

Multi-Function-Sensor Automatic Voltage Detection



A. u. K. Müller

Solenoid valves
Control valves
Special valves and systems

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Series IRS-WT-x



Resilient clip

Sensor

IR-windows



Characteristics

- External IR-sensor with micro controller
- Compact design
- Voltage recognition 6V , 9V (battery) or 12V (power supply)
- Check and switch off in case of low battery voltage or mains power failure (with power supply IRS-PS-U only)
- Battery low voltage signal
- Low quiescent current for elongated battery lifetime
- Easy to assemble and service
- Short response time on detection of user
- Automatic detection range adjustment to environment on Power-On for 30 minutes
- Resin moulded electronic, protection type IP 65
- High operating safety through the use of high quality materials and 100% final testing of the products
- Default values changeable by optional available remote control



Applications

- Control unit for sanitary faucets
- Flushes
- Irrigation systems
- Industrial appliances

Description

Opto-electronic sensor unit available for use with bi stable cartridge valves having a nominal voltage of 6 VDC (e.g. 05-B07-060 and 50.007.100, see separate data sheets) to be integrated within faucets. None contact activation by IR proximity sensor.

A LED flashes each time to signal that the detection area has been entered or left.

Compact design for easy integration of sensor at minimum required space.

The minimised power consumption allows, using common batteries, a surpassing long durability and safe operation.

Individual settings may be achieved by an optional IR-remote control. (Detection range, ON- OFF, mode dependent flushing times). Easy assembly, service and check of battery.

The sensor may be equipped with an optional push-button, which starts the flow of water immediately.

Modes

IRS-WT	Faucet
IRS-WT-E	Faucet Eco Mode
IRS-WT-OF	Faucet ON/OFF Mode

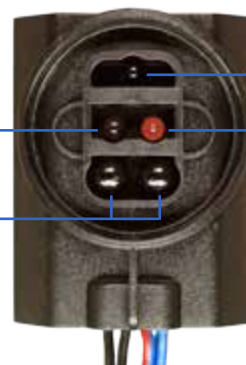
The functionality is factory set to order.

IR-Transmitter / scan near

IR-Transmitter / scan far

IR receiving diode

LED signal (red)

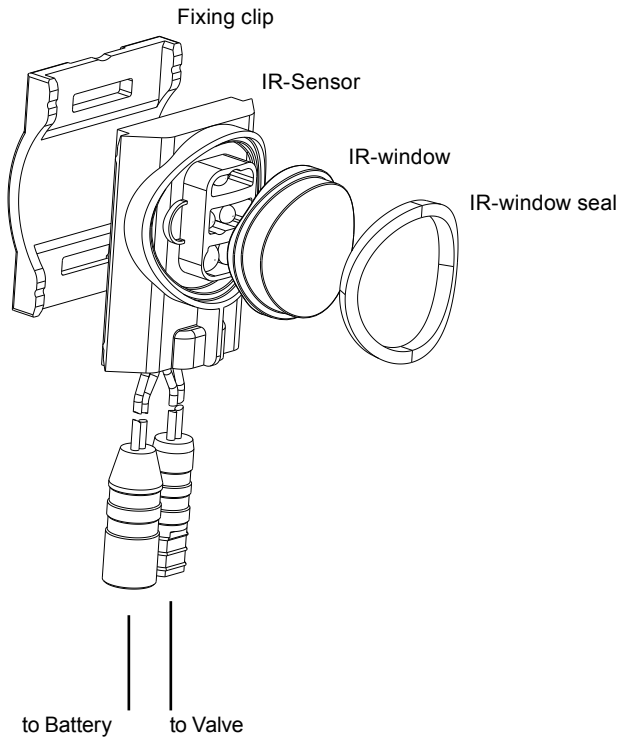


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Materials	
Housing	POM
IR-windows	PC
Resilient clip	PC
Window strip	EP cellular rubber

Options

Standard cable length			
Valve	With twin strand (red/blue) and female connector	252 ⁺¹⁰ (9.92 ^{+0.4} in)	mm
Battery	With twin strand (red/black) and male connector	187 ⁺¹⁰ (7.36 ^{+0.4} in)	mm

Please contact us for a specific request.

Technical Data

Type	opto electronical IR-sensor	
T-Ambient	60	°C max
Nominal voltage * Un	6 9 12	V DC (battery) V DC (battery) V DC (power supply)
Operating voltage Un: 6 VDC Un: 9 VDC Un: 12 VDC	5,0 - 6,0 V DC open/close 5,7 - 9,0 V DC open/close 11,0 - 12,0 V DC open/close	
Signal of low voltage level Un: 6 VDC	< 5,0 V DC LED flashing < 4,7 V DC LED persistent signal, valve will be closed permanently	
Un: 9 VDC	< 5,7 V DC LED flashing < 4,7 V DC LED persistent signal, valve will be closed permanently	
Un: 12 VDC	< 11,0 V DC LED persistent signal, valve will be closed permanently	
Voltage recognition	Battery (6V or 9V): on each output pulse or every 24 h Power supply: every 0,5 sec	
Output voltage ±U	5	V DC
Pulse shape/-time		
Output current max.	800	mA
Protection type	IP 65 according to EN 60529	
050-B07-060 or 50.007.100 (6 V DC only, see separate data sheet) Other valves on request.		
Lifetime of valve	typical 250.000 cycles / 5 years	
Lifetime of battery	6 V Lithium (min. 1.300 mAh) approx. 4 years ... 9 V Alkaline (min. 600 mAh) approx. 2,5 years for 150 cycles / day	

* Apply only one of the mentioned voltages!

Accessories for IR-Sensor	Thickness**		ID
Resilient clip (to fix sensor in housing)			007495
IR Window seal			007516
IR Window round	2 mm (0.08 in)		007491
IR Window squared			007492
IR Window round	3 mm (0.12 in)		007493
IR Window squared			007494

** IR Windows for use with different wall thicknesses of the tap ware.

Series IRS-WT-x

Default and adjustable settings



IRS-WT Faucet	Default Settings		Optional settings with IRS - RC3 Remote Control		Push button on request *
	Response time	≤ 0,5	sec	-	
Detection range	260 (10.24)	±15% w/o IR-window	40 - 300 (1.57 - 11.81)	mm (in)	
Turn off delay	1	sec (± 0,5 sec)	0,5 - 8,0	sec	
Max. time of flow	120	± 25 %	-	-	
Enforced flush **	every 24	h	24 / 72 / OFF	h	
Permanent - OFF	-	-	enable / disable		

* The optional push button starts the flow procedure immediately.

** The time interval for the enforced flush is restarted after each flush pulse.

IRS-WT-E Faucet Eco Mode short range	Default Settings		Optional settings IRS - RC3 Remote Control		Push button on request *
	Response time	≤ 0,5	sec	-	
Detection range	260 (10.24)	± 15% w/o IR-window	40 - 300 (1.57 - 11.81)	mm (in)	
Turn off delay	1	sec (± 0,5 sec)	-	-	
Max. time of flow	3	sec (± 0,5 sec)	1 - 80	sec	
Enforced flush **	every 24	h	24 / 72 / OFF	h	
Permanent - OFF	-	-	enable / disable		

* The optional push button starts the flow procedure immediately.

** The time interval for the enforced flush is restarted after each flush pulse.

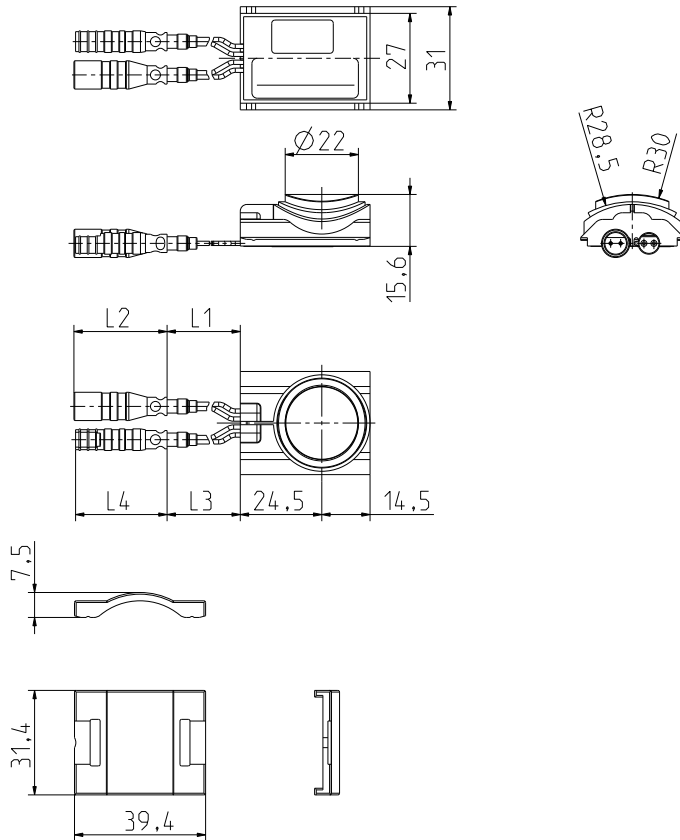
IRS-WT-OF Faucet ON/OFF Mode	Default Settings HDM		Optional settings IRS - RC3 Remote Control		Push button on request *
	Response time	≤ 0,5	sec	-	
Detection range	80 (3.15)	mm	40, 80, 120 or 160 (1.57, 3.15, 4.72 or 6.30)	mm (in)	
Max. time of flow	120	± 25%	10 - 310	sec	
Enforced flush **	OFF	-	24 / 72 / OFF	h	
Permanent - OFF	-	-	enable / disable		

* The optional push button starts the flow procedure immediately.

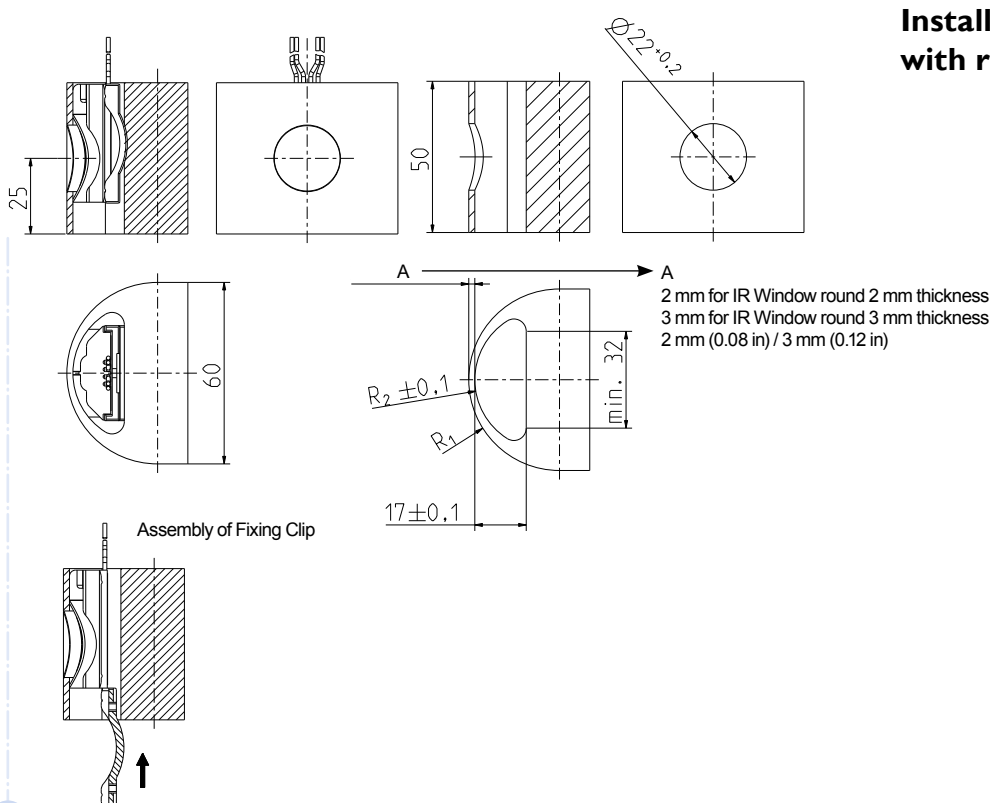
** The time interval for the enforced flush is restarted after each flush pulse.



Series IRS-WT-x



Sensor with round window.



Installation example for sensor with round window.



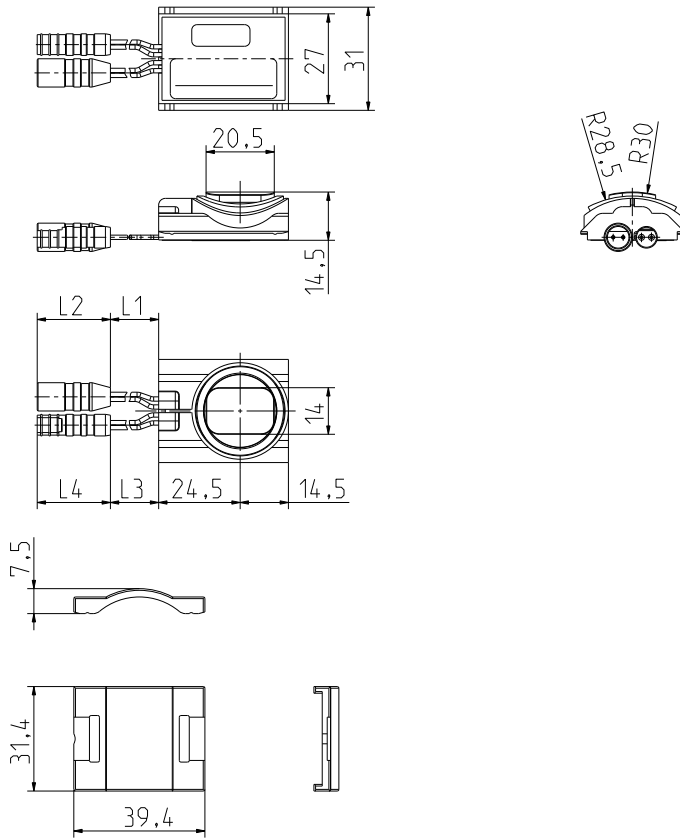
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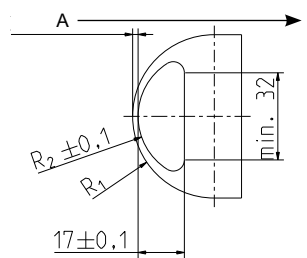
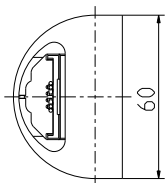
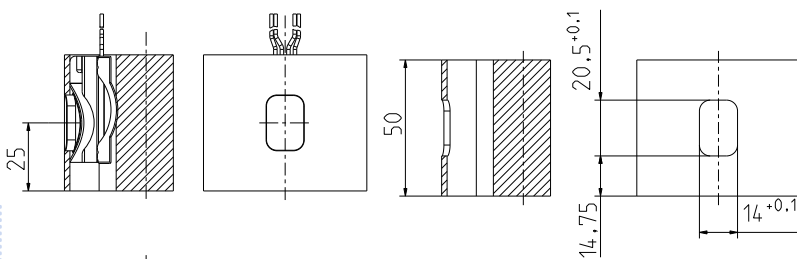
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Series IRS-WT-x

Sensor with squared window.

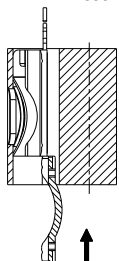


Installation example for sensor with squared window.



A
2 mm for IR Window squared 2 mm thickness
3 mm for IR Window squared 3 mm thickness
2 mm (0.08 in) / 3 mm (0.12 in)

Assembly of Fixing Clip





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Special features

Power Saving Mode

(For battery driven IR sensor only):

The sensor can be set to a power saving mode, which can only be activated within the first 30 minutes after connection to the power supply (Power-On).

If the sensor is continuously covered by an appropriate reflecting material no more than 15mm away from the sensor, the signal diode is illuminated red. The valve then closes and both the diode and the sensor are switched off. After removing the cover from the sensor, it resumes its normal function and opens the valve for a short period. Now the power saving mode can again be activated for 30 minutes.

If the sensor is deactivated and then reactivated again by use of the remote control, the power saving mode is also accessible for 30 minutes.

If the valve, battery and sensor are already built into a faucet, for subsequent installation into a wash stand, the power saving mode will save the energy of the battery. It also prevents accidental operation of the valve during installation.

Note:

On smaller wash stands installations the sensor should be carefully positioned to minimise the possibility of the user entering the 15 mm range as this may accidentally activate the power saving mode.

The change of the settings with the optional Remote Control is only possible within the 30 minutes time period after Power-On.

This time period can also be restarted by disconnecting the sensor from the power supply and a following reconnection.

Optional Push button:

The Sensor can be equipped with a third connection for a push button.

Actuating the push button forces an immediate flow or flush independent from a IR-detection.

This cable could have free lead end or a connector to apply an external push button or an already attached push button.

Please contact us for a specific request.

[...cm...]
detection range

⌚-Time

OFF / ON



For a detailed description of how to change settings of the detection range or flush time with the Remote Control, please refer to separate data sheet IRS-RC3.

Please refer to separate data sheet IRS-PS-x for available Power Supply.

