



Top product features!

- Inductive sensors with the longest sensing ranges in the market
- Sensing technology provides same sensing range for all target materials
- Industry standard M12, M18 and M30 diameter housings fit a variety of industrial automation applications
- Wide temperature range for application flexibility
- Robust metal housings are tested to withstand harsh environments and are rated IP 68/69K

Sensors with extended sensing ranges detect all metals – set new price/performance benchmark

NEW! ifm's new line of inductive proximity sensors offers an ideal combination of features, performance and value. The IFS, IGS and IIS Series new technology sensors have extended sensing ranges that enable the sensor to be mounted farther away from a target. This prevents mechanical damage to the sensor from physical impact. The IIS Series has up to 30 mm range, the longest sensing range on the market today.

K factor 1 sensing technology

Standard proximity sensors have correction factors for sensing ranges depending on the target material. For example, the range for an aluminum target compared to a mild steel target is reduced by 60%. The K=1 technology sensors have a correction factor of one for all metals. The ifm "S" Series inductive sensors provide an equal range for aluminum and mild steel targets.

Designed for reliable sensing

These sensors resist shock, vibration and electrical noise. They are rated IP68/IP69K against water ingress and resist oils and coolants used in harsh applications.

They feature a high switching frequency and reliably sense metal targets in high speed applications. Moreover, they incorporate a technology that allows them to ignore magnetic fields that can cause false triggers. With a wide temperature range of -40 to 185 °F, the Series "S" inductive sensors can be applied in many applications.



High performance and a low price point, ifm's IFS, IGS and IIS Series inductive sensors can be used as a plant standard—not just a solution for harsh applications.

Company	IO-Link	Position Sensors		Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Motion Control	Vision Sensors
	IO-Link	Inductive	Capacitive					Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



Product + accessory selector

Type	Dimensions (mm)	Sensing Range	No. of Wires	Output Function	Supply Voltage (V DC)	Switching Frequency (Hz)	Max Load Current (mA)	Electrical Connection	Part No.	List Price (1-pc.)
	M8 / L = 40	3 mm flush	3	PNP, N.O.	10...30	2000	100	M8 Pico DC	IES200	\$51.00
	M8 / L = 40	6 mm nonflush	3	PNP, N.O.	10...30	2000	100	M8 Pico DC	IES201	\$51.00
	M12 / L = 45	4 mm flush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IFS297	\$48.00
	M12 / L = 45	8 mm nonflush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IFS298	\$48.00
	M12 / L = 45	10 mm nonflush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IFS299	\$48.00
	M12 / L = 60	4 mm flush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IFS304	\$48.00
	M12 / L = 60	8 mm nonflush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IFS305	\$48.00
	M12 / L = 60	10 mm nonflush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IFS306	\$48.00
	M18 / L = 45	8 mm flush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IGS287	\$48.00
	M18 / L = 45	12 mm nonflush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IGS288	\$48.00
	M18 / L = 45	15 mm nonflush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IGS289	\$48.00
	M18 / L = 60	8 mm flush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IGS290	\$48.00
	M18 / L = 60	12 mm nonflush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IGS291	\$48.00
	M18 / L = 60	15 mm nonflush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IGS292	\$48.00
	M30 / L = 45	15 mm flush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IIS281	\$60.00
	M30 / L = 60	15 mm flush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IIS282	\$60.00
	M30 / L = 60	22 mm nonflush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IIS283	\$60.00
	M30 / L = 60	30 mm nonflush	3	PNP, N.O.	10...30	2000	100	M12 Micro DC	IIS284	\$60.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M8 Pico DC (3-pin) 2 m, PUR	EVC141	\$14.00
	M8 Pico DC (3-pin) 5 m, PUR	EVC142	\$17.00
	M8 Pico DC (3-pin) 2 m, PUR	EVC144	\$14.00
	M8 Pico DC (3-pin) 5 m, PUR	EVC145	\$17.00

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$15.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$15.00

Technical Specs

Protection	IP 68, IP 69K
Operating temperature	-40...185 °F (-40...85 °C)
Leakage current	< 20 mA
Housing material	Housing: 316 stainless steel Active face: LCP



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- Place orders, tech support**
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- Visit our product catalog**
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Easy ordering via eShop

Safety Technology	Process Sensors	Industrial Networks	ID Systems	Machine Condition	Power Supplies	Wiring Technology
Safety products	Pressure	AS-i network	RF identification systems	Diagnostic systems	Power supplies	Cordset solutions
144 - 155	156 - 175	226 - 239	252 - 253	254 - 259	260 - 263	264 - 277



Top product features!

- *Stainless steel housing and sensor face withstand physical damage in industrial automation applications*
- *Sensor design dramatically extends life-in-application by a factor of 15 compared to plastic face sensors*
- *Extended sensing ranges increase distance between the sensor and target which increases uptime*
- *Permanent laser-etched part numbers will not wear off over time*
- *360° ring LED for status indication*

Metal face technology design dramatically improves life-in-application and increases production uptime



In industrial automation applications, plastic sensors can fail from liquid ingress, damage from target impact, and overall wear from high shock and vibration.

ifm's non-contact, zero-leak, all-metal sensors are so robust that they may outlast the life of your machines! Our highly durable, stainless steel sensors are completely sealed against ingress and carry protection ratings of IP67, IP68 and IP69K.

ifm metal face sensors offer reliable performance and durability in tough industrial

Metal face technology can dramatically extend life-in-application for the sensor.

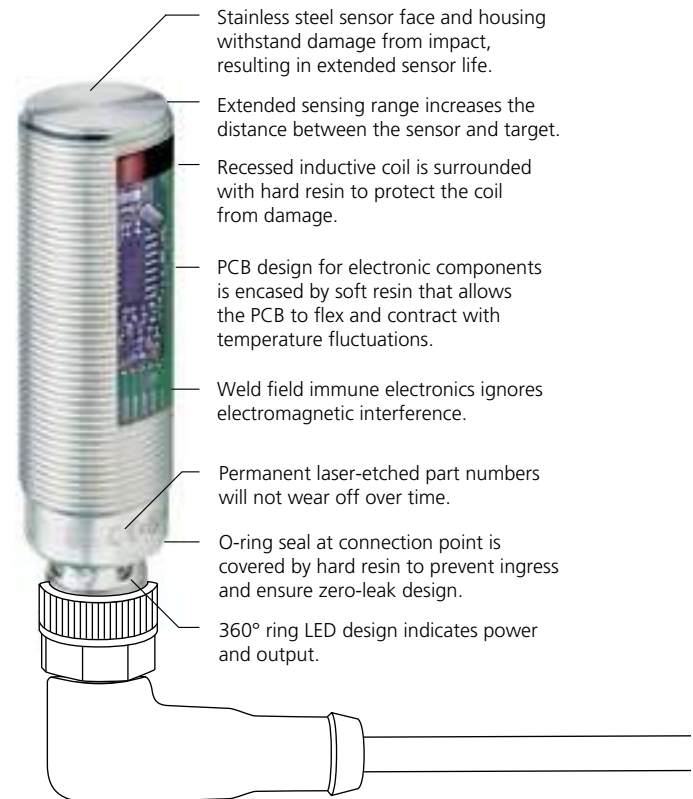
applications. Stainless steel construction extends the sensor's life-in-application by a factor of 15 compared to teflon or plastic face sensors. ifm metal face sensors increase plant uptime, and its price point is the best value in the market.



The stainless steel sensors are subjected to a variety of tests that insure reliable performance in application.

- Stainless steel sensor face and housing withstand damage from machining process and moisture ingress.
- Sensor design extends life-in-application by a factor of 15.
- Extended sensing range increases the distance between the sensor and the target.

Can be used in oils and coolants



Company	IO-Link		Position Sensors				Motion Control		Vision Sensors	
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection	
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143	



Product + accessory selector

Type	Dimensions Flush (mm)	Sensing Range	No. Wires	Output Function	Supply Voltage (V DC)	Switching Frequency (Hz)	Max Load Current (mA)	Electrical Connection	Part No.	List Price (1-pc.)
	M8 / L = 50	2 mm flush	3	PNP, N.O.	10...36	100	100	M8 Pico DC	IEC201	\$66.00
	M8 / L = 50	2 mm flush	3	PNP, N.O.	10...36	100	100	M8 Pico DC	IEC202	\$66.00
	M8 / L = 60	2 mm flush	3	PNP, N.O.	10...36	100	100	M8 Pico DC	IEC200	\$66.00
	M12 / L = 45	4 mm flush	3	PNP, N.O.	10...30	100	100	M12 Micro DC	IFC275	\$64.00
	M12 / L = 60	3 mm flush	3	PNP, N.O.	10...36	100	100	M12 Micro DC	IFC258	\$64.00
	M12 / L = 60	3 mm flush	3	NPN, N.O.	10...36	100	100	M12 Micro DC	IFC266	\$64.00
	M12 / L = 70	6 mm nonflush	3	PNP, N.O.	10...36	500	100	M12 Micro DC	IFT245	\$71.00
	M12 / L = 70	6 mm nonflush	3	NPN, N.O.	10...36	500	100	M12 Micro DC	IFT246	\$71.00
	M18 / L = 45	8 mm flush	3	PNP, N.O.	10...30	100	100	M12 Micro DC	IGC258	\$66.00
	M18 / L = 70	5 mm flush	3	PNP, N.O.	10...36	100	100	M12 Micro DC	IGC248	\$66.00
	M18 / L = 70	5 mm flush	3	NPN, N.O.	10...36	100	100	M12 Micro DC	IGC252	\$66.00
	M18 / L = 70	12 mm nonflush	3	PNP, N.O.	10...36	500	100	M12 Micro DC	IGT249	\$73.00
	M18 / L = 70	12 mm nonflush	3	NPN, N.O.	10...36	500	100	M12 Micro DC	IGT250	\$73.00
	M30 / L = 50	15 mm flush	3	PNP, N.O.	10...30	50	100	M12 Micro DC	IIC233	\$71.00
	M30 / L = 70	10 mm flush	3	PNP, N.O.	10...36	50	100	M12 Micro DC	IIC224	\$71.00
	M30 / L = 70	10 mm flush	3	NPN, N.O.	10...36	50	100	M12 Micro DC	IIC226	\$71.00
	M30 / L = 70	25 mm nonflush	3	PNP, N.O.	10...36	250	100	M12 Micro DC	IIT231	\$77.00
M30 / L = 70	25 mm nonflush	3	NPN, N.O.	10...36	250	100	M12 Micro DC	IIT232	\$77.00	

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M8 Pico DC (3-pin) 2 m, PUR	EVC141	\$14.00
	M8 Pico DC (3-pin) 5 m, PUR	EVC142	\$17.00
	M8 Pico DC (3-pin) 2 m, PUR	EVC144	\$14.00
	M8 Pico DC (3-pin) 5 m, PUR	EVC145	\$17.00

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$15.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$15.00

Accessories see page 27

Technical Specs

Protection: Part Nos. IEC200, IEC201, IEC202, IFC258, IFC266, IGC248, IGC252, IIC224, IIC226: IP67 / IP68
 Part Nos. IFC275, IFT245, IFT246, IGC258, IGT249, IGT250, IIT231, IIT232: IP68 / IP69K

Operating temp: Part Nos. IEC200, IEC201, IEC202, IFC258, IFC266, IGC248: -13...158 °F (-25...70 °C)
 Part Nos. IFT245, IFT246, IGT249, IGT250, IIT231, IIT232: 32... 212 °F (0... 100 °C)
 Part Nos. IFC275, IGC258, IIC233: -40...185 °F (-40...85 °C)

Leakage current: Negligible

Housing material: Housing: high-grade stainless steel;
 Active face: high-grade stainless steel;
 Lock nuts: high-grade stainless steel;
 Connector housing: TPU
 Connector coupling nut: nickel plated brass

Safety Technology

Process Sensors

Industrial Networks

ID Systems

Machine Condition

Power Supplies

Wiring Technology

Safety products

Pressure

Flow

Level

Temperature

AS-i network

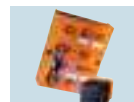
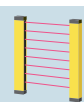
Safety systems

RF identification systems

Diagnostic systems

Power supplies

Cordset solutions



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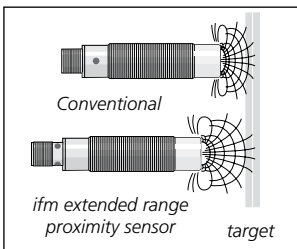
264 - 277



Top product features!

- Extended sensing ranges reduce failure from mechanical damage and increase uptime
- Available in both short and long body lengths
- Wider temperature range of -40...185 °F for greater application flexibility
- Robust industry standard housings are rated IP68 / IP69K and reliably perform in environments with oils and coolants
- Four bright LEDs provide 360-degree visibility for status indication and make troubleshooting in applications easy

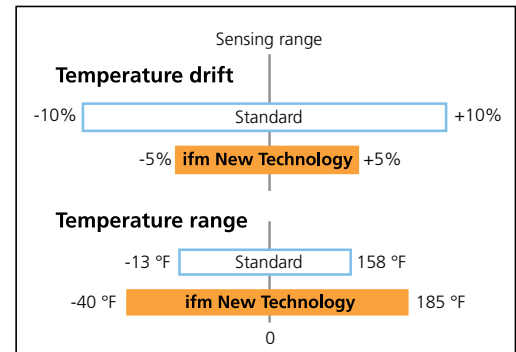
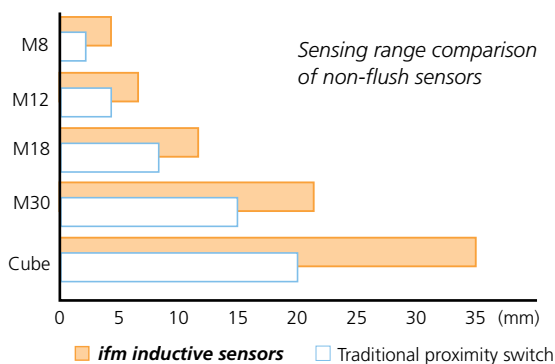
Sensor with extended range reduces failures from mechanical damage



NEW! ifm's new line of inductive sensors offers an ideal combination of features, performance and value. A newly patented design provides less temperature drift over a wider temperature range. This improves sensing range tolerance to $\pm 5\%$.

The sensors resist shock, vibration and electrical noise. They are rated IP68/IP69K against water ingress and resist oils and coolants used in harsh applications.

ifm's new technology sensors incorporate extended sensing ranges that enable the sensor to be mounted farther away from a target. This prevents mechanical damage to the sensor from physical impact.



Many variables affect sensing range such as temperature. ifm's newly patented design provides a sensor with less temperature drift over a wider temperature range. This improves sensing range tolerance to $\pm 5\%$ and enables more reliable detection of metal targets.

Company	IO-Link		Position Sensors				Motion Control		Vision Sensors	
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection	
	1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



Product + accessory selector

Dimensions Short body (mm)	Dimensions Long body (mm)	Sensing Range	No. of Wires	Output Function	Switching Frequency (Hz)	Part No. Short body	Part No. Long body	List Price (1-pc.)
-	M8 / L = 62	2 mm, flush	3	DC PNP, N.O.	1000	-	IE5312	\$49.00
-	M8 / L = 62	4 mm, nonflush	3	DC PNP, N.O.	300	-	IE5288	\$45.00
M12 / L = 45	M12 / L = 60	4 mm, flush	3	DC PNP, N.O.	700	IFS244	IFS240	\$46.00
M12 / L = 45	M12 / L = 60	7 mm, nonflush	3	DC PNP, N.O.	700	IFS245	IFS241	\$46.00
M12 / L = 45	M12 / L = 60	4 mm, flush	3	DC NPN, N.O.	700	IFS246	IFS242	\$46.00
M12 / L = 45	M12 / L = 60	7 mm, nonflush	3	DC NPN, N.O.	700	IFS247	IFS243	\$46.00
M18 / L = 45	M18 / L = 60	8 mm, flush	3	DC PNP, N.O.	400	IGS236	IGS232	\$48.00
M18 / L = 45	M18 / L = 60	12 mm, nonflush	3	DC PNP, N.O.	300	IGS237	IGS233	\$48.00
M18 / L = 45	M18 / L = 60	8 mm, flush	3	DC NPN, N.O.	400	IGS238	IGS234	\$48.00
M18 / L = 45	M18 / L = 60	12 mm, nonflush	3	DC NPN, N.O.	300	IGS239	IGS235	\$48.00
M30 / L = 50	M30 / L = 60	15 mm, flush	3	DC PNP, N.O.	100	IIS230	IIS226	\$58.00
M30 / L = 50	M30 / L = 60	22 mm, nonflush	3	DC PNP, N.O.	100	IIS231	IIS227	\$58.00
M30 / L = 50	M30 / L = 60	15 mm, flush	3	DC NPN, N.O.	100	IIS232	IIS228	\$58.00
M30 / L = 50	M30 / L = 60	22 mm, nonflush	3	DC NPN, N.O.	100	IIS233	IIS229	\$58.00

Note: PNP N.C. and NPN N.C. versions also available, call 800-441-8246.

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	Snap clamp for 8 mm sensor	E11521	\$8.00
	Snap clamp for 12 mm sensor	E11047	\$8.00
	Snap clamp for 18 mm sensor	E11048	\$8.00
	Snap clamp for 30 mm sensor	E11049	\$8.00
	L-bracket for 8 mm sensor	U20304	\$6.00
	L-bracket for 12 mm sensor	U20301	\$6.00
	L-bracket for 18 mm sensor	U20302	\$6.00
	L-bracket for 30 mm sensor	U20303	\$6.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$15.00
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$19.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$15.00
	M12 Micro DC (4-pin) 10 m, PUR	EVC006	\$19.00

Technical Specs

Operating voltage: 10... 30 VDC; except Part Nos. IE5288 and IE5312: 10...36 VDC
 Protection: IP65, IP67, IP68, IP69K; except Part Nos. IE 5288 and IE5312: IP67
 Temperature: -40...185 °F (-40...85 °C); except Part Nos. IE5288 and IE5312: -13...158 °F (-25...70 °C)
 Leakage current: Negligible
 Housing materials: Brass plated with white bronze, PBT, PEI; except Part No. IE5288 brass plated with white bronze, CO-PC, Part No. IE5312 brass plated with white bronze, LCP
 Electrical connection: M12; except Part No. IE5288 200 mA and IE5312 250 mA
 Maximum load current: 100mA

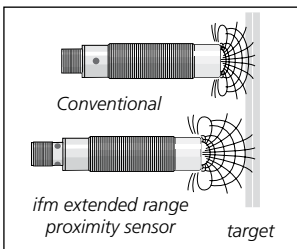
Safety Technology	Process Sensors	Industrial Networks	ID Systems	Machine Condition	Power Supplies	Wiring Technology
Safety products	Pressure	AS-i network	RF identification systems	Diagnostic systems	Power supplies	Cordset solutions
144 - 155	156 - 175	226 - 239	252 - 253	254 - 259	260 - 263	264 - 277
	Flow	Safety systems				
	Level					
	Temperature					



Top product features!

- Extended sensing ranges reduce failure from mechanical damage and increase uptime
- Available in both short and long housing lengths
- Wider temperature range of -40...185 °F for greater application flexibility
- Robust industry standard housings are rated IP68 / IP69K and reliably perform in environments with oils and coolants
- Bright LED provides 360-degree visibility for status indication and make troubleshooting in applications easy

Prewired sensors with extended range reduce failures from mechanical damage



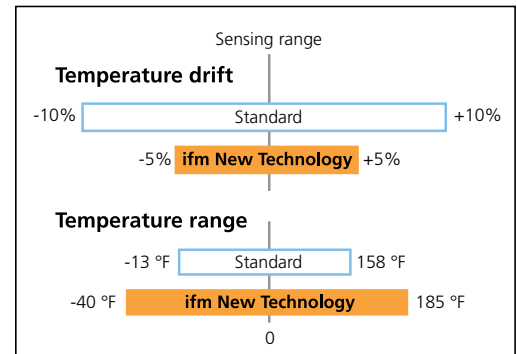
NEW! ifm's new line of prewired inductive sensors offers an ideal combination of features, performance and value. A newly patented design provides less temperature drift over a wider temperature range. This improves sensing range tolerance to $\pm 5\%$.

The sensors resist shock, vibration and electrical noise. They are rated IP68/IP69K against water ingress and resist oils and coolants used in harsh applications.

ifm's new technology sensors incorporate extended sensing ranges that enable the sensor to be mounted farther away from a target. This prevents mechanical damage to the sensor from physical impact.



New bright LED offers excellent visibility of the LED from all directions.



Many variables affect sensing range such as temperature. ifm's newly patented design provides a sensor with less temperature drift over a wider temperature range. This improves sensing range tolerance to $\pm 5\%$ and enables more reliable detection of metal targets.

Company	IO-Link	Position Sensors	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Motion Control	Vision Sensors
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143	



Product + accessory selector

Dimensions Short body (mm)	Dimensions Long body (mm)	Sensing Range	No. of Wires	Output Function	Switching Frequency (Hz)	Part No. Short body	Part No. Long body	List Price (1-pc.)
M12 / L = 40	M12 / L = 60	4 mm, flush	3	DC PNP, N.O.	700	IFS256	IFS252	\$48.00
M12 / L = 40	M12 / L = 60	7 mm, nonflush	3	DC PNP, N.O.	700	IFS257	IFS253	\$48.00
M12 / L = 40	M12 / L = 60	4 mm, flush	3	DC NPN, N.O.	700	IFS258	IFS254	\$48.00
M12 / L = 40	M12 / L = 60	7 mm, nonflush	3	DC NPN, N.O.	700	IFS259	IFS255	\$48.00
M18 / L = 40	M18 / L = 60	8 mm, flush	3	DC PNP, N.O.	400	IGS248	IGS244	\$50.00
M18 / L = 40	M18 / L = 60	12 mm, nonflush	3	DC PNP, N.O.	300	IGS249	IGS245	\$50.00
M18 / L = 40	M18 / L = 60	8 mm, flush	3	DC NPN, N.O.	400	IGS250	IGS246	\$50.00
M18 / L = 40	M18 / L = 60	12 mm, nonflush	3	DC NPN, N.O.	300	IGS251	IGS247	\$50.00
M30 / L = 45	M30 / L = 60	15 mm, flush	3	DC PNP, N.O.	100	IIS242	IIS238	\$60.00
M30 / L = 45	M30 / L = 60	22 mm, nonflush	3	DC PNP, N.O.	100	IIS243	IIS239	\$60.00
M30 / L = 45	M30 / L = 60	15 mm, flush	3	DC NPN, N.O.	100	IIS244	IIS240	\$60.00
M30 / L = 45	M30 / L = 60	22 mm, nonflush	3	DC NPN, N.O.	100	IIS245	IIS241	\$60.00

Note: PNP N.C. and NPN N.C. versions also available, call 800-441-8246

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	Snap clamp for 12 mm sensor	E11047	\$8.00
	Snap clamp for 18 mm sensor	E11048	\$8.00
	Snap clamp for 30 mm sensor	E11049	\$8.00
	L-bracket for 12 mm sensor	U20301	\$6.00
	L-bracket for 18 mm sensor	U20302	\$6.00
	L-bracket for 30 mm sensor	U20303	\$6.00

Technical Specs

Operating voltage: 10... 30 VDC
 Protection: IP65, IP67, IP68, IP69K
 Temperature: -40...185 °F (-40...85 °C)
 Leakage current: Negligible
 Housing materials: Brass plated with white bronze, PBT, PEI
 Electrical connection: 2 meter cable, PUR
 Maximum load current: 100 mA

Simple and comprehensive website

Data sheets, application examples, software downloads, virtual product demos... just one click away.

- Place orders, tech support 800-441-8246
- Visit our product catalog www.ifm.com/us
- Shop for products online Easy ordering via eShop

Safety Technology	Process Sensors	Industrial Networks	ID Systems	Machine Condition	Power Supplies	Wiring Technology				
Safety products	Pressure	Flow	Level	Temperature	AS-i network	Safety systems	RF identification systems	Diagnostic systems	Power supplies	Cordset solutions
144 - 155	156 - 175	176 - 191	192 - 207	208 - 225	226 - 239	240 - 251	252 - 253	254 - 259	260 - 263	264 - 277



Metal forming applications

Top product features!

- *Stainless steel sensor face and housing withstand damage from physical impact in the part loading process in manufacturing cells*
- *High temperature, weld slag resistant coating prevents weld slag from adhering to sensor*
- *Sensor design dramatically extends life-in-application by a factor of 15 compared to Teflon™ and plastic face sensors*
- *Permanent laser-etched part numbers will not wear off over time*

High performance at a good value

ifm's metal face sensors are designed and tested to provide reliable position detection in the toughest welding and metal stamping applications. The stainless steel sensor face and housing withstand damage from physical impact in the part loading process in manufacturing cells. A high temperature weld slag resistant coating prevents weld slag from adhering to the sensor, eliminating abrasive cleaning techniques.

The right combination of price and performance

Priced lower than competing metal-faced sensors, ifm's sensors are an exceptional benchmark for value. High performance, longer life-in-application and a low price point. The ifm metal face sensors can now be used as a plant standard – not just a solution for harsh applications.



Challenge

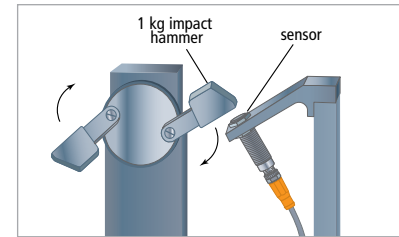
Plastic and teflon sensors life expectancies are reduced from weld-slag build-up and physical impact from the part-loading process in manufacturing cells.



Solution

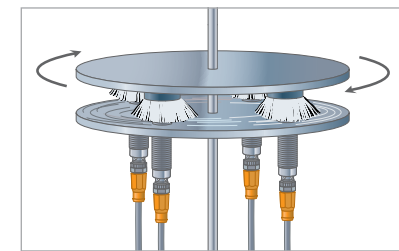
The ifm metal forming sensor's stainless steel construction and high temperature weld-slag resistant coating withstands damage from impact and weld slag build-up.

Designed and tested to increase life-in-application



ifm Impact Test

Sensors are hit twice every second by a 1 kg hammer. This represents the force of a large part being loaded in a cell. ifm's sensors can withstand 500,000 impacts compared to plastic face sensors that failed after 32,000 impacts.



ifm Abrasion Test

Sensors are scoured with wire wheel brushes for 1 million passes to simulate abrasive cleaning processes.

Company	IO-Link	Position Sensors					Motion Control	Vision Sensors		
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection	
	1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



Product + accessory selector

Dimensions (mm)	Sensing Range	No. of Wires	Output Function	Supply Voltage (V DC)	Switching Frequency (Hz)	Max Load Current (mA)	Sensor Termination	Part No.	List Price (1-pc.)
M8 / L = 60	2 mm flush	3	PNP, N.O.	10...36	100	100	M12 Micro DC	IER200	\$69.00
M8 / L = 60	2 mm flush	3	NPN, N.O.	10...36	100	100	M12 Micro DC	IER201	\$69.00
M12 / L = 45	4 mm flush	3	PNP, N.O.	10...30	2	100	M12 Micro DC	IFR207	\$65.00
M12 / L = 60	4 mm flush	3	NPN, N.O.	10...36	2	100	M12 Micro DC	IFR202	\$65.00
M18 / L = 45	8 mm flush	3	PNP, N.O.	10...30	2	100	M12 Micro DC	IGR207	\$67.00
M18 / L = 70	6 mm flush	3	NPN, N.O.	10...36	2	100	M12 Micro DC	IGR202	\$67.00
M30 / L = 45	15 mm flush	3	PNP, N.O.	10...30	2	100	M12 Micro DC	IIR207	\$70.00
M30 / L = 70	12 mm flush	3	NPN, N.O.	10...36	2	100	M12 Micro DC	IIR202	\$72.00

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	L-bracket for 8 mm sensor	U20304	\$6.00
	L-bracket for 12 mm sensor	U20301	\$6.00
	L-bracket for 18 mm sensor	U20302	\$6.00
	L-bracket for 30 mm sensor	U20303	\$6.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVW001	\$17.00
	M12 Micro DC (4-pin) 5 m, PUR	EVW002	\$22.00
	M12 Micro DC (4-pin) 10 m, PUR	EVW003	\$27.00
	M12 Micro DC (4-pin) 2 m, PUR	EVW004	\$17.00
	M12 Micro DC (4-pin) 5 m, PUR	EVW005	\$22.00
	M12 Micro DC (4-pin) 10 m, PUR	EVW006	\$27.00

ifm cordsets are designed and tested for metal forming applications. Cable material is rated for high temperatures and coupling nuts feature a weld-slag resistant coating.

▶ Can't find the right sensor for your application, call 800-441-8246 or visit www.ifm.com/us

Technical Specs

Protection: IP67; except IFR207, IGR207, IIR207: IP68 / IP69K
 Operating temperature: 32...185 °F (0...85 °C); except IFR207, IGR207, IIR207: -40...185 °F (-40... 85 °C)
 Leakage current: Negligible
 Housing material: Housing: high-grade stainless steel, weld-slag resistant coating
 Active face: high-grade stainless steel, weld-slag resistant coating
 Connector: PA
 Lock nuts: high-grade stainless steel, weld-slag resistant coating



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Safety Technology	Process Sensors				Industrial Networks	ID Systems	Machine Condition	Power Supplies	Wiring Technology	
Safety products	Pressure	Flow	Level	Temperature	AS-i network	Safety systems	RF identification systems	Diagnostic systems	Power supplies	Cordset solutions
144 - 155	156 - 175	176 - 191	192 - 207	208 - 225	226 - 239	240 - 251	252 - 253	254 - 259	260 - 263	264 - 277



Metal forming applications

Top product features!

- *Stainless steel sensor face and housing withstand damage from physical impact in the part loading process in manufacturing cells*
- *High temperature, weld slag resistant coating prevents weld slag from adhering to sensor*
- *2-wire DC sensor with PNP or NPN programmable output*
- *Flexible wiring options directly replace 3-wire PNP and 3-wire NPN sensors*

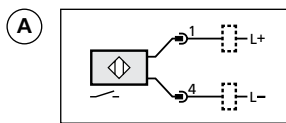
Withstands damage from physical impact in manufacturing cells



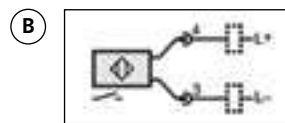
ifm's metal face sensors are designed and tested to provide reliable position detection in the toughest welding and metal stamping applications. The stainless steel sensor face and housing withstand damage from physical impact in the part loading process in manufacturing cells. A high temperature weld slag resistant coating prevents weld slag from adhering to the sensor, eliminating abrasive cleaning techniques.

Directly replaces 3-wire sensors

ifm has designed sensors to provide flexible wiring solutions for our customers. These 2-wire sensors can directly replace 3-wire sensors

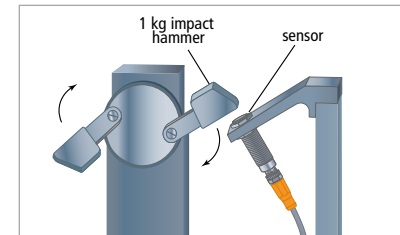


2-wire to directly replace 3-wire PNP



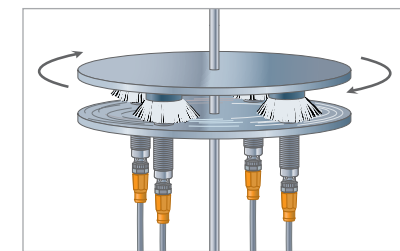
2-wire to directly replace 3-wire NPN

Designed and tested to increase life-in-application



ifm Impact Test

Sensors are hit twice every second by a 1 kg hammer. This represents the force of a large part being loaded in a cell. ifm's sensors can withstand 500,000 impacts compared to plastic face sensors that failed after 32,000 impacts.



ifm Abrasion Test

Sensors are scoured with wire wheel brushes for 1 million passes to simulate abrasive cleaning processes.

Company	IO-Link	Position Sensors		Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Motion Control	Vision Sensors
	IO-Link	Inductive	Capacitive					Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



Product + accessory selector

Dimensions (mm)	Sensing Range	No. of Wires	Output Function	Supply Voltage (V DC)	Switching Frequency (Hz)	Max Load Current (mA)	Electrical Connection	Part No.	List Price (1-pc.)
(A) Uses Pins 1 and 4 • Can directly replace 3-wire PNP sensors									
M8 / L = 45	2 mm flush	2	PNP/NPN, N.O.	10...36	150	100	M12 0.3 m pigtail	IER203	\$66.00
M12 / L = 40	4 mm flush	2	PNP/NPN, N.O.	10...36	75	100	M12 0.3 m pigtail	IFR203	\$66.00
M18 / L = 40	6 mm flush	2	PNP/NPN, N.O.	10...36	50	100	M12 0.3 m pigtail	IGR203	\$71.00
M30 / L = 40	12 mm flush	2	PNP/NPN, N.O.	10...36	25	100	M12 0.3 m pigtail	IIR203	\$82.00
(B) Uses Pins 3 and 4 • Can directly replace 3-wire NPN sensors									
M8 / L = 45	2 mm flush	2	PNP/NPN, N.O.	10...36	150	100	M12 0.3 m pigtail	IER206	\$66.00
M12 / L = 40	4 mm flush	2	PNP/NPN, N.O.	10...36	75	100	M12 0.3 m pigtail	IFR206	\$66.00
M18 / L = 40	6 mm flush	2	PNP/NPN, N.O.	10...36	50	100	M12 0.3 m pigtail	IGR206	\$71.00
M30 / L = 40	12 mm flush	2	PNP/NPN, N.O.	10...36	25	100	M12 0.3 m pigtail	IIR206	\$82.00

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	L-bracket for 8 mm sensor	U20304	\$6.00
	L-bracket for 12 mm sensor	U20301	\$6.00
	L-bracket for 18 mm sensor	U20302	\$6.00
	L-bracket for 30 mm sensor	U20303	\$6.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVW001	\$17.00
	M12 Micro DC (4-pin) 5 m, PUR	EVW002	\$22.00
	M12 Micro DC (4-pin) 10 m, PUR	EVW003	\$27.00
	M12 Micro DC (4-pin) 2 m, PUR	EVW004	\$17.00
	M12 Micro DC (4-pin) 5 m, PUR	EVW005	\$22.00
	M12 Micro DC (4-pin) 10 m, PUR	EVW006	\$27.00

ifm cordsets are designed and tested for metal forming applications. Cable material is rated for high temperatures and coupling nuts feature a weld-slag resistant coating.

Can't find the right sensor for your application, call 800-441-8246 or visit www.ifm.com/us

Technical Specs

Protection: IP67
 Operating temperature: 32...185 °F (0...85 °C)
 Leakage current: < 0.75 mA: Part Nos. IER203, IER206
 < 0.6 mA: Part Nos. IFR203, IFR206, IGR203, IGR206, IIR203, IIR206
 Housing material: Housing: high-grade stainless steel, weld-slag resistant coating
 Active face: high-grade stainless steel, weld-slag resistant coating
 Connector: PA
 Lock nuts: high-grade stainless steel, weld-slag resistant coating

R&D that delivers solutions

ifm R&D engineers design products that reduce machine downtime, increase productivity and simplify installation.

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Safety Technology	Process Sensors	Industrial Networks	ID Systems	Machine Condition	Power Supplies	Wiring Technology
Safety products	Pressure	AS-i network	RF identification systems	Diagnostic systems	Power supplies	Cordset solutions
144 - 155	156 - 175	226 - 239	252 - 253	254 - 259	260 - 263	264 - 277
	Flow	Safety systems				
	Level					
	Temperature					



Top product features!

- Inductive sensor with IO-Link precisely monitors target position with high linearity and repeatability
- Digital transmission of target distance eliminates analog signal drift and noise
- Additional features such as plug-and-play replacement, real-time recipe changes and diagnostic feedback
- Output function and polarity selectable via IO-Link
- Wider temperature range of -40...185 °F for greater application flexibility
- Rated IP 68 / IP 69K and reliably perform in oils and coolants environments

Precise position sensing on machines

NEW! ifm's new inductive sensors with IO-Link incorporate several functions in one unit. They can be utilized as switching sensors with an adjustable switch point or target window.

The output signal can be set to normally open or normally closed and PNP or NPN switching. IO-Link also allows output on-delays and off-delays to be programmed. Additionally, these inductive sensors can be applied as a measuring system with the target distance value transmitted digitally via IO-Link.

Highest precision

ifm's IO-Link inductive sensors can precisely detect minute changes in target position. Even spindle runout or the tension of circular or band saw blades is reliably detected.

An alarm can be set if the target leaves the target window or comes too close to the sensing face. All data acquired can be transmitted via IO-Link and recorded.

IO-Link provides the foundation for Industry 4.0 and allows the precise detection of the target with greater accuracy and maximizes overall equipment effectiveness.



Robust industry standard housings, ifm's new inductive sensors detect runout in rotating mechanical systems leading to improved tool life and higher quality manufactured parts.

Company	IO-Link	Position Sensors	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Motion Control	Vision Sensors
	IO-Link	Inductive						Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



Product + accessory selector

Dimensions (mm)	Sensing Range (mm)	No. of Wires	Output Function Can be set via IO-Link	Supply Voltage (V DC)	Switching Frequency (Hz)	Max Load Current (mA)	Electrical Connection	Part No.	List Price (1-pc.)
M12 / L = 60	.375...3.75 flush	3	PNP/NPN, N.O. / N.C.	10...30	600	100	M12 DC	IF6123	\$48.00
M12 / L = 60	0.7...7 nonflush	3	PNP/NPN, N.O. / N.C.	10...30	600	100	M12 DC	IF6124	\$48.00
M18 / L = 60	0.75...7.5 flush	3	PNP/NPN, N.O. / N.C.	10...30	300	100	M12 DC	IG6615	\$48.00
M18 / L = 60	1.3...13 nonflush	3	PNP/NPN, N.O. / N.C.	10...30	300	100	M12 DC	IG6616	\$48.00
M30 / L = 65	1.3...13 flush	3	PNP/NPN, N.O. / N.C.	10...30	100	100	M12 DC	I15973	\$60.00
M30 / L = 65	2.3...23 nonflush	3	PNP/NPN, N.O. / N.C.	10...30	100	100	M12 DC	I15974	\$60.00
Rectangular 40 x 40 mm	2.1...21 flush	3	PNP/NPN, N.O. / N.C.	10...30	100	100	M12 DC	IM5172	\$65.00
	2.6...26 nonflush	3	PNP/NPN, N.O. / N.C.	10...30	100	100	M12 DC	IM5173	\$65.00

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	L-bracket for 12 mm sensor	E10735	\$8.00
	L-bracket for 18 mm sensor	E10736	\$9.00
	L-bracket for 30 mm sensor	E10737	\$9.00
	Snap clamp for 12 mm sensor	E11047	\$8.00
	Snap clamp for 18 mm sensor	E11048	\$8.00
	Snap clamp for 30 mm sensor	E11049	\$8.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$15.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$15.00

Can't find the right sensor for your application, call 800-441-8246 or visit www.ifm.com/us

Technical Specs

Protection: IP 65, IP 66, IP 67, IP 68, IP 69K
 Part Nos. IM5172 and IM5173: IP 67

Operating temperature: -40...185 °F (-40...85 °C)
 Part Nos. IM5172 and IM5173: -13...176 °F (-25...80 °C)

Leakage current: 10 mA

Housing material: Coated brass
 Part Nos. IM5172 and IM5173: PA

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Safety Technology

Process Sensors

Industrial Networks

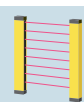
ID Systems

Machine Condition

Power Supplies

Wiring Technology

Safety products



144 - 155

Pressure



156 - 175

Flow



176 - 191

Level



192 - 207

Temperature



208 - 225

AS-i network



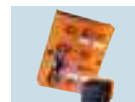
226 - 239

Safety systems



240 - 251

RF identification systems



252 - 253

Diagnostic systems



254 - 259

Power supplies



260 - 263

Cordset solutions



264 - 277



Oils and coolants applications

Top product features!

- *Extended sensing ranges increase distance between the sensor and target which increases uptime*
- *Models with robust 316 stainless steel housings withstand aggressive oils and coolants*
- *Models with chip-resistant ceramic sensing faces*
- *K=1 sensing technology provides same sensing range for all target materials*
- *Industry standard M12 Micro DC connectors*

Robust sensors for oils and coolants



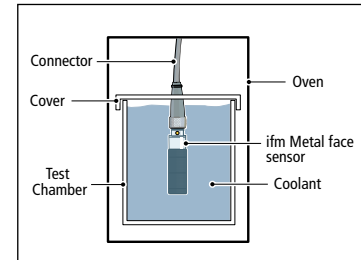
The oils and coolants used in metalworking applications can penetrate into the housing of a sensor resulting in component failure and sensing range fluctuations. Through research and experience, a number of oils and coolants were identified that were used by industry leaders.

ifm's sensors were completely submerged in these oils and coolants at a temperature of 176 °F. The sensor's zero-leak design was verified by measuring the sensing range after prolonged exposure in the chamber. The sensors passed this test with no change in sensing range characteristics.

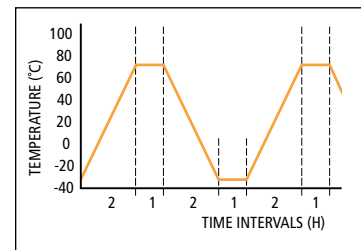
K factor 1 sensing technology

Standard technology proximity sensors have correction factors for sensing ranges depending on the target material. For example, the range for an aluminum target compared to a mild steel target is reduced by 60%. The K=1 technology sensors have a correction factor of one for all metals. Therefore, these sensors have an equal range for aluminum and steel targets.

Tested for oils and coolants



High temperature IP68 coolant test
Sensors are submerged in industrial oils and coolants at 176 °F. The sensors successfully pass the test and maintain sensing characteristics.



1000-hour cycle test
Sensors are cycled between -30 °C and 70°C to apply stress on the electronic and mechanical components and to check overall design integrity.

Company	IO-Link		Position Sensors				Motion Control		Vision Sensors	
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection	
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143	



Product + accessory selector

Dimensions (mm)	Sensing Range	No. of Wires	Output Function	Supply Voltage (V DC)	Switching Frequency (Hz)	Max Load Current (mA)	Electrical Connection	Part No.	List Price (1-pc.)
Plastic face									
M12 / L = 45	4 mm flush	3	PNP, N.O.	10...36	700	100	M12 Micro DC	IFC204	\$95.00
M12 / L = 60	4 mm flush	3	PNP, N.O.	10...36	700	200	M12 Micro DC	IF5775	\$95.00
M12 / L = 50	7 mm nonflush	3	PNP, N.O.	10...36	700	100	M12 Micro DC	IFC205	\$95.00
M12 / L = 60	7 mm nonflush	3	PNP, N.O.	10...36	700	200	M12 Micro DC	IF5811	\$95.00
M18 / L = 46	8 mm flush	3	PNP, N.O.	10...36	400	100	M12 Micro DC	IGC204	\$96.00
M18 / L = 72	8 mm flush	3	PNP, N.O.	10...36	500	250	M12 Micro DC	IG5788	\$96.00
M18 / L = 51	12 mm nonflush	3	PNP, N.O.	10...36	300	100	M12 Micro DC	IGC205	\$96.00
M18 / L = 70	12 mm nonflush	2/3	PNP/NPN, N.O.	10...36	300	100	M12 Micro DC	IGC213	\$96.00
M18 / L = 72	12 mm nonflush	3	PNP, N.O.	10...36	300	250	M12 Micro DC	IG5841	\$96.00
M30 / L = 50	15 mm flush	3	PNP, N.O.	10...36	100	100	M12 Micro DC	IIC200	\$99.00
M30 / L = 50	22 mm nonflush	3	PNP, N.O.	10...36	100	100	M12 Micro DC	IIC201	\$99.00
Ceramic face									
M12 / L = 45	4 mm flush	3	PNP, N.O.	10...36	700	100	M12 Micro DC	IFC206	\$99.00
M12 / L = 70	4 mm flush	2/3	PNP/NPN, N.O.	10...36	500	100	M12 Micro DC	IFC210	\$105.00
M18 / L = 46	8 mm flush	3	PNP, N.O.	10...36	400	100	M12 Micro DC	IGC206	\$102.00
M18 / L = 70	8 mm flush	2/3	PNP/NPN, N.O.	10...36	400	100	M12 Micro DC	IGC210	\$107.00
Ferrous only sensors									
M12 / L = 60	2.5 mm flush	3	PNP, N.O.	10...36	100	100	M12 Micro DC	IFC263	\$69.00
M12 / L = 60	2.5 mm flush	3	PNP, N.C.	10...36	100	100	M12 Micro DC	IFC264	\$69.00
M18 / L = 70	4.5 mm flush	3	PNP, N.O.	10...36	100	100	M12 Micro DC	IGC249	\$71.00
M18 / L = 70	4.5 mm flush	3	PNP, N.C.	10...36	100	100	M12 Micro DC	IGC250	\$71.00

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	Snap clamp for 12 mm sensor	E11047	\$8.00
	Snap clamp for 18 mm sensor	E11048	\$8.00
	Snap clamp for 30 mm sensor	E11049	\$8.00
	Quick-mount sleeve for 12 mm sensor	E11114	\$13.00
	Quick-mount sleeve for 18 mm sensor	E11115	\$14.00
	Quick-mount sleeve for 30 mm sensor	E10808	\$17.00
	L-bracket for 12 mm sensor	U20301	\$6.00
	L-bracket for 18 mm sensor	U20302	\$6.00
	L-bracket for 30 mm sensor	U20303	\$6.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$15.00
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$19.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$15.00
	M12 Micro DC (4-pin) 10 m, PUR	EVC006	\$19.00

Technical Specs

Protection: IP68
 Operating temperature: -13...158 °F (-25...70 °C); -40...185 °F (-40...85 °C): IFS304, IFS306, IGS290, IGS292, IIS282, IIS284
 Housing material: Special coated brass; 316 stainless steel: Part Nos. IGC232, IGC233, IIC218, IIC219; brass: Part No. IFC259
 Active face; LCP: PBT: Part No. IIC219; ceramic: Part Nos. IFC206, IFC210, IGC206, IGC210
 Leakage current: < 0.5 mA: Part Nos. IFC210, IGC210; < 0.9 mA: Part No. IGC213 when used in 2-wire operation

Safety Technology	Process Sensors	Industrial Networks	ID Systems	Machine Condition	Power Supplies	Wiring Technology				
Safety products	Pressure	Flow	Level	Temperature	AS-i network	Safety systems	RF identification systems	Diagnostic systems	Power supplies	Cordset solutions
144 - 155	156 - 175	176 - 191	192 - 207	208 - 225	226 - 239	240 - 251	252 - 253	254 - 259	260 - 263	264 - 277



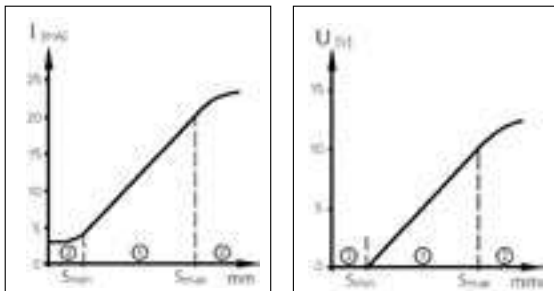
Top product features!

- Analog sensors with precise linear output signals
- 4...20 mA and 0...10 V analog output models in M12, M18 and M30 housings
- Four LEDs provide 360-degree visibility
- Wide temperature range enables sensors to withstand harsh conditions
- Use with ifm's ecolink M12 Micro DC cordsets

Analog sensors

ifm efector's inductive proximity sensor family includes models with analog output. Both 4-20 mA and 0-10 V output versions are available in 12, 18 and 30 mm diameter body styles. The sensors feature a linearity error of $\pm 1\%$ or $\pm 3\%$ depending on the model.

Linearity describes how closely the actual analog output of the proximity sensor mirrors a straight line drawn from the start point of the operating range (s_{min}) to the end point of the operating range (s_{max}).



- ① Operating range – LED on
- ② Warning range – LED flashes

s_{min} = start point of operating range
 s_{max} = end point of operating range

LED Indication

The analog proximity sensor contains a single yellow LED. The LED is "on" when a target is within the specified operating range and the LED flashes when a target is not present or out of range. For example, the 30mm sensor has an operating range of 1mm (s_{min}) to 15mm (s_{max}). If the sensor is <1mm or >15mm from the target, the LED will flash. The LED will be "on" if the target is within the operating range (1mm to 15mm). Note: this example assumes a mild target. Standard material and size/shape correction factors apply to this sensor.

Analog Sensors solve a variety of applications:

Converting linear motion into an analog signal: The distance between the sensor and target can be continuously monitored by an analog input card. Multiple switch points can be programmed if needed.

Sorting product by material: Targets with different material correction factors will have different curves when the output (current or voltage) is plotted versus the sensing distance. If the sensing distance is constant, targets constructed of dissimilar material will give different outputs and can be distinguished.

Sorting product by height: Targets constructed of the same material, but with different heights or thickness, can easily be sorted.

Concentricity monitoring: Analog proximity sensors can determine if rotating concentric targets go "out of round."

Company	IO-Link	Position Sensors						Motion Control	Vision Sensors
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



Product + accessory selector

Dimensions (mm)	Sensing Range	No. of Wires	Response Time (ms)	Linearity (%)	Repeatability (%)	Part No.	List Price (1-pc.)
4...20 mA output							
M12 / L = 70	2 mm, flush	3	< 10	± 3	± 2	IF6028	\$167.00
M12 / L = 70	4 mm, nonflush	3	< 10	± 3	± 2	IF6030	\$167.00
M18 / L = 60	5 mm, flush	3	< 20	± 3	± 2	IG6086	\$172.00
M18 / L = 60	8 mm, nonflush	3	< 10	± 1	± 1	IG6083	\$172.00
M30 / L = 70	10 mm, flush	3	< 10	± 3	± 2	II5916	\$187.00
M30 / L = 70	15 mm, nonflush	3	< 20	± 1	± 1	II5913	\$187.00
0...10 V DC output							
M12 / L = 70	2 mm, flush	3	< 10	± 3	± 2	IF6029	\$167.00
M12 / L = 70	4 mm, nonflush	3	< 10	± 3	± 2	IF6031	\$167.00
M18 / L = 60	5 mm, flush	3	< 10	± 3	± 2	IG6087	\$172.00
M18 / L = 60	8 mm, nonflush	3	< 10	± 1	± 1	IG6084	\$172.00
M30 / L = 70	10 mm, flush	3	< 10	± 3	± 2	II5917	\$187.00
M30 / L = 70	15 mm, nonflush	3	< 20	± 1	± 1	II5914	\$187.00

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	Snap clamp for 12 mm sensor	E11047	\$8.00
	Snap clamp for 18 mm sensor	E11048	\$8.00
	Snap clamp for 30 mm sensor	E11049	\$8.00
	Quick-mount sleeve for 12 mm sensor	E11114	\$13.00
	Quick-mount sleeve for 18 mm sensor	E11115	\$14.00
	Quick-mount sleeve for 30 mm sensor	E10808	\$17.00
	L-bracket for 12 mm sensor	U20301	\$6.00
	L-bracket for 18 mm sensor	U20302	\$6.00
	L-bracket for 30 mm sensor	U20303	\$6.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$15.00
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$19.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$15.00
	M12 Micro DC (4-pin) 10 m, PUR	EVC006	\$19.00

Can't find the right sensor for your application, call 800-441-8246 or visit www.ifm.com/us

Technical Specs

Supply Voltage: 15...30 V DC
 Supply Current: < 20 mA
 Protection: IP67
 Operating Temperature: -13...176 °F (-25...80 °C)
 Max. Load Resistance: Part Nos.: IF6028, IF6030, IG6083, IG6086, II5913 and II5916: 500 Ω
 Min. Load Resistance: Part Nos.: IF6029, IF6031, IG6084, IG6087, II5914 and II5917: 2000 Ω
 Leakage Current: Negligible

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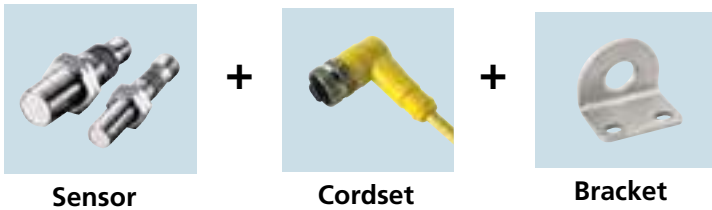
Safety Technology	Process Sensors		Industrial Networks		ID Systems	Machine Condition	Power Supplies	Wiring Technology		
Safety products	Pressure	Flow	Level	Temperature	AS-i network	Safety systems	RF identification systems	Diagnostic systems	Power supplies	Cordset solutions
144 - 155	156 - 175	176 - 191	192 - 207	208 - 225	226 - 239	240 - 251	252 - 253	254 - 259	260 - 263	264 - 277



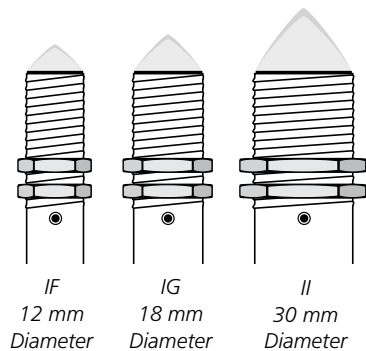
Top product features!

- Extended sensing ranges reduce failure from mechanical damage and increase uptime
- Models available in universal voltage with a range of 20...250 V AC/DC
- Industry standard M12, M18 and M30 diameter housings to fit a variety of industrial automation applications
- Available in quick disconnect and prewired options – visit www.ifm.com/us for more sensor options
- Robust metal housings are designed and tested to withstand industrial automation applications

Flexible mounting and quick installation



A three-piece solution provides flexible mounting and quick installation. ifm has developed accessories and connectors to simplify the installation process for inductive proximity sensors. The overall installation time of a proximity sensor can be further reduced by utilizing ifm efector's quick disconnect cordset for "plug and play" wiring.



Sensing range is determined by the physical size of the sensor

The strength of the radiated sensing field is a function of the size of the core in the sensor. Larger sensors have larger cores, and therefore, longer sensing ranges.

Select from three brackets for installation flexibility



ifm's snap clamp allows quick replacement of a switch with no tools or mounting nuts. The clamp features a "positive stop" that provides exact placement every time.



Metal quick mount sleeve features a "positive stop" for accurate placement every time.



L-Bracket secures tubular sensors and mounts quickly.

Company	IO-Link		Position Sensors					Motion Control	Vision Sensors
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



Product + accessory selector

Dimensions (mm)	Sensing Range	No. of Wires	Output Function	Supply Voltage (V AC/DC)	Switching Frequency (Hz) AC/DC	Max Load Current (mA) AC/DC	Electrical Connection	Part No.	List Price (1-pc.)
M12 / L = 62	4 mm flush	2	N.O.	20...140	25 / 200	200	1/2" Micro AC	IF0311	\$108.00
M12 / L = 62	7 mm nonflush	2	N.O.	20...140	25 / 90	200	1/2" Micro AC	IF0312	\$108.00
M18 / L = 72	8 mm flush	2	N.O.	20...250	25 / 60	250 / 100	1/2" Micro AC	IG0344	\$114.00
M18 / L = 72	12 mm nonflush	2	N.O.	20...250	25 / 90	250 / 100	1/2" Micro AC	IG0345	\$114.00
M30 / L = 72	15 mm flush	2	N.O.	20...250	25 / 40	350 / 100	1/2" Micro AC	I10340	\$119.00
M30 / L = 72	22 mm nonflush	2	N.O.	20...250	25 / 70	350 / 100	1/2" Micro AC	I10341	\$119.00

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	Snap clamp for 12 mm sensor	E11047	\$8.00
	Snap clamp for 18 mm sensor	E11048	\$8.00
	Snap clamp for 30 mm sensor	E11049	\$8.00
	Quick-mount sleeve for 12 mm sensor	E11114	\$13.00
	Quick-mount sleeve for 18 mm sensor	E11115	\$14.00
	Quick-mount sleeve for 30 mm sensor	E10808	\$17.00
	L-bracket for 12 mm sensor	U20301	\$6.00
	L-bracket for 18 mm sensor	U20302	\$6.00
	L-bracket for 30 mm sensor	U20303	\$6.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	1/2" Micro AC (3-pin) 2 m, PVC	E18212	\$15.00
	1/2" Micro AC (3-pin) 5 m, PVC	E18213	\$19.00
	1/2" Micro AC (3-pin) 2 m, PVC	E18214	\$15.00
	1/2" Micro AC (3-pin) 5 m, PVC	E18215	\$19.00

▶ Can't find the right sensor for your application, call 800-441-8246 or visit www.ifm.com/us

Technical Specs

Protection: IP67
 Operating Temperature: -13...158 °F (-25...70 °C)
 Leakage Current: < 0.8 mA: Part Nos. IF0311, IF0312
 < 1 mA @ 250 VAC: Part Nos. IG0344, IG0345, I10340, I10341
 Housing materials: Special coated brass; active face; PBT: Part Nos. IF0311, IF0312, I10340, I10341
 Special coated brass; active face; PA, PBT: Part Nos. IG0344, IG0345



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Safety Technology	Process Sensors					Industrial Networks	ID Systems	Machine Condition	Power Supplies	Wiring Technology
Safety products	Pressure	Flow	Level	Temperature	AS-i network	Safety systems	RF identification systems	Diagnostic systems	Power supplies	Cordset solutions
144 - 155	156 - 175	176 - 191	192 - 207	208 - 225	226 - 239	240 - 251	252 - 253	254 - 259	260 - 263	264 - 277



Top product features!

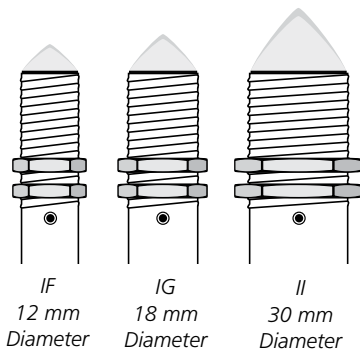
- Extended sensing ranges reduce failure from mechanical damage and increase uptime
- Models available in universal voltage with a range of 20...250 V AC/DC
- Industry standard M12, M18 and M30 diameter housings to fit a variety of industrial automation applications
- 2 meter high-flex PVC cable
- Available in quick disconnect and prewired options – visit www.ifm.com/us for more sensor options

Robust housings designed and tested for industrial automation



ifm's prewired tubular sensors provide reliable position detection throughout the industrial automation process. The robust, metal housings are ideal for tough applications found in robotics, packaging, assembly automation and material handling.

Extended sensing ranges allow the sensors to be placed farther away from a target which reduces the chance of damage from physical impact. The sensor's high-flex PVC cable can withstand repetitive movement.



Sensing range is determined by the physical size of the sensor

The strength of the radiated sensing field is a function of the size of the core in the sensor. Larger sensors have larger cores, and therefore, longer sensing ranges.

Select from three brackets for installation flexibility



ifm's snap clamp allows quick replacement of a switch with no tools or mounting nuts. The clamp features a "positive stop" that provides exact placement every time.



Metal quick mount sleeve features a "positive stop" for accurate placement every time.



L-bracket secures tubular sensors and mounts quickly.

Company	IO-Link		Position Sensors					Motion Control	Vision Sensors
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



Product + accessory selector

Dimensions (mm)	Sensing Range	No. of Wires	Output Function	Supply Voltage (VAC / VDC)	Switching Frequency (Hz) AC/DC	Max Load Current (mA) AC/DC	Electrical Connection	Part No.	List Price (1-pc.)
M12 / L = 71	2 mm flush	2	N.O.	20...250	25	250	Prewired 2 m cable	IF0303	\$99.00
M12 / L = 71	4 mm nonflush	2	N.O.	20...250	25	250	Prewired 2 m cable	IF0302	\$99.00
M18 / L = 80	5 mm flush	2	N.O.	20...250	25 / 50	350 / 100	Prewired 2 m cable	IG0305	\$100.00
M18 / L = 80	8 mm nonflush	2	N.O.	20...250	25 / 50	350 / 100	Prewired 2 m cable	IG0307	\$100.00
M30 / L = 81	10 mm flush	2	N.O.	20...250	25 / 50	350 / 100	Prewired 2 m cable	II0272	\$104.00
M30 / L = 81	15 mm nonflush	2	N.O.	20...250	25 / 50	350 / 100	Prewired 2 m cable	II0274	\$104.00

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	Snap clamp for 12 mm sensor	E11047	\$8.00
	Snap clamp for 18 mm sensor	E11048	\$8.00
	Snap clamp for 30 mm sensor	E11049	\$8.00
	Quick-mount sleeve for 12 mm sensor	E11114	\$13.00
	Quick-mount sleeve for 18 mm sensor	E11115	\$14.00
	Quick-mount sleeve for 30 mm sensor	E10808	\$17.00
	L-bracket for 12 mm sensor	U20301	\$6.00
	L-bracket for 18 mm sensor	U20302	\$6.00
	L-bracket for 30 mm sensor	U20303	\$6.00

Can't find the right sensor for your application, call 800-441-8246 or visit www.ifm.com/us

Technical Specs

Protection: IP67

Operating Temperature: -13...176 °F (-25...80 °C)

Leakage Current: < 2 mA: Part Nos. IF0302, IF0303

< 2.5 mA: Part Nos. IG0305, IG0307, II0272, II0274

Housing materials: Special coated brass; active face; PC: Part Nos. IF0302, IF0303, IG0305, IG0307

Special coated brass: Part Nos. II0272, II0274

Special coated brass; active face; PBT: Part Nos. II0272, II0274



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Safety products

Pressure

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Level

Temperature

AS-i network

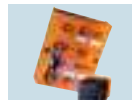
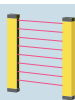
Safety systems

RF identification systems

Diagnostic systems

Power supplies

Cordset solutions



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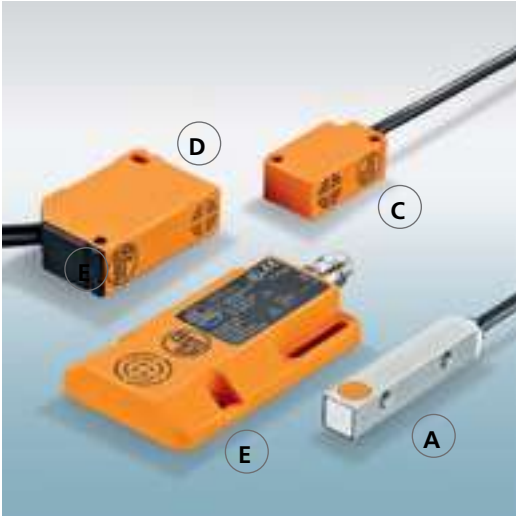
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Top product features!

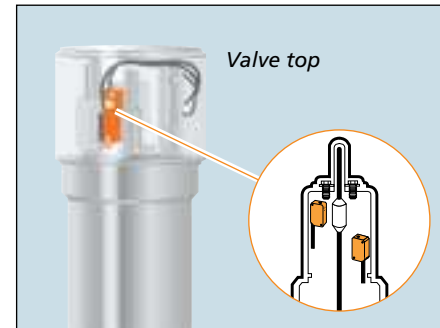
- Small package, large sensing range! Compact design is ideal for applications with limited mounting space
- Sensors retrofit V3 mechanical switches which increases uptime and reduces installation time
- Wiring flexibility – sensors available with quick disconnect or prewired 300 mm cable with M8 Pico connector
- Robust industry standard housings designed and tested to withstand industrial automation environments
- Plastic and metal housings to suit application needs

Compact sensors with powerful performance



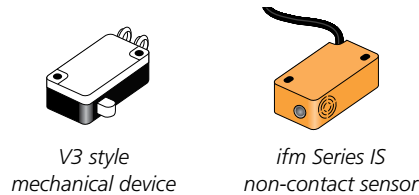
ifm efector's small rectangular proximity sensors are ideal for sensing the "open" and "closed" positions of a rising stem valve. The housing design of the IS Series family is a direct replacement for V3 style mechanical devices. The sensors are based on standard inductive technology and are mounted in the valve top for non-contact sensing of the stem.

ifm proximity sensors are designed as a sensor "system" with surface-mounted components on flexible polyamide film. All elements are carefully matched to expand and contract together, minimizing the effects of thermal shock. Sensors with an IP67 rating are constructed to withstand washdown conditions.



Compact rectangular sensors can be mounted in the valve top for non-contact sensing of the stem.

Retrofits V3 style mechanical switches



V3 style mechanical device

ifm Series IS non-contact sensor

Company	IO-Link	Position Sensors						Motion Control	Vision Sensors
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



Product + accessory selector

	Dimensions (mm)	Sensing Range	No. of Wires	Output Function	Supply Voltage (V DC)	Switching Frequency (Hz)	Max Load Current (mA)	Electrical Connection	Part No.	List Price (1-pc.)
A	52 x 8 x 8	2 mm flush	3	PNP, N.O.	10...36	2000	250	M8 Pico	IL5004	\$93.00
B	28 x 10 x 16	2 mm flush	3	PNP, N.O.	10...36	800	200	M8 Pico	IS5035	\$102.00
C	28 x 10 x 16	2 mm flush	3	PNP, N.O.	10...36	800	200	Prewired 2 m cable	IS5001	\$81.00
	28 x 10 x 16	2 mm flush	3	NPN, N.O.	10...36	800	200	Prewired 2 m cable	IS5003	\$81.00
	28 x 10 x 16	2 mm flush	2	PNP/NPN, N.O. / N.C.	10...36	2000	200	Prewired 2 m cable	IS5026	\$84.00
	28 x 10 x 16	2 mm flush	3	PNP, N.O.	10...36	800	200	Pigtail 0.3 m cable w/ M8 Pico	IS5068	\$105.00
D	40 x 12 x 26	2 mm flush	3	PNP, N.O.	10...36	1400	250	M8 Pico	IN5230	\$108.00
	40 x 12 x 26	4 mm nonflush	3	PNP, N.O.	10...36	1300	250	M8 Pico	IN5212	\$108.00
	40 x 12 x 26	2 mm flush	3	PNP, N.O.	10...36	1400	250	Prewired 2 m cable	IN5121	\$88.00
	40 x 12 x 26	2 mm flush	3	NPN, N.O.	10...36	1400	250	Prewired 2 m cable	IN5125	\$88.00
	40 x 12 x 26	4 mm nonflush	3	PNP, N.O.	10...36	1300	250	Prewired 2 m cable	IN5129	\$88.00
	40 x 12 x 26	4 mm nonflush	3	NPN, N.O.	10...36	1300	250	Prewired 2 m cable	IN5133	\$88.00
E	60 x 36 x 10	8 mm nonflush	3	PNP, N.O.	10...36	300	250	M8 Pico	IW5064	\$103.00
	60 x 36 x 10	8 mm nonflush	3	NPN, N.O.	10...36	120	250	Prewired 2 m cable	IW5008	\$92.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M8 Pico DC (3-pin) 2 m, PUR	EVC141	\$14.00
	M8 Pico DC (3-pin) 5 m, PUR	EVC142	\$17.00
	M8 Pico DC (3-pin) 10 m, PUR	EVC143	\$24.00
	M8 Pico DC (3-pin) 2 m, PUR	EVC144	\$14.00
	M8 Pico DC (3-pin) 5 m, PUR	EVC145	\$17.00
	M8 Pico DC (3-pin) 10 m, PUR	EVC146	\$24.00

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Technical Specs

Protection: IP65: Part Nos. IL5004, IN5212, IW5064
 IP67: Part Nos. IN5121, IN5125, IN5129, IN5230, IN5133, IS5001, IS5003, IS5026, IS5035, IW5008

Operating Temperature: -13...158 °F (-25...70 °C): Part Nos. IL5004, IS5001
 -13...176 °F (-25...80 °C): Part Nos. IN5121, IN5125, IN5129, IN5133, IN5212, IS5003, IS5026, IS5035, IW5008, IS5068
 -4...176 °F (-20...80 °C): Part Nos. IN5230, IW5064

Leakage Current: Negligible; < 0.8 mA: Part No. IS5026

Housing materials: Special coated brass; active face; LCP: Part No. IL5004
 PBT: Part Nos. IS5026, IN5121, IN5125, IN5129, IN5133, IN5212, IN5230, IS5001, IS5003, IS5035, IS5068, IW5008 and IW5064

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AS-i network

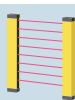
Safety systems

RF identification systems

Diagnostic systems

Power supplies

Cordset solutions



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Top product features!

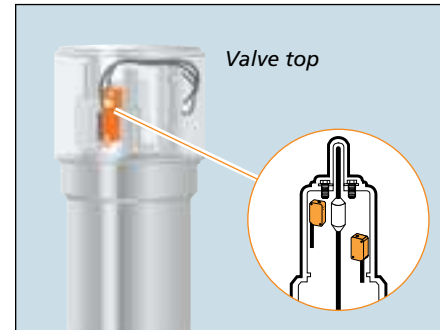
- Robust industry standard miniature housing for applications with limited mounting space
- Sensors retrofit V3 style mechanical switches which increases uptime and reduces installation time
- Corrosion resistant plastic housing designed and tested to withstand industrial automation environments
- Wide dual voltage range of 20...250 AC/DC
- 2 m cable with PVC jacket options

Compact sensors with powerful performance



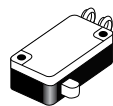
ifm efector's small rectangular proximity sensors are ideal for sensing the "open" and "closed" positions of a rising stem valve. The housing design of the Series IS family is a direct replacement for V3 style mechanical devices. The sensors are based on standard inductive technology and are mounted in the valve top for non-contact sensing of the stem.

ifm proximity sensors are designed as a sensor "system" with surface-mounted components on flexible polyamide film. All elements are carefully matched to expand and contract together, minimizing the effects of thermal shock. Sensors with an IP67 rating are constructed to withstand washdown conditions.

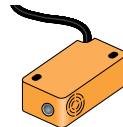


Compact rectangular sensors can be mounted in the valve top for non-contact sensing of the stem.

Retrofits V3 style mechanical switches



V3 style mechanical device




ifm Series IS non-contact sensor

Company	IO-Link	Position Sensors					Motion Control	Vision Sensors	
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



Product + accessory selector

Dimensions (mm)	Sensing Range	No. of Wires	Output Function	Supply Voltage (V) AC/DC	Switching Frequency (Hz)	Max Load Current (mA)	Electrical Connection	Part No.	List Price (1-pc.)
28 x 10 x 16	2 mm flush	2	N.O.	20...140 AC / 10...140 DC	25	200	Prewired 0.3 m cable	IS3501	\$89.00
28 x 10 x 16	2 mm flush	2	N.C.	20...140 AC / 10...140 DC	25	200	Prewired 0.3 m cable	IS0008	\$89.00
40 x 12 x 26	2 mm flush	2	N.O.	20...250	25 / 50	350 / 250	Prewired 2 m cable	IN0097	\$96.00
40 x 12 x 26	4 mm nonflush	2	N.O.	20...250	25 / 50	350 / 250	Prewired 2 m cable	IN0098	\$96.00

 Can't find the right sensor for your application, call 800-441-8246 or visit www.ifm.com/us

Technical Specs

Protection: IP67
 Operating Temperature: -4...176 °F (-20...80 °C): Part Nos. IS3501, IS0008
 -13...176 °F (-25...80 °C): Part Nos. IN0097, IN0098
 Leakage Current [mA]: < 0.8: Part Nos. IS3501, IS0008
 < 2.0 (AC 250 V) / < 1.3 (AC 110 V) / < 0.8 (DC 24 V): Part Nos. IN0097, IN0098
 Housing material: PBT

Simple and comprehensive website



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Process Sensors

Industrial Networks

ID Systems

Machine Condition

Power Supplies

Wiring Technology

Safety products

Pressure

Flow

Level

Temperature

AS-i network

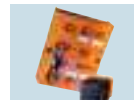
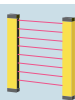
Safety systems

RF identification systems

Diagnostic systems

Power supplies

Cordset solutions



144 - 155

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Top product features!

- ID and IM Series feature extended sensing ranges that reduce failure from mechanical damage and increase uptime
- IM Series "cube" sensing face can rotate in one of five different directions for application versatility
- IM "cube" easily retrofits limit switches using only half the space
- K=1 sensing technology provides same sensing range for all target materials
- ID unit with terminal chamber offers convenient wiring of various lengths

Rugged housing for industrial applications

IM rectangular inductive proximity sensors feature extended sensing ranges for rugged industrial automation applications. The sensor can be placed farther away from the target which provides protection against mechanical damage in applications such as conveying.

Ideal for packaging lines and conveying applications, the IM "Cube" sensor offers two corner-mounted LEDs to indicate power and output.

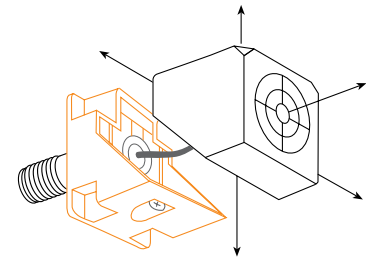
Compact size, long sensing range

The compact sensor "cube" measures 40 x 40 x 66 mm and features a sensing face that rotates in one of five different directions. An integrated mounting bracket offers simple installation and the sensor can be rotated in one of five directions for application versatility.

The ID unit is ideal for floor conveyor applications. The ID also has a "mechanical quick disconnect" feature; it snaps onto a mounting bracket, or DIN rail, so any damaged sensor can be replaced in seconds.



Flexible mounting options



The IMC "Cube" sensor can rotate in one of five different directions for application versatility.



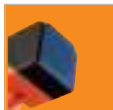
PNP to NPN converter cordset

This cordset converts PNP outputs to NPN outputs.

Part no.: EVCO1E (5 meters)

List price (1-pc): \$19.00

Company	IO-Link		Position Sensors					Motion Control	Vision Sensors
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



Product + accessory selector



Dimensions (mm)	Sensing Range	No. of Wires	Output Function	Supply Voltage (V DC)	Switching Frequency (Hz)	Max Load Current (mA)	Sensor Termination	Part No.	List Price (1-pc.)
40 x 40 x 66	20 mm flush	3	PNP, N.O.	10...36	100	200	M12 Micro DC	IM5115	\$51.00
40 x 40 x 66	35 mm nonflush	3	PNP, N.O.	10...36	80	200	M12 Micro DC	IM5116	\$51.00
40 x 40 x 66	40 mm nonflush	3	PNP, N.O.	10...36	80	200	M12 Micro DC	IM5117	\$92.00
92 x 80 x 40	50 mm flush*	3	PNP, N.O.	10...36	70	250	M12 Micro DC	ID5055	\$170.00
105 x 80 x 40	60 mm nonflush	3	PNP, N.O.	10...36	100	250	M12 Micro DC	ID5046	\$221.00

K factor 1 technology



40 x 40 x 66	20 mm flush	3	PNP, N.O.	10...36	200	200	M12 Micro DC	IM5128	\$102.00
40 x 40 x 66	40 mm nonflush	3	PNP, N.O.	10...36	200	200	M12 Micro DC	IM5131	\$96.00


*When mounted nonflush, operating distance of Part No. ID 5055 is 35 mm

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	Limit switch adapter bracket	U20200	\$21.00
	Protective Bracket for ID	E10730	\$12.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$15.00
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$19.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$15.00
	M12 Micro DC (4-pin) 10 m, PUR	EVC006	\$19.00

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Technical Specs

Protection: IP67
 Operating Temp: -13...158 °F (-25...70 °C)
 -13...176 °F (-25...80 °C): Part No. ID5046
 Leakage Current: Negligible
 Housing material: PA (polyamide)



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Safety Technology

Process Sensors

Industrial Networks

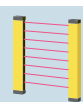
ID Systems

Machine Condition

Power Supplies

Wiring Technology

Safety products



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Flow



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Level



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Temperature



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AS-i network



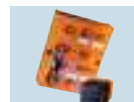
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Safety systems



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RF identification systems



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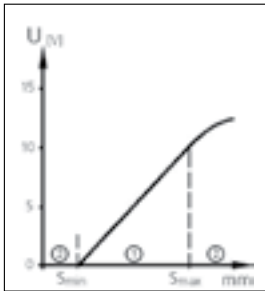
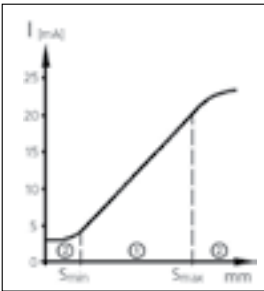
Top product features!

- Analog sensors with precise linear output signals
- 4...20 mA and 0...10 V analog output models
- Two corner-mounted LEDs indicate power and switching status
- "Cube" sensor features sensing face that rotates in one of five directions
- Use with ifm's ecolink M12 Micro DC cordsets

Analog sensors

ifm efector's inductive proximity sensor family includes models with analog output. Both 4-20 mA and 0-10 V output versions are available in rectangular housings. The sensors feature a linearity error of $\pm 1\%$ or $\pm 3\%$ depending on the model.

Linearity describes how closely the actual analog output of the proximity sensor mirrors a straight line drawn from the start point of the operating range (s_{min}) to the end point of the operating range (s_{max}).



- ① Operating range – LED on
- ② Warning range – LED flashes

s_{min} = start point of operating range
 s_{max} = end point of operating range

LED Indication

The analog proximity sensor contains a single yellow LED. The LED is "on" when a target is within the specified operating range and the LED flashes when a target is not present or out of range. For example, the 30mm sensor has an operating range of 1mm (s_{min}) to 15mm (s_{max}). If the sensor is <1mm or >15mm from the target, the LED will flash. The LED will be "on" if the target is within the operating range (1mm to 15mm). Note: this example assumes a mild target. Standard material and size/shape correction factors apply to this sensor.

Analog Sensors solve a variety of applications:

Converting linear motion into an analog signal: The distance between the sensor and target can be continuously monitored by an analog input card. Multiple switch points can be programmed if needed.

Sorting product by material: Targets with different material correction factors will have different curves when the output (current or voltage) is plotted versus the sensing distance. If the sensing distance is constant, targets constructed of dissimilar material will give different outputs and can be distinguished.

Sorting product by height: Targets constructed of the same material, but with different heights or thickness, can easily be sorted.

Concentricity monitoring: Analog proximity sensors can determine if rotating concentric targets go "out of round."


Company	IO-Link	Position Sensors					Motion Control	Vision Sensors	
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143





Product + accessory selector


Dimensions (mm)	Sensing Range	No. of Wires	Response Time (ms)	Linearity (%)	Repeatability (%)	Part No.	List Price (1-pc.)
4...20 mA output							
40 x 40 x 66	15 mm flush	3	< 20	± 3	± 2	IM5139	\$184.00
40 x 40 x 66	26 mm nonflush	3	< 20	± 3	± 2	IM5141	\$184.00
0...10 V DC output							
40 x 40 x 66	14 mm flush	3	< 20	± 3	± 2	IM5140	\$184.00
40 x 40 x 66	26 mm nonflush	3	< 20	± 3	± 3	IM5142	\$184.00

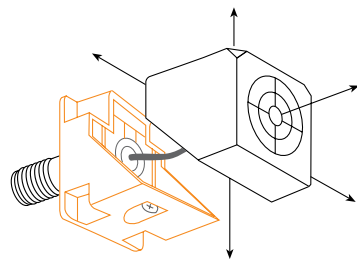
Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	Limit switch adapter bracket	U20200	\$21.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$15.00
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$19.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$15.00
	M12 Micro DC (4-pin) 10 m, PUR	EVC006	\$19.00

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Flexible mounting options

The IMC "Cube" sensor can rotate in one of five different directions for application versatility.

Technical Specs

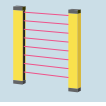










Supply Voltage: 15...30 V DC
 Supply Current: < 20
 Protection: IP67
 Operating Temperature: -13...176 °F (-25...80 °C)
 Max. Load Resistance: Part Nos.: IM5139 and IM5141: 500 Ω
 Min. Load Resistance: Part Nos.: IM5140 and IM5142: 2000 Ω
 Leakage Current: Negligible



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Safety products	Pressure	Flow	Level	Temperature	AS-i network	Safety systems	RF identification systems	Diagnostic systems	Power supplies	Cordset solutions
										
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Top product features!

- ID and IM Series feature extended sensing ranges that reduce failure from mechanical damage and increase uptime
- IM Series "cube" sensing face can rotate in one of five different directions for application versatility
- IM "cube" easily retrofits limit switches using only half the space
- IM "cube" with two corner-mounted bright LEDs indicate power and switching status
- ID unit with terminal chamber offers convenient wiring of various lengths

Robust rectangular sensors easily retrofit limit switches



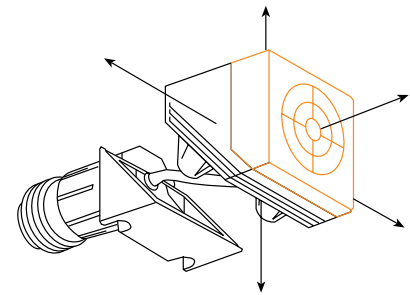
Smaller and more robust than traditional limit switches, ifm's IM Series rectangular inductive proximity sensors feature extended sensing ranges for industrial automation applications. Both ID and IM Series sensors offer extended sensing ranges that allow them to be placed farther away from the target which provides protection against mechanical damage. Ideal for packaging lines and conveying applications, the sensors offer bright LEDs to indicate power and output.



Traditional limit switches are large with moving parts.

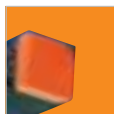
IM Cube is compact with no moving parts.

Application flexibility



The IM "Cube" sensor can rotate in one of five different directions for application versatility.

Company	IO-Link	Position Sensors					Motion Control	Vision Sensors	
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143



Product + accessory selector

Dimensions (mm)	Sensing Range	No. of Wires	Output Function	Supply Voltage (V) AC/DC	Switching Frequency (Hz) AC/DC	Max Load Current (mA) AC/DC	Sensor Termination	Part No.	List Price (1-pc.)
40 x 40 x 66	20 mm flush	2	N.O.	20...140	25 / 100	450	1/2" Micro AC	IM0055	\$102.00
40 x 40 x 66	35 mm nonflush	2	N.O.	20...140	25 / 100	350	1/2" Micro AC	IM0041	\$102.00
40 x 40 x 120	15 mm flush	2	Programmable N.O. / N.C.	20...250	20 / 55	350 (...50°C), 250 (...80°C) / 100	1/2" NPT Terminal Chamber	IM0020	\$109.00
40 x 40 x 120	20 mm nonflush	2	Programmable N.O. / N.C.	20...250	20 / 55	350 (...50°C), 250 (...80°C) / 100	1/2" NPT Terminal Chamber	IM0013	\$109.00
40 x 80 x 112	50 mm flush*	2	N.O.	20...140 AC / 10...140 DC	25	450	1/2" Micro AC	ID0039	\$176.00
40 x 80 x 92	50 mm flush*	2	N.O.	20...140 AC / 10...140 DC	25	450	7/8" Mini AC	ID0038	\$176.00
40 x 80 x 105	60 mm nonflush	2	Programmable N.O. / N.C.	20...250	4	350 (...50°C), 250 (...80°C)/100	1/2" NPT Terminal Chamber	ID0036	\$203.00

*When mounted nonflush, operating distance of Part Nos. ID 0039 and ID 0038 is 35 mm

Optional Accessories

Type	Description	Part No.	List Price (1-pc.)
	Limit switch adapter bracket	U20200	\$21.00
	Protective Bracket for ID	E10730	\$12.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	1/2" Micro AC (3-pin) 2 m, PVC	E18212	\$15.00
	1/2" Micro AC (3-pin) 5 m, PVC	E18213	\$19.00
	1/2" Micro AC (3-pin) 2 m, PVC	E18214	\$15.00
	1/2" Micro AC (3-pin) 5 m, PVC	E18215	\$19.00
	7/8" Mini AC (3-pin) 4 m, PVC	W80610	\$25.00
	7/8" Mini AC (3-pin) 4 m, PVC	W80632	\$25.00

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Technical Specs

Protection: IP67
 Operating Temp: -13...158 °F (-25...70 °C)
 Leakage Current [mA]: < 1.7: Part Nos. IM0055, IM0041, ID0039, ID0038
 < 2.5 (250 V AC) / < 1.3 (110 V AC) / < 0.8 (24 V DC): Part Nos. IM0020, IM0013
 < 2.5 (250 V AC) / < 1.3 (110 V AC) / < 1 (24 V DC): Part No. ID0036
 Housing material: PPE
 Active face: PPE
 End cap: diecast zinc
 Connector housing: special coated brass
 Bracket; diecast zinc; PPE: Part No. IM0055
 Connector housing: brass
 Bracket; diecast zinc: Part No. IM0041

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Safety products	Pressure	Flow	Level	Temperature	AS-i network	Safety systems	RF identification systems	Diagnostic systems	Power supplies	Cordset solutions
144 - 155	156 - 175	176 - 191	192 - 207	208 - 225	226 - 239	240 - 251	252 - 253	254 - 259	260 - 263	264 - 277



Top product features!

- Ring and tube inductive sensors detect metal objects inside tubing
- Static and dynamic versions with extremely quick response times
- High resolution – even steel balls with 0.6 mm diameters can be detected
- Pulse stretching and sensitivity adjustable via potentiometer
- Normally open and normally closed options available in varying diameters and connection options

ifm's ring and tube inductive sensors are ideal for feeder process applications

ifm's ring and tube inductive sensors detect small metal objects that pass through tubing. These sensors are ideal for assembly automation applications that include feeder processes and parts counting. Two output versions are available: static and dynamic.

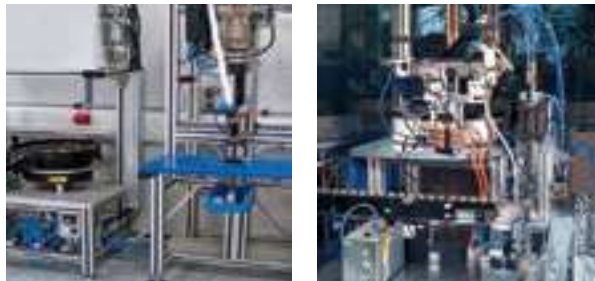
Static and dynamic operating principal

Static sensors operate like an inductive proximity sensor and generate an output signal when there is metal in the detection zone. These sensors can be used for a variety of feed applications that include detecting falling screws or monitoring for jams. Static-style sensors are also used in wire-brake detection applications.

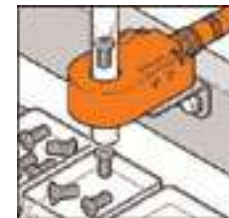
Dynamic sensors are used when very small parts with low mass or fast-moving parts need to be detected. When the sensor detects a part, it generates an output, which is adjustable from 0.1 to 150 ms. The resolution is also adjustable for the application needs and will remain stable, even in the case of metal contamination in the tube.

Ring and tube sensors with high resolution

Ideal for assembly automation applications that include feeder processes and parts counting.



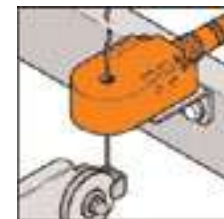
Application solutions



Ring sensor detects parts in hoses



Tube sensor detects parts in feed hose



Wire break detection



Company	IO-Link	Position Sensors					Motion Control	Vision Sensors	
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143





Product + accessory selector

Ring Diameter (mm)	Sensing Range (mm)	No. of Wires	Output Function	Operating Principle	Resolution Steel Ball (Ø mm)	Electrical Connection	Pulse Stretching (ms)	Response Time/Fall Time (ms)	Part No.	List Price (1-pc.)
Ring sensors										
10.1	–	3	PNP, N.O. / N.C.	Static	1.5	M12 Micro	10...150	0.5 / 10	I7R201	\$188.00
10.1	–	3	NPN, N.O. / N.C.	Static	1.5	M12 Micro	10...150	0.5 / 10	I7R202	\$188.00
15.1	–	3	PNP, N.O. / N.C.	Static	2	M12 Micro	10...150	0.5 / 10	I7R205	\$188.00
15.1	–	3	NPN, N.O. / N.C.	Static	2	M12 Micro	10...150	0.5 / 10	I7R206	\$188.00
20.1	–	3	PNP, N.O. / N.C.	Static	2.5	M12 Micro	10...150	0.5 / 10	I7R209	\$188.00
20.1	–	3	NPN, N.O. / N.C.	Static	2.5	M12 Micro	10...150	0.5 / 10	I7R210	\$188.00
25.1	–	3	PNP, N.O. / N.C.	Static	3	M12 Micro	10...150	0.5 / 10	I7R213	\$188.00
25.1	–	3	NPN, N.O. / N.C.	Static	3	M12 Micro	10...150	0.5 / 10	I7R214	\$188.00
51	–	3	PNP, N.O. / N.C.	Static	6	M12 Micro	10...150	0.5 / 10	I7R217	\$262.00
10.1	–	3	PNP, N.O. / N.C.	Dynamic	0.6	M12 Micro	0.1...150	0.2 / 0.2	I7R203	\$198.00
10.1	–	3	NPN, N.O. / N.C.	Dynamic	0.6	M12 Micro	0.1...150	0.2 / 0.2	I7R204	\$198.00
15.1	–	3	PNP, N.O. / N.C.	Dynamic	0.8	M12 Micro	0.1...150	0.2 / 0.2	I7R207	\$198.00
15.1	–	3	NPN, N.O. / N.C.	Dynamic	0.8	M12 Micro	0.1...150	0.2 / 0.2	I7R208	\$198.00
20.1	–	3	PNP, N.O. / N.C.	Dynamic	1	M12 Micro	0.1...150	0.2 / 0.2	I7R211	\$198.00
20.1	–	3	NPN, N.O. / N.C.	Dynamic	1	M12 Micro	0.1...150	0.2 / 0.2	I7R212	\$198.00
25.1	–	3	PNP, N.O. / N.C.	Dynamic	1.2	M12 Micro	0.1...150	0.2 / 0.2	I7R215	\$188.00
25.1	–	3	NPN, N.O. / N.C.	Dynamic	1.2	M12 Micro	0.1...150	0.2 / 0.2	I7R216	\$188.00
Tube sensors										
–	14	3	PNP, N.O.	Static	3	M8 Pico	100	0.5 / 100	I85000	\$188.00
–	14	3	NPN, N.O.	Static	3	M8 Pico	100	0.5 / 100	I85001	\$188.00

Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M8 Pico DC (3-pin) 2 m, PUR	EVC141	\$14.00
	M8 Pico DC (3-pin) 5 m, PUR	EVC142	\$17.00
	M8 Pico DC (3-pin) 2 m, PUR	EVC144	\$14.00
	M8 Pico DC (3-pin) 5 m, PUR	EVC145	\$17.00

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$15.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$15.00

Technical Specs

Operating voltage: 10...35 VDC
 Current rating: 200 mA
 Current consumption: Ring sensors: static < 11 mA; dynamic: < 20 mA
 Tube sensors: static < 15 mA; dynamic: < 25 mA
 Voltage drop: < 2 V
 Part speed: < 35 ms
 Housing material: Ring sensors: PA (polyamide); ring: POM
 Tube sensors: polycarbonate
 Ambient temperature: -13...158 °F (-25...70 °C)
 Protection: IP67

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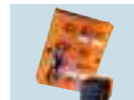
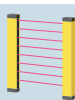
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Top product features!

- Ideal for sensing non-metallic objects such as plastic, glass, wood and paper
- Robust stainless steel housing withstands harsh industrial environments
- Potentiometer enables easy sensitivity setting
- High performance PEEK sensing face
- 4-port LED for 360° visibility

Capacitive proximity sensors detect the position of non-metallic objects

Capacitive proximity sensors use non-contact sensing and solid state circuitry to ensure durability in the most aggressive environments.

In contrast to inductive sensors, which detect metallic objects, capacitive sensors can detect almost any material. They are used in the wood, paper, glass, plastic, food, and chemical industries.

Potentiometer adjustment

The sensors feature a potentiometer that adjusts the sensitivity of the sensor. This feature allows the sensor to be precisely tuned for a specific application.



Improved noise immunity

Switching power supplies, variable frequency motor drives, and high-powered communication devices are found in most industrial plants. These devices can generate high noise levels contributing to erratic sensor operation.

As a result, ifm's patented "charge balance" circuit design offers reliable noise immunity and enables ifm capacitive sensors to perform effectively in high noise level environments.



PNP to NPN converter cordset

This cordset converts PNP outputs to NPN outputs.

Part no.: EVC01E (5 meters)
List price (1-pc): \$19.00

Company	IO-Link	Position Sensors		Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Motion Control	Vision Sensors
	IO-Link	Inductive	Capacitive					Encoders / Speed monitors	2D / 3D inspection
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Product + accessory selector

Dimensions (mm)	Sensing Range	No. of Wires	Output Function	Supply Voltage (V DC)	Switching Frequency (Hz)	Max Load Current (mA)	Electrical Connection	Part No.	List Price (1-pc.)
M12 / L = 60	4 mm flush	3	PNP, N.O.	10...36	50	100	M12 Micro	KF5001	\$138.00
M12 / L = 61	8 mm nonflush	3	PNP, N.O.	10...36	50	100	M12 Micro	KF5002	\$138.00

Optional Accessories

Type	Description	Part No.	Unit Price (1-pc.)
	Quick-mount sleeve for 12 mm sensor with hex nut (M16 x 1)	E11114	\$13.00
	Snap clamp for 12 mm sensor	E11047	\$8.00
	L-bracket for 12 mm sensor	U20301	\$6.00

Cordsets

Type	Description	Part No.	Unit Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$15.00
	M12 Micro DC (4-pin) 10 m, PUR	EVC003	\$19.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$15.00
	M12 Micro DC (4-pin) 10 m, PUR	EVC006	\$19.00
	M12 Micro DC (4-pin) 2 m, PUR, LED	EVC007	\$13.00
	M12 Micro DC (4-pin) 5 m, PUR, LED	EVC008	\$16.00
	M12 Micro DC (4-pin) 10 m, PUR, LED	EVC009	\$20.00

▶ Can't find the right sensor for your application, call 800-441-8246 or visit www.ifm.com/us

Technical Specs

Operating voltage: 10...36 VDC
 Voltage drop: 2.5 V
 Supply current: < 12 mA
 Operating temperature: -13...158 °F (-25...70 °C)
 Housing material: stainless steel, PEEK
 Protection: IP65
 Switchpoint drift of Sr: ± 20 %
 Correction factors: water 1, glass 0.6, ceramics 0.5, PVC 0.4



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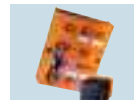
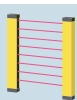
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Top product features!

- A reliable alternative to mechanical and optical touch sensors using dynamic and static sensing principles
- Sensor is actuated with a light touch of a single finger
- Housing is resistant to impact and wear, rated IP69K for water ingress
- Dynamic sensing principle ignores build-up on sensing face
- M22 x 1.5 threads allows direct mounting in many areas

Cylindrical capacitive touch sensitive sensors for machine start / stop with light finger touch

The KT Series capacitive touch sensors are used for starting and stopping machinery, assembly lines and processes. When compared to mechanical pushbuttons, the KT Series sensors offer many advantages. Utilizing the capacitive principle, the KT Series sensors are electronic sensors with no moving parts to wear out. The completely sealed device is rated IP69K, prevents oil ingress and ignores build-up on the sensing face. KT Series sensors use roughly half the space of mechanical pushbuttons freeing up valuable space behind panels.

Dynamic, static and latching sensing principles provide reliable operation

ifm offers three types of devices for start / stop control.

- KT sensors utilizing the dynamic principle give a 300 mS output signal when touched. This principle allows the sensor to ignore build up on the sensing face and suppress interference such as water, layers of ice, or particles that can stick to the sensor face. Even if the operator is wearing a glove, the sensor will trigger.
- The output for KT sensors using the static principle remain on for as long as the sensing face it touched.
- When touched, the output of KT latching sensors changes state and remains in that state until touched again.

Versatile and simple mounting

The KT Series capacitive touch sensors have a M22 thread along the entire length of the housing. Simply screw the sensor into a M22 tapped hole until it bottoms out. There is no need to worry about the alignment of the sensing face as the symbol disc is snapped in place after mounting. KT Series capacitive touch sensors may also be mounted in through holes 22.5 mm or larger by using the supplied lock nut.









Mechanical machine start/stop buttons are susceptible to wear and tear. ifm's cylindrical touch sensitive sensors operate without wear because they react to light contact for actuation and therefore provide a long life-in-application.

Company	IO-Link	Position Sensors		Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Motion Control	Vision Sensors
	IO-Link	Inductive	Capacitive					Encoders / Speed monitors	2D / 3D inspection
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






Product + accessory selector



	Operating Principle	Output Function	Connection	Part No.	List Price (1-pc.)
	Dynamic	PNP, N.O.	2 m PUR cable	KT5111	\$73.00
	Dynamic	PNP, N.O.	0.3 m PUR with M12 pigtail	KT5102	\$73.00
	Static	PNP, N.O.	2 m PUR cable	KT5110	\$73.00
	Static	PNP, N.O.	0.3 m PUR with M12 pigtail	KT5106	\$73.00
	Latching	PNP, N.O.	2 m PUR cable	KT5150*	\$68.00
	Latching	PNP, N.O.	0.3 m PUR with M12 pigtail	KT5151*	\$68.00


*With controllable red LED via pin 2.

Required accessories (sold as pairs)

Type	Description	Part No.	Unit Price (1-pc.)
	Cover disc lettering: START	E12377	\$8.00
	Cover disc lettering: STOP	E12378	\$8.00
	Cover disc symbol: on	E12379	\$8.00
	Cover disc symbol: off	E12380	\$8.00
	Cover disc transparent	E12386	\$7.00

Cordsets

Type	Description	Part No.	Unit Price (1-pc.)
	M12 Micro DC (4-pin) 2 m, PUR	EVC001	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC002	\$15.00
	M12 Micro DC (4-pin) 2 m, PUR	EVC004	\$11.00
	M12 Micro DC (4-pin) 5 m, PUR	EVC005	\$15.00

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Technical Specs

Operating voltage: Part Nos.: KT5102 and KT 5106: 12...30 V DC
 Part Nos.: KT5110, KT5111, KT5150 and KT5151: 24 V DC ± 20%

Supply current: 30 mA

Current rating: 500 mA

Operating temperature: -40...185 °F (-40...85 °C)

Housing material: PA

Protection: IP65, IP67, IP69K (on the front)



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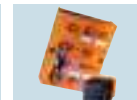
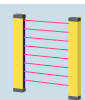
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Top product features!

- A reliable alternative to mechanical and optical touch sensors using dynamic and static sensing principles
- Ergonomic design allows sensor to be actuated with a single finger or hand
- Robust polycarbonate housing is resistant to impact and wear, rated IP69K
- Dynamic sensing principle ignores build-up on sensing face
- Optical feedback provided by switching status LEDs

Capacitive touch sensitive sensors for machine start / stop with light hand touch

Machine operators often require simple start / stop control of their plant machinery by simply pushing or pressing a large button. Traditional mechanical start / stop buttons are often used but these devices are susceptible to wear and tear. ifm now introduces the KT Series capacitive touch sensitive sensor that operates using non-contact sensing and solid state circuitry. With this design, the KT touch sensors will respond with simply a single finger or light touch of the hand, providing an ergonomic advantage.

Designed to provide long-life in application

The KT's robust housing is made of scratch-resistant polycarbonate. The completely sealed device is rated IP69K, prevents oil ingress, and ignores build-up on the sensing face.

Dynamic and static sensing principles for reliable operation

ifm offers two types of devices for start / stop control.

- KT sensors utilizing the dynamic principle give a 300 mS output signal when touched. This principle allows the sensor to ignore build up on the sensing face and suppress interference such as water, layers of ice, or particles that can stick to the sensor face. Even if the operator is wearing a glove, the sensor will trigger.
- The output for KT sensors using the static principle remains on for as long as the sensing face it touched.

Easy mounting

KT sensors are easily mounted directly to a wall or in other areas with an L-bracket specifically designed to fit the KT. Cover rings in a variety of colors are also available for function association.




Mechanical machine start/stop buttons are susceptible to wear and tear. ifm's KT Series touch sensitive sensors operate without wear because they react to light contact for actuation and therefore provide a long life-in-application.

Company	IO-Link		Position Sensors				Motion Control		Vision Sensors	
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific	Ultrasonic	Encoders / Speed monitors	2D / 3D inspection	
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Product + accessory selector



	Operating Principle	Output Function	Connection	Part No.	List Price (1-pc.)
	Dynamic	PNP, N.O.	2 m PUR cable	KT5001	\$152.00
	Dynamic	PNP, N.O.	2 m PUR cable, green LEDs controlled via pin 2	KT5009	\$152.00
	Dynamic	PNP, N.O.	0.3 m PUR cable with M8 pigtail	KT5002	\$164.00
	Dynamic	NPN, N.O.	0.3 m PUR cable with M8 pigtail	KT5007	\$168.00
	Static	PNP, N.O.	2 m PUR cable	KT5005	\$166.00
	Static	PNP, N.O.	0.3 m PUR cable with M8 pigtail	KT5006	\$175.00


A green cover ring is included. Optional rings can be purchased.

Optional accessories (sold as pairs)

Type	Description	Part No.	Unit Price (1-pc.)
	Cover ring, yellow	E80372	\$8.00
	Cover ring, green	E80373	\$8.00
	Cover ring, red	E80374	\$8.00
	Cover ring, blue	E80375	\$8.00
	Cover ring, orange	E80376	\$8.00
	L-bracket for KT with mounting screws	UK0009	\$26.00

Cordsets

Type	Description	Part No.	Unit Price (1-pc.)
	M8 Pico DC (4-pin), 2 m, PUR	EVC150	\$15.00
	M8 Pico DC (4-pin), 5 m, PUR	EVC151	\$18.00
	M8 Pico DC (4-pin), 2 m, PUR	EVC153	\$15.00
	M8 Pico DC (4-pin), 5 m, PUR	EVC154	\$18.00

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Technical Specs

Operating voltage: 12...36 V DC
 Supply current: 30 mA
 Operating temperature: -40...185 °F (-40...85 °C)
 Protection: IP67 / IP69K (on the front)

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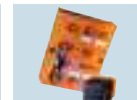
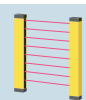
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