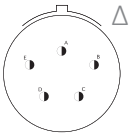
14

04



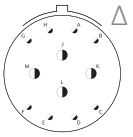
4#12
Service I

05



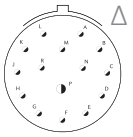
5#16
Service II

12



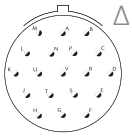
8#20
4#16
Service I

15



14#20
1#16
Service I

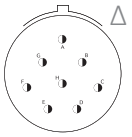
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19#20
Service I

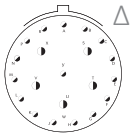
16

08



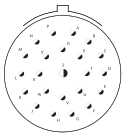
8#16
Service II

21



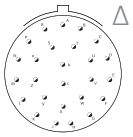
16#20
5#16
Service I

23



22#20
1#16
Service I

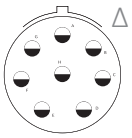
26



26#20
Service I

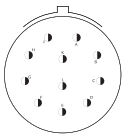
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08



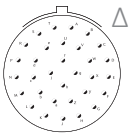
8#12
Service I

11



11#16
Service I

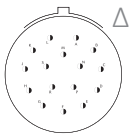
32



32#20
Service I

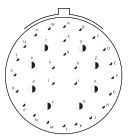
20

16



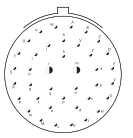
16#16
Service II

34



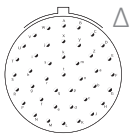
26#20
8#16
Service I

39



37#20
2#16
Service I

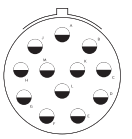
41



41#20
Service I

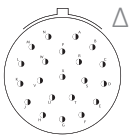
22

12



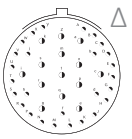
12#12
Service ?

21



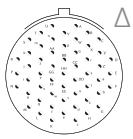
21#16
Service II

41



27#20
14#16
Service I

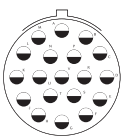
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55#20
Service I

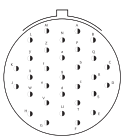
24

19



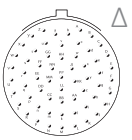
19#12
Service II

31



31#16
Service I

61



61#20
Service I

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Ordering information

Basic series	EN3646	RS0	10	06	M	N

Shell type, temperature, plating and rear teeth
- **A6:** Aluminum plug without grounding spring, 200°C, black anodized plated, 3 rear teeth at 120°
- **RS6:** Aluminum plug with grounding spring, 200°C, nickel plated, 3 rear teeth at 120°
- **WS6:** Aluminum plug with grounding spring, 175°C, olive green cadmium plated, rear teeth over 360°
- **A0:** Aluminum square flange receptacle, 200°C, black anodized plated, 3 rear teeth at 120°
- **RS0:** Aluminum square flange receptacle, 200°C, nickel plated, 3 rear teeth at 120°
- **WS0:** Aluminum square flange receptacle, 175°C, olive green cadmium plated, rear teeth over 360°
- **A7:** Aluminum jam nut receptacle, 200°C, black anodized plated, 3 rear teeth at 120°
- **RS7:** Aluminum jam nut receptacle, 200°C, nickel plated, 3 rear teeth at 120°
- **WS7:** Aluminum jam nut receptacle, 175°C, olive green cadmium plated, rear teeth over 360°

Shell size: 08, 10, 12, 14, 16, 18, 20, 22, 24

Contact layout: See previous page

Contact type
- **M:** Male
- **F:** Female
- **A:** Connector delivered without male contact
- **B:** Connector delivered without female contact
- **C:** Connector delivered with male contact #20 large barrel
- **D:** Connector delivered with female contact #20 large barrel

Orientation: N, W, X, Y, Z

Hermetic connectors

Basic series	EN3646	Y	0	08	03	M	N

Y: Hermetic, mandatory suffix

Shell type:
- **0:** Square flange receptacle, 200°C, passivated stainless steel
- **1:** Solder mount receptacle, 200°C, passivated stainless steel
- **7:** Jam nut receptacle, 200°C, passivated stainless steel

Shell size: 08, 10, 12, 14, 16, 18, 20, 22, 24

Contact layout: See previous page

M: Pin solder contacts

Orientation: N, W, X, Y, Z

Aluminum protective covers

Basic series	EN3646	RS3	C	10

Cover style, temperature and plating
- **A3:** Cover for receptacle, 200°C, black anodized plated
- **RS3:** Cover for receptacle, 200°C, nickel plated
- **WS3:** Cover for receptacle, 175°C, olive green cadmium plated
- **A4:** Cover for plug, 200°C, black anodized plated
- **RS4:** Cover for plug, 200°C, nickel plated
- **WS4:** Cover for plug, 175°C, olive green cadmium plated

Fixing type
- **C:** Small fixing attachement, 4.20 mm hole diameter
- **D:** Large fixing attachement

Size: 08, 10, 12, 14, 16, 18, 20, 22, 24

Please consult us.

Dummy receptacles

Basic series	EN3646	WS5	10

Temperature and plating
- **A5:** 200°C, black anodized plated
- **RS5:** 200°C, nickel plated
- **WS5:** 175°C, olive green cadmium plated

Size: 08, 10, 12, 14, 16, 18, 20, 22, 24

Please consult us.

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Contacts

Technical characteristics

Contact type	Male contact Ø	Retention force	Current rating	Contact resistance	Admissible wires		
					External Ø over insulator	Admissible section	Wire gauge
#20	1 mm	90 N	7.5 A	≤ 1 mΩ	0.98 to 2.11 mm	0.25 to 0.6 mm²	24 to 20
#20 large barrel						0.25 to 1 mm²	24 to 18
#16	1.6 mm	115 N	13 A	≤ 0.55 mΩ	1.34 to 2.62 mm	0.6 to 1.2 mm²	20 to 16
#16 large barrel						1 to 2 mm²	18 to 14
#12	2.4 mm	136 N	23 A	≤ 0.35 mΩ	2.45 to 4.01 mm	1.2 to 3 mm²	16 to 12
#12 small barrel			10 A		0.98 to 2.11 mm	0.25 to 1 mm²	24 to 18

Note: Reducing sleeve for #20 standard contact available. For wire 0.09 to 0.21 mm². PN 8522-2142PZ.

Part numbers EN3155

Contact type		Part number		Color band	Dot
		Male contact	Female contact		
Standard contacts	#20	018M2020	019F2020	Red/Red	-
	#20 large barrel	018M2018	019F2018	Red/Violet	-
	#16	018M1616	019F1616	Blue/Blue	-
	#16 large barrel	018M1614	019F1614	Blue/Orange	-
	#12	018M1212	019F1212	Yellow/Yellow	-
	#12 small barrel	018M1218	019F1218	Violet/Yellow	-
Thermocouple contacts	#20 chromel	056M2020	057F2020	Red/Red	Yellow/White
	#20 alumel	054M2020	055F2020	Red/Red	Black/White

Minicoax contacts

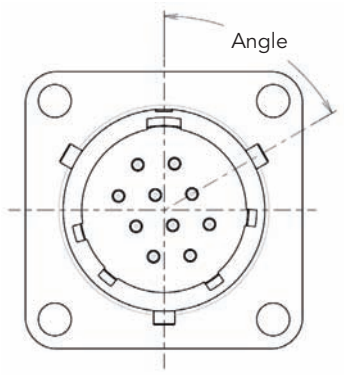
Installed instead of size 16 contacts.

	Part numbers	
Male contacts	8522-2-001	8522-2-002
Female contacts	8522-1-001	8522-1-002
Admissible cables	RG 316 U KX 22 A RG 174 U KX 3 A RG 188 A/U RG 179 B/U	RG 178 B/U KX 21 A RG 196 A/U

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Orientation

Polarization code



Viewed from receptacle front face.
Insulator rotated inside metal body.

Shell size	Layout	N	W	X	Y	Z
08	3A	0	60	210	-	-
	33	0	90	-	-	-
10	06	0	90	-	-	-
12	03	0	-	-	180	-
	08	0	90	112	203	292
	10		60	155	270	295
14	04	0	45	-	-	-
	05	0	40	92	184	273
	12	0	43	90	-	-
	15	0	17	110	155	234
	19	0	30	165	315	-
16	08	0	54	152	180	331
	21	0	-	-	-	-
	23	0	158	270	-	-
	26	0	60	-	275	338

Shell size	Layout	N	W	X	Y	Z
18	08	0	180	-	-	-
	11	0	62	119	241	340
	32	0	85	138	222	265
20	16	0	238	318	333	347
	39	0	63	144	252	333
	41	0	45	126	225	-
22	12	0	-	-	-	6
	21	0	16	135	175	349
	41	0	39	135	264	-
	55	0	30	142	226	314
24	19	0	30	165	315	-
	31	0	90	225	255	-
	61	0	90	180	270	324

Maximum connector weights (in grams)

Shell type	Shell size	8	10	12	14	16	18	20	22	24
Sealed without contacts	Square flange receptacle (type 0)	6	10	13	16	22	26	33	39	49
	Jam nut receptacle (type 7)	6	8	11	16	21	23	29	38	42
	Plug (type 6)	9	13	19	23	28	31	39	45	55
Hermetic with contacts	Solder mount receptacle (type IH)	7	9	13	17	21	26	32	37	43
	Square flange receptacle (type 02H)	10	12	16	21	26	33	41	47	55
	Large square flange receptacle (type 02H spec. 002)	16	18	24	29	34	40	56	60	70
	Jam nut receptacle (type 07H)	20	25	38	45	52	63	86	96	115

For further information contact us at contactmilaero@souriau.com
or visit our web site www.souriau.com

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