

# EPIC® CIRCON M23 Series Circular Signal Connectors

CIRCON M23 circular signal connectors are designed to DIN specification EN61984 and have a standard M23 threaded connection housing. They are offered in coupler, connector, and panel mount configurations that satisfy simple cable-to-cable and cable-to-machine requirements. They are ideal for control signal transmission and servo drive encoder feedback applications in the plastics, printing, analytical instrument, robotic, and machine tool industries, and any other industrial or commercial application where a compact, rugged connector is required.



800-774-3539

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**LAPP GROUP**

# EPIC® CIRCON M23 Series

## Technical Specifications

### Equipment Description

EPIC CIRCON M23 Connectors are available in 3 housing arrangements that can accommodate 3 different insert keying positions. Inserts are offered in 7 contact configurations for mounting male or female, crimp or solder contacts. Common to all arrangements are a rugged nickel plated zinc body, plastic contact insulation body and sleeve, and gold plated electrical contacts. Cable mounted arrangements also include an integral EMC shield ring and cable clamp and seal. The figure to the right shows the general construction of these connectors.

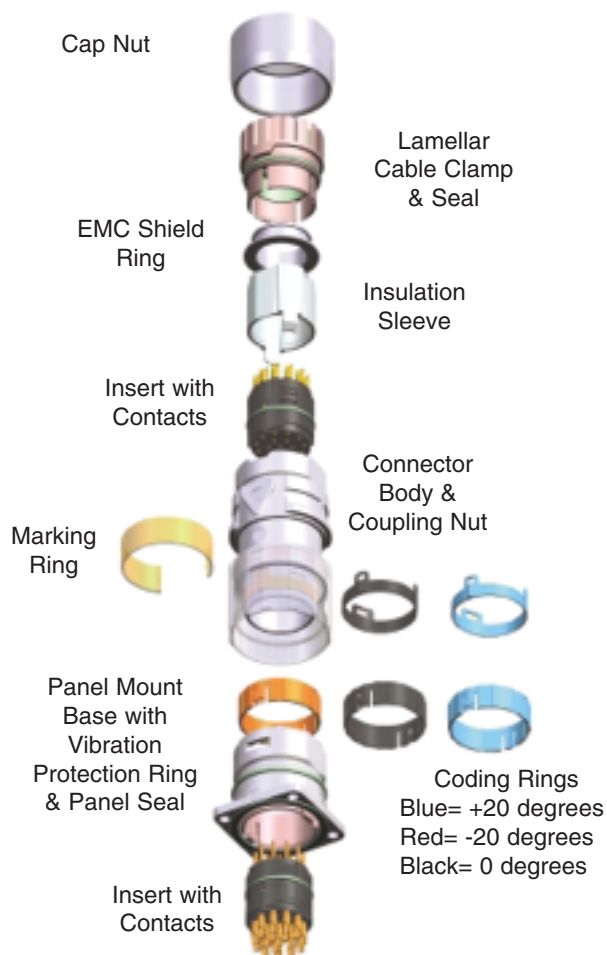
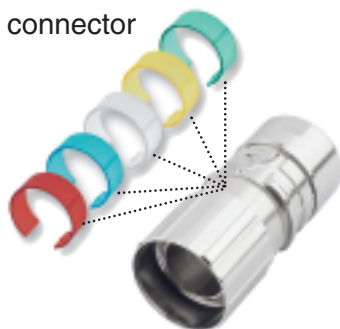
The connectors are offered with insert configurations for 6, 7, 8+1, 9, 12, 16, and 17 crimp or solder contacts in either a clockwise or counter-clockwise orientation. Used in combination, they connect one cable with another (cable coupler) or a cable to fixed wiring in a control enclosure or on a machine, instrument, or servo motor.

### Features & Benefits

The new 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.

#### 5 Key features include:

- 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/IP68 protection, and 360 degree shielding
- Identification marking field and unique color marking clips provide positive identification and visual differentiation in multiple connector installations.
- Color-coded keying rings insure correct mating selection in applications where several connectors are mounted in the same location.



### Technical Specifications






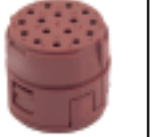

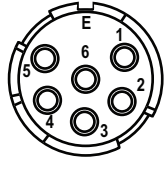

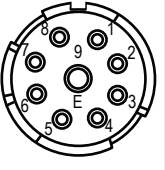
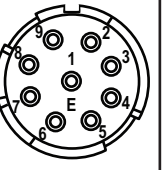
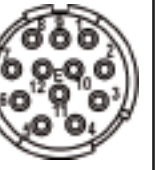














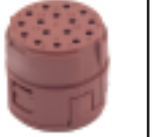

<b># of Contacts:</b>	6, 7, 8+1, 9, 12, 16, 17
<b>Rated Voltage:</b>	6,7,8+1,9 poles - 150 volts 12 & 16 poles - 100 volts 17 poles - 50 volts
<b>Rated Current:</b>	6 & 7 pole: 14 amps; 8+1, 9, 12, 16, 17 pole: 7 amps
<b>Impulse Voltage:</b>	0.8 kV
<b>Contact Resistance:</b>	<5m Ohms
<b>Mating Cycles:</b>	100 minimum
<b>Temperature Range:</b>	-25°C to +125°C
<b>Protection Class:</b>	IP67/68 (10h/1m)
<b>Wire Gauge: Crimp</b>	1mm : 0.14-1.0mm <sup>2</sup> (24-18 AWG) 2mm : 1.0-2.5mm <sup>2</sup> (18-14 AWG)
<b>Solder</b>	1mm : up to 1mm <sup>2</sup> (18 AWG) 2mm : up to 2.5mm <sup>2</sup> (14 AWG)
<b>Cable Diameter:</b>	7.0 to 13.5 mm
<b>Materials:</b>	Housing: Nickel Plated Zinc Insert: PA, PBT, UL94 V-0 Contacts: gold plated copper alloy Gaskets & Seals: FPM
<b>Standards:</b>	DIN EN 61984
<b>Approvals:</b>	

# EPIC® CIRCON M23 Series

## Insert Configurations & Contacts

### Insert Configurations

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

E-Type Insert  (Clockwise numbered contacts viewed from the mating side)	73.002766 w/o contacts	73.002754 w/o contacts	73.002742 w/o contacts	73.002730 w/o contacts	73.002718 w/o contacts	73.002706 w/o contacts	73.008500 w/o contacts	
	73.002768 w/male solder	73.002756 w/male solder	73.002744 w/male solder	73.002732 w/male solder	73.002720 w/male solder	73.002708 w/male solder	73.028500 w/male solder	
	73.002770 w/female solder	73.002758 w/female solder	73.002746 w/female solder	73.002734 w/female solder	73.002722 w/female solder	73.002710 w/female solder	73.018500 w/female solder	
								
	Use 2mm Contacts	Use 2mm Contacts	Use 1 & 2mm Contacts	Use 1mm Contacts	Use 1mm Contacts	Use 1mm Contacts	Use 1mm Contacts	
								
# of Contacts	6	7	8+1	9	12	16	17	
P-Type Insert  (Counter-Clockwise numbered contacts viewed from the mating side)								
								
	Use 2mm Contacts	Use 2mm Contacts	Use 1 & 2mm Contacts	Use 1mm Contacts	Use 1mm Contacts	Use 1mm Contacts	Use 1mm Contacts	
	73.002760 w/o contacts	73.002748 w/o contacts	73.002736 w/o contacts	73.002724 w/o contacts	73.002712 w/o contacts	73.002700 w/o contacts	73.008000 w/o contacts	
	73.002762 w/male solder	73.002750 w/male solder	73.002738 w/male solder	73.002726 w/male solder	73.002714 w/male solder	73.002702 w/male solder	73.028000 w/male solder	
73.002764 w/female solder	73.002752 w/female solder	73.002740 w/female solder	73.002728 w/female solder	73.002716 w/female solder	73.002704 w/female solder	73.018000 w/female solder		

### Contacts

Part Number	Description	Pack Size
72.400000	M23 Gold Male Crimp 1mm Contact: 0.14 - 1.0 mm <sup>2</sup> (26 - 18 AWG)	100
72.402000	M23 Gold Male Solder Contact: up to 1.0 mm <sup>2</sup> (18 AWG)	100
72.402600	M23 Gold Female Solder Contact: up to 1.0 mm <sup>2</sup> (18 AWG)	100
74.200600	M23 Gold Female Crimp Contact: 0.14 - 1.0 mm <sup>2</sup> (26 - 18 AWG)	100
74.034500	M23/LS1 HYP Gold Female Crimp Contact D6: 0.14 - 1.0 mm <sup>2</sup> (26 - 18 AWG)	100
72.401600	M23 Gold Female Crimp 2 mm Contact: 1.0 - 2.5 mm <sup>2</sup> (18 - 14 AWG)	100
72.404000	M23 Gold Female Solder Contact 2mm up to 2.5 mm <sup>2</sup> (14 AWG)	100
72.401000	M23 Gold Male Crimp 2mm Contact: 1.0 - 2.5 mm <sup>2</sup> (18 - 14 AWG)	100
72.403000	M23 Gold Male Solder 2 mm Contact: up to 2.5 mm <sup>2</sup> (14 AWG)	100

# EPIC® CIRCON M23 Series

## Housing Configurations

### Housing Configurations

Panel mount base, cable connector, and cable coupler housings are provided with color-coded keying rings to insure correct mating selection in multiple connector applications.

#### STRAIGHT PANEL MOUNT BASE (STYLE A1)

Keying "N"



72.004000

Keying "-20"

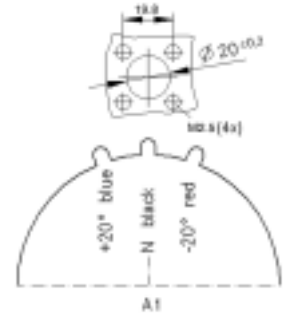
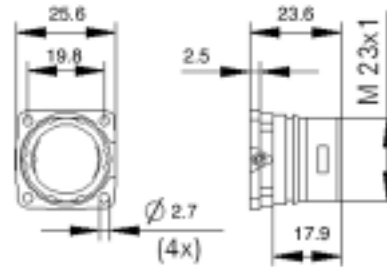


72.004100

Keying "+20"



72.004200



#### CABLE CONNECTOR (STYLE D6)

Keying "N"



44.420037

Keying "-20"

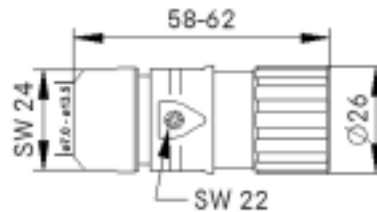


44.420036

Keying "+20"



44.420038



#### CABLE COUPLER (STYLE F6)

Keying "N"



44.420040

Keying "-20"

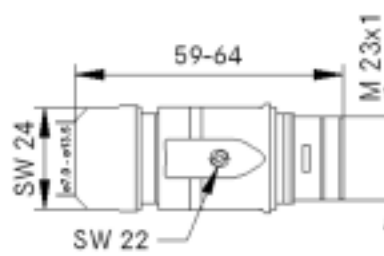


44.420039

Keying "+20"



44.420041



(All dimensions above are in mm)

# EPIC® CIRCON M23 Series

Tools & Accessories



**Crimp Tool**  
0.14 - 6.0 mm<sup>2</sup>  
11.1480



**Locator**  
11.148300



**Removal Tool**  
*Panel Base Insert*  
75.005150



**Metal Screw Cap**  
Style A1: 75.018110  
Style F6, F7: 75.018010



**Plastic Protection Cap**  
Style D6: 75.007710  
Style A1, F6, F7: 75.007810



**Yellow Marking Rings**  
44.420098



**Red Marking Rings**  
44.420100



**Blue Marking Rings**  
44.420096



**Green Marking Rings**  
44.420099



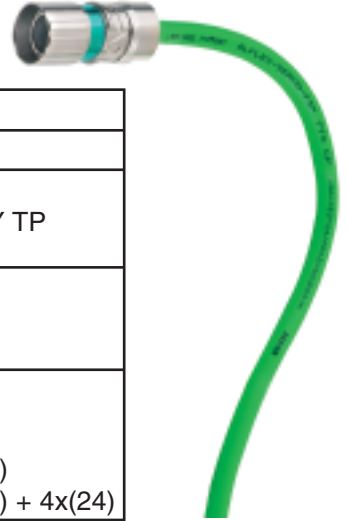
**Transparent Marking Rings**  
44.420097

# EPIC® CIRCON M23 Series

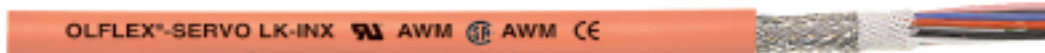
## Cable Applications

The CIRCON M23 connectors are ideal for use with industrial control and data cables, and servo feedback cables. Based on the specific application, a wide variety of cable/connector combinations is possible. The tables below provide a sampling of the possibilities.

### Stationary/Flexible Applications



Application	Use With Connector Contact Configuration	
	6 & 7 Pole	8+1, 9, 12, 16, & 17 Pole
Industrial Equipment Control and Signal	OLFLEX® 190/190 CY	UNITRONIC® 190/190 CY/190 CY TP
	OLFLEX® 490P/490 CP	
	OLFLEX® 590P/590 CP	
	SPIREX® 400P/540 P	
	OLFLEX® TC 600	UNITRONIC® 300/300CY
OLFLEX® Tray II		
Servo Feedback (Siemens)		OLFLEX® Servo LK-SMS-FX5 0025724 - 4x2x(22) + 4x(20) 0025725 - 3x2x(26) + 4x(26) + 1x2x(20) 0025726 - 3x2x(26) + 4x(26) + 1x2x(20) + 4x(24)



### Continuous Flex Applications

Application	Use With Connector Contact Configuration		
	6 & 7 Pole	8+1, 9, 12, 16, & 17 Pole	
Industrial Equipment Control and Signal	OLFLEX®-FD 890/890 CY	UNTRONIC®-FD 890	
	OLFLEX®-FD 891/891 CY	UNTRONIC®-FD P Plus	
	OLFLEX®-FD 890 P/890 CP	UNTRONIC®-FD CP Plus	
	OLFLEX®-FD 891 P/891 CP	UNTRONIC®-FD CP (TP) Plus	
Servo Feedback (Siemens)		OLFLEX® Servo LK-SMS-FX8 0027711 - 4x2x(22) + 4x(20) 0027713 - 3x2x(26) + 4x(26) + 1x2x(20) 0027714 - 3x2x(26) + 4x(26) + 1x2x(20) + 4x(24)	
	Servo Feedback (Indramat)		OLFLEX® Servo LK-INX 7072400 - 4x2x(24) + 2x(18) 7072401 - 4x2x(24) + 2x(20) 7072402 - 9x(20)

