BrightConnX™ MRD Series IP67 Circular Connectors and Cable Assemblies

IP67 SEALED RUGGED CIRCULAR LATCHING CONNECTORS AND CABLES

BrightConnX™ MRD series IP67 connectors and cable assemblies are available in 2, 3, 4, 5, 6, 7, 8, and 9 position insert arrangements. Housing options include all plastic constructions as well as metal locking bodies for greater durability. The quick release metal thumb latch provides positive locking to ensure secure and reliable mating and ease of unmating. Panel mount and cable termination options are available with or without finger-proof protection.

Finished cable assemblies are available in all insert arrangements and form factors, including double end termination and single ended ("pigtail") version, in 1m and 3m standard lengths. Customer-defined cable lengths are also available from the factory on request.



TARGET MARKETS



- IP67 in the mated conditions water/dust proof
- Can be used for power or signal connections
- Available in 2, 3, 4, 5, 6, 7, 8 and 9 position pin count insert arrangements
- Size A (all plastic) and Size B (plastic or metal options) form factors
- Size B connectors are available with pins or sockets in the plug or receptacle

FEATURES	BENEFITS
IP67 sealed when mated	Protection against dust and moisture incursion
Shell Size A in 2, 3, 4, 5, 6, 7, 8 position Shell Size B in 2, 3, 4, 5, 7, 8, 9 position	Mutiple configurations for ultimate flexibility
Up to 10A current rating	Supports high power applications
Ruggedized circular design	Shock and Impact resistant for a variety of industrial applications
Thumb activated latch on plug	Positive locked mating, easy to unlatch
Receptacles available with cable or panel mount configurations	Provides Cable to Cable or Cable to Panel mating
Available dust caps	Provides protection to unmated connectors
Cable assemblies in a variety of standard lengths, custom configurations on request	Allows customers to avoid making their own cable assemblies, and to easily specify cables to their end users
RoHS Compliant	Meets environmental, health and safety requirements

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TECHNICAL INFORMATION

MATERIAL

- Contacts: Copper alloy with gold flash over 50u" (1.27um) min. nickel
- Housing: Engineering thermoplastic, UL94V-0 rated, black
- Metal Shell: Die cast zinc alloy, chrome plated
- Cable: PER UL AWM 2464, 300V, VW-1, stranded copper conductors with PVC Insulation, black PVC jacket

ELECTRICAL PERFORMANCE

- Current Rating
  - Size A:

    5A per contact (2-6 position) with 20AWG wire max.

    3A per contacts (7-8 position) with 22 AWG wire max.
  - Size B:

    10A per contact (2-4 position) with 16 AWG wire max.

    5A per contact (5, 7-9 position) with 20AWG wire max.
- Voltage Rating:
  - Size A: 125VAC (2-6 position); 100VAC (7-8 position)
  - Size B: 400VAC (2-4 position); 250VAC (5, 7-9 position)
- Contact Resistance:
  - Size A: 10mΩ max.
  - Size B: 5mΩ max.
- Insulation Resistance: 500MΩ min.
- Dielectric Withstanding Voltage:

  Size A: 1500VDC

  Size B: 2500VDC (2-4 Position), 1500VDC (5-9 Position)

MECHANICAL PERFORMANCE

- Durability: 500 mating cycles

APPROVALS & CERTIFICATION

- RoHS
- REACH/SVHC

ENVIRONMENTAL

- RoHS: This product is compatible according to the European Union Directive 2011/65/EU
- Operating Temperature Range: -40°C to +105°C
- Salt Spray: Per EIA364-26, 250 hours
- Temperature Rise: 30°C ΔT max. above ambient at rated current

PACKAGING

- Box

TARGET MARKETS/APPLICATIONS



Power Generation
Smart Grid
LED Lighting



CT
MRI
Ultrasonic



Robotics

EXAMPLE PART NUMBERS

DESCRIPTION	PART NUMBER
Size A Receptacle, Panel Mount, with Dust Cover, Plastic Housing, 3 Socket Contacts	MRD-AH03-L13-000
Size A Receptacle, Cable Termination, Plastic Housing, 5 Socket Contacts	MRD-AH05-M15-000
Size A Plug, Cable Termination, Plastic Housing, 8 Pin Contacts	MRD-AP08-M15-000
Size B Receptacle, Panel Mount, Metal Housing, 2 Socket Contacts	MRD-BF02-L13-000
Size B Recepacle, Panel Mount, Plastic Housing, 5 Pin Contacts	MRD-BJ05-L13-000
Size B Receptacle, Cable Termination, Metal Housing for 8.0mm dia Cable, 7 Pin Contacts	MRD-BG07-M16-000
Size B Plug, Cable Termination, Plastic Housing for 4.5mm dia Cable, 4 Socket Contacts	MRD-BR04-M17-000
Size A Cable, Plastic Plugs Both Ends, 3 Pin Contacts 50cm Length	MRD-AP03-CBP-500
Size A Cable, Plastic Plug One End, 6 Pin Contacts, 1.6m Length	MRD-AP06-CAP-A60
Size B Cable, Metal Plugs Both Ends, 9 Socket Contacts, 3.0m Length	MRD-BN09-CBP-C00
Size B Cable, Plastic Receptacle One End, 4 Socket Contacts, 15.0m Length	MRD-BH04-CAP-K50

Multiple variations exist, for configurations not listed please consult factory.

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CONNECTOR PART NUMBERS

Size	Style	Mounting	Dust Cover	Cable Diameter (mm)	Housing	Contacts	Current Rating (A)	Positions (X)	Part Numbers
A	RECEPTACLE	PANEL	YES	N/A	PLASTIC	SOCKET	5	2, 3, 4, 5, 6	MRD-AH0X-L13-000
							3	7, 8	
		CABLE	NO	3.0 TO 6.0			5	2, 3, 4, 5, 6	MRD-AH0X-M15-000
							3	7, 8	
	PLUG					PIN	5	2, 3, 4, 5, 6	MRD-AP0X-M15-000
							3	7, 8	
						SOCKET	5	3	MRD-AR03-M15-000
	RECEPTACLE	PANEL	YES	N/A		PIN	5	3	MRD-AJ03-L13-000
B	RECEPTACLE	PANEL	YES	N/A	METAL	SOCKET	10	2, 3, 4	MRD-BF0X-L13-000
							5	5, 7, 8, 9	
						PIN	10	2, 3, 4	MRD-BG0X-L13-000
							5	5, 7, 8, 9	
					PLASTIC	SOCKET	10	2, 3, 4	MRD-BH0X-L13-000
							5	5, 7, 8, 9	
						PIN	10	2, 3, 4	MRD-BJ0X-L13-000
							5	5, 7, 8, 9	
		CABLE	NO	7.0 TO 9.0	METAL	SOCKET	10	2, 3, 4	MRD-BF0X-M16-000
							5	5, 7, 8, 9	
						PIN	10	2, 3, 4	MRD-BG0X-M16-000
							5	5, 7, 8, 9	
					PLASTIC	SOCKET	10	2, 3, 4	MRD-BH0X-M16-000
							5	5, 7, 8, 9	
						PIN	10	2, 3, 4	MRD-BJ0X-M16-000
							5	5, 7, 8, 9	
				4.0 TO 7.0	METAL	SOCKET	10	2, 3, 4	MRD-BF0X-M17-000
							5	5, 7, 8, 9	
						PIN	10	2, 3, 4	MRD-BG0X-M17-000
							5	5, 7, 8, 9	
					PLASTIC	SOCKET	10	2, 3, 4	MRD-BH0X-M17-000
							5	5, 7, 8, 9	
						PIN	10	2, 3, 4	MRD-BJ0X-M17-000
							5	5, 7, 8, 9	
	PLUG			7.0 TO 9.0	METAL	SOCKET	10	2, 3, 4	MRD-BN0X-M16-000
							5	5, 7, 8, 9	
						PIN	10	2, 3, 4	MRD-BM0X-M16-000
							5	5, 7, 8, 9	
					PLASTIC	SOCKET	10	2, 3, 4	MRD-BR0X-M16-000
							5	5, 7, 8, 9	
						PIN	10	2, 3, 4	MRD-BP0X-M16-000
							5	5, 7, 8, 9	
				4.0 TO 7.0	METAL	SOCKET	10	2, 3, 4	MRD-BN0X-M17-000
							5	5, 7, 8, 9	
						PIN	10	2, 3, 4	MRD-BM0X-M17-000
							5	5, 7, 8, 9	
					PLASTIC	SOCKET	10	2, 3, 4	MRD-BR0X-M17-000
							5	5, 7, 8, 9	
						PIN	10	2, 3, 4	MRD-BP0X-M17-000
							5	5, 7, 8, 9	

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CABLE ASSEMBLY PART NUMBERS

Size	Cable Jacket	Connector 1	Connector 2	Housing	Contacts	Current Rating (A)	Conductor Size (AWG)	Positions (X)	"Part Numbers X=Positions; YY=Length"
A	PVC	PLUG	PLUG	PLASTIC	PIN	5	20	2, 3, 4, 5, 6	MRD-AP0X-CBP-YY0
						3	22	7, 8	
			NONE			5	20	2, 3, 4, 5, 6	MRD-AP0X-CAP-YY0
						3	22	7, 8	
B	PVC	PLUG	PLUG	METAL	SOCKET	10	16	2, 3, 4	MRD-BN0X-CBP-YY0
						5	22	5, 7, 8, 9	
			NONE			10	16	2, 3, 4	MRD-BN0X-CAP-YY0
						5	22	5, 7, 8, 9	
			PLUG		PIN	10	16	2, 3, 4	MRD-BM0X-CBP-YY0
						5	22	5, 7, 8, 9	
			NONE			10	16	2, 3, 4	MRD-BM0X-CAP-YY0
						5	22	5, 7, 8, 9	
			PLUG	PLASTIC	SOCKET	10	16	2, 3, 4	MRD-BR0X-CBP-YY0
						5	22	5, 7, 8, 9	
			NONE			10	16	2, 3, 4	MRD-BR0X-CAP-YY0
						5	22	5, 7, 8, 9	
			PLUG		PIN	10	16	2, 3, 4	MRD-BP0X-CBP-YY0
						5	22	5, 7, 8, 9	
			NONE			10	16	2, 3, 4	MRD-BP0X-CAP-YY0
						5	22	5, 7, 8, 9	
		RECEPTACLE	RECEPTACLE	METAL	SOCKET	10	16	2, 3, 4	MRD-BF0X-CBP-YY0
						5	22	5, 7, 8, 9	
			NONE			10	16	2, 3, 4	MRD-BF0X-CAP-YY0
						5	22	5, 7, 8, 9	
			RECEPTACLE		PIN	10	16	2, 3, 4	MRD-BG0X-CBP-YY0
						5	22	5, 7, 8, 9	
			NONE			10	16	2, 3, 4	MRD-BG0X-CAP-YY0
						5	22	5, 7, 8, 9	
			RECEPTACLE	PLASTIC	SOCKET	10	16	2, 3, 4	MRD-BH0X-CBP-YY0
						5	22	5, 7, 8, 9	
			NONE			10	16	2, 3, 4	MRD-BH0X-CAP-YY0
						5	22	5, 7, 8, 9	
			RECEPTACLE		PIN	10	16	2, 3, 4	MRD-BJ0X-CBP-YY0
						5	22	5, 7, 8, 9	
			NONE			10	16	2, 3, 4	MRD-BJ0X-CAP-YY0
						5	22	5, 7, 8, 9	

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CABLE DIAMETER

Size	Conductor Size (AWG)	Current Rating (A)	Positions	Cable Diameter (mm)
A	20	5	2	5.0
			3	5.2
			4	5.6
			5	6.0
			6	6.5
	22	3	7	5.8
			8	6.0
B	16	10	2	6.3
			3	6.7
			4	7.3
	22	5	5	5.3
			7	5.8
			8	6.0
			9	6.8

CABLE LENGTH

CABLE LENGTH ("YY" in Part Number)	
20 to 99	LENGTH IN CM
A0 to A9	1 METERS + 0 TO 9 DECIMETERS
B0 to B9	2 Meters + 0 to 9 Decimeters
C0 to C9	3 Meters + 0 to 9 Decimeters
D0 to D9	4 Meters + 0 to 9 Decimeters
E0 to E9	5 Meters + 0 to 9 Decimeters
F0 to F9	6 Meters + 0 to 9 Decimeters
G0 to G9	7 Meters + 0 to 9 Decimeters
H0 to H9	8 Meters + 0 to 9 Decimeters
J0 to J9	9 Meters + 0 to 9 Decimeters
K0 to K9	10 Meters + 0 to 9 Meters
L0 to L9	20 Meters + 0 to 9 Meters
M0 TO M9	30 METERS + 0 TO 9 DECAMETERS

CABLE LENGTH ORDERING CODE EXAMPLES:
75CM: YY="75" 6.3M: YY="F3"
25M: YY="L5" 80M: YY="M5"

ACPAMRD1123EA4

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