EPIC® CIRCON M23 SeriesCircular 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.



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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.

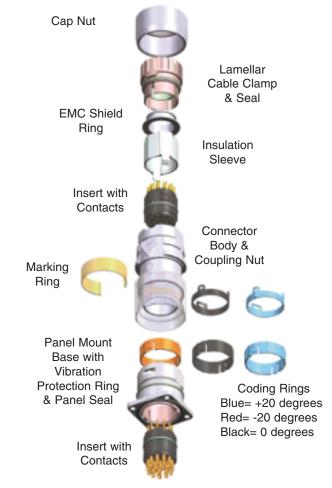
The connectors are offered with insert configurations for 6, 7, 8+1, 9, 12, 16, and 17 crimp or solder contacts in either a clockwise or counter-clockwise orientation. Used in combination, they connect one cable with another (cable coupler) or a cable to fixed wiring in a control enclosure or on a machine,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

5Key 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

of Contacts: 6, 7, 8+1, 9, 12, 16, 17

Rated Voltage: 6,7,8+1,9 poles - 150 volts

12 & 16 poles - 100 volts 17 poles - 50 volts

Rated Current: 6 & 7 pole: 14 amps;

8+1, 9, 12, 16, 17 pole: 7 amps 0.8 kV

Contact Resistance: <5m Ohms
Mating Cycles: 100 minimum
Temperature Range: -25°C to +125°C
Protection Class: IP67/68 (10h/1m)

Wire Gauge: *Crimp* 1mm : 0.14-1.0mm2 (24-18 AWG) 2mm : 1.0-2.5mm2 (18-14 AWG) 5older 1mm : up to 1mm2 (18 AWG)

2mm : up to 2.5mm2 (14 AWG)

Cable Diameter: 7.0 to 13.5 mm

Materials: Housing: Nickel Plated Zinc Insert: PA, PBT, UL94 V-0

Contacts: gold plated copper alloy

Gaskets & Seals: FPM

Standards: DIN EN 61984
Approvals:



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

| | 73.002766 | 73.002754 | 73.002742 | 73.002730 | 73.002718 | 73.002706 | 73.008500 |
|--|---|---|----------------------------|----------------------------|----------------------------|-----------------------------|----------------------------|
| | w/o contacts | w/o contacts | w/o contacts | w/o contacts | w/o contacts | w/o contacts | w/o contacts |
| | 73.002768 | 73.002756 | 73.002744 | 73.002732 | 73.002720 | 73.002708 | 73.028500 |
| E-Type | w/male solder | w/male solder | w/male solder | w/male solder | w/male solder | w/male solder | w/male solder |
| Insert | 73.002770 | 73.002758 | 73.002746 | 73.002734 | 73.002722 | 73.002710 | 73.018500 |
| | w/female solder | w/female solder | w/female solder | w/female solder | w/female solder | w/female solder | w/female solder |
| (Clockwise numbered contacts viewed from the | Use 2mm Contacts | Use 2mm Contacts | Use 1 & 2mm Contacts | Use 1mm Contacts | Use 1mm Contacts | Use 1mm Contacts | Use 1mm Contacts |
| mating side) | | | | | 0000 | (0.00 (0.000) (0.000) | 0000 |
| # of Contacts | 6 | 7 | 8+1 | 9 | 12 | 16 | 17 |
| P-Type Insert | 000 | 000 | 0.0.0 | 0000 | 0000 | 00000 000000 | 00000 |
| (Counter- Clockwise numbered contacts viewed | Use 2mm Contacts | Use 2mm Contacts | Use 1 & 2mm Contacts | Use 1mm Contacts | Use 1mm Contacts | Use 1mm Contacts | Use 1mm Contacts |
| from the | 73.002760 | 73.002748 | Contacts 73.002736 | 73.002724 | 73.002712 | 73.002700 | 73.008000 |
| mating | w/o contacts | w/o contacts | w/o contacts | w/o contacts | w/o contacts | w/o contacts | w/o contacts |
| 1 | | | 73.002738 | 73.002726 | 73.002714 | 73.002702 | 73.028000 |
| l cido) l | 73.002762 | /3.002/50 | /3.UUZ/30 | | | | |
| side) | 73.002762 w/male solder | 73.002750 w/male solder | | | | | |
| side) | 73.002762 w/male solder 73.002764 | 73.002750 w/male solder 73.002752 | w/male solder 73.002740 | w/male solder 73.002728 | w/male solder 73.002716 | w/male solder 73.002704 | w/male solder 73.018000 |

Contacts

| Part Number | Description | Pack Size |
|-------------|---|-----------|
| 72.400000 | M23 Gold Male Crimp 1mm Contact: 0.14 -1.0 mm² (26 - 18 AWG) | 100 |
| 72.402000 | M23 Gold Male Solder Contact: up to 1.0 mm ² (18 AWG) | 100 |
| 72.402600 | M23 Gold Female Solder Contact: up to 1.0 mm² (18 AWG) | 100 |
| 74.200600 | M23 Gold Female Crimp Contact: 0.14 -1.0 mm ² (26 -18 AWG) | 100 |
| 74.034500 | M23/LS1 HYP Gold Female Crimp Contact D6: 0.14 - 1.0 mm² (26 -18 AWG) | 100 |
| 72.401600 | M23 Gold Female Crimp 2 mm Contact: 1.0 - 2.5 mm² (18 - 14 AWG) | 100 |
| 72.404000 | M23 Gold Female Solder Contact 2mm up to 2.5 mm² (14 AWG) | 100 |
| 72.401000 | M23 Gold Male Crimp 2mm Contact: 1.0 - 2.5 mm² (18 - 14 AWG) | 100 |
| 72.403000 | M23 Gold Male Solder 2 mm Contact: up to 2.5 mm ² (14 AWG) | 100 |

Housing Configurations

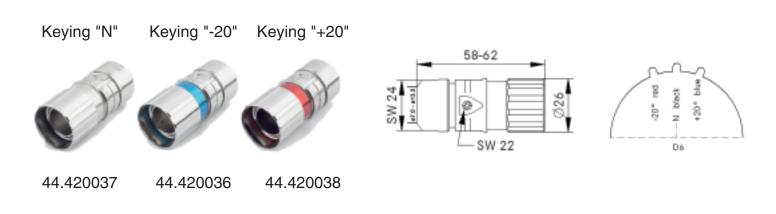
Housing Configurations

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.

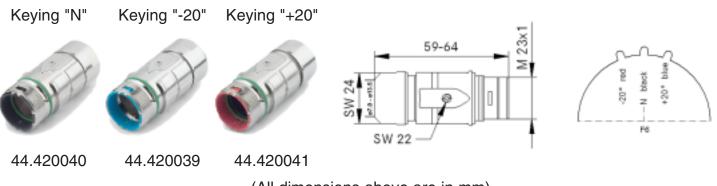
STRAIGHT PANEL MOUNT BASE (STYLE A1)



CABLE CONNECTOR (STYLE D6)



CABLE COUPLER (STYLE F6)



(All dimensions above are in mm)

Tools & Accessories



Crimp Tool 0.14 - 6.0 mm² 11.1480



Locator 11.148300



Removal Tool Panel Base Insert 75.005150



Metal Screw Cap

Style A1: Style F6, F7: 75.018110 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

Green Marking Rings 44.420099



Blue Marking Rings 44.420096

Transparent Marking Rings 44.420097



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 | | |
| | OLFLEX® 190/190 CY | | | |
| Industrial Equipment | OLFLEX® 490P/490 CP | UNITRONIC® 190/190 CY/190 CY TP | | |
| Control and Signal | 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

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





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