



Fast • Simple • Secure

Ultra-Lock™ Connector System

Next Generation M12 Connector Technology



(Patents Pending)

Fast

- Reduces assembly time and cost
- Reduces ergonomic strain on the assembler

Simple

- Push and lock without turning the coupler
- Simplifies assembly in tight locations

Secure

- Repeatably IP68 sealing performance
- Connector locks easily into place...and stays locked

Woodhead introduces the most significant innovation in industrial connectors in 30 years!

The Ultra-Lock™ Connector System—A new series of integrated distribution boxes and cordsets based on an innovative "push-lock" operating principal. Users simply *push down to connect*, and *pull up to disconnect*. For assemblers and installers, the unique threadless design of the Ultra-Lock Connector System provides faster, easier installation than traditional threaded connectors, resulting in higher productivity, less worker fatigue and reduced labor costs ▲

Ultra-Lock™ Connector System

Designed for Harsh Industrial Environments and Hard to Reach Locations

Fail-Safe Connectivity—With the traditional threaded connector, users often wonder “*Is it screwed down tight enough?*” The Ultra-Lock System provides fail-safe connectivity, even under the stresses of cable flexing, mechanical shock or machine vibration, virtually eliminating intermittent connections—those hard-to-find and hard-to-diagnose conditions that can result in thousands of dollars of lost production time.

Ergonomic Design—The simple push-and-lock motion eliminates the repetitive and sometimes painful motion of “threading” connectors together.

Radial Seal—The Ultra-Lock System, comprised of distribution boxes, cordsets and sensors, incorporates a revolutionary radial sealing design to provide a water-tight seal which protects against moisture and chemical exposure ▲

Ultra-Lock™ Connector System: Fast, Simple, Secure

Features

Push & Lock without touching the coupler

No threads, No turning

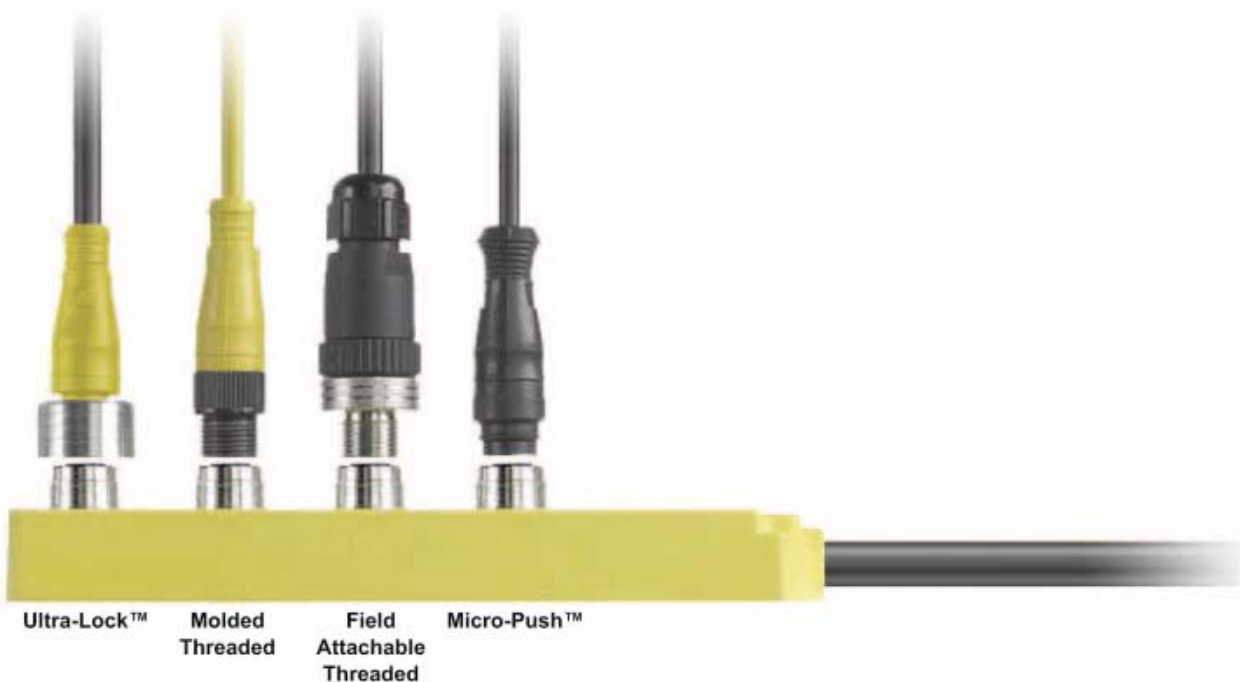
Innovative interlock design

Radial seal design

Benefits

- Reduced assembly time and effort
- Reduced ergonomic strain on the assembler
- Simplifies assembly in tight locations
- Confirms connection is made every time
- Connectors stay fully mated, even in harsh industrial conditions (vibration, cable pull, etc.)
- Repeatable, reliable IP68 sealing performance virtually eliminates intermittent connections
- Performance is NOT operator dependent

Compatible with existing M12 connectivity systems!



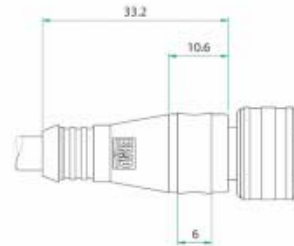
Ultra-Lock™ Cordsets

Figure & Description

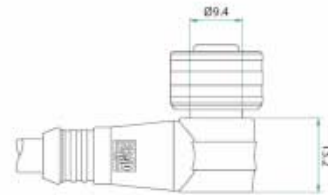
Dimensions (mm)



Mates with Ultra-Lock compatible sensors



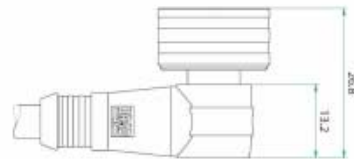
Mates with Ultra-Lock compatible sensors



Mates with Ultra-Lock distribution boxes



Mates with Ultra-Lock distribution boxes



Technical Data

Performance

Rated Voltage (IEC 60 664-1)	3+4 pol: 250 V 5 pol: 60V
Insulation Resistance (IEC 60 512-2)	>10 ⁹ Ω
Rated current Tamb. 40°C (IEC 60 512-3)	4 A
Contact Resistance (IEC 60 512-2)	<5mΩ
Polution Degree (IEC 60 664-1)	3
IP Degree of Protection (IEC 60 529)	IP 68
Temperature Range	-25°C / +90°C

Material

Connector Housing	PUR
Dielectric Material	PUR
Locking Ring	CuZn (Brass) Nickel Plated
Contacts	CuSn (Bronze) Gold Plated
O-Ring	Viton



Ultra-Lock™ Distribution Boxes

Figure & Description

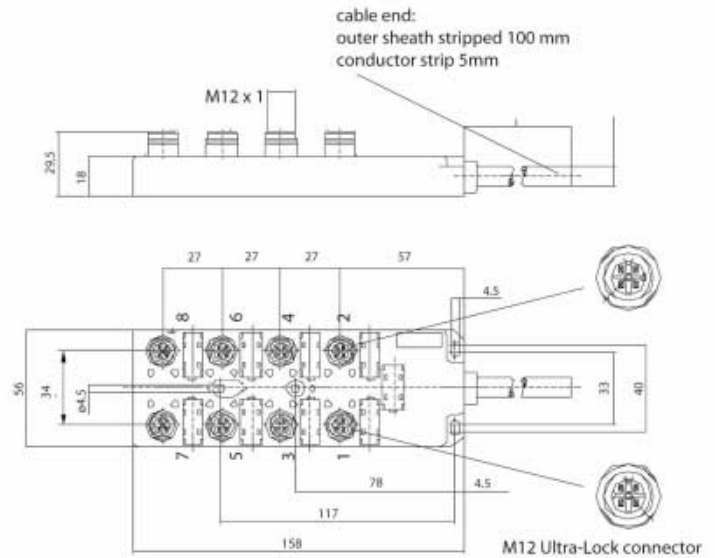
Distribution Box with cable

For connecting actuators and sensors.



Suitable to male M12 Ultra-Lock connectors 4+PE with PUR cable. Mates with Ultra-Lock or threaded M12 cordsets

Dimensions (mm)

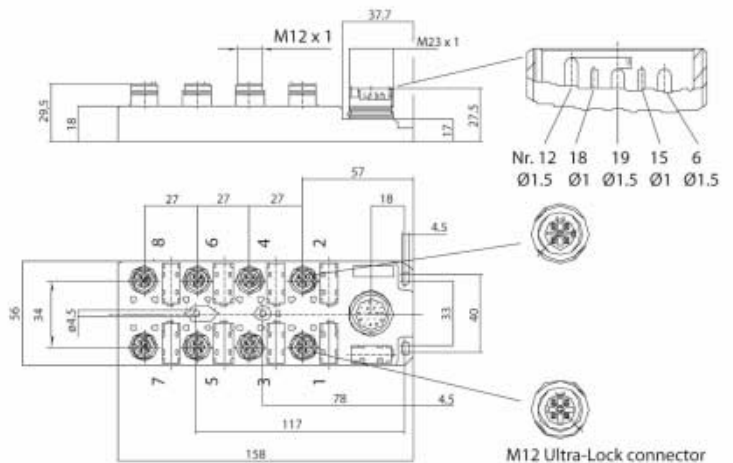


Distribution Box with M23 connector

For connecting actuators and sensors.



Suitable to male M12 Ultra-Lock connectors 4+PE with 19 pole connector M23
Mates with Ultra-Lock or threaded M12 cordsets



Technical Data

Performance

Rated Voltage (IEC 60 664-1)	10-30 VDC
Insulation Resistance (IEC 60 512-2)	>10 ⁹ Ω
Rated current Tamb. 40°C (IEC 60 512-3)	2 Amps per I/O
Contact Resistance (IEC 60 512-2)	<5mΩ
Polution Degree (IEC 60 664-1)	3
IP Degree of Protection (IEC 60 529)	IP 68
Temperature Range	-25°C / +90°C
Maximum Total Current	6 Amps

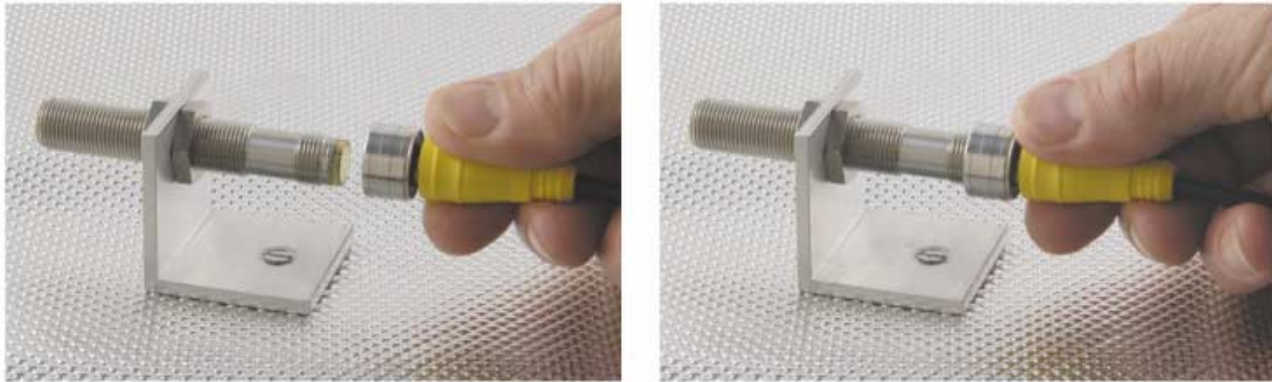
Material

Connector Housing	PUR
Dielectric Material	PUR
Contacts	CuSn (Bronze) Gold Plated
Distribution Boxes	PBT
Insert of Distribution Boxes	PBT
Receptacle Material	CuZn (Brass) Nickel Plated
O-Ring	Viton



Ultra-Lock™ Connector System

No Touch Coupling



With traditional threaded connectors, the operator **MUST** have his hand on the coupler to assemble the product. This can be difficult if a sensor is in a tight location or if one is trying to assemble several connectors to a distribution box.

Ultra-Lock cordsets, distribution boxes and compatible sensors can be mated without ever touching the coupler. Just hold the connector body itself, push down and lock the connector in place. No touching. No Turning! ▲

Radial Seal Coupling

The typical compression seal used in threaded connectors is dependent on how tight the operator makes the connection. If the operator is fatigued, for example, from turning down several couplers, he may not turn the coupler down all the way. This may lead to an intermittent connection or moisture penetrating the connection.

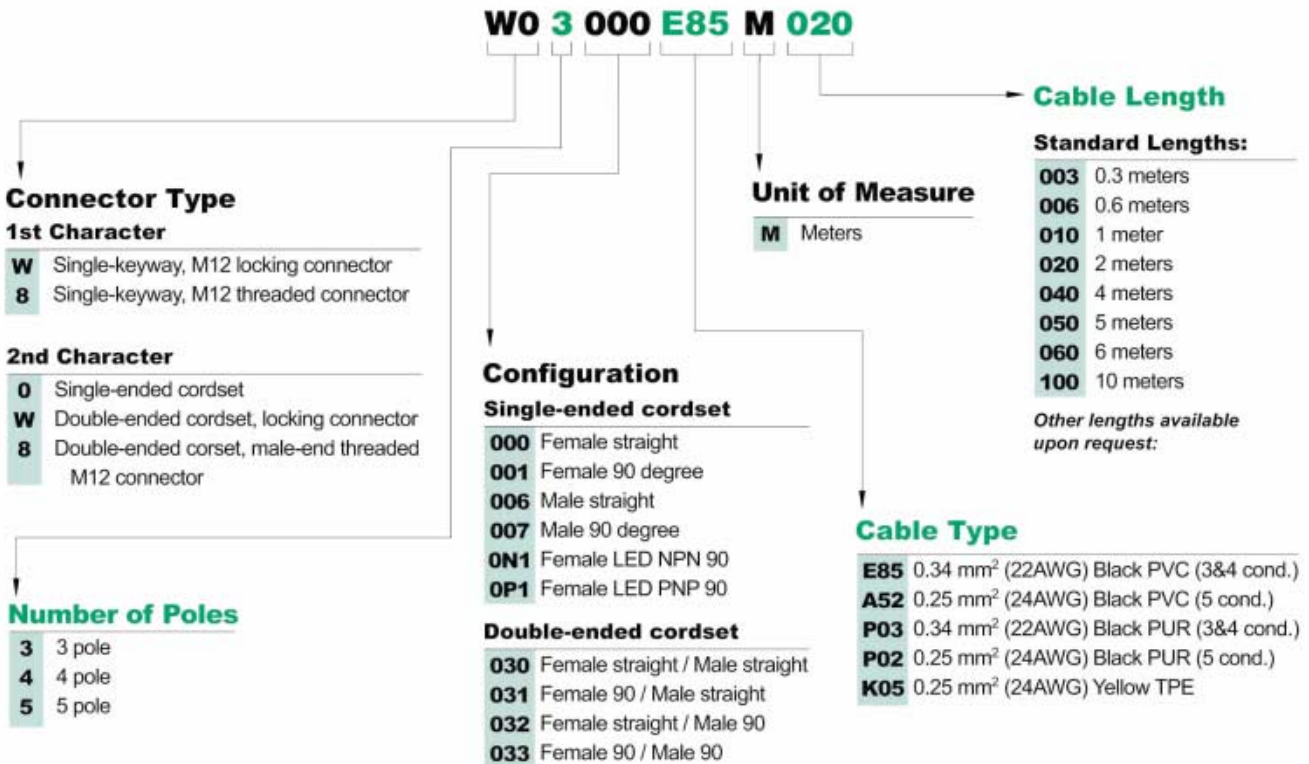
If the operator *over-tightens* the threaded connector, he may damage the O ring seal and, again, moisture may penetrate the connection.

The Ultra-Lock O ring seal is a Radial seal that is not operator dependent. The connectors are mated with the same simple downward pressure every time and the radial seal maintains a constant pressure seal against moisture ▲



Ultra-Lock™ Cordset Ordering Information

Example: W03000E85M020 = Ultra-Lock single-keyway, M12 locking connector, single-ended cordset with a female connector, 0.34mm² (22AWG) Black PVC (3 cond.), 2 meters in length



Ultra-Lock™ Distribution Box Ordering Information

Description	w/ Integral Cable	w/ Integral M23 Connector	w/ Integral Mini-Change® Connector
Single I/O per port			
4 Port, 5 pole/4 wire-single I/O per port	BKY400P-FBP-05	BKY401P-FBC	BKY401P-FBB
6 Port, 5 pole/4 wire-single I/O per port	BKY600P-FBP-05	BKY601P-FBC	BKY601P-FBB
8 Port, 5 pole/4 wire-single I/O per port	BKY800P-FBP-05	BKY801P-FBC	BKY801P-FBB
Dual I/O per port			
4 Port, 5 pole/5 wire-dual I/O per port	BKY405P-FBP-05	BKY403P-FBC	BKY403P-FBB
6 Port, 5 pole/5 wire-dual I/O per port	BKY605P-FBP-05	BKY603P-FBC	BKY603P-FBB
8 Port, 5 pole/5 wire-dual I/O per port	BKY805P-FBP-05	BKY803P-FBC	BKY803P-FBB



Woodhead Connectivity – UK
Woodhead Connectivity – France
Woodhead Connectivity – Italy

Tel.: +44 (0) 1495 356 300
Tel.: +33 (0) 164 30 91 36
Tel.: +39 (0) 266 40 03 21

Email: contact@wdhd.co.uk
Email: elitec@woodheadfr.com
Email: info@mpm.woodhead.it