



Position sensors

2 in 1: Sensors with IO-Link and digital switching signal



Inductive sensors



Simultaneous transmission of comprehensive process data and fast switching signals

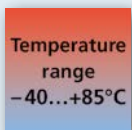
- Permanent distance information makes mechanical changes visible at an early stage
- Diagnostic information helps to reduce downtimes
- Configurable functions increase versatility and reduce stock-keeping



IO-Link



IP 67
IP 68
IP 69 K



Temperature range
-40...+85°C



Vibration and shock resistant



Fast switching, permanent diagnostics

With these inductive sensors, the Y path, i.e. the provision of sensor information for both the analogue and digital worlds, begins in the sensor itself.

The sensor thus enables the best of both worlds - via only one connection cable: Fast switching operations can be transmitted to the controller via a switching signal, while changes in the distance between the sensor and the target, for example, can be continuously monitored and transmitted to the IT level via IO-Link.

This allows to identify maintenance requirements at an early stage and avoid expensive unplanned downtimes.



Type	Total length [mm]	Measuring range [mm]	Installation [mm]	Protection rating	Order no.
M12	60	0.375...3.75	flush	IP 65...IP 69K	IF6137
M12	60	0.7...7	non flush	IP 65...IP 69K	IF6138
M18	60	0.75...7.5	flush	IP 65...IP 69K	IG6214
M18	60	1.3...13	non flush	IP 65...IP 69K	IG6215
M30	65	1.3...13	flush	IP 65...IP 69K	I15983
M30	65	2.3...23	non flush	IP 65...IP 69K	I15984
rectangular	40 x 40	2.1...21	flush	IP 67	IM5183
rectangular	40 x 40	2.6...26	non flush	IP 67	IM5184

Accessories

Type	Description	Order no.
	Angle bracket for type M12	E10735
	Angle bracket for type M18	E10736
	Angle bracket for type M30	E10737
	Mounting clamp with end stop for type M12	E11994
	Mounting clamp with end stop for type M18	E11995
	Mounting clamp with end stop for type M30	E11996
	1-port IO-Link master (connects IO-Link sensors to the PC via USB)	AL1060
	Memory plug, parameter memory for IO-Link sensors	E30398
	IO-Link master, EtherNet/IP, 4 ports	AL1320
	moneo configure SA (Stand-alone) licence, software for online and offline parameter setting of IO-Link devices including maintenance and support until the end of the following year	QMP010

Connection technology

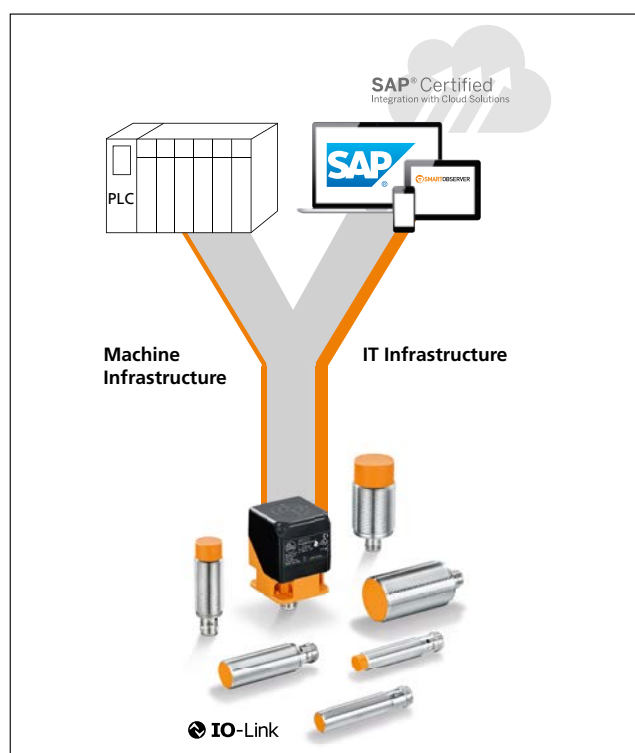
	M12 connection cable, straight, 2 m black, PUR cable	EVC001
	M12 connection cable, straight, 5 m black, PUR cable	EVC002
	M12 connection cable, angled, 2 m grey, PUR cable	EVC004
	M12 connection cable, angled, 5 m grey, PUR cable	EVC005

Further technical data

Electrical design	[DC]	PNP / NPN (can be set via IO-Link)
Output functions		NC / NO (adjustable via IO-Link)
Operating voltage	[V DC]	10...30
Current rating output	[mA]	100
Reverse polarity protection		Yes
Short-circuit protection		Yes
Protection class		III
Switching status indication	[LED]	yellow

IO-Link

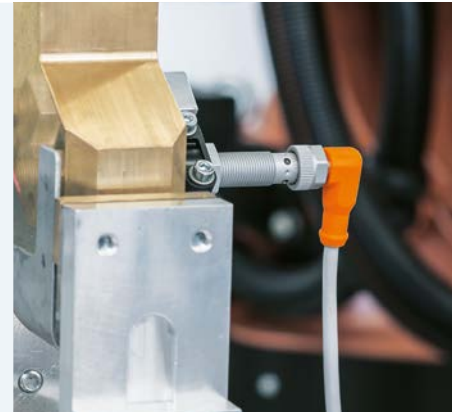
V1.1; COM2;
3.2 ms cycle time;
Smart sensor profiles;
Single point mode;
Two point mode;
Window mode





Position sensors

Electromagnetic field immune Kplus sensors for welding areas



Inductive sensors



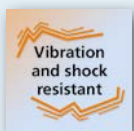
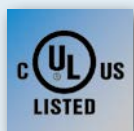
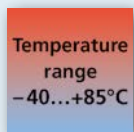
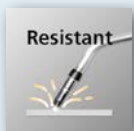
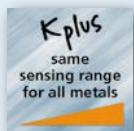
Uniform sensing range for the reliable detection of all metals

No sticking of weld slag thanks to non-stick coating

Electromagnetic field immune sensor technology to prevent incorrect switching

Wide temperature range for universal use

IP 65 to IP 69K for greater reliability



For use in harsh welding applications

The inductive Kplus sensors withstand the harsh operating conditions that are found in welding processes. The sensor housing and the fixing nuts have a non-stick coating to prevent sticking of weld slag. What is more, the new sensor technology is robust against the strong magnetic fields that occur during welding and therefore reliably prevents incorrect switching.

The quick connection with the standard M12 connector and matching cable from the ecolink range is the ideal basis for permanent use.


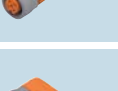




Type	Total length [mm]	Sensing range [mm]	Installation [mm]	Switching frequency [Hz]	Current rating [mA]	Order no.
3-wire · M12 connector						
M8 x 1	50	3	flush	2000	100	IEW205
M8 x 1	50	6	non flush	2000	100	IEW206
M12 x 1	45	4	flush	2000	100	IFW210
M18 x 1	45	8	flush	2000	100	IGW205
M30 x 1.5	45	15	flush	2000	100	IIW204

Accessories

Type	Description	Order no.
	M8 mounting sleeve with end stop, non-stick	E12753
	M12 mounting sleeve with end stop, non-stick	E12452
	M18 mounting sleeve with end stop, non-stick	E12453
	M30 mounting sleeve with end stop, non-stick	E12454

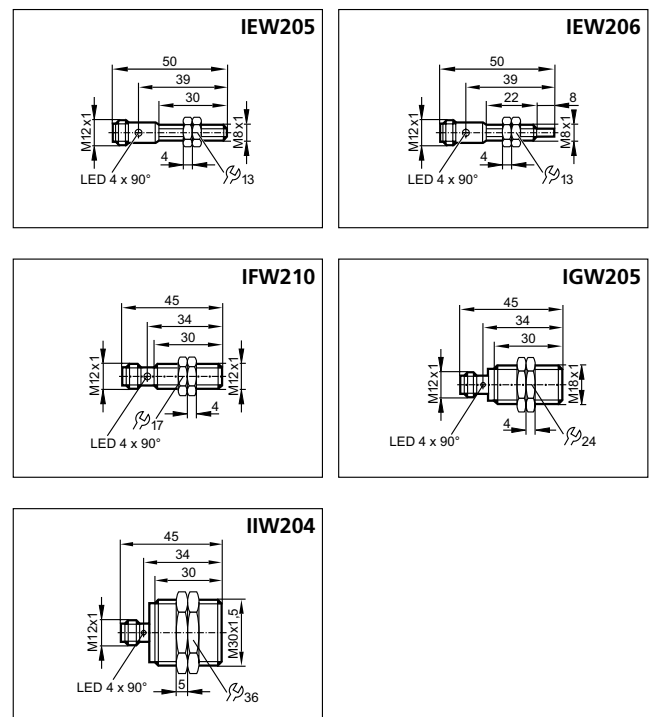
Connection technology

	M12 socket, 2 m grey, PUR cable	EVW001
	M12 socket, 5 m grey, PUR cable	EVW002
	M12 socket, 2 m grey, PUR cable	EVW004
	M12 socket, 5 m grey, PUR cable	EVW005

Further technical data

Operating voltage [V]	10...30
Current consumption [mA]	< 10
Electromagnetic field immunity [mT]	300
Short-circuit protection	yes
Reverse polarity protection	yes
Protection rating	IP 65, IP 66, IP 67, IP 68, IP 69K
Protection class	II
Ambient temperature [°C]	-40...85
Housing material	sensing face: black LCP housing: brass, non-stick LED window: PEI
Switching status indication	4 x LED yellow

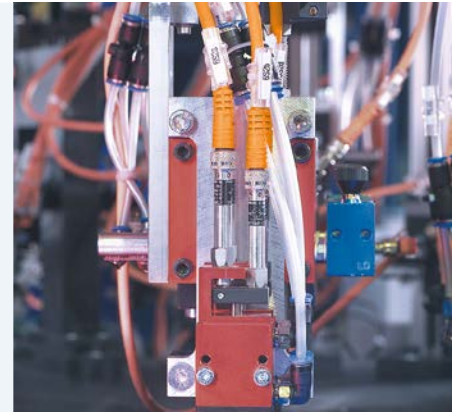
Dimensions





Position sensors

Inductive M8 sensor for limited space



Inductive sensors



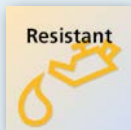
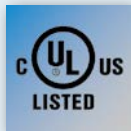
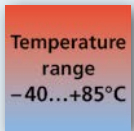
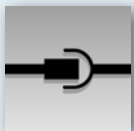
Reliable detection due to increased sensing ranges

Wide temperature range for universal application areas

High reliability thanks to protection rating IP 65 to IP 69K

Quick, correct connection via M12 connector

Robust version with stainless steel housing



Light, small and powerful

The extremely compact housing has its strength wherever there is restricted space for sensors or where the additional mass is to be kept low: In factory automation, on machine tools or on fast moving robot arms the miniature sensor scores with a sensing range that is almost as long as that of larger designs.

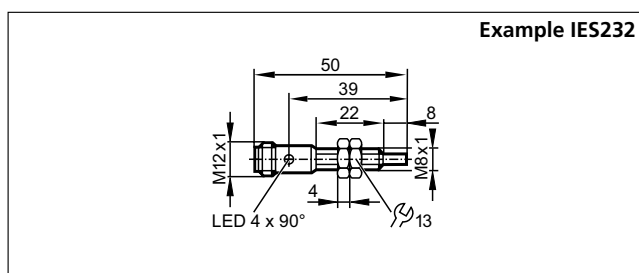
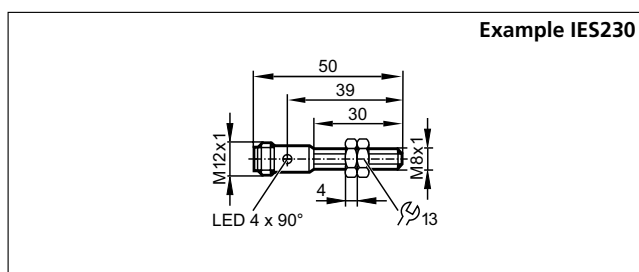
Ready for every application

The high-grade stainless steel housing makes the sensor extremely resistant, the temperature range from -40 to 85 °C and the protection rating IP 65 to IP 69K open up almost unlimited application possibilities. The LED switching status indication is easy to read even in places where access is difficult, the standard M12 connector allows a quick and correct connection.



Type	Total length [mm]	Sensing range [mm]	Installation [mm]	Electrical design	Switching output	Order no.
3-wire · M12 connector						
M8 x 1	50	3	flush	PNP	NO	IES230
M8 x 1	50	3	flush	PNP	NC	IES231
M8 x 1	50	6	non flush	PNP	NO	IES232
M8 x 1	50	6	non flush	PNP	NC	IES233
M8 x 1	50	3	flush	NPN	NO	IES234
M8 x 1	50	3	flush	NPN	NC	IES235
M8 x 1	50	6	non flush	NPN	NO	IES236
M8 x 1	50	6	non flush	NPN	NC	IES237

Dimensions



Further technical data

Operating voltage [V]	10...30
Current consumption [mA]	< 10
Short-circuit protection	yes
Reverse polarity protection	yes
Protection rating	IP 65, IP 66, IP 67, IP 68, IP 69K
Protection class	III
Ambient temperature [°C]	-40...85
Housing material	sensing face: LCP natural, housing: stainless steel, LED window: PEI
Switching status indication	4 x LED yellow

Accessories

Type	Description	Order no.
	Angle bracket M8	E10734
	Mounting clamp	E11521

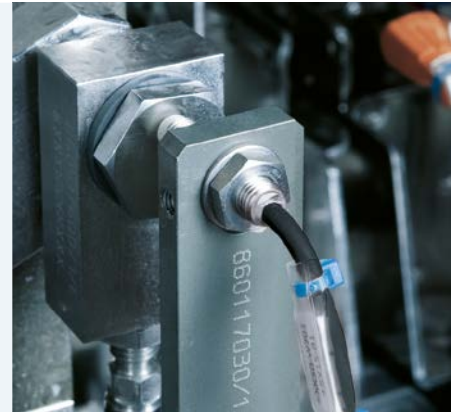
Connection technology

	M12 socket, straight, 4-pole, 2 m black, PUR cable	EVC001
	M12 socket, straight, 4-pole, 5 m black, PUR cable	EVC002
	M12 socket, angled, 4-pole, 2 m black, PUR cable	EVC004
	M12 socket, angled, 4-pole, 5 m black, PUR cable	EVC005



Position sensors

They could hardly be smaller: inductive sensors in M8 design



Inductive sensors

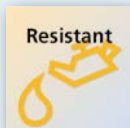
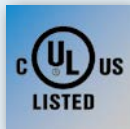
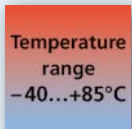


Compact dimensions enable their use in a confined space

Robust design, sensing face also available in stainless steel

Sealed: protection ratings IP 65 to IP 69K

Wide temperature range for universal use



Light, small and powerful

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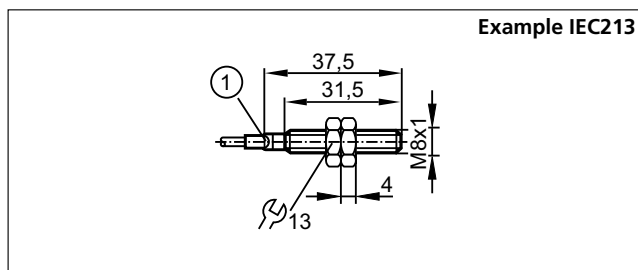
Ready for every application

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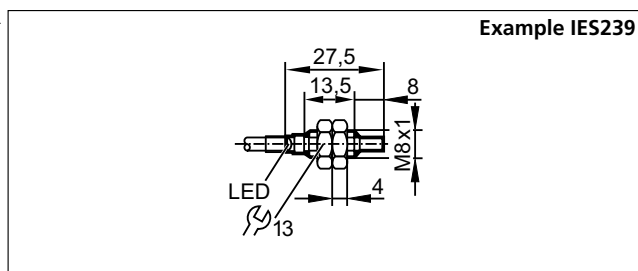
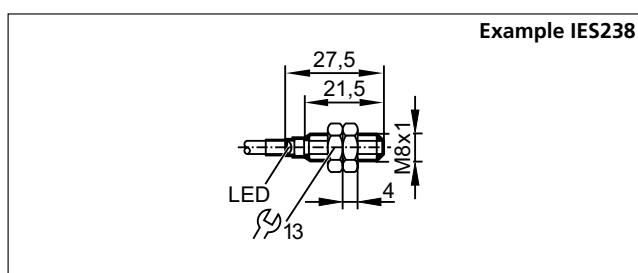


Type	Total length [mm]	Sensing range [mm]	Installation [mm]	Electrical design	Switching output	Order no.
3-wire · full metal sensor · sensing face of high-grade stainless steel · LED in cable end part · PUR connection cable						
M8 x 1	37.5	2	flush	PNP	NO	IEC213
M8 x 1	37.5	2	flush	PNP	NC	IEC214
M8 x 1	37.5	2	flush	NPN	NO	IEC215
M8 x 1	37.5	2	flush	NPN	NC	IEC216
3-wire · stainless steel sleeve · sensing face LCP natural · LED in cable end part · PUR connection cable						
M8 x 1	27.5	3	flush	PNP	NO	IES238
M8 x 1	27.5	6	non flush	PNP	NO	IES239
M8 x 1	27.5	3	flush	PNP	NC	IES240
M8 x 1	27.5	6	non flush	PNP	NC	IES241
M8 x 1	27.5	3	flush	NPN	NO	IES242
M8 x 1	27.5	6	non flush	NPN	NO	IES243
M8 x 1	27.5	3	flush	NPN	NC	IES244
M8 x 1	27.5	6	non flush	NPN	NC	IES245
2-wire · stainless steel sleeve · sensing face LCP natural · LED in cable end part · PUR connection cable						
M8 x 1	27.5	3	flush	PNP / NPN	NO	IES246
M8 x 1	27.5	6	non flush	PNP / NPN	NO	IES247

Dimensions



1) LED yellow



Further technical data

Operating voltage [V]	10...30
Current consumption [mA]	< 10
Short-circuit protection	yes
Reverse polarity protection	yes
Protection rating	IP 65, IP 66, IP 67, IP 68, IP 69K
Protection class	II
Ambient temperature [°C]	-40...85
Housing material	sensing face: LCP natural or stainless steel, housing: stainless steel, LED window: PEI
Switching status indication	4 x LED yellow
Connection cable	2 m PUR 3 x 0.14 mm ²

Accessories

Type	Description	Order no.
	Angle bracket M8	E10734
	Mounting clamp	E11521



Position sensors

Fibre optic sensor: smart, fast, convenient



Fibre optics and fibre optic sensors



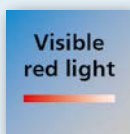
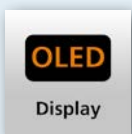
Intelligent clamping system simplifies installation

Fast set-up thanks to intuitive menu navigation and OLED display

Automatic selection of the right operating mode

Two switching outputs - for fast processes and diagnostic options

Helpful maintenance functions support the system availability



Convenient installation and operation


When the smallest or most transparent objects have to be detected in applications where space is limited: fibre optic technology is the best choice. With the OCF fibre optic sensor, this technology can be used even more easily and reliably.

Already during installation the OCF proves to be very convenient: two spring-loaded locating lugs allow the OCF to be mounted on a DIN rail with one hand. The fibrelock system simplifies mounting and securing of the fibre optics.

Thanks to the automatic selection of the optimal operating mode and the intelligent maintenance functions, the OCF works always reliably under all conditions and thus contributes to high performance and availability of the system.



Products

Type	Connection	Order no.
	Cable 2.0 m	OCF500
	M8 connector	OCF501
	M12 pigtail	OCF502

Technical data

Operating voltage	[V DC]	10...30
Output logic		PNP / NPN
Output		light-on / dark-on mode
Display		OLED display
Ambient temperature	[°C]	-25...60
Type of light		red light
Protection rating		IP 65
Number of operating modes		6
Dimensions	[mm]	12.5 x 74

Fibre optics:



The perfect choice for every application

Different sensing heads and highest transmission quality with minimum bending radii and resistance to multiple bending make the fibre optics the perfect choice for any scenario. The fibre optics also withstand the stress when used in drag chains, chemicals or high temperatures.




Fibre optics

Description	Order no.
Through-beam sensor	
High temperature range up to 290°	E20129
Angled, very small bending radius	E20062
Long ranges, small bending radius	E20606
Long range, very small bending radius	E20615
With 90° deflection for limited space	E20714
With very small bending radius	E21323
Flat design for limited space	E21312
With hexagonal head for easy fastening	E21317


Accessories

Type	Description	Order no.
	Adapter for fibre optics	E21327
	Mounting bracket for fibre optic sensor	E21328

Accessories IO-Link

	USB IO-Link master for parameter setting and analysis of devices	AL1060
	IO-Link master with PROFINET interface	AL1100
	moneo configure SA (Stand-alone) licence, software for online and offline parameter setting of IO-Link devices including maintenance and support until the end of the following year	QMP010

Connection technology

	M12/M8 connection cable, 2 m, PUR cable, black	EVC243
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Description	Order no.
Diffuse sensors	
High temperature range up to 290°	E20055
Long ranges, small bending radius	E20051
Resistant to aggressive chemicals	E20511
For short ranges, small bending radius	E20654
For short ranges, very small bending radius	E20645
With very small bending radius	E21322
Flat design for limited space	E21313
With hexagonal head for easy fastening	E21316

You can find the entire range of fibre optics in our online shop.



Position sensors

Robust full-metal ultrasonic sensor for harsh environments



Ultrasonic sensors



Continuous non-contact level measurement and object detection regardless of environmental condition

Resistant to aggressive media

Long range of up to 2500 mm

Digital or analogue measured value output

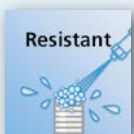
Easy parameter setting, measured value transmission and diagnostic information via IO-Link



IO-Link



Ultrasound



Resistant



High-grade stainless steel



IP 69 K



ECOLAB certified

Level monitoring in any application


Whether in tanks or silos, whether liquids, bulk material or individual objects: The universal level and distance measurement using ultrasound is reliable and accurate. However, even if there is no direct contact with the medium, aggressive vapours and fumes can severely affect the function and life of a sensor. But thanks to ifm's new full-metal ultrasonic sensor, this is now a thing of the past. From the diaphragm to the connector, the sensor is completely enclosed in resistant high-grade stainless steel. Thus, it is resistant to external influences and benefits from an extended service life.

IO-Link included

Using IO-Link communication, distance values can be transmitted digitally or the measuring range can be set. Thanks to the feedback on the echo quality, the alignment of the sensor can be optimised during installation and the functional reliability can be continuously monitored.



Products


Type	Total length [mm]	Output	Order no.
M30, IO-Link			
	103	2 x PNP / 2 x NPN*	UIT300
	103	PNP + 4...20 mA / NPN + 4...20 mA*	UIT301
	103	PNP + 0...10 V / NPN + 0...10 V*	UIT302

* Selectable via IO-Link


Further technical data


Operating voltage	[V DC]	10...30
Switching frequency	[Hz]	1
Current rating	[mA]	100
Switching output		
Operating temperature range	[°C]	-10...60
Temperature compensation		•
Protection rating		IP 65, IP 67, IP 68, IP 69K
Housing material		High-grade stainless steel
Connection		M12 connector
Switching status indication	[LED]	Yellow


Accessories

Type	Description	Order no.
	Angle bracket for type M30, stainless steel	E10737



IO-Link

	IO-Link master DataLine, USB	AL1060
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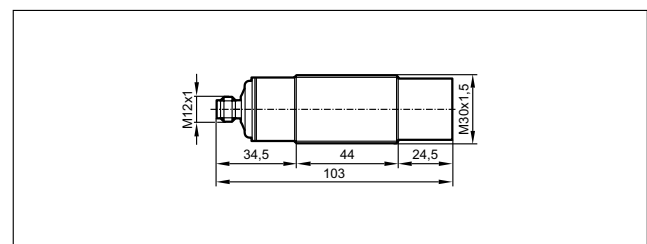
	USB connection cable, 1 m, PUR	E12689
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	moneo configure SA (Stand alone) licence, software for online and offline parameter setting of IO-Link devices incl. maintenance and support until the end of the following year	QMP010
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Connection technology

	Socket, M12, 4 poles 2 m, grey, MPPE cable	EVF064
	Socket, M12, 4 poles 5 m, grey, MPPE cable	EVF001
	Socket, M12, 4 poles 2 m, grey, MPPE cable	EVF067
	Socket, M12, 4 poles 5 m, grey, MPPE cable	EVF004

Dimensions



Wiring

