THE ORANGE BOOK

PRODUCT **FACTSHEETS**

2026

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Our product news:
ifm.com/cnt/productnews



Turning the tube into a counter

Inductive ring sensors monitor material flow in feeding technology

- Reliable detection of even the smallest metallic objects
- Very short response time
- Dynamic or static operating principle
- Sensitivity, pulse stretching and output function can be adjusted
- Internal piece counter can be queried via IO-Link



IP67

IO-Link

ifm – close to you!

Diameter [mm]	Electrical design (default setting)	Order no.	
		Static measuring principle (default setting)	Dynamic measuring principle (default setting)
10	PNP	**I7R201**	**I7R203**
10	NPN	**I7R202**	**I7R204**
15	PNP	**I7R205**	**I7R207**
15	NPN	**I7R206**	**I7R208**
20	PNP	**I7R209**	**I7R211**
20	NPN	**I7R210**	**I7R212**
25	PNP	**I7R213**	**I7R215**
25	NPN	**I7R214**	**I7R216**
50	PNP	**I7R217**	–

360° monitoring of small parts

Inductive ring sensors are used in feeding technology to detect metallic parts such as screws or nuts as they are transported through tubes. Objects are identified at speeds of up to 35 m/s, regardless of their size. This enables precise counting and efficient flow control. Blockages, standstills or incorrect conveyance (no part or several parts at once) can be reliably detected.

Static and dynamic applications

Ring sensors operate either statically or dynamically: Static sensors detect permanently present metal parts, e.g. for level monitoring. Dynamic sensors only react to passing parts and are suitable for counting tasks or flow control. Both versions ensure a trouble-free production process in assembly systems.

IO-Link functions

The sensitivity can be conveniently adjusted using a potentiometer. Extended parameters such as pulse stretching, electrical design (PNP/NPN) and output function (NO/NC) can be configured via IO-Link. The sensor also offers IO-Link-specific features such as piece counting and diagnostic functions.

Technical data		
Operating voltage	[V DC]	10...30
Output function		NO (default setting) / NC
Pulse stretching	[ms]	10...150
Ambient temperature	[°C]	-25...70
Protection rating		IP67

BEST FRIENDS



IO-Link masters
Field-compatible masters with PROFINET interface



SD compressed air meter
Detects flow, consumption, pressure and temperature



OGD photoelectric distance sensor
Precise object detection using time-of-flight measurement

For further technical details, please visit: ifm.com/fs/I7R201

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Compact, robust, clearly visible

Rectangular inductive sensors

- Increased sensing range allowing for greater installation flexibility
- Robust housing with LED for increased service life and visibility
- Space-saving design for easy installation in confined spaces



IP67

ifm – close to you!

Dimensions [mm]	Installation	Sensing range [mm]	Switching frequency [Hz]	Order no. M8 connector	Order no. 2 m PUR cable
40 x 26 x 12	flush	4	500	**IN6000**	**IN6002**
40 x 26 x 12	non-flush	7	500	**IN6001**	**IN6003**
28 x 16 x 10	flush	3	800	**IS6000**	**IS6002**
28 x 16 x 10	non-flush	6	800	**IS6001**	**IS6003**

Enhancing the tried and tested

Following a comprehensive redesign, the rectangular inductive sensors make a strong comeback. With an increased sensing range, the offer greater flexibility during installation. Moreover, a clearly visible LED has been integrated into the optimised and more robust housing, simplifying identification and visual status queries in the field. Enhanced performance now allows the non-flush versions to be installed partially flush.

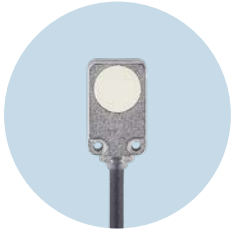
Easy to change, easy to replace

But not everything has changed: The dimensions are exactly the same as those of the previous models. This means switching to the new models is seamless, and installation in confined spaces remains just as easy.

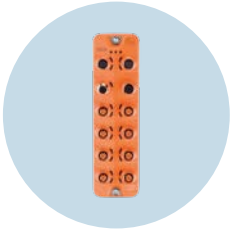
Thanks to the specified fixing points, the exact position and thus reliable object detection is guaranteed without further adjustment when the sensor is replaced.

Technical data		
Operating voltage	[V]	10...30
Current consumption	[mA]	<20
Ambient temperature	[°C]	-40...85
Switching status indication		LED, yellow
Protection rating		IP67

BEST FRIENDS



Inductive IQ sensor
Compact design with high magnetic-field immunity



I/O modules
Direct connection of sensors to the fieldbus



Photoelectric O8 sensor
Light barriers and diffuse reflection sensors in miniature design

For further technical details, please visit: ifm.com/fs/IN6000

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The right ones for every occasion

New generation of OGD distance sensors

- Distance measurement with millimetre precision using PMD time-of-flight technology
- From short distance to long distance, all requirements are covered
- 2-in-1: simultaneous output of distance value and reflectivity
- Process values shown on 2-colour display and sent via IO-Link



IP67 | IO-Link | ToF

ifm – close to you!

Measuring range [mm]	Laser protection class	Output	Housing material	Order no.
50...500	1	2x PNP/NPN (selectable)	stainless steel	**OGD540**
50...4000	2	2x PNP/NPN (selectable)	stainless steel	**OGD560**
50...2000	1	2x PNP/NPN (selectable)	plastic	**OGD250**
50...2000	1	1x PNP/NPN, 1x analogue	plastic	**OGD251**
50...2000	1	2x PNP/NPN (selectable)	stainless steel	**OGD550**
50...2000	1	1x PNP/NPN, 1x analogue	stainless steel	**OGD551**

Even more performance

The new generation of the proven OGD distance sensors now offers an even wider range to suit all applications. Precise measurements at short distances are just as easy as object detection over ranges of up to 4 metres. All versions are equipped with PMD technology resistant to extraneous light and can distinguish objects based on their reflectivity. The sensors can also easily detect jet-black or high-gloss products.

Solutions for reliable error proofing

As a laser class 2 model, the OGD560 has twice the range and enables error proofing at distances of up to 4 metres. The OGD540 ensures process reliability in close proximity. Even dark, reflective or otherwise challenging objects are reliably detected thanks to the new Ultimate Black Mode.

Versatile use

The sensors of the OGD series measure distance values with millimetre precision. They are ideal assistants for positioning objects or checking presence, for example in quality control. The reflectance values can also be used, for example for identification in sorting tasks. The areas of application are wide-ranging: whether handling technology, robotics, assembly automation, conveyor technology or logistics; the new OGDs are universal problem solvers for your automation!

Light- or heavy-duty?

The choice is yours. We now offer the OGD in both plastic and stainless steel housings.

Common technical data		
Type of light / wave length	[nm]	laser light 650
Front pane material		PMMA
Measuring frequency [Hz]		max. 180
Avoidance of mutual interference		up to 5 sensors
Protection rating		IP65, IP67

User-friendly

The sensor can be set either directly on the device by using the 3 operating buttons and the 4-digit display, or conveniently from a distance via IO-Link. As the new OGDs are backward compatible, they can seamlessly adopt the parameter sets of the previous generation when replacing earlier devices.

Speaking of the display: it can do more than just display the current measured value reading. A red-green colour change signals the status of the current measurement in a clear and simple way.

In addition to the distance value, the reflectance value can also be output for evaluation via analogue output or IO-Link, or signalled via switching output.

BEST FRIENDS



IO-Link interface
For setting the parameters of IO-Link devices on a PC



IO-Link masters
Field-compatible masters with PROFINET interface



moneo|configure free
Software for parameter setting of the IO-Link infrastructure

For further technical details, please visit: ifm.com/fs/OGD540

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Compact design with exceptional performance

PMD distance sensor – the all-rounder for confined spaces

- Maximum range of 3 m for the O6 type
- Robust object detection thanks to angle- and colour-independent PMD technology
- Ultimate Black Mode for reliable detection of deep black and reflective objects
- Three operating modes in one device for maximum flexibility



IP67 IO-Link ToF

ifm – close to you!

Description	Order no.
O6 type PMD distance sensor	**O6D100**

Universal application possibilities

The O6D100 has been designed as a powerful all-rounder for typical applications in object detection, distance measurement and positioning. Typical applications include material handling, robotics, assembly automation and logistics.

Thanks to its PMD time-of-flight technology, the sensor enables reliable and robust detection regardless of an object's colour, angle and characteristics. The new Ultimate Black Mode makes it particularly effective when dealing with dark, reflective or otherwise challenging objects.

The three operating modes Fine, Standard and Fast can be switched via IO-Link, offering maximum flexibility. This allows one single sensor to meet the requirements of a wide range of applications. With a long detection range of 3 metres, it is also suitable for use outside the immediate process environment.

Another standout feature is the adjustable hysteresis. The factory setting enables stable switching states even with changing colours. For single-colour objects, the user can adjust hysteresis via IO-Link.

Quick integration thanks to standard design

With its compact dimensions in the widely used O6 housing, the sensor integrates seamlessly into existing machine set-ups. No new accessories are required for installation. The electrical connection is easily established via an M8 connector. Thanks to IO-Link, the sensor can be quickly integrated into modern control architectures and configured remotely.

Common technical data		
Measuring range (distance)	[mm]	30…3000
Adjustable object reflectivity	[%]	6…200
Type of light / wave length	[nm]	laser light 680
Front pane material		glass
Measuring frequency	[Hz]	max. 140
Protection rating		IP65, IP67

BEST FRIENDS



moneo|configure free
Software for parameter setting of the IO-Link infrastructure



IO-Link master
Field-compatible masters with Profinet interface



O3D 3D sensor
For object measurement, gripper navigation and much more

For further technical details, please visit: ifm.com/fs/O6D100

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Always close to the action

Fibre-optic amplifiers for precise object detection

- Intelligent clamping system simplifies installation
- Fast set-up thanks to intuitive menu navigation and OLED display
- Two switching outputs enable fast processes and diagnostics
- Useful maintenance functions help ensure system availability



IP65

IO-Link

ifm – close to you!

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

Convenient installation and operation

The OCF fibre-optic amplifier is ideal for detecting even the smallest or most transparent objects in confined spaces. It makes proven fibre optic technology easier and more user-friendly than ever before.

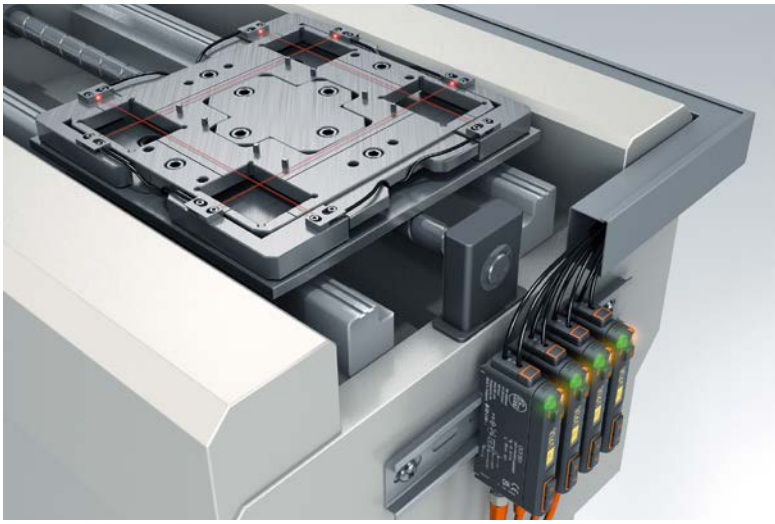
This becomes clear right from installation: two spring-loaded locating lugs allow the OCF to be mounted on a DIN rail with one hand. The fibrelock system simplifies mounting and securing of the fibre optics. Thanks to its OLED display and guided installation menu, the device is very easy to configure.

Visit our website to discover which maintenance functions the OCF uses to ensure optimal performance and support high system availability.

The perfect fibre optics for every requirement

Are you looking for fibre optics that can withstand high temperatures, aggressive chemicals, or the mechanical stress of drag chains – and are flexible enough to bend around even the smallest radii? Our online shop offers a wide selection of fibre optics.

Common technical data		
Outputs		2x NPN/PNP
Switching frequency	[kHz]	max. 20
Type of light		red light
Dimensions	[mm]	38.5 x 12.5 x 74
Protection rating		IP65

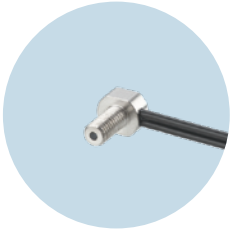


The OCF fibre optic amplifiers can be installed on a DIN rail to save space. From there, the fibre optics lead directly to the measuring points at which objects or positions are detected.

BEST FRIENDS



IO-Link masters
Field-compatible masters with PROFINET interface



Fibre optics
As through-beam and diffuse reflection sensors



Inductive IY sensors
Miniature designs for extremely confined spaces

For further technical details, please visit: ifm.com/fs/OCF500

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A focus on hydraulic cylinders

Pressure-resistant sensors for end position detection

- Reliable: magnetic operating principle with predamping
- Extremely robust: pressure-resistant up to 500 bar, bursting pressure 2,000 bar
- Resistant: withstands at least 10 million pressure cycles
- Added value: additional functions with the IO-Link versions



IP69K

ifm – close to you!

Type	Housing length [mm]	Sensing range (flush) [mm]	Output	Order no.
Connection: M12 connector, ambient temperature -25...120 °C				
M12	60	2.0	IO-Link, PNP/NPN, normally closed/normally open	**MFH218**
M12	60	1.8	PNP, normally open	**MFH202**
M12	60	1.8	NPN, normally open	**MFH203**
M12	60	1.8	PNP, normally closed	**MFH204**
M12	93	1.8	PNP, normally open	**MFH200**
M12	53	2.0	PNP, normally open	**M9H200**
Connection: Cable 2 m, PUR, ambient temperature -25...85 °C				
M12	55	2.0	IO-Link, PNP/NPN, normally closed/normally open	**MFH219**
M12	41	1.8	PNP, normally open	**MFH205**
M14	41	2.0	PNP, normally open	**MFH201**

Applications

The sensors have been specially developed for end position detection in hydraulic cylinders. They can be installed flush or quasi-flush using a thread and will precisely detect the steel target on the piston rod. With their high pressure rating and capability to detect ferromagnetic metals, these sensors are well-suited for a wide range of applications also in other hydraulic components, including valves or pumps.

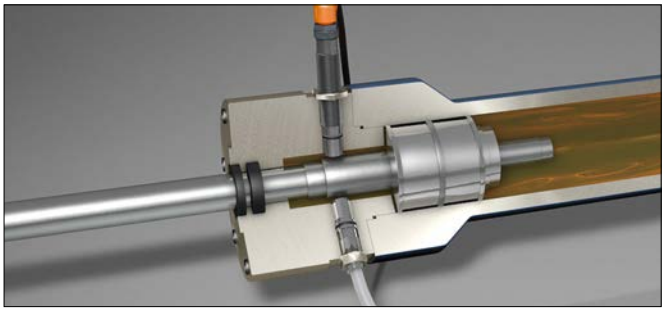
Two types for a wide range of requirements

The standardised threaded type allows the sensor to be installed and adjusted flexibly on various hydraulic cylinders, enabling a single sensor to cover various cylinder types. The special M9H type comes with an end stop. This significantly simplifies installation when always the same cylinder type is used.

Added value with IO-Link

Sensor versions with IO-Link offer additional functions such as stroke or switching cycles counters or unique sensor identification, whereas time monitoring between end positions and temperature measurement enable demand-based maintenance.

Technical data		
Operating voltage	[V]	10...36 (10...30 with IO-Link versions)
Pressure rating dynamic/static	[bar]	500/1000
Bursting strength	[bar]	2000
Switching frequency	[Hz]	1000 (200 for MFH218/MFH219)
Protection rating		IP69K

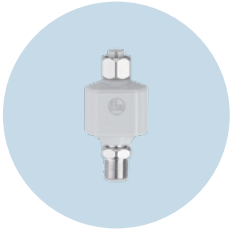


In the IO-Link versions, a conical piston rod allows continuous monitoring of the approach to the end position.

BEST FRIENDS



Inductive IGM sensor
For use in mobile machines in harsh environments



Bluetooth mesh
Connection to the IT level without complex wiring



IO-Link master
Field-compatible masters with Profinet interface

For further technical details, please visit: ifm.com/fs/MFH218

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Bringing everything safely into position

Safety encoders for mobile machines

- Integrated safety check, TÜV certificate and daisy chain option simplify system set-up
- Accurate position synchronisation in motion thanks to the "preset on the fly" function
- Additional ifm mode with active safe state e.g. for faster system response



IP69K PL/SIL CODESYS

ifm – close to you!

Safety for mobile machines

Whether in municipal vehicles, in AGVs in intralogistics, or in AMRs for heavy-duty use in mines or harbours: Wherever vehicles or superstructures are moved automatically, the safety must be guaranteed at all times. The safety encoder from ifm can be used to precisely record the position, angle and speed values of moving elements such as axles, crane arms or tipping skips. This information can be used to reliably derive steering, turning and tilting angles as well as the current lifting height. Continuous position synchronisation, for example via RFID, is also possible thanks to the "preset on the fly" function.
The product family has been expanded to include versions with a direct hollow shaft flange without stator coupling and with a servo flange for mounting external couplings or cable pulls.

Fast integration, also in series

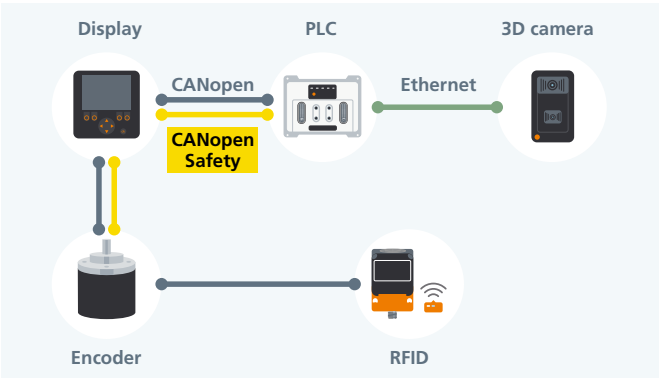
The sensor redundancy required to ensure safe operation is already integrated in the safety encoder. This and the corresponding continuous self-monitoring of safe operation have been tested and certified by TÜV Rheinland. A new addition is a multicolour LED on the rear of the housing, which displays safe operating status. The sensor is also integrated into the SISTEMA library. This immensely reduces the effort required to implement and subsequently accept safety-related automation. The safety encoder also has both a CAN input and a CAN output. Hence, several encoders or other compatible sensors can be connected in series, making the installation of safety sensors efficient and simple.

Seamless communication with the controller

The combination with the ifm controller also significantly reduces the programming effort in Codesys because the seamless connection of the encoder to the controller and secure communication between the two products is guaranteed by default.

Safety encoder, 58 mm	Order no.
Axial connection	
Solid shaft, 10 mm, clamp flange	**RM900S**
Hollow shaft, 12 mm, stator coupling	**RM901S**
Solid shaft, 6 mm, servo flange	**RM904S**
Hollow shaft, 12 mm, direct flange	**RM906S**
Radial connection	
Solid shaft, 10 mm, clamp flange	**RM902S**
Hollow shaft, 12 mm, stator coupling	**RM903S**
Solid shaft, 6 mm, servo flange	**RM905S**
Hollow shaft, 12 mm, direct flange	**RM907S**

Technical data		
Operating voltage	[V DC]	8...36
Resolution	[bits]	29 (Multiturn: 16; single turn: 13)
M12 CANbus connections		1x in; 1x out
Communication protocols		CANopen, CANopen Safety
Safety level		SIL2; PLd; AgPLd; MPLd
Protection rating		IP69K



BEST FRIENDS



ecomatController
Controller for mobile applications, also for safety applications



Graphic display
Programmable HMI for the control of mobile machines



RFID read/write head
Antenna and evaluation in one device

For further technical details, please visit: ifm.com/fs/RM900S

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Always accurate, even when the machine is moving

Dynamic inclination sensors with IO-Link

- Sensor combines 3D acceleration and 3D gyro data for accurate measurements even in applications subject to shock and vibration
- Optimised for simultaneous fast response time with high signal quality
- Lightweight, compact housing simplifies integration into any machine



IP6K9K

IO-Link

ifm – close to you!

Description	Order no.
Dynamic inclination sensor for horizontal installation position	**JBC334**
Dynamic inclination sensor for vertical installation position	**JBC234**

Machine motion disturbances are filtered out

The JBC dynamic inclination sensor offers an innovative solution for accurate angle measurement, even in the event of disturbances such as a vehicle starting or braking, or vibrations and shocks. The device detects acceleration and rotation in three dimensions, as well as temperature data. By filtering out motion disturbances, the Kalman filter ensures accurate inclination values even in the most dynamic of applications.

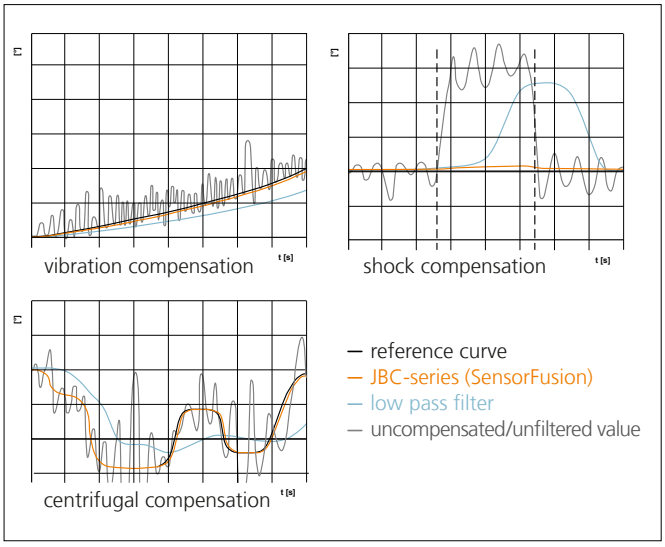
User-friendly parameter setting

The filtered data is output either via IO-Link or via two switch points. In addition, all raw data, including the temperature, can be read out separately. Basic sensor settings are also made via IO-Link. Once installed, the angle value can be easily set to zero using the inductive teach face, without the need for additional software.

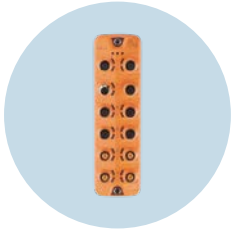
Compact design, easy installation

The sensor's lightweight and compact plastic housing allows for easy installation even where space is limited. Despite its small size, the sensor is robust enough to withstand external influences. It attaches with only two screws, simplifying installation and providing a stable, vibration-free mount. A highly visible LED clearly indicates the current status of the sensor.

Technical data		
Internal measurement axes	[acceleration]	3
Internal measurement axes	[rotation rate]	3
Measurement axes	[angle]	2
Angular range	[°]	-90...90, freely adjustable over 360°
Static accuracy	[°]	≤ ± 0.25
Dynamic accuracy	[°]	≤ ± 0.5
Repeatability	[°]	± 0.05
Resolution	[°]	0.01
Weight	[g]	< 20
Protection rating		IP6K5, IP6K7, IP6K8, IP6K9K



BEST FRIENDS



IO-Link master
Field-compatible PerformanceLine, up to 2 A per port



moneo|configure free
Software for parameter setting of the IO-Link infrastructure



Bluetooth Mesh system
Wireless connection of sensors to the IT level

For further technical details, please visit: ifm.com/fs/JBC334

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Robust measurement, clear communication

Flush G½ pressure sensor with display

- Ceramic measuring cell withstands highly viscous and abrasive media as well as pressure peaks
- Display and three-button operation simplify process control on site
- Continuous transmission of pressure and temperature at a single measuring point



IP68

IO-Link

ifm – close to you!

Robust measuring cell, on-site process insights

The G½ PF pressure sensor is always the ideal choice whenever processes involving highly viscous or abrasive media conveyed through pipelines at precisely defined and high pressures need to be monitored directly on the system.

The ceramic measuring cell is extremely robust and can withstand pressure peaks. The rotatable display provides immediate insight in the process, and the PF15 can be configured on site using the proven three-button operation.

Flush, securely sealed

The flush design provides no dead space for media to adhere to, effectively preventing clogging of the pipe. ifm's exceptionally reliable sealing concept ensures that fluid media such as water or paints cannot enter the thread area of the process connection, even under high pressure. This prevents any media from settling in this area, mixing with subsequent media during the process, or causing contamination.

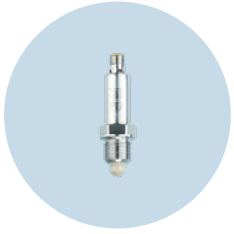
PL pressure sensor as a display-free alternative

For applications with similarly challenging media, where no display or parameter setting is required on the sensor itself, the PL13 / PL15 series pressure sensors are a suitable alternative.

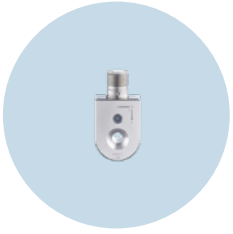
Factory setting of the measuring range [bar]	Measuring range of the relative pressure [bar]	Order no.
0...100	0...100	**PF1502**
0...60	0...60	**PF1523**
0...40	-1...40	**PF1543**
0...25	-1...25	**PF1503**
0...16	-1...16	**PF1514**
0...10	-1...10	**PF1504**
0...6	-1...6	**PF1515**
0...2.5	-0.125...2.5	**PF1506**
-1...1	-1...1	**PF1509**
0...1	-0.05...1	**PF1507**

Common technical data		
Accuracy / deviation (in % of the span) Characteristics deviation (to DIN EN 62828-1)		< ± 0.5
Temperature monitoring Accuracy	[K]	± 2.5 + (0.045 x (ambient temperature - medium temperature))
Medium temperature	[°C]	-25...110
Materials (wetted parts)		ceramic, PTFE, FKM V4A (1.4435 / 316L)
Protection rating		IP67, IP68

BEST FRIENDS



LMC level sensor
Level detection on tanks and containers



VVB vibration sensor
Easy condition monitoring for pumps



SA flow sensor
Simultaneous detection of flow and temperature

For further technical details, please visit: ifm.com/fs/PF1502

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As compact as you need it to be

Flush G½ PL pressure sensor

- Ceramic measuring cell withstands highly viscous and abrasive media as well as pressure peaks
- Process connection in two lengths for ideal integration in every application
- Continuous transmission of pressure and temperature at a single measuring point



IP68

IO-Link

ifm – close to you!

Defies high pressures and abrasive media

Wherever highly viscous or abrasive media such as adhesives, glue or sealants are conveyed through pipes under exact and high pressure, the compact G½ type PL pressure transmitter is the ideal choice. The flush design provides no dead space for media to adhere to, effectively preventing clogging of the pipe. The PL also scores highly in other challenging applications, such as pumps, water filtration and mobile machines, thanks to its robustness.

Flush mount sealed or shorter installation length

ifm's own, extremely safe sealing concept of the PL15 prevents fluid media such as water or lacquers from entering the threaded area of the measurement connection under high pressure, from depositing there, or from mixing with or even contaminating subsequent media further into the process.

The PL13 with a shortened process connection and flat gasket is the ideal choice for installation in T-pieces and mounting adapters with standard dimensions.

2 in 1: pressure and temperature via IO-Link

In both versions, the PL can be operated either analogously as a two-wire system or digitally via IO-Link. In the latter case, the pressure and temperature can be read continuously, as the pressure transmitter also transmits the temperature of the medium so that a second measuring point is not necessary. The operating hours can also be read via IO-Link.

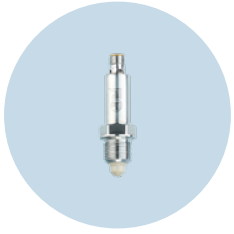
PF pressure sensor as an alternative with display

For applications with similarly challenging media, in which process values are to be read on the machine and parameter setting is to be carried out on the sensor itself, the PF15 pressure sensor is a suitable alternative.

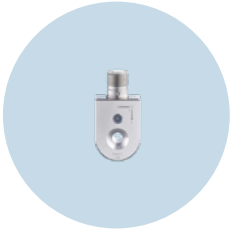
Factory setting Measuring range [bar]	Measuring range Relative pressure [bar]	Order no.	
		Process connection 14 mm	Process connection 21 mm
0...160	0...160	**PL1312**	**PL1512**
0...100	0...100	**PL1302**	**PL1502**
0...60	0...60	**PL1323**	**PL1523**
0...40	-1...40	**PL1343**	**PL1543**
0...25	-1...25	**PL1303**	**PL1503**
0...16	-1...16	**PL1314**	**PL1514**
0...10	-1...10	**PL1304**	**PL1504**
0...6	-1...6	**PL1315**	**PL1515**
0...2.5	-0.125...2.5	**PL1306**	**PL1506**
0...1	-0.05...1	**PL1307**	**PL1507**

Common technical data		
Accuracy / deviation (in % of the span) Characteristics deviation (to DIN EN 62828-1)		< ± 0.5
Temperature monitoring Accuracy	[K]	± 2.5 + (0.045 x (ambient temperature - medium temperature))
Medium temperature	[°C]	-25...110
Materials (wetted parts)		ceramic, PTFE, FKM V4A (1.4435 / 316L)
Protection rating		IP67, IP68

BEST FRIENDS



LMC level sensor
Level detection on tanks and containers



VVB vibration sensor
Easy condition monitoring for pumps



SA flow sensor
Simultaneous detection of flow rate and temperature

For further technical details, please visit: ifm.com/fs/PL1312

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The grip strength always clearly in view

PQ Cube pressure sensor sets new standards

- For universal use in pneumatic applications
- Versions for differential pressure measurement
- Easy-to-read 1" TFT display
- Smart installation concept requires fewer adapters
- Made for use in demanding environments



IP65

IO-Link

ifm – close to you!

Outputs:	2 switching outputs DC PNP/NPN			1 switching output + 1 analogue output 4...20 mA / 0...10 V / 1...5 V		
Process connection:	G⅛		NPT⅛	G⅛		NPT⅛
Connector:	M8	M12	M8	M8	M12	M8
Measuring range [bar]	Order no.					
-1...0	PQS819	PQS829	–	PQC819	PQC829	–
-1...1	PQS816	PQS826	–	PQC816	PQC826	–
-1...10	PQS812	PQS822	–	PQC812	PQC822	–
Measuring range [bar] / [psi]	Order no.					
-1...1 / -14.5...14.5	PQS866	–	PQS616	PQC866	–	PQC616
-1...10 / -14.5...145	PQS862	–	PQS612	PQC862	–	PQC612

Differential pressure measurement		
Outputs:	1 switching output + 1 analogue output • 4...20 mA / 0...10 V / 1...5 V	
Process connection:	2x G⅛ without mounting adapter	2x G⅛ with mounting adapter
Connector:	M8	M8
Measuring range [bar]	Order no.	
-1...1	PQD489	PQD389
-1...10	PQD484	PQD384

Robust in every corner

The robustness of the PQ Cube makes it the ideal choice for use on vacuum grippers and all other pneumatic applications. Whether it is the IP65 housing, the brass sockets or the proven precise measuring cell: everything is designed for permanent use in demanding industrial environments.

Differential pressure measurement available

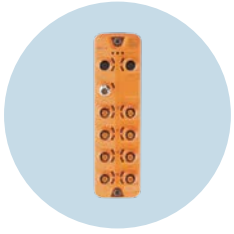
In the PQD version, the Cube measures differential pressure, for example on air filters. In the version without a mounting adapter, one process connection is routed downwards and the other to the rear. In the version with a mounting adapter, the rear connection is also redirected downwards.

Further information is available in our webshop.

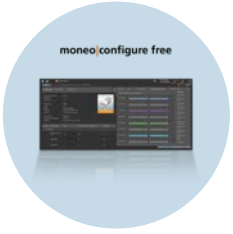
Common technical data		
Switch point accuracy PQSxx9 and PQCxx9 all other versions:	[%]	 ± 1 < ± 0.5
Characteristics deviation PQSxx9 and PQCxx9 all other versions:		 ± 1% < ± 0.5 % (LS) / < ± 0.25 % (BFSL)
Communication interface		IO-Link 1.1 COM 3
Protection rating		IP65

LS = Limit Value Setting
BFSL = Best Fit Straight Line

BEST FRIENDS



IO-Link master
For use in the field with up to 8 ports



moneo|configure free
Software for parameter setting of the IO-Link infrastructure



IO-Link interface
For parameter setting of IO-Link devices on the PC

For further technical details, please visit: ifm.com/fs/PQS819

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Always safe in ex zones

Pressure transmitter for hazardous areas

- Certified for use in zones 2 and 22
- Particularly robust thanks to a ceramic measuring cell, enhanced EMC and vibration resistance
- Proven measuring accuracy and long-term stability of the PA series



IP67

ifm – close to you!

Safe pressure measurement in hazardous areas

Extreme caution is required wherever dust or gas can accumulate in the atmosphere. The PA30XA pressure transmitter complies with category 3D/3G. Therefore, it is certified for use in potentially explosive atmospheres in zones 2 and 22, enabling risk-free monitoring of the process pressure.

Robust construction

The ceramic measuring cell is highly resistant to media, ensuring long-term reliable and precise measurement results. Its high resistance to overpressure, enhanced electromagnetic compatibility and vibration resistance complete the transmitter's robust design.

Measuring range [bar]	Pressure rating [bar]	Order no.
0...25	150	**PA303A**
0...10	75	**PA304A**
0...2.5	20	**PA306A**
0...1	10	**PA307A**
0...0.25	0.6	**PA308A**
0...0.1	0.4	**PA30ZA**
-1…0	10	**PA309A**

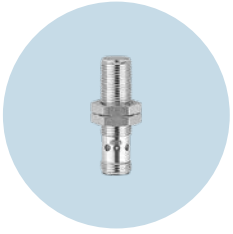
Technical data		
Operating voltage	[V]	9.6...32
Medium temperature	[°C]	-20...60
Characteristics deviation	[%]	± 0.5
Step response time analogue output	[ms]	3
ATEX marking		Ex II3G Ex ec IIC T4 Gc X Ex II 3D Ex tc IIIC T85°C Dc X
Protection rating		IP65, IP67

Further international approvals in preparation

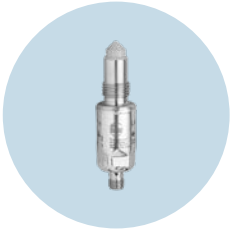
BEST FRIENDS



SI500A flow monitor
Measures liquids and gases in zones 2 and 22



IF508A inductive sensor
For object detection in zones 2 and 22



LMT01A level sensor
Level monitoring in tanks and containers in zones 2 and 22

For further technical details, please visit: ifm.com/fs/PA303A

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Smart pressure indication in the industrial sector

Electronic manometer with LED visualisation

- Optimum interpretation of measured values through operating ranges that can be customised in colour as well as threshold and trend displays
- Pressure peak and overload resistant ceramic measuring cell
- Fast compensation of dynamic temperature changes
- Temperature resistant up to 80 °C
- Very high resolution thanks to 32-bit process value transmission via IO-Link



IP69

IO-Link

ifm – close to you!

Factory setting of the measuring range [bar]	Measuring range of the relative pressure [bar]	Order no.
0…0,25	0,0124…0,25	**PG1408**
0…1	-0,05…1	**PG1407**
-1…1	-1…1	**PG1409**
0…2,5	-0,124…2,5	**PG1406**
0…4	-1…4	**PG1405**
0…6	-1…6	**PG1415**
0…10	-1…10	**PG1404**
0…16	-1…16	**PG1414**
0…25	-1…25	**PG1403**
0…60	0…60	**PG1423**
0…100	0…100	**PG1402**
0…160	0…160	**PG1412**
0…250	0…250	**PG1401**
0…400	0…400	**PG1400**

Technical data		
Accuracy (in % of the span) Characteristics deviation (to DIN EN 61298-2)		< ± 0.5
Medium temperature	[°C]	-25...80
Materials (wetted parts)		ceramics, FKM, high-grade stainless steel (316L/1.4404)
Communication interface		IO-Link 1.1 COM3
Process connection		G½ (DIN EN 837)
Protection rating		IP67, IP69 (to DIN EN 60529)

Tried-and-tested pressure sensor combined with an innovative LED manometer display

ifm pressure sensors have proven to be a reliable solution in a wide range of industrial applications for many years. The PG electronic manometer has now been revised and boasts new and improved features.

The multicolour LED display enables clear and unambiguous visualisation of pressure ranges, switching points, minimum and maximum values and trend curves. Mechanical pointers, which are prone to errors, were replaced by durable and highly visible LEDs. This technological advancement ensures improved clarity and reliability.

Robust ceramic measuring cell for maximum reliability

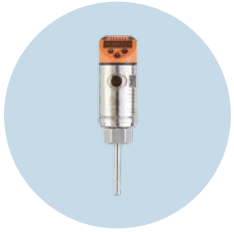
The pressure sensor itself impresses with its extremely robust ceramic measuring cell which can easily withstand even extreme pressure peaks and overloads. Thanks to the measuring cell's high resistance to abrasive media, it offers a durable and reliable solution for demanding applications.

IO-Link

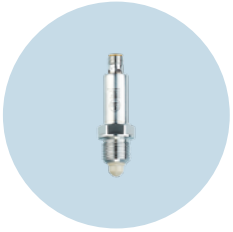
In addition to typical functions such as parameter setting and process value transmission, the manometer offers further information and options via IO-Link:

- Display optimisation (brightness, colour, layout)
- Min. and max. memory, counter

BEST FRIENDS



TN temperature sensor
Precise measured values with local display



LMC level sensor
Level detection on tanks and containers



SA flow sensor
Simultaneous detection of flow and temperature

For further technical details, please visit: ifm.com/fs/PG1408

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Smart pressure indication in hygienic areas

Electronic manometer with LED visualisation

- Optimum interpretation of measured values, e.g. through operating ranges that can be customised in colour as well as threshold and trend displays
- Pressure peak and overload-resistant ceramic measuring cell
- Fast compensation of dynamic temperature changes
- Permanent 150°C medium temperature
- Very high resolution thanks to 32-bit process value transmission via IO-Link



IP69K

IO-Link

ifm – close to you!

Factory setting of the measuring range [bar]	Measuring range of the relative pressure [bar]	Order no.
0…0,25	-0,0124...0,25	**PG1708**
0…1	-0,05…1	**PG1707**
-1…1	-1…1	**PG1709**
0…1,6	-0,1…1,6	**PG1717**
0…2,5	-0,124…2,5	**PG1706**
0…4	-1…4	**PG1705**
0…6	-1…6	**PG1715**
0…10	-1…10	**PG1704**
0…16	-1…16	**PG1714**
0…25	-1…25	**PG1703**
0…40	-1…40	**PG1743**

Technical data		
Accuracy (in % of the span) Deviation of the characteristics (to DIN EN 61298-2)		< ± 0.2
Medium temperature	[°C]	-25...150
Materials (wetted parts)		ceramics 99.9 %, PTFE, stainless steel (1.4435 / 316L)
Communication interface		IO-Link 1.1 COM3
Process connection		G1 / Aseptoflex Vario
Protection rating		IP67, IP69K

Tried-and-tested pressure sensor combined with an innovative LED manometer display

ifm pressure sensors have proven to be a reliable solution in the food and beverage industry for many years. Following the successful updates to the transmitters and display versions, the PG manometer has now also been revised and boasts new and improved features.

The multicolour LED display enables clear and unambiguous visualisation of pressure ranges, switching points, minimum and maximum values and trend curves. Mechanical pointers, which are prone to errors, are replaced by durable and highly visible LEDs. This technological advancement ensures improved clarity and reliability.

Robust ceramic measuring cell for maximum reliability

The pressure sensor itself impresses with its extremely robust ceramic measuring cell which can easily withstand even extreme pressure peaks and overloads. Thanks to the measuring cell's high resistance to abrasive media, it offers a durable and reliable solution for demanding applications.

Unlike conventional sensors with a metallic diaphragm, the ceramic measuring cell does not require oil as a pressure transfer medium. This completely eliminates the risk of medium contamination when the sensor is damaged. This property makes it particularly suitable for the strict hygiene requirements of the food and beverage industry.

IO-Link

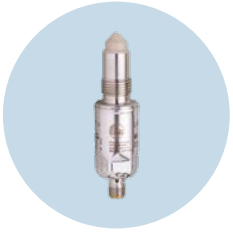
In addition to typical functions such as parameter setting and process value transmission, the manometer offers further information and options via IO-Link:

- Display optimisation (brightness, colour, layout)
- Min. and max. memory, counter
- Device temperature

BEST FRIENDS



TCC temperature sensor
Including self-monitoring for maximum process reliability



LMT level sensor
Point level detection even with difficult media



SM Foodmag
Magnetic-inductive flow meter for the food industry

For further technical details, please visit: ifm.com/fs/PG1708

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The pressure's on: compact design and always ready to connect

Small pressure transmitters with integrated DIN valve plug

- Robust welded stainless steel housing with high IP67 protection rating
- Measurement accuracy < ± 0.5 %, repeatability < ± 0.05 %
- Extremely fast response: step response time of only 2 ms
- Compact design (SW19) with process connection



IP67

ifm – close to you!

Measuring range of the relative pressure [bar]	^{P}Overload max. [bar]	^{P}Bursting min. [bar]	Order no.
Output function 4...20 mA			
0...600	1500	2500	**PT5060**
0...400	1000	1700	**PT5000**
0...250	625	1200	**PT5001**
0...160	400	1100	**PT5012**
0...100	250	1000	**PT5002**
0...60	150	900	**PT5023**
0...40	65	800	**PT5043**
0...25	65	600	**PT5003**
0...16	40	450	**PT5014**
0...10	25	300	**PT5004**
0...6	15	200	**PT5015**
-1...16	40	450	**PT5096**
-1...10	25	300	**PT5094**
-1...5	15	200	**PT5095**

Fast and easy exchange

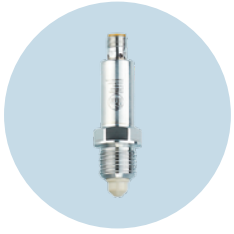
Despite numerous alternatives valve plugs are still used for the connection of sensors in many plants. ifm's PT50 series now also includes compact pressure sensors with an integrated valve plug. This makes it easy to integrate the sensors into existing plants and to use the existing wiring, which saves time and money.

Tried-and-tested technology and high IP protection rating

The sensors feature a robust thin-film measuring cell without a sealing ring in compact design with 19 mm across flats. IP67 protection rating is achieved when used in conjunction with a suitable valve plug (e.g. E30447). Compared to the IP65 sensors with valve plug which are common on the market the operational reliability is higher.

Technical data		
Operating voltage	[V]	8.0...36
Accuracy/deviation Characteristics deviation of the span Repeatability	 [%] [%]	 < ± 0.5 < ± 0.05
Medium temperature	[°C]	-40...125
Materials (wetted parts)		FKM, V4A (1.4542)
Step response time	[ms]	2
Protection rating		IP67

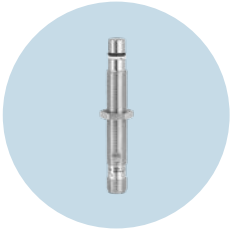
BEST FRIENDS



LMC level sensor
Reliable monitoring of tanks and vessels



Temperature transmitter
High accuracy and particularly good response dynamics



MFH position sensor
Pressure-resistant position detection on hydraulic cylinders

For further technical details, please visit: ifm.com/fs/PT5060

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Level measurement at temperatures up to 250 °C

LMH point level sensor with ceramic measuring tip

- Robust ceramic measuring tip which is permanently resistant to abrasive media and high temperatures
- Flexible sealing concept for use in hygienic and industrial applications
- Reliable point level detection due to the suppression of deposits



IP69K

IO-Link

ifm – close to you!

Point level sensors, target medium is individually adjustable	
Description	**Order no.**
Sensor preset to detect water-based media	**LMH600**
Sensor preset to detect oil-based media	**LMH610**

Mandatory sealing sets			
Description	**Material**	**Temperature resistance [°C]**	**Order no.**
Hygienic/pharmaceutical set, FCM Japan (O-ring on the front, L-ring on the back)	FKM	-15...200	**E43033**
Hygienic set (O-ring on the front, L-ring on the back)	FFKM	-15...240	**E43030**
Hygienic set, FCM China (O-ring on the front, L-ring on the back)	EPDM	-40...150	**E43031**
Industrial set (sealing ring on the back)	FFKM	-40...250	**E43032**

Reliable level detection in deep-frying, pasteurisation and condensation processes

The LMH point level sensor ensures reliable detection of the medium, regardless of being either water or oil based, even at continuous high temperatures of up to 250 °C. In industrial food production, such as deep-frying, milk pasteurisation or CIP/SIP processes, the sensor helps to maintain constant process quality. The same goes for high-temperature applications in the pharmaceutical, chemical and biotech industries.

Sensor for point level and temperature detection

The measuring tip is made of the pure, robust ceramic typically used by ifm. Being so resistant to abrasive media ensures a long service life for the LMH. The sensor's ability to transmit both the medium's temperature and the point level via IO-Link reduces the need for extra measuring points.

Deposit suppression to ensure precise and reliable results

The LMH offers the effective media deposit suppression already known from the LMT point level sensor. Incorrect switching, which could result in containers running empty or being overfilled, is eliminated.

Technical data		
Temperature measuring range	[°C]	-40...250
Accuracy of temperature measurement	[K]	±0.6
Pressure rating	[bar]	40
Ceramic material quality	[%]	99.97
Roughness average of measuring tip	[µm]	<0.38
Approvals		3A, EHEDG, FDA, USP Class VI, ASME BPE*
Protection rating		IP68, IP69K

* with electropolished clamp adapter (E43416, E43417)

Flexibility through sealing concept

The point level sensor is designed for use in both hygienic and industrial environments. The adaptation to individual conditions is simplified by the sophisticated sealing concept.

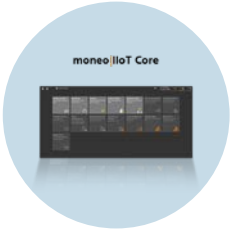
BEST FRIENDS



LR level sensor
Continuous detection using guided microwave measurement



IO-Link master
Field-compatible masters for use in hygienic areas



moneo|IIoT Core
IIoT software for simple condition monitoring

For further technical details, please visit: ifm.com/fs/LMH600

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Precise flow measurement for the water industry

Ultrasonic flow meter with flange connection

- Measurement of conductive and non-conductive water-based media
- Flange connection welded directly onto the measuring tube for easy and secure installation
- Low pressure loss measurement for energy-efficient operation
- Seamless integration into existing water systems



IP65 IP67 IO-Link

ifm – close to you!

Nominal width	Process connection	Measuring range		Order no.
		[l/min]	[gpm]	
DN65 (2 ½")	flange EN 1092-1	20…2400	–	**SUW500**
DN80 (3")	flange EN 1092-1	25…3600	–	**SUW600**
DN100 (4")	flange EN 1092-1	45…6000	–	**SUW700**
DN80 (3")	flange ASME B16.5	25…3600	6.6…951.0	**SUW611**
DN100 (4")	flange ASME B16.5	45…6000	11.8…1585.0	**SUW711**

Reliable flow measurement with easy integration

The ultrasonic sensor measures flows of conductive and non-conductive water-based media with high precision. Process values are clearly shown on the integrated display and can be used for transparent monitoring of water distribution, energy monitoring and consumption optimisation. The flange welded directly onto the measuring tube also enables quick, safe and uncomplicated installation.

Versatile use

The sensor is suitable for a wide range of applications such as cooling circuits, boiler storage tanks, process water systems, drinking water treatment systems and reverse osmosis systems. Retrofitting existing systems is also possible without much effort thanks to industry-standard flanges.

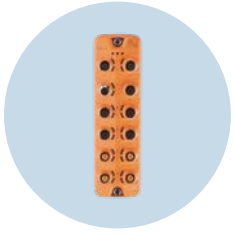
Robust measuring pipe without structures

The stainless steel measuring tube is free of measuring elements, seals or moving parts. This reliably prevents wear, leaks and blockages. At the same time, the flow rate remains unaffected, ensuring long-term low-pressure loss and energy-efficient operation.

Technical data		
Pressure rating flange EN 1092-1	[bar]	PN16
Pressure rating flange ASME B16.5	[psi]	class 150
Output functions		IO-Link, analogue output 4...20 mA, pulse output, switching output, diagnostic output
Flow		
Accuracy (in the measuring range)		± (2.0 % MW + 0.5 % MEW)
Repeatability		± 0.2 % MEW
Minimum conductivity	[µS]	from 0
Temperature		
Measuring range	[°C]	-20...100
Accuracy	[K]	± 2.5
Protection rating		IP65, IP67

MW = Measuring range value
MEW = Measuring range end value

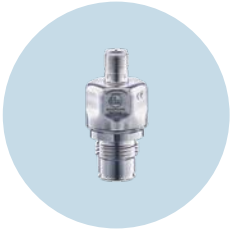
BEST FRIENDS



IO-Link master
Field-compatible Performance-Line, up to 2 A per port



Position sensors
Monitoring and diagnosis of quarter-turn actuators



Pressure transmitter PL15
Compact design for mobile and industrial applications

For further technical details, please visit: ifm.com/fs/SUW500

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ifm electronic gmbh · Friedrichstr. 1 · 45128 Essen



Hygienic and accurate flow measurement

Ultrasonic flow meter for the food and beverage industry

- Flow measurement of conductive and non-conductive media, e.g. ultrapure water and edible oils
- Hygienic inline design with dead space-free measuring tube and standardised process connections
- Status LED for displaying the sensor status and quickly assessing the process quality
- Robust housing design for increased shock and vibration resistance



IP69

IO-Link

ifm – close to you!

Nominal width	Measuring range		Order no. Clamp series A (DIN)	Order no. Clamp series C (ASME BPE)	Order no. Clamp series C (ASME BPE)	Order no. Clamp series C (ASME BPE)
			Without display		With display	
	[l/min]	[gpm]	[l/min] + [gpm]	[l/min] + [gpm]	[l/min] + [gpm]	[l/min]
Clamp process connection [DIN 32676]						
DN15 (½")	1...65	0.26...17.17	**SUH120**	**SUH101**	-	-
DN20 (¾")	1...75	0.26...19.81	**SUH820**	**SUH801**	-	-
DN25 (1")	1…240	0.26…63.4	**SUH220**	**SUH251**	**SUH201**	**SUH200**
DN40 (1½")	3...375	0.8...99.06	**SUH320**	**SUH301**	-	-
DN50 (2")	5…1,000	1.32…264.18	**SUH420**	**SUH451**	**SUH401**	**SUH400**
DN65 (2½")	20…2400	5.2…634.0	**SUH520**	**SUH501**	-	-
DN80 (3")	25…3600	6.6…951.0	**SUH620**	**SUH601**	-	-
DN100 (4")	45…6000	11.8…1585.0	**SUH720**	**SUH701**	-	-
Process connection: ifm-specific device flange						
DN25 (1")	1…240	-	-	-	-	**SUH230**
DN50 (2")	5…1,000	-	-	-	-	**SUH430**

Ensuring process quality easily and permanently

The SU Puresonic Hygienic ultrasonic sensor detects flows of conductive and non-conductive media with high precision, for example ultrapure water, water or food oils.

Robust measuring pipe without structures

The stainless steel measuring tube is free of measuring elements, seals and moving parts. This means that faults due to damage, leaks or blockages are excluded from the outset, as are design-related pressure drops.

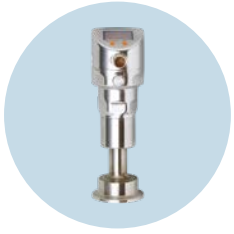
Hygienic adaptation

The clamp process connection enables quick, tool-free installation and replacement of the sensor. The dead space-free design facilitates cleaning and sterilisation (CIP/SIP) and increases process efficiency. The ifm device flange, on the other hand, allows the use of different seals and adapters for flexible integration into existing systems.

Technical data		
Pressure rating	[bar]	25
Output functions		IO-Link, analogue output 4...20 mA, pulse output, switching output, diagnostic output
Flow		
Accuracy water (in the measuring range)		
SUH1...SUH4, SUH8		± (1.0 % MW + 0.5 % MEW)
SUH5...SUH7		± (2.0 % MW + 0.5 % MEW)
Repeatability		± 0.2 % MEW
Minimum conductivity	[µS]	from 0
Temperature		
Measuring range devices with / without display	[°C]	-20...100 / -40...120
Accuracy	[K]	± 2,5
Protection rating		IP67/IP69

MW = value of the measuring range
MEW = final value of the measuring range

BEST FRIENDS



PI pressure sensor
Specifically for the food and beverage industry



Conductivity sensor
Measures the conductivity of a medium, such as ultrapure water



IO-Link master
Field-compatible masters with PROFINET interface

For further technical details, please visit: ifm.com/fs/SUH120

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The game changer

Hygienic flow meter with IO-Link

- Magnetic-inductive flow meter completes the portfolio for the food industry
- Reduces the need for measuring points by providing flow rate, total volume, temperature and conductivity
- Easy to set up thanks to app-based menu and guided installation



IP69

IO-Link

ifm – close to you!

Nominal width	Measuring range [m³/h]	Order no.		
		Units of measurement: SI, EU With TFT display	Units of measurement: SI, EU, Imperial With TFT display	Units of measurement: SI, EU, Imperial Without TFT display
DN15 (½")	0.06...6	**SMF120**	**SMF121**	**SMF150**
DN25 (1")	0.16...18	**SMF220**	**SMF221**	**SMF250**
DN40 (1½")	0.3…45	**SMF320**	**SMF321**	**SMF350**
DN50 (2")	0.6…72	**SMF420**	**SMF421**	**SMF450**
DN65 (2½")	1.2…120	**SMF520**	**SMF521**	**SMF550**
DN80 (3")	1.8…180	**SMF620**	**SMF621**	**SMF650**
DN100 (4")	3.0…300	**SMF720**	**SMF721**	**SMF750**
DN125 (5")	4.5…450	**SMF820**	**SMF821**	**SMF850**
DN150 (6")	6.0…600	**SMF920**	**SMF921**	**SMF950**

No more blind spots in the digital process

The SM Foodmag takes flow measurement of liquid and creamy foods to a new level. IO-Link enables digital data transmission from the process and eliminates the last blind spot in a fully digitalised and transparent production environment. On site, the display and the all-round visible status LED indicate the current status.

Measures what matters

The sensor detects the current flow rate, total volume and flow direction, as well as the presence of the medium (often referred to as empty pipe detection). It also transmits conductivity and temperature to the control system and IT level. This reduces the need for additional measuring points.

Convenience, clarity, safety

The SM Foodmag integrates almost automatically: A standard M12 connector and patented cables enable fast, watertight and error-free connection. Common installation dimensions, along with selectable seals and process adapters, make retrofitting into existing systems easy. Parameter configuration is quick and intuitive via app-based menu navigation and guided installation.

Technical data		
Accuracy, flow rate Under reference conditions With optional factory calibration (availability is being planned)	[%]	± 0.5 MW + 1.5 mm/s ± 0.2 MW + 2 mm/s
Response time	[s]	0.3
Repeatability	[%]	± 0.1 MW
Medium temperature	[°C]	-20...150 (continuous)
Conductivity measuring range	[µS/cm]	100...100,000
Accuracy, conductivity 100...20,000 µs/cm 20,000...100,000 µs/cm	[%]	 ± 10 MW ± 20 MW
Materials (wetted parts)		PFA; high-grade stainless steel (316L/1.4435)
Protection rating		IP67 IP69 (to DIN EN 60529)

MW: measured value

BEST FRIENDS



IO-Link master
Field-compatible masters for use in hygienic areas



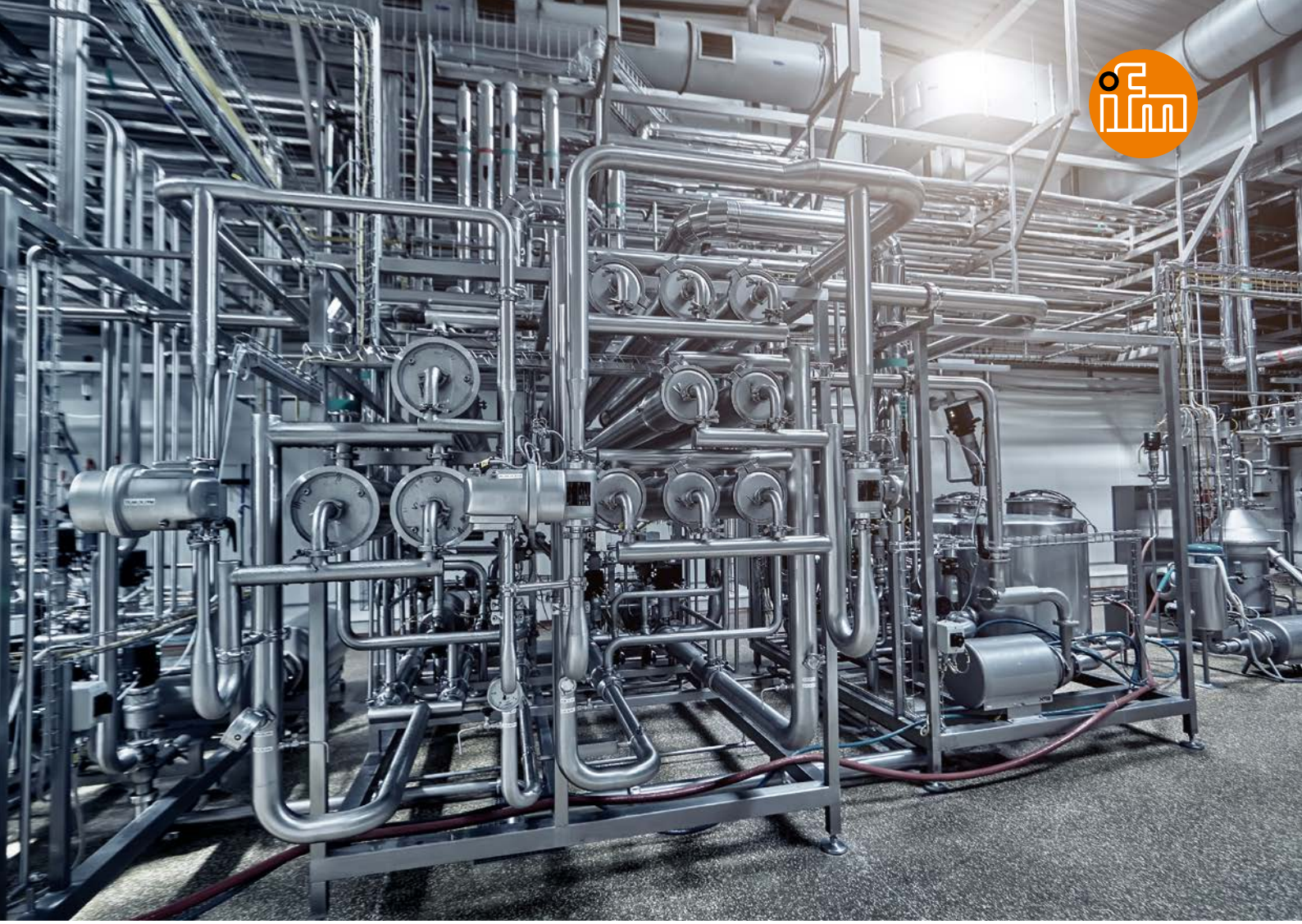
Conductivity sensor
Precise distinction of liquid media based on their conductivity



Pressure sensor
Hygienic, with robust and flush-mounted ceramic measuring cell

For further technical details, please visit: ifm.com/fs/SMF120

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Small sensor. Serious temperature measurement.

Reliable results despite limited space

- Ideal for confined installation conditions and small pipe diameters
- 3 and 6 mm measuring tip for minimal pipe constriction
- High measuring accuracy and advanced diagnostics thanks to state-of-the-art software



IP69

IO-Link

ifm – close to you!

Measuring range	Probe diameter [mm]	Insertion depth [mm]	Process connection	Order no.
-10…150 °C	3	17	M12 x 1.5	**TC1101**
0…160 °C	3	17	M12 x 1.5	**TC1102**
0…100 °C	3	17	M12 x 1.5	**TC1107**
-10…150 °C	6	25	G½ sealing cone	**TC2501**
0…160 °C	6	25	G½ sealing cone	**TC2502**
0…100 °C	6	25	G½ sealing cone	**TC2507**
-10…150 °C	6	50	G½ sealing cone	**TC2511**
0…160 °C	6	50	G½ sealing cone	**TC2512**
0…100 °C	6	50	G½ sealing cone	**TC2517**

Space-saving without compromising performance

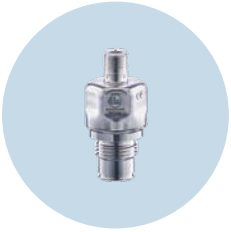
The compact temperature transmitter has been specially developed for applications with very limited installation space and small pipe diameters. Thanks to its significantly smaller stainless steel housing, this transmitter can easily be installed in even the most confined spaces.

The compact measuring tip minimises pipe constrictions and flow resistance, which is a decisive advantage for small pipe diameters. Special adapters ensure an optimum installation depth in pipes while allowing precise positioning of the measuring element without additional mechanical effort.

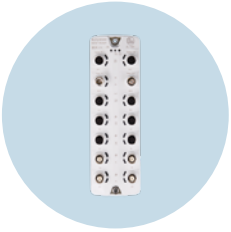
The sensor is complemented by modern software functions and a clearly visible status display via the LED dome. Featuring high measurement accuracy, IP69 protection and IO-Link, the sensor is a powerful solution for demanding applications – ranging from compact industrial plants in the food industry to cooling circuits in data centres.

Technical data		
Operating voltage	[V DC]	18…32
Output function switching output	[mA]	4…20
Pressure rating	[bar]	100
Response time T05 / T09	[s]	0.5 / 1.5
Measuring range	[°C]	-25…160
Accuracy	[K]	± 0.2
Ambient temperature	[°C]	-25…80
Materials in contact with the medium		V4A (1.4404/316L)
Protection rating		IP67, IP68, IP69

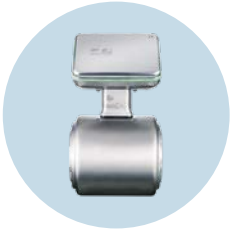
BEST FRIENDS



PL15 pressure transmitter
Compact design for mobile and industrial applications



IO-Link master
Field-compatible masters for use in hygienic areas



Foodmag SMF150
One device covering various measured variables

For further technical details, please visit: ifm.com/fs/TC1101

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Preventing condensation

Dew point sensor ensures compressed air quality and reduces energy costs

- High-precision dew point measurement down to -20 °C
- Robust design for use in harsh industrial environments
- Easy installation and commissioning thanks to the compact sensor design



IP67

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Clean and dry compressed air

Monitoring the pressure dew point is a key process in compressed air lines and tanks to ensure air quality and operational safety. The pressure dew point indicates the temperature at which the water vapour contained in the compressed air condenses – at constant pressure.

Excessive moisture leads to corrosion and potential leaks, shortens system service life and impairs the function of compressed air-powered devices. Dry compressed air is essential for trouble-free processes and compliance with standards, particularly in sensitive areas such as the food and pharmaceutical industries or in precision pneumatic control systems.

Optimised compressed air treatment

The new dew point sensor from ifm makes a decisive contribution to efficient compressed air treatment. It measures the pressure dew point with high precision – the lower this value, the drier the compressed air.

Continuous air quality monitoring enables demand-based control of dryers. This prevents unnecessary "over-drying", saves energy and reduces costs.

The sensor does not directly supply the required air but performs a monitoring function. It ensures that components such as dryers and other system parts operate correctly, and it immediately detects any deviations, enabling the user to take prompt corrective action. Therefore, its primary purpose is quality monitoring, while also indirectly helping to prevent downtime.

Installation and operation

Thanks to its compact design, the sensor can be easily integrated into existing compressed air lines. The robust design with stainless steel housing and IP67 protection rating allows use even in harsh environmental conditions. Via the IO-Link interface, the sensor can be easily integrated into the system control.

Description	Order no.
Dew point sensor	**LDH313**
Fast coupling adapter for pneumatic lines	**E33710**

Technical data		
Measuring range	[°C Td]	-20…20
Display range	[°C Td]	-20…60
Medium temperature	[°C]	-20…60
Pressure rating	[bar]	50
Output signals		IO-Link, 1x 4...20 mA
Accuracy	[°C Td]	± 2
Process connection		G½
Protection rating		IP67

BEST FRIENDS



SD compressed air meter
Measures flow, consumption, pressure and temperature



PQC pressure sensor
Monitors system pressure in pneumatic and compressed air systems



Location of leaks
Handheld device for the location of smallest compressed air leaks

For further technical details, please visit: ifm.com/fs/LDH313

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For pure water

Conductivity sensors measure from 0.04 µS/cm

- For effective, permanent control of water and process quality
- Compact sensor requires no further hardware for operation
- High resolution enables detection of the smallest deviations



IP69

IO-Link

ifm – close to you!

Process connection	Medium temperature [°C]	Insertion depth [mm]	Pressure rating [bar]	Output measured values	Materials	Order no.
G½	-25...100; (< 1 h: 150)	23	16	conductivity, temperature	stainless steel (316L / 1.4435, 1.4404); PEEK; FKM	**LDL101**
G½	-25...80	73	max. 16 (up to 80 °C)	conductivity, specific resistance, temperature	1.4438, PEEK, PVDF, FKM	**LDL311**
½NPT	-25...80	73	max. 16 (up to 80 °C)	conductivity, specific resistance, temperature	1.4438, PEEK, PVDF, FKM	**LDL321**

Safe solution for permanent process quality

The LDL101 and LDL3x1 conductivity sensors are the ideal choice for applications where highest standards of water purity, and therefore product quality or process safety, must be met.

The sensors can measure conductivity from as low as 0.04 µS/cm. The LDL3x1 can also provide a specific resistance value in MΩ. This makes them ideal for the use in applications involving purified water at all treatment stages. Typical areas of application include the food and beverage industry, semiconductor production, the pharmaceutical industry and power production.

Quality assurance and condition monitoring

Thanks to a high resolution and a loss-free digital signal transmission via IO-Link, the water quality can be analysed continuously and precisely, ensuring stable and reliable processes.

In ultrapure water processes, rising conductivity or falling resistivity can serve as an early indicator that the filters require maintenance, for example.

When monitoring cooling circuits, the sensors detect increasing mineralisation of the water at an early stage, allowing countermeasures to be initiated before damage to the piping system occurs.

Technical data		
Conductivity measuring range	[µS/cm]	0.04…1,000
Specific resistance (LDL 3x1)	[MΩ/cm]	0.001...25
Conductivity accuracy	**[µS/cm]**	
LDL101		3 % MW ± 0.03
LDL3x1		3 % ± 0.00005
Conductivity repeatability	**[µS/cm]**	
LDL101		1.5 % MW ± 0.015
LDL3x1		0.3 % ± 0.00002
Protection rating (to DIN EN 60529)		
LDL101		IP67, IP68, IP69
LDL3x1		IP68, IP69

MW = value of the measuring range

BEST FRIENDS



SU Puresonic
Flow measurement of conductive and non-conductive media



Vortex flow meter
Monitors flow and temperature in water pipes



IO-Link master
Field-compatible masters with PROFINET interface

For further technical details, please visit: ifm.com/fs/LDL101

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Condition monitoring with CANopen

Vibration sensor for mobile machines

- Sensor specifically designed for use in mobile applications
- Reliable 3-axis detection of unbalance, collisions, fatigue and bearing damage
- Seamless transfer of data to the cloud improves aftersales service and optimises maintenance planning



IP6K9K

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Description	Order no.
3-axis vibration sensor with CANopen interface.	**VMB301**

Always keeping an eye on the mobile machine status

Whether there is an imbalance in the rotating blades of a mowing machine, cavitation or foreign objects in mobile drainage pumps, impacts on critical components: If such issues go unnoticed, they can cause costly damage and long downtimes.

Convenient and informative

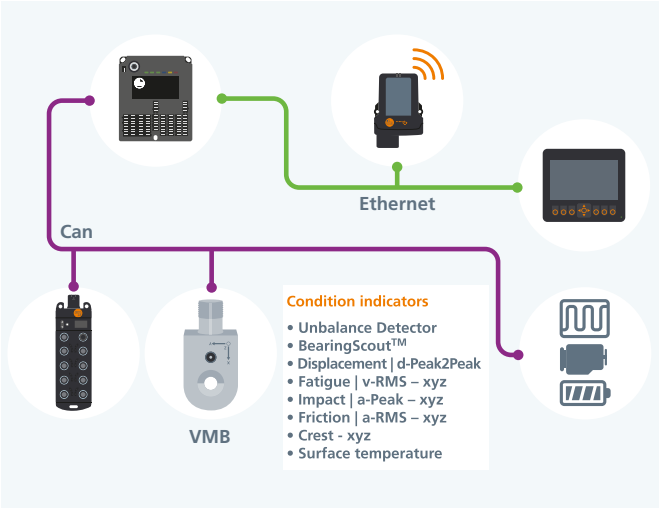
The 3-axis condition monitoring sensor VMB301 is designed for use in mobile applications and can be seamlessly integrated into the vehicle network and ifm's system portfolio thanks to its CANopen interface. The integrated 120 Ohm bus resistor can optionally be activated or deactivated via CANopen. This reduces costs and increases flexibility.

Comprehensive condition monitoring

Once integrated, the VMB301 transmits a large number of proven condition indicators in real time: Fatigue (v-RMS), mechanical friction (a-RMS), shocks (a-Peak), mechanical stresses (d-Peak2Peak), statistical bearing wear (crest) and surface temperature. The innovative BearingScout™ for bearing analysis and dynamic unbalance measurement complete the VMB301's range of features as a standalone condition monitoring solution for mobile machines.

For remote monitoring, the condition and machine data can be transmitted via radio modem to mobile IoT, ifm's IIoT platform for mobile machines.

Technical data		
Frequency range	[Hz]	1...7500
Measuring range, velocity	[mm/s]	0...320
Measuring range, displacement	[mm]	0...320
Measuring range, acceleration	[g]	0...60
Temperature measuring range	[°C]	-30...80
Protection rating		IP6K7, IP6K8, IP6K9K



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Graphic display
Programmable HMI for the control of mobile machines



ecomatController
Controller for mobile applications, also for safety applications



Mobile IoT gateway
Global access to the machine via mobile communications

For further technical details, please visit: ifm.com/fs/VMB301

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Uncompromising performance in a compact design

Cost-effective multicode readers for demanding production environments

- Ultracompact design for limited space
- Reads up to 50 codes and 60 images per second
- Reliable decoding up to 3 m/s motion speed
- Ethernet and RS232 interface for flexible connection



IP52

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Dimensions [mm]	Illumination	Lens	Camera resolution [MPx]	Interface	Order no.
50 x 50 x 28	red light + white light	wide angle	1.3	Ethernet + RS232	**O2I220**
50 x 50 x 28	white light	wide angle	1.3	Ethernet + RS232	**O2I221**
45 x 52 x 25	red light	standard	1.5	Ethernet + RS232	**O2I232**
45 x 52 x 25	white light	standard	1.5	Ethernet + RS232	**O2I233**
45 x 35 x 25	red light	wide angle	1.5	Ethernet + RS232	**O2I230**
45 x 35 x 25	white light	wide angle	1.5	Ethernet + RS232	**O2I231**

Versatile use

With the new O2I2 series multicode readers, ifm electronic presents a powerful yet cost-effective solution for demanding identification tasks in a compact design.

Typical applications for the O2I2 code readers include product tracking along production lines, order picking, position mark detection in automated guided vehicle systems and retracing of sensitive components in the semiconductor industry.

Small and powerful

The devices are available in compact dimensions, making them ideal for installation in confined spaces.
Despite their small design, they deliver uncompromising performance: with the ability to process up to 50 codes and 60 images per second, they can also cope with highly dynamic applications. Even at object speeds of 3 m/s, the code readers maintain exceptional reliability. The devices can be flexibly integrated into existing systems via the Ethernet and RS232 interfaces.

The multi-camera function adds further versatility for applications with changing code positions: several sensors work together to detect the code and output the data centrally via a master device.

Intelligent algorithms

The innovative integration of deep learning-based AI algorithms ensures outstanding robustness against faults and code defects, making these devices an indispensable tool in modern production environments. This technology also impresses with its high positioning accuracy, even when codes are damaged. Automatic image adjustment and intelligent pre-processing significantly enhance decoding efficiency.

Easy set-up

With the user-friendly "Vision Assistant" PC software, the devices can be configured quickly and easily – even complex identification tasks can be solved in no time.

Suitable accessories

ifm offers a selection of suitable connection cables and mounting brackets for connecting and installing the multicode reader. A complete overview is available on the device product page.

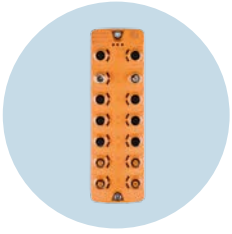
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Vision Assistant
PC software for configuration and parameter setting



Monitoring add-on
Visualisation of images and data on the dashboard



SolutionBlock IO-Link-Master
Multiprotocol interface and integrated Node-RED environment

For further technical details, please visit: ifm.com/fs/O2I220

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Mobile identification

RFID Ident handheld including
1D/2D code scanner and SAP integration

- Modular design with plug-in UHF module for maximum flexibility
- Direct integration into SAP ERP systems
- Intuitive operation via Android-based apps and robust design
- Easy data transfer via FTP server using Wi-Fi or a docking station



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Optimising logistics processes, increasing inventory accuracy

The digitalisation of intralogistics is further simplified by the new RFID Ident handheld device. The compact and robust mobile device combines RFID technology for HF/NFC and UHF with a powerful 1D/2D code scanner in a single system. This enables flexible identification of goods anywhere within the company, either via RFID tag or code.

Thanks to its modular design with optional plug-in UHF modules, the Ident handheld easily adapts to changing requirements. Intuitive operation via Android-based apps ensures good usability, even for users without specific prior experience.

Interface for SAP

By purchasing an SFI licence, SAP ERP systems can be accessed directly via the Ident handheld device using an SAP Fiori web interface. Real-time processing of orders is therefore possible on mobile devices. Another option for integrating data into the ERP system is to use the FTP server, either wirelessly (Wi-Fi) or via a docking station (Ethernet). An interface to the ifm software suite moneo|Track & Trace is also available.

Applications

Typical areas of application for the versatile Ident handheld device include optimising the processes for incoming and outgoing goods, stocktaking and order picking. Mobile identification directly at the gate or storage location speeds up processes, prevents errors and saves valuable time. This also makes subsequent data entry, for example for returns or subsequent deliveries, quick and straightforward.

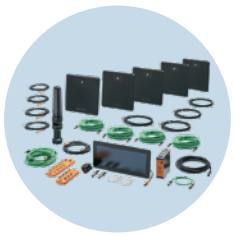
The Ident handheld device enables seamless monitoring of work steps and ensures quality standards even in harsh environments. It provides maximum transparency along the production chain through complete traceability, making processes more efficient and ensuring that quality requirements are reliably met.

Description	Order no.
2D handheld reader	**E80500**
2D / HF / NFC handheld reader	**E80501**
Handheld reader	**E80502**
HF / NFC handheld reader	**E80503**
ETSI mid-range UHF module	**E80504**
FCC mid-range UHF module	**E80505**
Docking station with charging function	**E80506**
Spare battery	**E80507**



The various antenna modules on the handheld device's top edge can easily be replaced.

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RFID gate solution
Complete set
for detecting goods



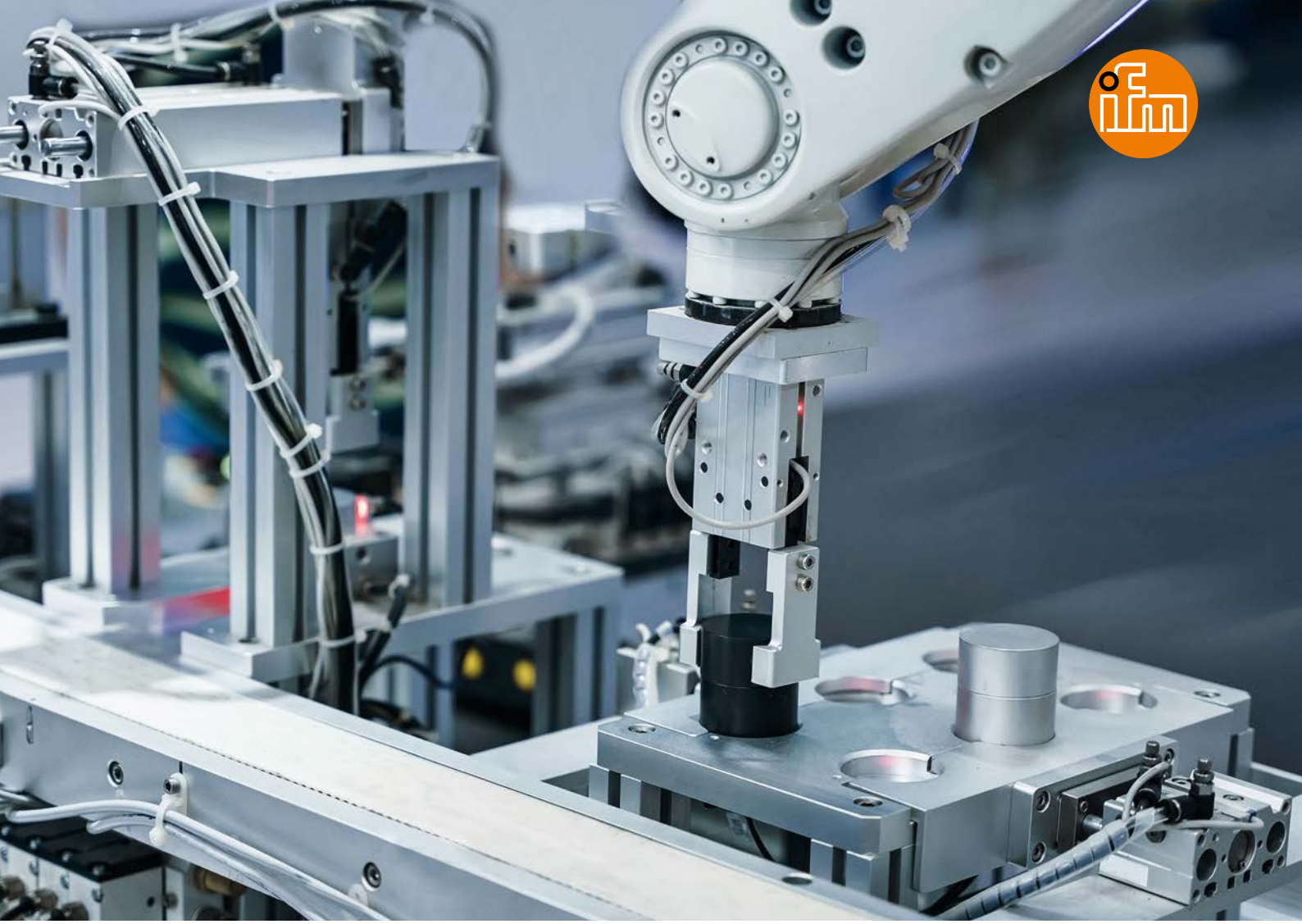
Shop Floor Integration (SFI)
Transmits sensor data directly
to SAP ERP processes



moneo|Track & Trace
Track and optimise
the flow of goods

For further technical details, please visit: ifm.com/fs/E80500

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RFID: The new HF generation

Improved RFID IO-Link antennas

- Faster data transmission thanks to IO-Link COM3 communication standard
- Internal synchronisation of tag data and target value relieves the controller
- Additional switching output enables use even without the IO-Link master



IP69

IO-Link

ifm – close to you!

Faster data communication and SIO mode

In the 2nd generation, the HF RFID antennas with IO-Link are characterised by improved values and extended possibilities. While the IO-Link COM3 communication standard ensures the fastest possible data transmission, the additional integrated switching output expands the possible applications of the antennas: they can also be operated in SIO mode without being connected to an IO-Link master and act as normally closed or normally open contacts.

Suitable for access control

As the antennas also support the ISO15693 and ISO14443 standards, they are the ideal choice for access control as well as for switch control in factory automation, for example.

On-board data analysis

In addition, the 2nd generation is equipped with two data comparators that can be used separately or in combination. The antennas are therefore able to read and process values from tags. For example, the tag value can be compared with defined target values and a signal can be output accordingly via IO-Link or switching output. No additional controller is required.

Password support and tag type detection

Automatic tag type detection ensures reliable reading of values even with varying block sizes. The option to restrict read and write access to tags via password entry completes the improved range of 2nd generation HF RFID antennas.

Type	Installation	Length / dimension [mm]	Order no.
M12	f	70	**DTI110**
M12	nf	70	**DTI111**
M18	f	50	**DTI120**
M18	nf	50	**DTI121**
M18	f	70	**DTI124**
M18	nf	70	**DTI125**
M30	f	50	**DTI130**
M30	nf	50	**DTI131**
M30	f	70	**DTI134**
M30	nf	70	**DTI135**
Cube	nf	40 x 40 x 54	**DTI213**
Rectangular	nf	20 x 48 x 7 Cable length: 1 m	**DTI215**
Rectangular	nf	20 x 48 x 7 Cable length: 2 m	**DTI216**
Compact design	nf	120 x 113 x 50	**DTI300**

f = flush
fl = non-flush

Technical data	
Switching output	PNP, NPN
Operating mode	IO-Link, SIO mode
Protection rating	IP67, IP69, DTI300 IP67

BEST FRIENDS



IO-Link master
Field-compatible masters with PROFINET interface



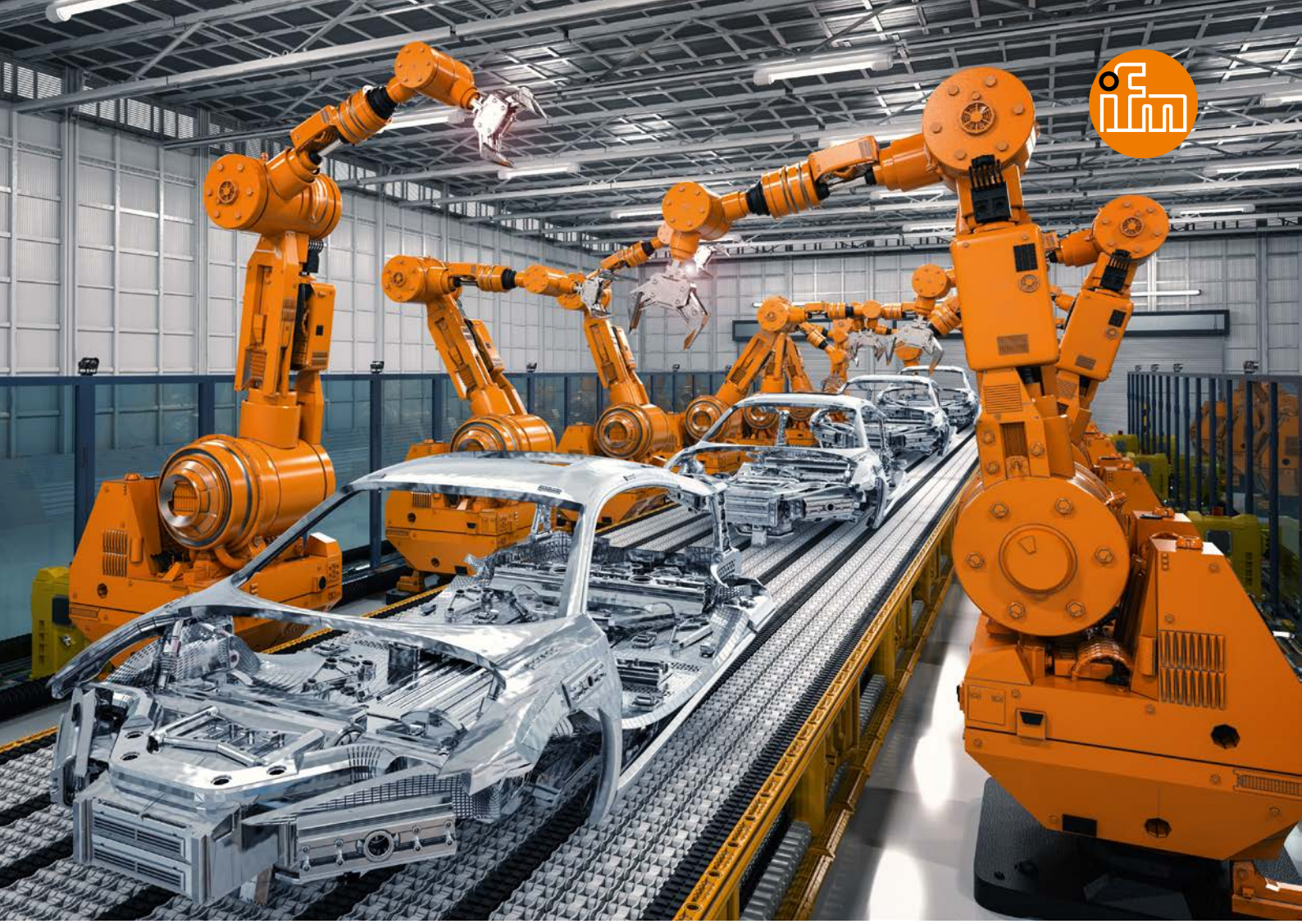
moneo Track & Trace
Track and optimise the flow of goods



ID tags
RFID tags for easy identification of objects

For further technical details, please visit: ifm.com/fs/DTI110

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For maximum performance

IO-Link masters from the PerformanceLine

- Field-ready IO-Link masters for connecting up to 8 IO-Link sensors and/or actuators with up to 2 amperes
- Power supply up to 16 amperes possible via L-code cabling
- Easy energy management thanks to current measurement and configurable current limitation for each port



IP67 IP69 IO-Link

ifm – close to you!

Description	Order no.	
	Coolant (orange)	Food (grey)
PerformanceLine IO-Link masters · 4 ports		
PROFINET	**AL1400**	**AL1401**
EtherNet/IP	**AL1420**	**AL1421**
EtherCAT	**AL1430**	**AL1431**
PerformanceLine IO-Link masters · 8 ports		
PROFINET	**AL1402**	**AL1403**
PROFINET with OPC UA Server	**AL1406**	**AL1407**
EtherNet/IP	**AL1422**	**AL1423**
EtherNet/IP with OPC UA server	**AL1426**	**AL1427**
EtherCAT	**AL1432**	**AL1433**

Technical data		
Voltage supply		M12, L-code, 16A (US), 16A (UA) daisy-chain option
IO-Link ports 4-port master 8-port master		 4x B ports 4x A ports, 4x B ports
Current rating of the outputs UA (total / port) US (total / port)	 [A] [A]	 8 / 2 3.9 / 2
Coolant (orange) Protection rating Housing Socket / connector		 IP67 polyamide nickel-plated brass
Food (grey) Protection rating Housing Socket / connector		 IP69 polyamide stainless steel

Decentralised data nodes with a secure connection

The field-ready IO-Link masters from the PerformanceLine are powerful and decentralised communicators between sensors, actuators, controllers and the IT level.

The variant with an integrated OPC UA server enables standardised communication directly from the IO-Link master to the IT level, eliminating the need for an additional gateway. Sensor data and status information can be read directly and processed further independently of the platform.

Up to 16 amperes are available

The IO-Link masters can be supplied with up to 16 amperes via the standardised L-coded M12 connectors. A maximum of 2 amperes is provided per port, which is sufficient to control large solenoid valves or other energy-intensive actuators, for example. The integrated daisy-chain function allows multiple masters to be connected to a single power supply, helping reduce cabling effort even further.

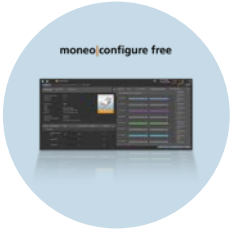
Energy monitoring

A current limit can be set for each port. Furthermore, voltage and current values can be measured at each port, making it easy to determine the energy requirements of the system and analyse them in ERP systems.

BEST FRIENDS



IO-Link M12 modules
Connection of binary sensors to IO-Link masters



moneo|configure free
Software for parameter setting of the IO-Link infrastructure



IP67 power supply
24 volt supply in the field, controllable via IO-Link

For further technical details, please visit: ifm.com/fs/AL1400

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New generation brings greater flexibility to the field

Multiprotocol-capable IO-Link master for scalable automation solutions

- 8 IO-Link ports (class A/B) with 16 freely configurable inputs and 16 freely configurable outputs
- High current rating up to 2 A per output
- Robust IP67 design for decentralised use in the field
- New cost-effective manufacturing technology
- Multiprotocol interface for easy integration into different fieldbus environments



IP67

IO-Link

ifm – close to you!

Raising IO-Link integration to a new level

The black IO-Link masters of the AutomationLine represent a new generation of decentralised automation solutions. They enable high-performance, versatile IO-Link communication while reducing engineering effort and offering flexible fieldbus connectivity.

Robustness for decentralised field applications

The glass-fibre reinforced plastic housing and the fully potted printed circuit board ensure high resistance. With an IP67 protection rating and a temperature range of –40...70 °C, the devices are well-suited for demanding industrial environments.

Flexible I/O configuration

Thanks to the optimised device architecture, up to 16 digital inputs and 16 digital outputs can be flexibly configured and operated via 8 IO-Link ports. Each port supports IO-Link class A and B and enables the switching of high loads.

High current rating for actuators

With a current rating of up to 2 A per output, the IO-Link masters are ideally suited for applications involving powerful actuators. Typical areas of application include conveyor technology and intralogistics, for example for the direct control of motorised rollers, conveyor drives, diverters or stoppers.

Efficient energy supply and simple networking

The common ground concept (GND US = GND UA, without electrical separation) enables simple and flexible port configuration. Inputs are always supplied from US, while outputs are always supplied from UA. This results in a compact and cost-efficient device design. The integrated daisy-chain function allows easy voltage supply to multiple IO-Link masters and significantly reduces wiring effort in the field.

Multiprotocol-capable for flexible system concepts

Thanks to the integrated multiprotocol interface, the IO-Link masters of the AutomationLine can be easily integrated into different fieldbus architectures. This supports standardisation in mechanical and plant engineering, reduces type versions and sustainably minimises engineering effort.

Description	Order no.
Coolant	
IO-Link master AL A/B 8P IP67	**AL1602**

Technical data		
Voltage supply		M12 L-code daisy chain option
Number of inputs and outputs		8x 2 DO 8x 2 DI
Current rating of the outputs	[A]	2 (US) 2 (UA)
Current rating per port	[A]	2 (US) 3 (UA)
Coolant (black) Housing Ethernet sockets		 PC (polycarbonate) nickel-plated brass
Protection rating		IP67

BEST FRIENDS



moneo|configure free
Software for parameter setting of the IO-Link infrastructure



AutomationLine DX module
8 independently configurable I/O ports



IO-Link M12 modules
Connection of binary sensors to IO-Link masters

For further technical details, please visit: ifm.com/fs/AL1602

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Analogue meets IO-Link

Flexibly configurable analogue IO-Link module

- 4 ports, each with one analogue input and one analogue output
- Connection of sensor and actuator via one port using Y-splitters possible
- Freely configurable: current or voltage signals
- IO-Link communication for easy integration into the controller
- Robust housing with high protection rating



IP67 IP69 IO-Link

ifm – close to you!

Description	Order no.	
	Coolant (orange)	Food (grey)
Analogue IO-Link module		
4x analogue In / 4x analogue Out	**AL2350**	**AL2250**

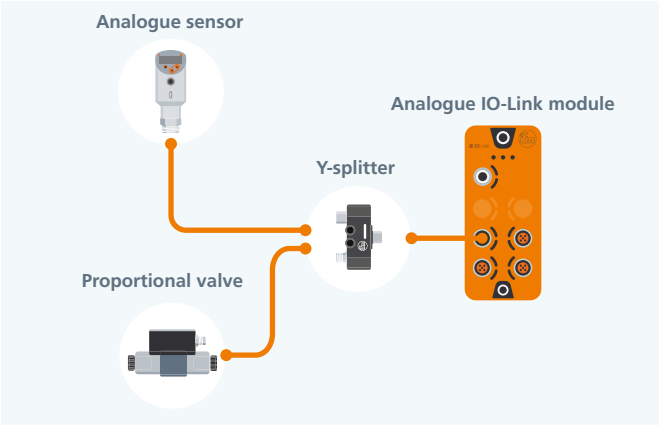
Analogue application scenarios

The analogue IO-Link module combines proven analogue technology with modern IO-Link communication, bridging the gap between existing systems and digital automation. Typical applications include water and wastewater management, where levels are detected and valves are controlled automatically – all via a single port. The module also enables the reliable control of flow, pressure and temperature in server cooling systems. This allows existing analogue sensors and actuators to be easily and efficiently integrated into the IO-Link infrastructure.

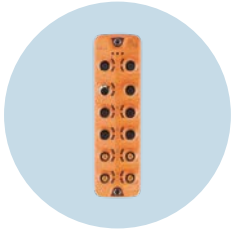
Operating principle

Four freely configurable ports, each with an analogue input and an output, enable maximum flexibility. Using a Y-splitter, the sensor and actuator can be operated simultaneously on one port, while the analogue signals are conveniently integrated into the controller via IO-Link. For hygiene-sensitive applications, a robust food version with IP69, stainless steel sockets and food-grade housing material is also available – ready for tough everyday industrial use.

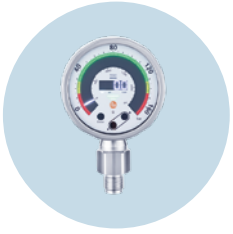
Technical data		
Number of ports		4
Inputs		4x analogue
Outputs		4x analogue
IO-Link ports		1
Input/output function (configurable)		4...20 mA / 0...20 mA / 0...10 V / 0...5 V
Current rating of the outputs	[mA]	500
Coolant (orange) Protection rating Housing Socket/connector		 IP67 polyamide nickel-plated brass
Food (grey) Protection rating Housing Socket/connector		 IP69 polyamide stainless steel



BEST FRIENDS



IO-Link master
Field-compatible Performance-Line, up to 2 A per port



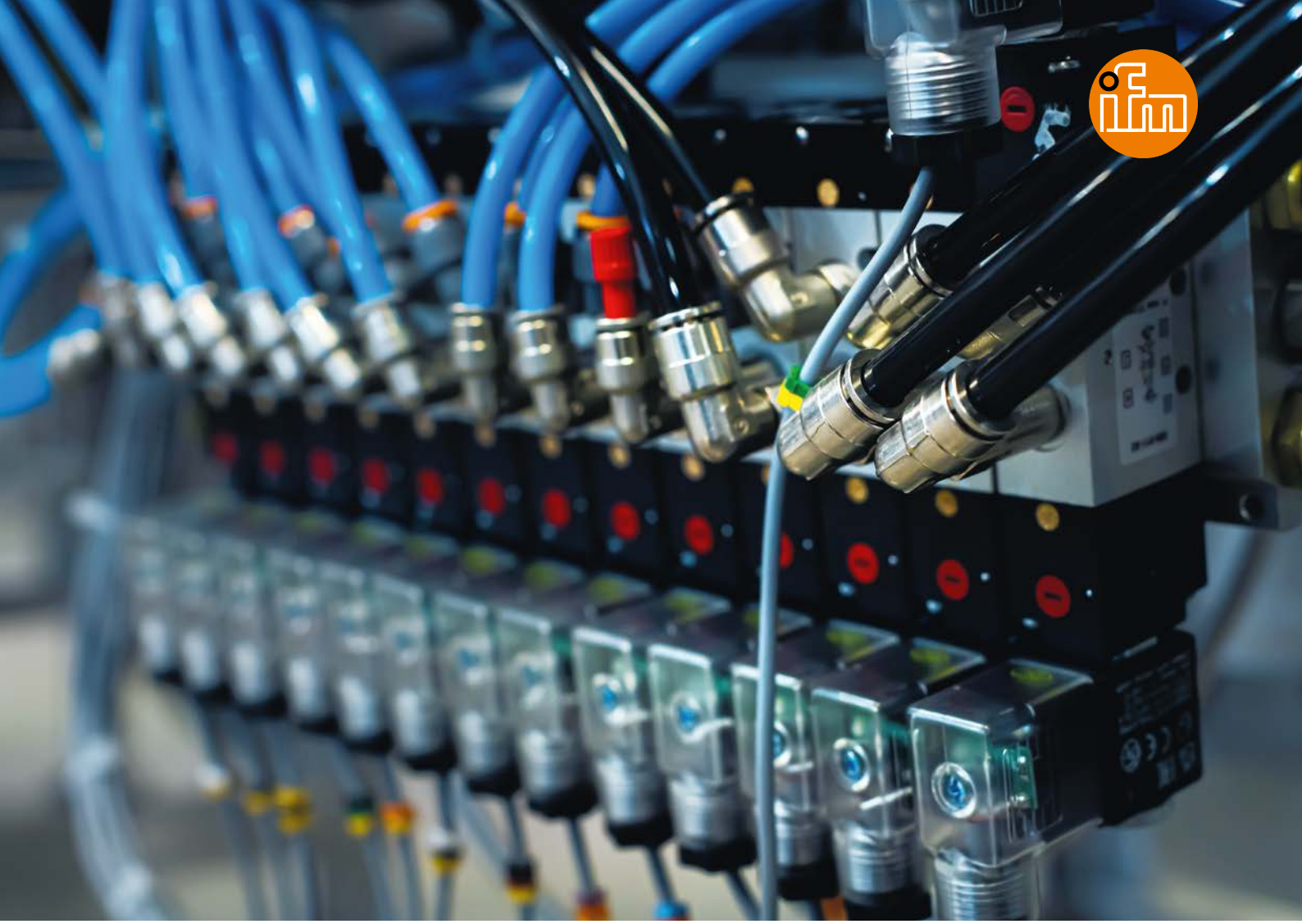
Electronic manometer
Analogue display and output of measured values



24 V switched-mode power supply
Power supply of sensors and actuators

For further technical details, please visit: ifm.com/fs/AL2350

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Maximum performance, minimum risk

IO-Link output module for safe and non-reactive switching

- 16 digital outputs per module for independent circuits
- Up to 4A per port and 16A total current
- 2 digital outputs per port controllable
- Without interaction in applications up to PL d (category 3)



IP67 IP69 IO-Link

ifm – close to you!

Safely perform decentralised switching tasks

With the new IO-Link digital output modules, ifm offers a reliable solution for decentralised switching tasks in safety-related applications. The modules have been specially developed for applications in which high currents must be switched while maintaining electrical isolation and freedom from interference.

Two independent circuits per module

Each module has 16 digital outputs, which are electrically isolated in two groups. This allows actuators to be controlled in a targeted manner in two independent circuits. Up to 4A can be switched per port, and the total current per module can be up to 16A.

Safe switching (off)

What makes the new modules special is their non-interaction up to Performance Level d (Category 3). The special design eliminates the theoretical error of an output being supplied with voltage even though the supply voltage has been switched off.

Wide range of applications

The modules are used wherever high currents need to be switched and safety functions need to be implemented, for example in industrial automation, the automotive, pharmaceutical, chemical and food industries.

A version with protection rating IP69 is available for use in hygienic and wet areas.

The IO-Link modules offer a cost-effective way to meet the requirements of the Machinery Directive without compromising on availability and reliability.

Description	Order no.
IO-Link module IP67	**AL2637**
IO-Link module IP69	**AL2537**

Technical data		
Ports		2 x 4 (with 2 digital outputs each)
Switchable current paths		2 (with 4 ports each)
Total current per port pair	[A]	4
Current rating Module total	[A]	16
Safety category		PL d (Category 3)

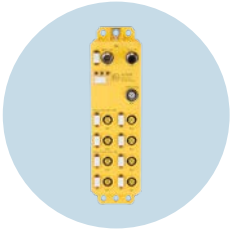
BEST FRIENDS



Safety relay
For connecting safety switches and sensors



Switched-mode power supply
Higher degree of protection thanks to configurable electronic fuses



PROFIsafe IO-Link module
With secure inputs and outputs for switches and sensors

For further technical details, please visit: ifm.com/fs/AL2637

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Decentralised I/O solution with maximum efficiency

IO-Link DX module with digital inputs/outputs

- 8 independently configurable digital I/O ports for IO-Link communication
- Compact AutomationLine housing for cost-optimised field automation
- Reduced process and diagnostic data for a particularly economical device concept
- Robust IP67 design for decentralised use in the field



IP67

IO-Link

ifm – close to you!

Flexible digital inputs and outputs with IO-Link connection

The AutomationLine DX module offers 8 ports that can be individually configured as digital inputs or outputs (2 per port).

The connection via IO-Link enables simple and space-saving integration into existing system architectures.

Basic device concept with optimised data volume

By focusing specifically on essential process and diagnostic data, the DX module represents a cost-effective alternative to IO-Link modules with a wider range of functions. It is particularly suitable for systems and applications where reliable basic functions are sufficient. The reduced amount of data simplifies configuration and lowers engineering and system costs.

Robust design for decentralised field applications

The module has a robust AutomationLine housing and is designed for use in demanding industrial environments. With IP67 protection and an extended temperature range of -40...+70 °C, it is ideal for continuous use in the field.

Description	Order no.
Coolant	
IO-Link I/O module with 8 DX ports, IP67	**AL2821**

Technical data		
Electrical connection IO-Link		M12 A-code
Number of inputs and outputs		16 DI , 16 DO
Overall current rating of outputs	[mA]	1000
Operating voltage	[V]	18…30 DC
Ambient temperature	[°C]	-40…70
Coolant (black) Upper part of housing Lower part of housing Socket / connector		 PC (polycarbonate) PBT PC (polycarbonate)
Protection rating		IP67

BEST FRIENDS



IO-Link masters
8 freely configurable A/B ports and EtherNet/IP interface



Capacitive sensors
For position detection or level monitoring



IP67 power supply
24 volt supply in the field, controllable via IO-Link

For further technical details, please visit: ifm.com/fs/AL2821

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Turning analogue into digital

Smart signal monitoring with the IO-Link analogue converter

- Reliably monitors up to 2 analogue sensors
- Intelligent signal processing through addition/subtraction of the inputs
- Measured values scalable to physical units
- Provision via IO-Link, one analogue and two switching outputs
- Space-saving field installation directly on the machine reduces cabling



IP67

IO-Link

ifm – close to you!

Description	Order no.
IO-Link analogue converter with 2 inputs and 4 outputs	**DP1204**

Easy integration of analogue sensors into IO-Link systems

Analogue sensors provide important process values in industry, but often cannot be directly integrated into digital infrastructures. The DP1204 analogue signal monitor from ifm offers an efficient solution for this: It enables the simple integration of up to two analogue sensors (4...20 mA / 0...10 V) into IO-Link systems – also ideal for retrofitting in existing systems.

Flexibly adjustable for your application

The DP1204 offers various operating modes: Switching points can be assigned individually and measured values can be added or subtracted. The calculated value can be monitored and output as a 4...20 mA signal.

Besides, the analogue input signals can be scaled linearly to physical units (e.g. 4...20 mA to 50...2000 mm). The processed data is available via IO-Link, one analogue and two digital outputs. In addition, an analogue signal can be mirrored via the output.

Applications

Typical applications include differential pressure monitoring (e.g. filter condition, pump efficiency), level monitoring in pressurised containers or width measurement of moving objects using two distance sensors.

Fast installation saves time and money

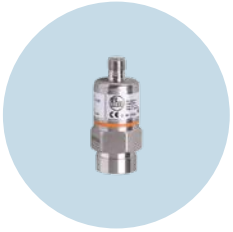
The DP1204 has been designed for installation close to the field – directly on the machine, without a control cabinet. Its compact design and IP67 protection rating minimise wiring complexity, saving space, time and installation costs.

Technical data		
Operating voltage	[V]	18…30
Inputs		2x analogue (4…20 mA or 0…10 V)
Outputs		1x IO-Link 1x analogue (4…20 mA) 2x digital (PNP, max. 10 mA)
Protection rating		IP67

BEST FRIENDS



DN0220 switching amplifier
Reliably switches high direct and alternating currents



PA pressure transmitter
High repeatability and low characteristics deviation



OGD distance sensor
Time-of-flight measurement for measured values accurate to the millimetre

For further technical details, please visit: ifm.com/fs/DP1204

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Check your drive

Programmable frequency-to-current converter

- Monitoring speeds and pulse sequences for overspeed and underspeed
- Frequency-proportional current or voltage output
- High input frequency of up to 600,000 pulses / minute
- Extensive and convenient parameter setting via IO-Link
- Easy-to-read OLED display for actual value indication and parameter setting



IP20

IO-Link

ifm – close to you!

Digital inputs	Digital outputs	Analogue outputs	Order no.
1	2	1 (0…10 V or 4…20 mA)	**DW3003**
1	2	–	**DD3003**
2	2	–	**DD3005**

Drive monitoring

In many industrial applications, drives and various other rotating machines are expected to run at a defined speed. When using external sensors on shafts or drive wheels, speed-dependent signals can be generated and analysed with the help of the depicted frequency-to-current converter. Damage to the drive, such as slipping or even broken V-belts, can be detected in good time by comparing setpoints and then indicated via a switching signal. At the same time, the DW3003 outputs a current or voltage signal which is proportional to the speed and can be transmitted to a higher-level controller or used for other control processes.

High-performance evaluation unit

The measured value can be transmitted digitally via IO-Link which also facilitates the extensive and convenient parameter setting options, such as scaling of the analogue output signals or the definition of switch points.

A particularly useful feature: the evaluation unit can be operated with both 24 V DC and 110...250 V AC. The unit provides 24 V DC to supply the sensors.

Technical data	
Operating voltage	24 V DC or 110…250 V AC
Input frequency	up to 600,000 pulses / minute
Digital interface	IO-Link
Protection rating	IP20

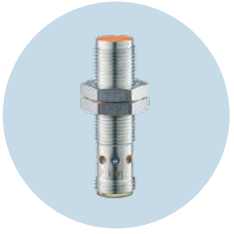
BEST FRIENDS



moneo|IIoT Core
IIoT software for simple condition monitoring



IO-Link master
Field-compatible masters with Profinet interface



Inductive sensors
Detection of rotary movements on shafts and drive wheels

For further technical details, please visit: ifm.com/fs/DW3003

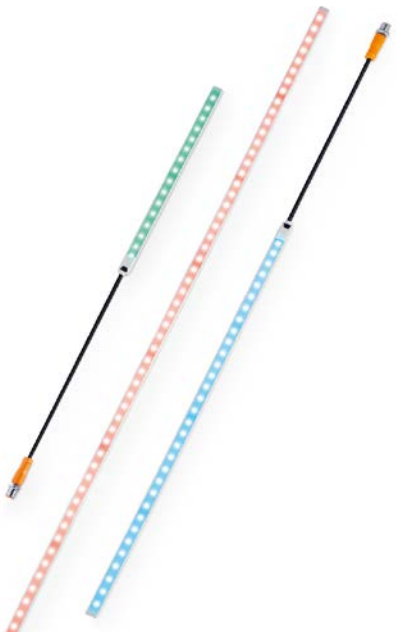
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Precise visualisation

LED strips with individually controllable RGB LEDs

- Flexible visualisation using any coloured segments on the LED strip
- For status display, user guidance, product tracking and much more
- Extremely robust, fully potted design with protection rating IP69
- Simple connection with the DP1617 controller via IO-Link
- Bent and straight installation



IP69

IO-Link

ifm – close to you!

Individually controlled LEDs for maximum flexibility and reliability

This innovative LED strip enables far more than visualisation in a single colour: up to 320 RGB LEDs can be individually controlled in terms of colour and brightness. The DP1617 controller offers pre-programmed modes for this purpose, allowing quick and easy implementation of customised visualisation concepts. LED control is performed via IO-Link.

The hygienically designed and extremely robust LED strips are available in lengths from 250 mm to 5000 mm, making them ideal for demanding applications in factory automation as well as in the food industry. Thanks to an integrated bypass system, the strip remains functional even if individual LEDs fail, which increases reliability and extends the service life of the system.

Operating modes of the DP1617 controller

Segment mode

Allows the LED strip to be divided into several segments that can be controlled independently of each other for flexible and customised applications.

Running light point mode

Creates a flowing movement effect by lighting up the LEDs one after the other. Ideal for dynamic and appealing visualisations that convey the impression of movement.

Bar graph mode

Visualises values or states by lighting up LEDs in a row one after the other, similar to a bar graph.

Position mode

Provides precise control of individual LED groups to clearly display specific positions.

You can find an illustration of the modes in various sample applications on our website. Simply scan the QR code on this page to get there directly.

Length [mm]	Order no.	
	Industry	Food
250	**DV1110**	**DV1210**
500	**DV1111**	**DV1211**
750	**DV1112**	**DV1212**
1000	**DV1113**	**DV1213**
1500	**DV1114**	**DV1214**
2000	**DV1115**	**DV1215**
2500	**DV1116**	**DV1216**
3000	**DV1117**	**DV1217**
3500	**DV1118**	**DV1218**
4000	**DV1119**	**DV1219**
4500	**DV1120**	**DV1220**
5000	**DV1121**	**DV1221**

Controller for LED strip	Order no.
Different operating modes controllable via IO-Link	**DP1617**

BEST FRIENDS



Light tower
Clearly visible visualisation of operating states



IO-Link master
Field-compatible masters for use in hygienic areas



Temperature sensors
Reliable temperature measurement

For further technical details, please visit: ifm.com/fs/DV1110

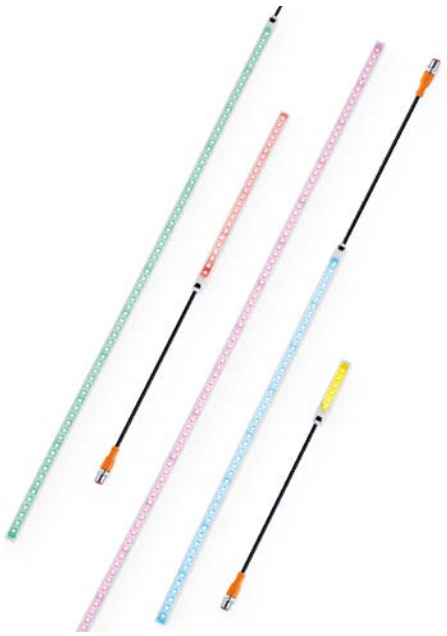
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Clear colour.
Clear status.

Flexible LED strip in RGB and white

- RGBW status light, signal colours can be controlled directly via digital inputs
- Extremely robust: industrial-grade, fully potted, shock and vibration resistant, with IP68 protection
- Highly visible: uniform, high intensity light output for clear and unambiguous status indication
- Flexible installation: bent or straight



IP68

ifm – close to you!

Illuminated area length [mm]	Max. current consumption [mA]	Luminous flux [lm]	Order no.	
			Industry	Food
62.5	50	red: 8 / green: 22 / blue: 6 / white: 48	**DV1150**	**DV1250**
250	200	red: 32 / green: 91 / blue: 24 / white: 193	**DV1151**	**DV1251**
500	400	red: 64 / green: 182 / blue: 48 / white: 386	**DV1152**	**DV1252**
750	600	red: 96 / green: 273 / blue: 72 / white: 579	**DV1153**	**DV1253**
1000	800	red: 128 / green: 364 / blue: 96 / white: 772	**DV1154**	**DV1254**
1500	1200	red: 192 / green: 546 / blue: 144 / white: 1158	**DV1155**	**DV1255**
2000	1600	red: 256 / green: 728 / blue: 192 / white: 1544	**DV1156**	**DV1256**

Illumination and signalling all-in-one

LED strips not only fulfil the function of illumination, for example during mounting. They can also indicate the machine status via different light colours.

Flexible application options and different lengths make the LED strips extremely versatile. Thanks to the optional use of aluminium profiles, they can be quickly and securely fastened, and they illuminate even out-of-the way corners without casting shadows.

The robust design with protection rating IP68 allows their use in various demanding environments.

Wide range of colour options

The powerful LEDs of the LED strips are available in RGB and white. Triggering is via four digital inputs that can be used to produce the colours red, yellow, green, blue, cyan and purple, as well as pure white light. Indeed any colour shade is possible thanks to PWM control.

Common technical data		
Operating voltage	[V DC]	21.6...26.4
Colour temperature	[K]	7500
Typ. life cycle	[h]	30000
Ambient temperature	[°C]	-20...45
Housing material Versions for industrial applications: Versions for food applications:		 TPU (black) TPU (grey)
Protection rating		IP68

BEST FRIENDS



Light tower
Clearly visible visualisation of operating states



Illuminated capacitive touch sensors
Switching of machines and systems



Controller for LED strip
Offers various modes for easy visualisation

For further technical details, please visit: ifm.com/fs/DV1150

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Full flexibility, full visibility

Freely configurable stackable light tower

- Precise status visualisation through a combination of up to 5 LED segments
- High visibility enables the status to be identified even at a greater distance
- Optional buzzer adds an acoustic signal to the visual display



IP65

ifm – close to you!

Description	Order no.
Sets of signal lights	
Set: 3 LED segments (red, yellow, green), base module	**DV3320**
Set: 3 LED segments (red, yellow, green), base module, buzzer	**DV3330**
Set: 5 LED segments (red, yellow, green, blue, white), base module	**DV3520**
Set: 5 LED segments (red, yellow, green, blue, white), base module, buzzer	**DV3530**
Segments	
Base module	**DV3000**
LED segment red	**DV3002**
LED segment yellow	**DV3003**
LED segment green	**DV3004**
LED segment blue	**DV3005**
LED segment white	**DV3006**
Buzzer	**DV3007**
Mounting base	
Universal mounting base for floor and wall mounting	**DV3001**

Clearly visible, customised status display

The individually configurable stackable light towers allow the user to customise the status display of industrial machines and systems precisely to their requirements. Five differently coloured LED segments are available for this purpose, of which up to five can be placed on top of each other on a base module. The high visibility of the LED segments simplifies visual status transmission even over long distances.

Simple installation and acoustic signalling

The LED segments are mounted simply and securely using a twist lock. The segments are controlled individually via digital 24V DC inputs. A buzzer can be added to the stackable light tower as an option, for example to attract greater attention in critical situations.

Thanks to its IP65 protection rating, the stackable light tower is also the ideal choice for challenging working environments. The universal mounting base which can be angled allows the upright mounting of the stackable light tower on both horizontal and vertical surfaces.

BEST FRIENDS



Relay adapter
Electrical separation between input and output



Switching amplifier
Reliable switching of high currents or alternating currents



IO-Link input/output module
Connects conventional wiring with IO-Link

For further technical details, please visit: ifm.com/fs/DV3320

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ifm electronic gmbh · Friedrichstr. 1 · 45128 Essen



Secure remote access

moneo|edgeGateway S: flexible and secure

- Enables secure remote access to the automation infrastructure
- Easy and secure connection of the sensor level to the cloud with maximum flexibility
- Translation of incoming IO-Link and VSE process data into readable information



IP67

IO-Link

ifm – close to you!

Version	Order no.
moneo|edgeGateway S	**AE1400**
Cloud solution for remote access	
moneo|IIoT Core Cloud	**QCM100**

Powerful and secure

The moneo|edgeGateway S is the convenient and secure solution for remote access to systems and applications. The gateway also transmits data from the sensor level to the IT infrastructure and the cloud. Its centrepiece is the 1.4 GHz dual-core processor which works at maximum performance level in environments with ambient temperatures of up to 60°C. With its robust IP67 housing, the powerful hardware does not require an additional control cabinet.

Simple integration, simple dialogue

The moneo|edgeGateway S is not only robust and powerful, but also convenient: The guided integration into the IT structure and into the moneo|cloud simplifies set-up and enables fast and secure remote access to the automation level. Besides, the data from the system is available for further analysis in the moneo|cloud from any location. Despite its simple set-up, the gateway offers a high degree of flexibility in operation and handling that is essential for the holistic and efficient solution of comprehensive IIoT tasks.

Turns data into information

The moneo|edgeGateway S can be integrated not only into ifm's IIoT platform but also into other common cloud solutions. As the gateway converts the incoming IO-Link and VSE process data into readable information, no further programming is required.

Technical data		
Communication interface		Ethernet
Protocol		TCP/IP, HTTPs, MQTTs, OPC UA
Transmission rate	[Mbit/s]	10; 100
Processor		ARM 64 bits dual core 1.4 GHz
RAM memory		2 GB RAM
Mass storage		4 GB flash
Transmission rate		max. 100 process values per second
Operating system		**moneo|connect**
Ambient temperature	[°C]	-25...60
Protection rating		IP65, IP67

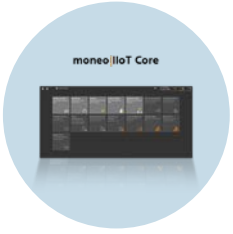
moneo|connect: flexibility through an open software platform

moneo edgeGateway S is a powerful edge computer with a Linux-based operating system and a flexible software platform. It records and processes data from the field and connected systems and transmits it seamlessly to downstream systems - both on-premises and in the cloud. moneo remoteConnect enables secure remote access to the infrastructure at anytime and from anywhere.

BEST FRIENDS



IO-Link masters
Field-compatible masters for all common fieldbus systems



moneo|IIoT Core
IIoT software for simple condition monitoring



Diagnostic electronics
Vibration monitoring of machines and equipment

For further technical details, please visit: ifm.com/fs/AE1400

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io-key: kickstarting digitalisation

Quick access to production data via direct cloud connection

- Easy detection and visualisation of your production data
- Seamless data transmission to the moneo Cloud
- Monitoring of local and distributed applications
- Cross-site data access – no IT involvement required



IP65

IO-Link

ifm – close to you!

Description	Order no.	
io-key version	World*	Europe
io-key, IIoT gateway for 2 IO-Link sensors	**AIK050**	**AIK001**
Data tariff for the io-key for data transmission once per minute	**AIS972**	
Data tariff for the io-key for data transmission every 10 seconds	**AIS973**	

* USA, Canada, EU/RED, Australia, Japan, South Africa, Malaysia, Israel

Technical data		
Operating voltage	[V DC]	18...30
Ambient temperature	[°C]	-20...50
Mobile phone transmission standards		NarrowBand IoT; 2G quad-band GSM; LTE Cat-M1
Protection rating		IP65

An easy way to start using the cloud

The io-key makes it effortless to get started with the Industrial IoT. Whether in remote facilities, in transport and logistics, or right in the middle of production: two IO-Link sensors can be connected directly to the io-key, and additional sensors can be added using the appropriate accessories. The io-key transmits the sensor data directly to the moneo|Cloud, where it is visualised, analysed, and monitored via an intuitive dashboard. Thanks to integrated mobile connectivity, no additional hardware or complex IT integration is needed to make effective use of the data.

Safe and reliable

The io-key is especially suitable for hard-to-reach or remote systems, thanks to wireless communication via mobile networks. It only requires a power supply to operate.

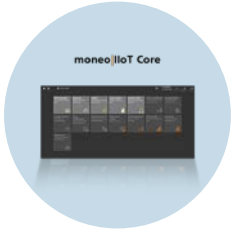
With its robust design and IP65 protection rating, the io-key also functions reliably in harsh industrial environments. Furthermore, the moneo|Cloud is operated in certified data centres and meets the highest security standards.

View sensor data anytime, anywhere

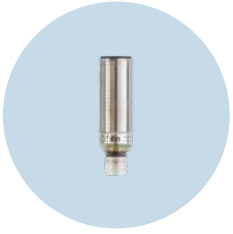
The solution is freely scalable: one moneo|Cloud licence can be used for multiple io-keys. The data is accessible at any time, enabling convenient remote monitoring of processes.

Warnings and notifications can also be configured individually: if predefined thresholds are exceeded, moneo|Cloud automatically sends email alerts, allowing responsible personnel to respond quickly and prevent downtime or equipment damage.

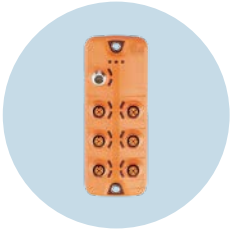
BEST FRIENDS



moneo|IIoT Core
IIoT software for easy condition monitoring



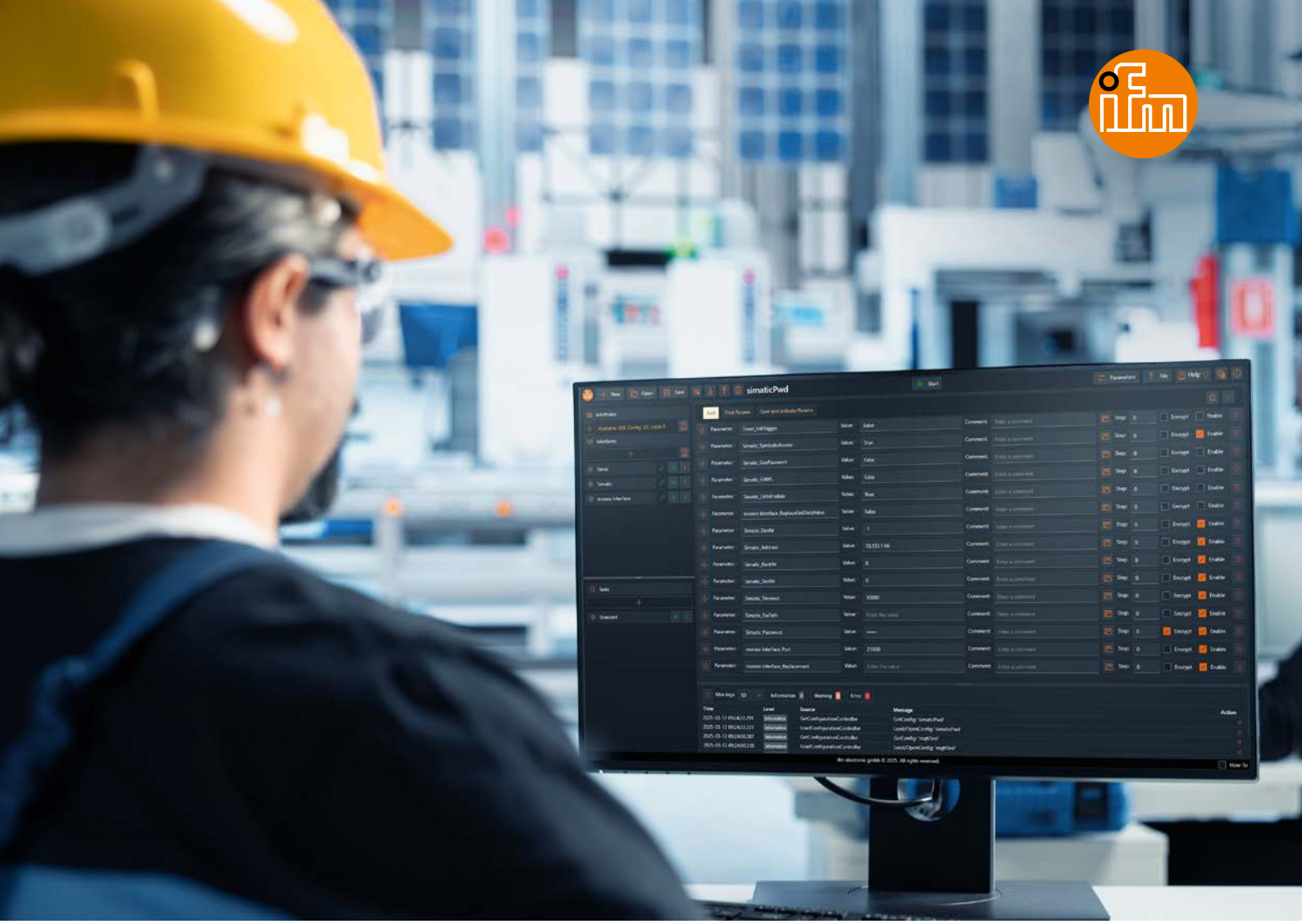
UGT level sensor
Level detection on tanks and containers



IO-Link M12 modules
Connection of binary sensors to IO-Link masters

For further technical details, please visit: ifm.com/fs/AIK050

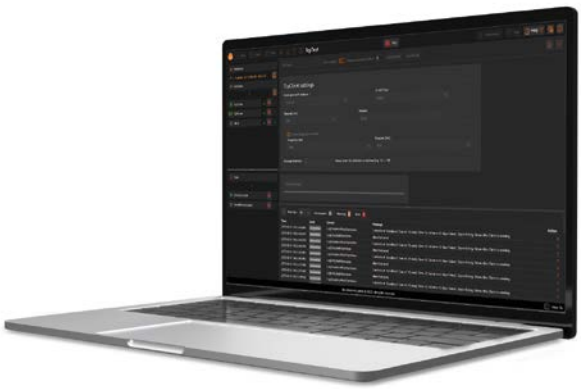
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ifm Agent software

Seamless connectivity between machine and software

- Efficient communication between machines and software environments via multiple interfaces
- Easy installation and intuitive operation – suitable even for non-experts
- Seamless integration into both existing and new systems (brownfield and greenfield)



ifm – close to you!

Versatile interface software for Industry 4.0

The ifm Agent is a powerful interface software enabling straightforward and reliable communication between machines and software solutions. Supporting a wide range of interfaces, including Simatic S7, Modbus TCP, OPC UA and MQTT, the ifm Agent offers maximum flexibility. MQTT connectivity, for instance, also allows data transfers to external cloud systems. Whether production data need to be transferred to software solutions or information fed back to machine controllers, the ifm Agent covers a broad spectrum of application scenarios.

Thanks to its intuitive user interface, the ifm Agent is also suitable for users without high-level IT skills. This means that internal system integrators and users alike can benefit from simple operation and immediate readiness for use.

Future-proof and versatile integration

Continuous updates ensure that the ifm Agent always remains current. New interfaces allow it to meet future requirements as well.

It is suitable both for greenfield projects and retrofitting in existing systems. Thanks to bidirectional communication, it enables data exchange with moneo as well as with other destinations such as databases and MES systems[1)].

The ifm Agent offers flexible deployment options: It can be installed directly on Windows or Linux systems, or operated via an appliance. Regardless of the chosen set-up, the agent can be incorporated into the moneo IIoT platform where it seamlessly integrates with the moneo structure and is included in the licence management.

Experience how simple industrial communication can be with the ifm Agent.

[1)] For connection to MES systems, moneo credits may be required.

Description	Order no.
ifm Agent	**QLA010**

Available interfaces

Communication interfaces:

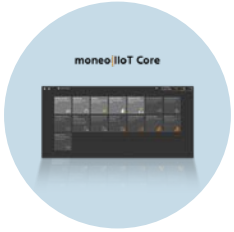
ifm IO-Link masters; AMQP Client; File; FTP; HTTP; Modbus TCP; moneo; MQTT Client; MQTT Broker; OPC UA Client; Simatic S7; TCP Client; TCP Server; VSE

Functional interfaces:

Initialize; IODD Parser; Timer

And that is just the beginning!
Development of additional interfaces is already underway.

BEST FRIENDS



moneo|IIoT Core
IIoT software for simple condition monitoring



edgeGateway
For secure transmission of system data to the IT level



edgeGateway field applications
Secure data transmission from harsh industrial environments

For further technical details, please visit: ifm.com/fs/QLA010

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Turning data into information

Software moneo|IIoT Core

- Visualising or analysing production processes and monitoring deviations in real time
- Predicting impending failures and preventing unplanned downtime
- Simple maintenance planning thanks to easy connection to SAP



IO-Link

ifm – close to you!

Description	Order no.
Cloud solution	
moneo|IIoT Core Cloud	**QCM100**
On-premises solution	
moneo|IIoT Core On-Premises	**QM9112**

Not yet available in all countries.

From parameter setting to condition monitoring

The moneo|IIoT Core is the basis of the moneo IIoT platform and bundles the most important functions. Whether as a cloud solution or in an on-premises environment: the moneo|IIoT Core enables uncomplicated, manufacturer-independent parameter setting of IO-Link sensors and an increasing number of IO-Link masters. With the intuitive drag-and-drop interface, user-defined dashboards for machines and processes can be created in no time at all to clearly visualise the collected data. Comprehensive data analyses provide valuable insights that help to increase efficiency, productivity and safety. If there are deviations from the target status, the software informs you immediately so that measures can be taken in good time to avoid efficiency losses or unplanned production downtimes.

From sensor level to cloud

The moneo|IIoT Core also offers seamless transmission of important process data to cloud and third-party applications. Tickets created in moneo can be automatically forwarded to predefined target systems. Maintenance teams are notified in real time via the integrated SAP connection. Orders and documents can be generated directly in the SAP system – end-to-end integration of shop floor data into the ERP world.

Remote maintenance with moneo|Cloud

With moneo|remoteConnect, it is possible to establish secure and manufacturer-independent remote access to PLCs, servers, sensors and other network devices from moneo|Cloud. Thanks to end-to-end encryption and targeted access configurations, data remains protected at all times. Remote maintenance and in-depth fault analyses can be carried out using the cloud. This helps to plan on-site maintenance efficiently and effectively and to reduce it to a minimum. This reduces the workload for specialised personnel and keeps machine availability high.

Simple operation thanks to integrated chatbot

The operation of moneo is simplified by an integrated chatbot based on OpenAI technology. The moneo Assistant has knowledge of the respective IIoT system as well as ifm's hardware and software.

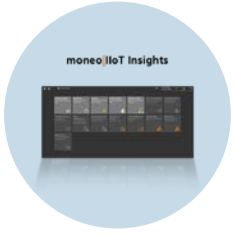
It provides support in using the software and connected systems, assists with data analysis and ticket processing and answers individual technical questions.

The chatbot only uses the existing customer system and generally available information, ensuring information security of the system at all times.

Add-ons expand the range of services

The range of services offered by the moneo IIoT platform can be expanded with add-ons such as moneo|IIoT Insights.

BEST FRIENDS



moneo|IIoT Insights
AI-supported data analysis and track and trace solution



IO-Link master
Field-compatible masters with PROFINET interface



Vibration diagnostics
Diagnostic electronics for decentralised use

For further technical details, please visit: ifm.com/fs/QCM100

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Take 1 for 2

A Y-cable for a variety of applications

- Available in straight and space-saving angled designs
- Variants for machine tools, the food industry and mobile machines
- Simple, error-free installation without torque tools thanks to proven ecolink technology



IP69

ifm – close to you!

Length [m]	Socket configuration A & B	Wiring	C plug angled	C plug straight
Coolant, M12				
0.3	straight	1	**EVCC58**	**EVC510**
1	straight		**EVCC59**	**EVC517**
1	angled	1	**EVCC60**	**EVC519**
2	angled		**EVCC61**	**EVC618**
3	angled		**EVCC62**	**EVC619**
5	angled		**EVCC63**	**EVC621**
1	straight	2	**EVCC64**	**EVC431**
2	straight		**EVCC65**	**EVC432**
5	straight		**EVCC66**	**EVC433**
1	angled	2	**EVCC67**	**EVC434**
2	angled		**EVCC68**	**EVC435**
5	angled		**EVCC69**	**EVC436**
0.3	straight	3	**EVCC70**	**EVC614**
Food, M12				
0.3	straight	2	**EVF770**	
1	straight		**EVF771**	**EVF329**
2	straight		**EVF772**	**EVF330**
5	straight		**EVF773**	**EVF331**
1	angled	2	**EVF774**	**EVF332**
2	angled		**EVF775**	**EVF333**
5	angled		**EVF776**	**EVF334**
Mobile machines, M12 to 2x M8				
0.12	straight	4	**EVM122**	**EVM064**
Mobile machines, M12				
0.2	straight	–	**EVM123**	**EVM062**

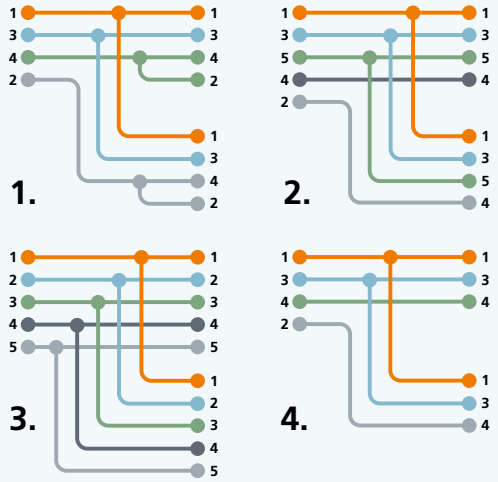
A solution for every conceivable application

Two sensors, one input? Y-cables make this possible. In machine tools, the food industry and mobile machines, information from two sensors is bundled into one port. This reduces the number of required inputs and saves space.

Thanks to their high resistance to shock and vibration, combined with IP65, IP67, IP68 and IP69 protection ratings, Y-cables are also ideal for demanding applications. The proven ecolink technology makes error-free connection child's play.

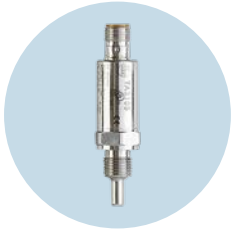
Various wiring options

For maximum flexibility in every application, our Y-cables are available with different wiring options:

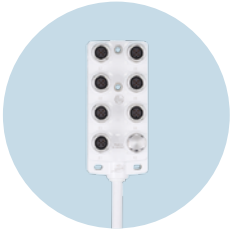


1. Merging two sensors (digital and/or analogue) into one port
2. Merging two digital sensors into one port
3. 1-to-1 wiring, e.g. for OR queries
4. Merging two digital sensors with M8 connectors into one M12 port

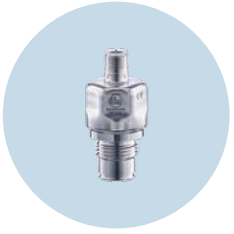
BEST FRIENDS



Temperature transmitter
High accuracy and particularly good response dynamics



Splitter box
With 8 ports and ecolink Fast Connect technology



PL15 pressure transmitter
Compact design for mobile and industrial applications

For further technical details, please visit: ifm.com/fs/EVCC58

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Protected signal transmission

Screened ecolink M12 cables for machine tools

- Resistant to oils and coolants
- Protected against electromagnetic interference
- Accurate and tight mounting by hand
- Permanently secured against loosening caused by vibration



IP69K

ifm – close to you!

Description	Connector		Connector		Connector		Connector/socket		Connector/socket	
	4 pins		5 pins		5 pins		4 pins		5 pins	
	Screened		Screened		Screen connected to the housing		Screen connected to the housing on both sides		Screen connected to the housing on both sides	
	Straight	Angled	Straight	Angled	Straight	Angled	Straight/ straight	Angled/ angled	Straight/ straight	Angled/ angled
2 m	**EVCB34**	**EVCB60**	**EVCB39**	**EVCB65**	**EVCB44**	**EVCB70**	**EVCB49**	**EVCB75**	**EVCB55**	**EVCB82**
5 m	**EVCB35**	**EVCB61**	**EVCB40**	**EVCB66**	**EVCB45**	**EVCB71**	**EVCB50**	**EVCB76**	**EVCB56**	**EVCB83**
10 m	**EVCB36**	**EVCB62**	**EVCB41**	**EVCB67**	**EVCB46**	**EVCB72**	**EVCB51**	**EVCB77**	**EVCB57**	**EVCB84**
15 m	**EVCB37**	**EVCB63**	**EVCB42**	**EVCB68**	**EVCB47**	**EVCB73**	**EVCB52**	**EVCB78**	**EVCB58**	**EVCB85**
25 m	**EVCB38**	**EVCB64**	**EVCB43**	**EVCB69**	**EVCB48**	**EVCB74**	**EVCB53**	**EVCB79**	**EVCB59**	**EVCB86**

More versions available at ifm.com.

Protecting sensitive signals

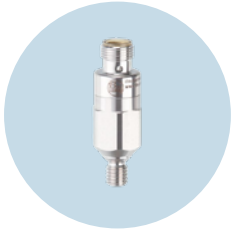
In industrial production facilities, screened connection cables are indispensable for the transmission of analogue sensor signals, as these are sensitive to electromagnetic interference. Sources of interference such as machines and frequency converters can cause signal noise or distortion, which can falsify measured data. Screening protects the signals from such influences, ensuring precise data transmission. This is essential to ensure controller accuracy, production quality and operational safety.

What makes ecolink special

ecolink is a connector solution developed by ifm that stands out for its excellent reliability and durability. Thanks to its sophisticated design, the seal remains reliable over time, even with toolless mounting. A mechanical end stop protects against over-tightening and, together with the integral O-ring, provides for optimum sealing. What is more, a vibration protection with saw-tooth contour ensures that the nut remains securely fixed even under shock and vibration loads. ecolink stands for quality and safety in demanding industrial applications and is compatible with industrial M8 and M12 connections.

Technical data		
Operating voltage	[V AC / V DC]	< 50 / < 60
Total current rating	[A]	4
Core cross-section	[mm²]	0.34
Ambient temperature	[°C]	-25…90
Moulded body material Coupling nut Cable		TPU nickel-plated brass PUR
Protection rating		IP67, IP68, IP69K

BEST FRIENDS



VSA acceleration sensor
Robust vibration sensor with high protection rating



Vibration monitor
Intuitive switch point setting via setting rings



IO-Link converter
Conversion between analogue and IO-Link signals

For further technical details, please visit: ifm.com/fs/EVCB34

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Protected from radiation and moisture

Screened ecolink M12 cables for wet areas

- Resistant to cleaning agents used in the food and beverage industry
- Protected against electromagnetic interference
- Accurate and tight mounting by hand
- Permanently secured against loosening caused by vibration



IP69K

ifm – close to you!

Description	Straight socket		Straight socket		Straight socket		Connector/socket		Connector/socket	
	4 pins		5 pins		5 pins		4 pins		5 pins	
	Screened		Screened		Screen connected to the housing		Screen connected to the housing on both sides		Screen connected to the housing on both sides	
	Straight	Angled	Straight	Angled	Straight	Angled	Straight/ straight	Angled/ angled	Straight/ straight	Angled/ angled
2 m	**EVF381**	**EVF385**	**EVF389**	**EVF393**	**EVF405**	**EVF409**	**EVF700**	**EVF714**	**EVF705**	**EVF719**
5 m	**EVF382**	**EVF386**	**EVF390**	**EVF394**	**EVF406**	**EVF410**	**EVF701**	**EVF715**	**EVF706**	**EVF720**
10 m	**EVF383**	**EVF387**	**EVF391**	**EVF395**	**EVF407**	**EVF411**	**EVF702**	**EVF716**	**EVF707**	**EVF721**
15 m	**EVF416**	**EVF711**	**EVF710**	**EVF712**	**EVF699**	**EVF713**	**EVF703**	**EVF717**	**EVF708**	**EVF722**
25 m	**EVF384**	**EVF388**	**EVF392**	**EVF396**	**EVF408**	**EVF412**	**EVF704**	**EVF718**	**EVF709**	**EVF723**

More versions available at ifm.com

Protecting sensitive signals

In food and beverage production facilities, screened connection cables are indispensable for the transmission of analogue sensor signals, as these are sensitive to electromagnetic interference. Sources of interference such as machines and frequency converters can cause signal noise or distortion, which can falsify measured data. Screening protects the signals from such influences, ensuring precise data transmission. This is essential to ensure controller accuracy, production quality and operational safety.

What makes ecolink special

ecolink is a connector solution developed by ifm that stands out for its excellent reliability and durability. Thanks to its sophisticated design, the seal remains reliable over time, even with toolless mounting. A mechanical end stop protects against over-tightening and, together with the integral O-ring, provides for optimum sealing. What is more, a vibration protection with saw-tooth contour ensures that the nut remains securely fixed even under shock and vibration loads. ecolink stands for quality and safety in demanding industrial applications and is compatible with industrial M8 and M12 connections.

Technical data		
Operating voltage	[V AC / V DC]	< 50 / < 60
Total current rating	[A]	4
Core cross-section	[mm²]	0.34
Ambient temperature	[°C]	-25…100
Moulded body material Coupling nut Cable		PP stainless steel 1.4404 MPPE
Protection rating		IP67, IP68, IP69K

BEST FRIENDS



Vibration transmitter
Permanent monitoring of the overall vibration level



VSA acceleration sensor
Robust vibration sensor with high protection rating



IO-Link converter
Analogue converter especially for the food industry

For further technical details, please visit: ifm.com/fs/EVF381

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No more screws. Just plug it in.

Passive splitter with ecolink Fast Connect technology

- Secure connection via simple plug-in
- Tool-free, ultra-fast and error-free installation
- High protection against shock and vibration
- IP69 – ideal for wet areas and the food industry



IP69

FAST CONNECT

ifm – close to you!

Connection cable	8x 1-signal ports	8x 1-signal ports + LEDs	8x 2-signal ports	8x 2-signal ports + LEDs
5 m	**EBF018**	**EBF022**	**EBF026**	**EBF030**
10 m	**EBF019**	**EBF023**	**EBF027**	**EBF031**
15 m	**EBF020**	**EBF024**	**EBF028**	**EBF032**
20 m	–	–	**EBF029**	**EBF033**
25 m	**EBF021**	**EBF025**	–	–

Operating principle

Passive splitter boxes with M12 connectors are robust, decentralised interfaces for connecting multiple sensors and actuators to a central controller in industrial automation technology. They do not have their own electronics; they transmit signals and power purely mechanically and electrically. Thanks to their compact design and standardised M12 connectors, they enable fast, error-free installation directly on the machine or system.

New: ecolink Fast Connect technology

The new ecolink Fast Connect technology makes installation particularly quick and easy: Instead of screwing on the coupling nut, which is time-consuming, simply press the plug onto the module. This creates immediately a secure, tight and vibration-resistant connection, with no need for additional installation work. This saves valuable time and increases process reliability. It is, of course, compatible with all M12 connectors that comply with the IEC 61076-2-101 standard. The connection is released simply by turning the coupling nut.

Applications

Typical areas of application in the food and beverage industry include production and filling lines, conveyor systems, as well as processing and packaging machinery. Thanks to their IP69 protection rating, the devices are resistant to high-pressure cleaning with hot water, as well as aggressive cleaning agents and disinfectants. The housing is made of a food-grade material, allowing it to be used directly in hygiene-sensitive areas.

Technical data		
Operating voltage with LED without LED		 < 30 V DC < 50 V AC / < 60 V DC
Current rating per port	[A]	4
Material Housing Socket Seal Cable		 polyamide stainless steel EPDM MPPE
Ambient temperature	[°C]	-25...80
Protection rating		IP69

BEST FRIENDS



EVF connection cable
For wet areas and hygienic applications



Stainless steel cap
Cover for unused ports



Y splitter
For two sensors on one M12 connection

For further technical details, please visit: ifm.com/fs/EBF018

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Turning the dream of clockwork into reality

How the IIoT can help you achieve a perfectly synchronised supply chain

Reference 57260, Aeternitas Mega 4, Calibre 89. If this name gets you excited, then you are definitely someone who is fascinated by the art of watchmaking. And that is totally understandable. It really is incredible to see how countless complications – as a horologist calls the different functions of a watch – can be implemented in such a small space. It's all down to precise interaction of cogs, springs, levers and shafts. Of course, a work of art like this doesn't come about overnight.
It took around eight years for the 2,826 components of the Reference 57260 to be conceived, developed, produced and assembled, resulting in no less than 31 hands that provide 57 different functions. Sorry, we mean complications.

Complicated? It doesn't have to be that way.

The issue of time (and unfortunately sometimes also the issue of complications) plays a crucial role in supply chain management. Every unused or wasted unit of time costs money. Efficiency is to a supply chain manager what perfection is to a watchmaker. And they are essentially one and the same thing. To achieve maximum efficiency, all the units involved need to engage perfectly with one another, like clockwork, at all times. That is the only way to deliver the best possible results across all functions – ideally without any complications getting in the way. It sounds complicated but it's not really. At least not if you look for experienced supply chain specialists to perform the task, just like a watchmaker. They have perfected the craft of composing and synchronising all the cogs in the supply chain over many decades.

The first bit of good news is that you've already found these experts. The second bit of good news is that our seamless combination of sensors and software can turn your dream of perfectly clean, well-oiled and pleasantly whirring clockwork into a reality much more quickly than the example we talked about earlier.

Bringing two worlds together: GIB SCX meets Industry 4.0

How does it work? Very easy: We bring the production and IT levels closer together, ideally using existing frameworks. No matter whether we are talking about machine maintenance requirements, production capacity or intralogistic material flows: in Industry 4.0 they are all recorded using sensors, forwarded to the IT level and converted into readable information, for example using the moneo IIoT software. Our native "Shop Floor Integration" interface sends the information to SAP in real time. There, thanks to our "GIB SCX" supply chain solution, which also has native SAP integration and certification, all of the operational and strategic units involved access the exact same standardised data. This creates transparency and ensures that all subprocesses are perfectly synchronised. This means that everyone from purchasing to shipping can respond very quickly to even unscheduled maintenance requirements or spur-of-the-moment large orders. Everything is integrated and coordinated.

One cog engages with the other. Complex operations that were previously carried out manually run automatically in the background. Like the delicate work of art behind a clock face. An onlooker only sees the information displayed. But they know that the clockwork is running.

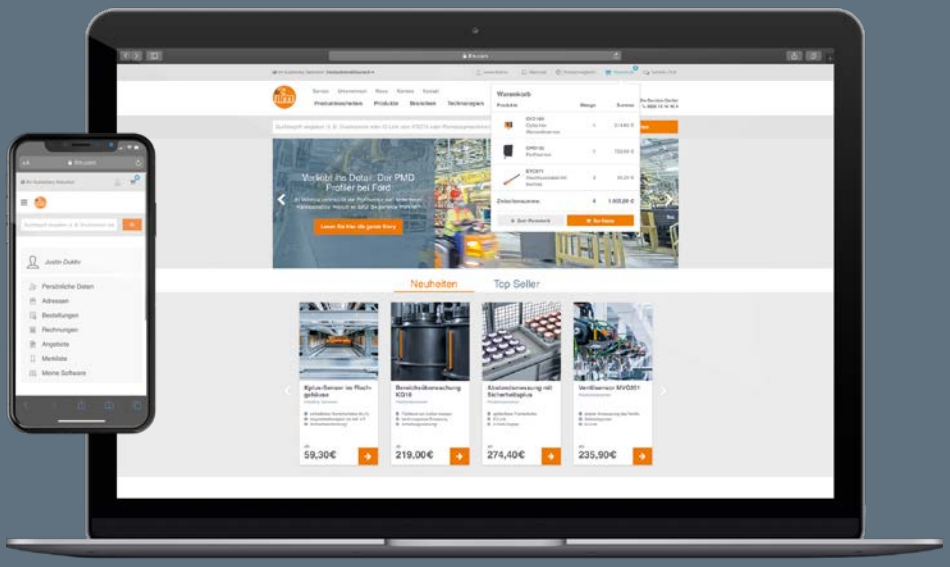
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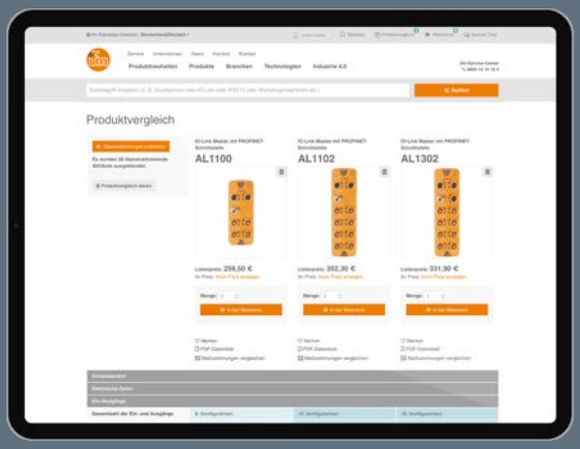
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Products, accessories and interesting facts

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