

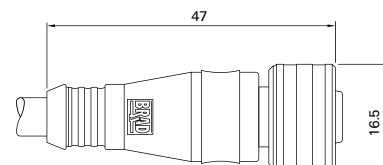
# ULTRA-LOCK™ CORDSETS

Ultra-Lock single-keyway M12 cordsets are available with three cable types and manufactured to optimize performance for your application.

- PVC – for most standard applications.
- PUR – for oil and coolant environments.
- TPE – for welding areas and applications requiring repeated cable flexing.

Ultra-Lock cordsets are offered in single- or double-ended configurations. They come with Ultra-Lock connectors on the distribution box end and Ultra-Lock or threaded connectors on the device end. Using threaded connector ends allows immediate use of the Ultra-Lock system with existing threaded devices.

## Dimensions (mm)



**Mates with Ultra-Lock Compatible Sensors and Receptacles**

## TECHNICAL DATA

### Mechanical

Connector Body	PUR
Contact Carrier	PUR
Locking Mechanism	Nickel Plated Brass
Contact	Male: Brass Female: Phosphor Bronze
Contact Plating	Gold over Nickel
O-Ring	Viton
Durability	30,000 Mate/Demate

### Electrical

Rated Voltage (IEC 60 664-1)	3 & 4-Pole: 250V 5-Pole: 60V
Insulation Resistance (IEC 60 512-2)	>10 <sup>9</sup> Ω
Rated Current T amb. 40C (IEC 60 512-3)	4 A
Contact Resistance (IEC 60 512-2)	<5mΩ

### Environmental

Pollution Degree (IEC 60 664-1)	3
Protection (IEC 60 529)	IP 67/68/69K
Operating Temperature	-25°C / 90°C

### Certification

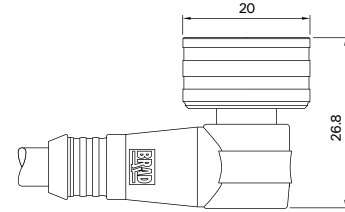
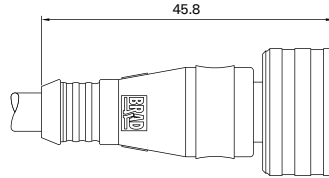
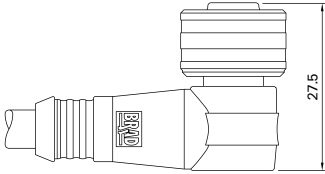
CSA & UL



For additional product and technical information, visit [woodhead.com/ultralock](http://woodhead.com/ultralock).

Designed For Performance And Reliability

# M12



**Mates with Ultra-Lock™ Compatible Sensors and Receptacles**



**Mates with Ultra-Lock Distribution Boxes and Receptacles**



**Mates with Ultra-Lock Distribution Boxes and Receptacles**

## ORDERING INFORMATION

Example: W03000A09M020 = Ultra-Lock single-ended cordset, 3-pole, female straight, PVC cable, 2 meters in length.

**W 0 3 0 0 0 A 0 9 M 0 2 0**

### Connector Type

#### 1st Character

- W** M12 Ultra-Lock connector
- 8** M12 threaded connector

#### 2nd Character

- 0** Single-ended cordset
- W** Double-ended cordset, M12 Ultra-Lock connector
- 8** Double-ended cordset, M12 threaded connector

### Number of Poles

- 3** 3-pole
- 4** 4-pole
- 5** 5-pole

### Unit of Measure

**M** Meters

### Configuration

#### Single-Ended Cordset

- 000** Female straight
- 001** Female 90°
- 006** Male straight
- 007** Male 90°
- 0N1** Female LED NPN 90°
- 0P1** Female LED PNP 90°

#### Double-Ended Cordset

- 030** Female straight / Male straight
- 031** Female 90° / Male straight
- 032** Female straight / Male 90°
- 033** Female 90° / Male 90°

### Cable Length

#### Single-Ended

- 020** 2 meter
- 040** 4 meter
- 050** 5 meter
- 060** 6 meter
- 100** 10 meter

#### Double-Ended

- 003** 0.3 meter
- 006** 0.6 meter
- 010** 1 meter
- 020** 2 meter
- 030** 3 meter
- 040** 4 meter
- 050** 5 meter

*Other lengths available upon request.*

### Cable Type

- A09** PVC 0.34mm<sup>2</sup> (22AWG) Yellow
- B03** PUR 0.34mm<sup>2</sup> (22AWG) Black
- K05** TPE 0.34mm<sup>2</sup> (22AWG) Yellow

# Cordset Catalog Number Matrix

Below is an example of a properly constructed Cordset part number and how it translates to an actual part.

**803000A09M020**

Micro-Change® Single Keyway M12 3 Pole Female Straight Single-Ended Cordset,  
22 AWG PVC Cable with DC Color Code, 2 meters long.

# 803000A09M020

PRODUCT FAMILY		NUMBER OF POLES	CABLE TYPE	CONNECTOR TYPE (Female: Internal Threads) (Male: External Threads)	UNIT OF MEASURE	CABLE LENGTH	COUPLING NUT
1 <sup>st</sup> Character	2 <sup>nd</sup> Character						
7	0	X	Dual Keyway 1/2"-20 UNF	Single-Ended Cordset	F	10 X Length	Blank
8	7	X	18 AWG PVC, Auto Color Code 2P to 5P	Female Straight	M	1 X Length	1
B	8	X	18 AWG PUR, Auto Color Code 2P to 5P	Female Straight 360° Shield		.1 X Length	2
	B	3	22 AWG PVC, Auto Color Code 2P to 6P	Female 90°			
		2 to 6 Pole Dual Keyway	22 AWG PVC, 360° Shield, Auto Color Code 2P to 6P	Female Straight 360° Shield			
		3 to 5 Pole Single Keyway	18 AWG TPE Auto Color Code 3P and 5P	Male Straight			
		3 and 4 Pole Reverse Keyway	22 AWG PVC, DC Color Code 3P to 5P	Male Straight 360° Shield			
			18 AWG PVC, DC Color Code 3P and 4P	Male 90°			
			18 AWG SJOOW, DC Color Code 3P and 4P	Male 90° 360° Shield			
			22 AWG PVC with Braid, DC Color Code 3P to 5P	Female Straight LED NPN			
			22 AWG PVC 360° Shield, DC Color Code 3P to 5P	Female Straight LED PNP			
			18 AWG TPE, DC Color Code 4P	Female 90° LED NPN			
			Reverse Keyway M12	Female 90° LED PNP			
			22 AWG International AC 3P and 4P				
				030	030		
				S30	S30		
				031	031		
				032	032		
				033	033		
				ON7	ON7		
				ON9	ON9		
				OP7	OP7		
				OP9	OP9		



# Single-Ended Cordsets

## Single Keyway M12

#22 AWG yellow PVC cables with or without braid – DC color code  
 Oil-resistant PVC jacket for all types of heavy-duty industrial environments  
 Highly reliable low-resistance contact design with gold/palladium nickel plating

	3P	4P	5P
FEMALE FACE VIEW			
COLOR CODE	1- brown 2- not used 3- blue 4- black 5- not used	1- brown 2- white 3- blue 4- black 5- not used	1- brown 2- white 3- blue 4- black 5- gray
VOLTAGE	250V AC/DC	250V AC/DC	250V AC/DC
CURRENT	4A	4A	4A
CONDUCTOR	#22-3	#22-4	#22-5

FEMALE	FIG	SINGLE-ENDED CORDSETS WITH #22 AWG PVC CABLE WITHOUT BRAID 2 METERS LONG		
STRAIGHT	1	803000A09M020	804000A09M020	805000A09M020
90°	2	803001A09M020	804001A09M020	805001A09M020
MATING RECEPTACLE*	5	8R3006A18A120	8R4006A18A120	8R5006A18A120
MALE	FIG	SINGLE-ENDED CORDSETS WITH #22 AWG PVC CABLE WITHOUT BRAID 2 METERS LONG		
STRAIGHT	3	803006A09M020	804006A09M020	805006A09M020
90°	4	803007A09M020	804007A09M020	805007A09M020
MATING RECEPTACLE*	6	8R3A00A18A120	8R4A00A18A120	8R5A00A18A120

### CATALOG OPTIONS

\*See Page 116 for additional Mating Receptacles

Use the following chart to modify your part's specifications

**803000A09M0201**

**WIRE TYPE**

#22 AWG YELLOW PVC  
 W/ METALLIC BRAID . . . . . **D01**

**CABLE LENGTH**

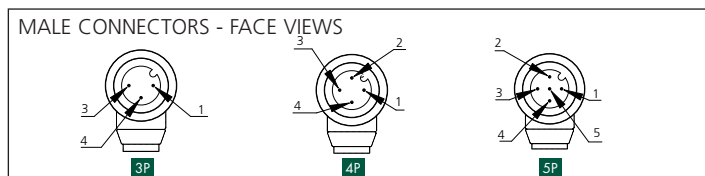
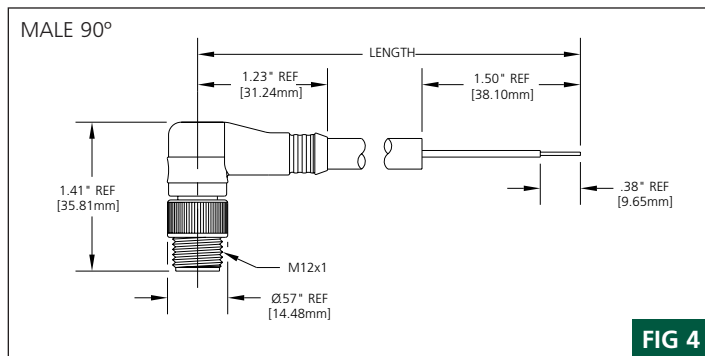
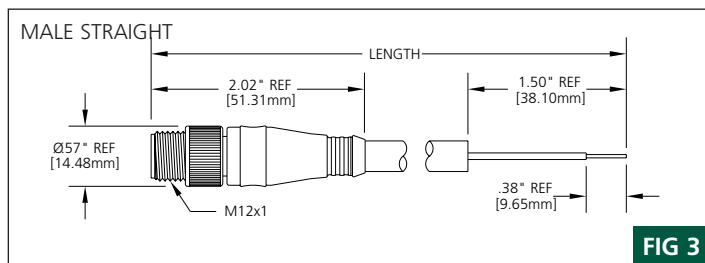
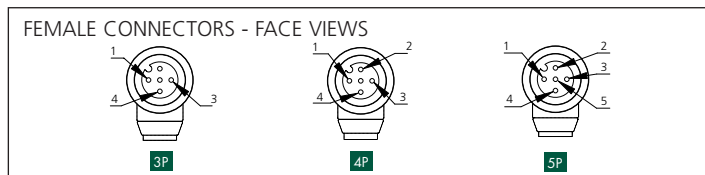
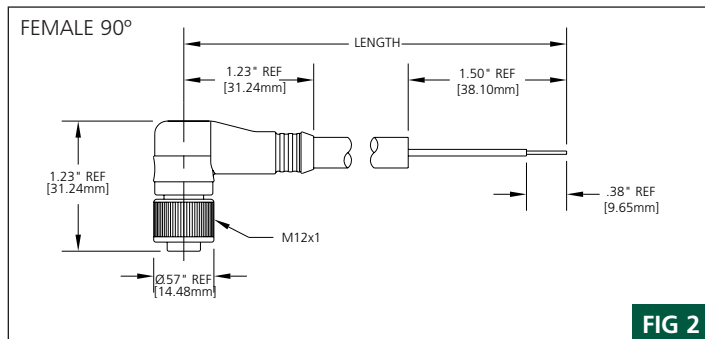
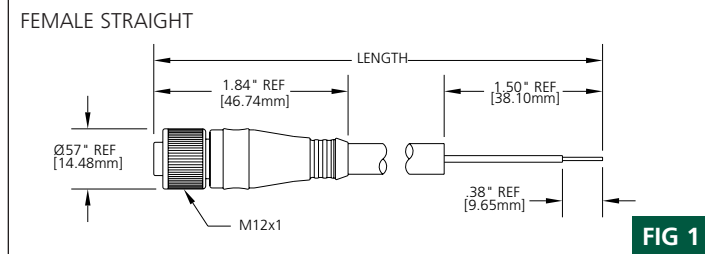
4 METER . . . . . **040**  
 5 METER . . . . . **050**

**COUPLING NUT**

STAINLESS STEEL . . . . . **ADD 1**  
 NON-METALLIC . . . . . **ADD 2**  
 (NON-METALLIC AVAILABLE ON  
 FEMALE CONNECTORS ONLY)

# Specifications

## CONNECTOR DIMENSIONS



**MECHANICAL**  
 CONNECTOR FACE: NYLON 6/6  
 MOLDED BODY: PVC  
 O-RING: NITRILE RUBBER  
 COUPLING NUT: ZINC DIECAST W/ BLACK EPOXY COAT, OPTIONAL STAINLESS STEEL TYPE 303 OR NON-METALLIC BLACK DELRIN



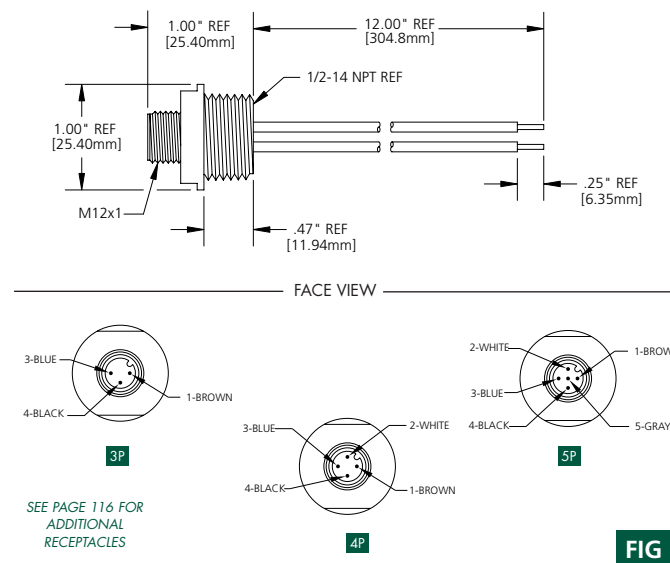
**CABLE:** YELLOW #22 AWG PVC JACKET AND PVC CONDUCTOR INSULATION OVER 26 X #36 COPPER STRANDING, 300V, UL STYLE 2661, CSA AWM I/II A/B, OPTIONAL 80% METALLIC BRAID  
**WITHOUT BRAID WITH BRAID**  
**OUTSIDE DIAMETER:**  
 3P - .18" (4.6mm) 3P - .23" (5.8mm)  
 4P - .20" (5.1mm) 4P - .25" (6.4mm)  
 5P - .23" (5.8mm) 5P - .26" (6.6mm)

**ELECTRICAL**  
 VOLTAGE RATING: 250 V AC/DC  
 AMPERAGE:  
 3P - 4A  
 4P - 4A  
 5P - 4A

**ENVIRONMENTAL**  
 PROTECTION: IP 68, NEMA 6P  
 AMBIENT OPERATING TEMP: -4° TO 221° F (-20° TO 105° C)  
**CERTIFICATIONS**  
 UL: UL LISTED, FILE NO. E152210  
 CSA: CSA CERTIFIED, FILE NO. LR6837

## RECEPTACLE DIMENSIONS

### MALE RECEPTACLE W/ EXTERNAL THREADS AND 1/2" - 14NPT THREADS



### FEMALE RECEPTACLE W/ INTERNAL THREADS AND 1/4" - 18NPT THREADS

