Product Information

Multi-Function-Sensor
Automatic Voltage Detection

A. u. K. Müller

Solenoid valves
Control valves
Special valves and systems

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Series IRS-UWS-x







Piezotaster optional



Description

Opto-electronic sensor unit available for use with bi stable cartridge valves having a nominal voltage of 6 VDC (e.g. 50.007.101, 05-B07-060 and 50.007.100, see separate data sheets) for use for urinal, toilet (WC) or shower.
None contact activation by IR proximity sensor.

A LED flashes each time to signal that the detection area had 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, follow-up-time).
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-UWS-U	Urinal (Stadium Mode included)
IRS-UWS-WC	WC
IRS-UWS-BDM	Shower (Body Detect Mode)
IRS-UWS-HDM	Shower (Hand Detect Mode)

The functionality is factory set to order.

Applications

- Control unit for sanitary urinals, WC's and Showers
- Flushes
- Irrigation systems
- Industrial appliances

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
- Shower mode with two modes
  BDM = body detection mode
  HDM = hand detection mode
- 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



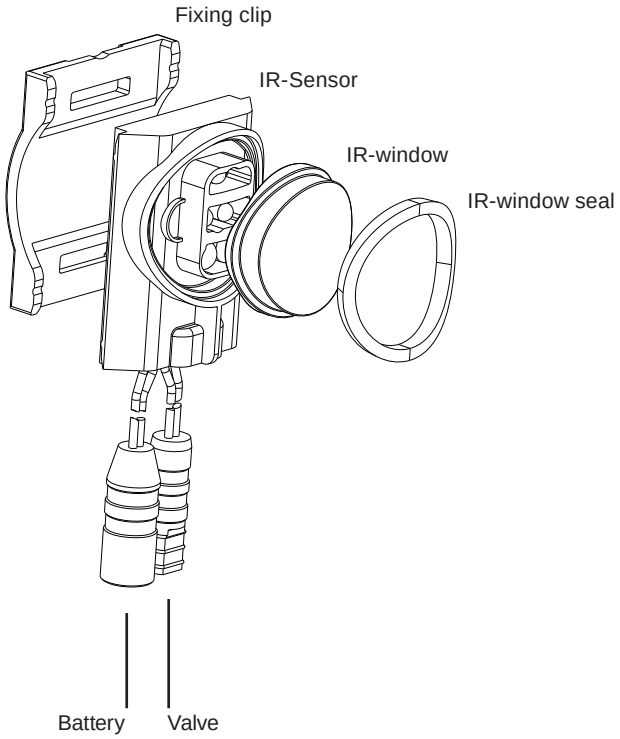


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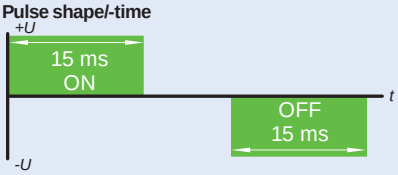
Multi-Function-Sensor
Automatic Voltage Detection

A. u. K. Müller

Series IRS-UWS-x



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** **Un: 9 VDC** **Un: 12 VDC**	< 5,0 V DC LED flashing < 4,7 V DC LED persistent signal, valve will be closed permanently < 5,7 V DC LED flashing < 4,7 V DC LED persistent signal, valve will be closed permanently < 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
	for the 6 V battery the output voltage corresponds to the battery voltage	
Pulse shape/-time		
Output current max.	800	mA
Protection type	IP 65 according to EN 60529	
50.00x.101 **(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!

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
Power supply	With twin strand (red/black) and male connector	187 $^{+10}$ (7.36 $^{+0.4}$ in)	mm

Please contact us for a specific request.

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.

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Series IRS-UWS-x



Default and adjustable settings

IRS-UWS-U Urinal (Stadium Mode included)	Default Settings		Optional settings with IRS - RC3 Remote Control		Push button on request *
Response time	1	sec	-	-	Yes
Detection range	650 (25.59)	± 23% w/o IR-window	200 - 800 (7.87 - 31.50)	mm (in)	
Min. length of stay	7,5	± 25%	-	sec	
Flushing time	5,5	± 1 sec	0,5 - 15,5	sec	
Enforced flush **	every 24		24 / 72 / OFF	h	
Permanent - OFF	-	-	enable / disable		

* The optional push button starts the flush procedure immediately.

Stadium mode

For the urinal functionality a stadium mode is included. If more than three detections occur within 3 minutes, the Stadium mode is set active. On each detection an opening pulse is activated first and then a closing pulse after half the set flushing time has been elapsed.
If no detection occurs within 5 minutes, the stadium mode is deactivated.
Upon request, the stadium mode can be disabled by manufacturer.
** Refer to "Enforced flush" on page 6. The flush period is about 30 seconds.

IRS-UWS-WC WC	Default Settings		Optional settings with IRS - RC3 Remote Control		Push button on request *
Response time	1	sec	-		Yes
Detection range	650 (25.59)	±23% w/o IR-window	200 - 800 (7.87 - 31.50)	mm (in)	
Min. length of stay	5,0	± 25%	-	sec	
Flushing time delay	5,0	± 25%	-	sec	
Flushing time	3,0	± 1 sec	0,5 - 15,5	sec	
Permanent - OFF	-	-	enable / disable		

* The optional push button starts the flush procedure immediately.

IRS-UWS-BDM Shower (Body Detect Mode)	Default Settings*		Optional settings with IRS - RC3 Remote Control		Push button on request **
Response time	1	sec	-	-	Yes
Detection range	650 (25.59)	±23% w/o IR-window	200 - 800 (7.87 - 31.50)	mm (in)	
Min. length of stay	2,0	± 25%	-	sec	
Max. time of flow	300	± 25%	-	sec	
Turn off delay	3,0	± 1 sec	0,5 - 8	sec	
Permanent - OFF	-	-	enable / disable		

* Optional cleaning mode: covering of the sensor window for 5 s deactivates the sensor for 30 seconds.
** The optional push button starts the flow procedure immediately.

For IRS-UWS-WC/BDM/HDM the forced flushed is deactivated at delivery. If it is subsequently activated by remote control, the flush period is:

Type	Period forced flush
IRS-UWS-WC	3 s
IRS-UWS-BDM	30 s
IRS-UWS-HDM	30 s

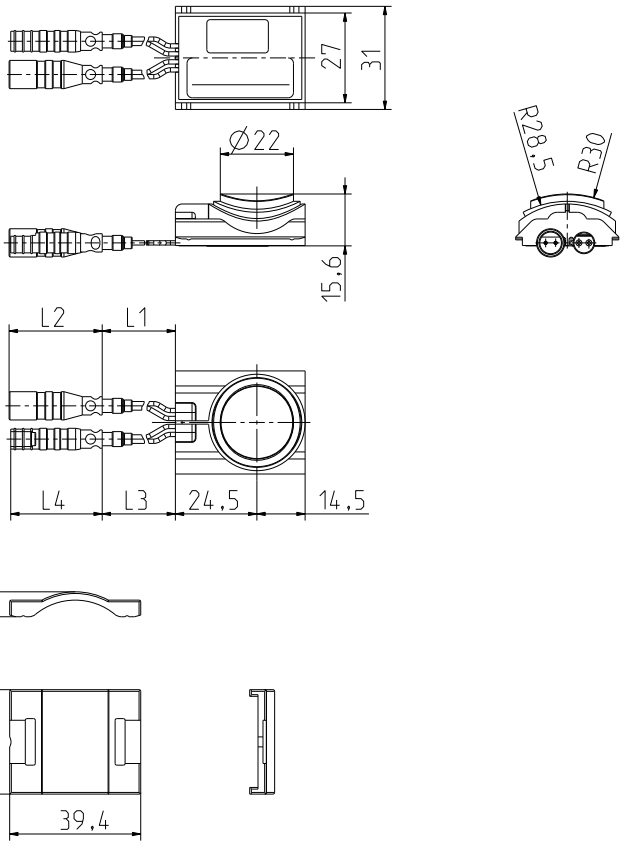
IRS-UWS-HDM Shower (Hand Detect Mode)	Default Settings		Optional settings with IRS - RC3 Remote Control		Push button on request *
Response time	0,5	sec	-	-	Yes
Detection range	80 (3.15)		40, 80, 120 or 160 (1.57, 3.15, 4.72 or 6.30)	mm (in)	
Max. time of flow	120	± 25%	10 - 310	sec	
Permanent - OFF	-	-	enable / disable		

* The optional push button starts the flow procedure immediately.
HDM = on each detection the system toggles between ON and OFF

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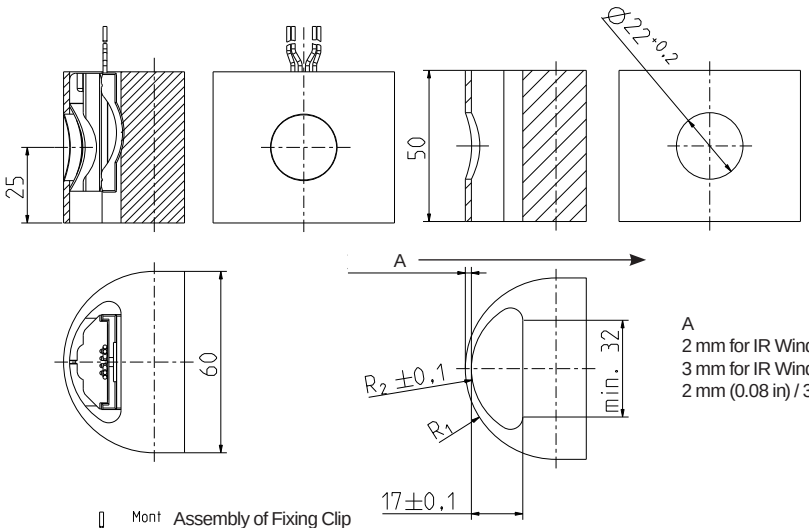
Series IRS-UWS-x

Sensor with round window.

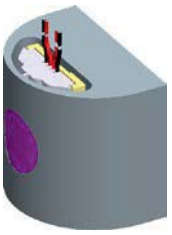




Installation example for sensor with round window.



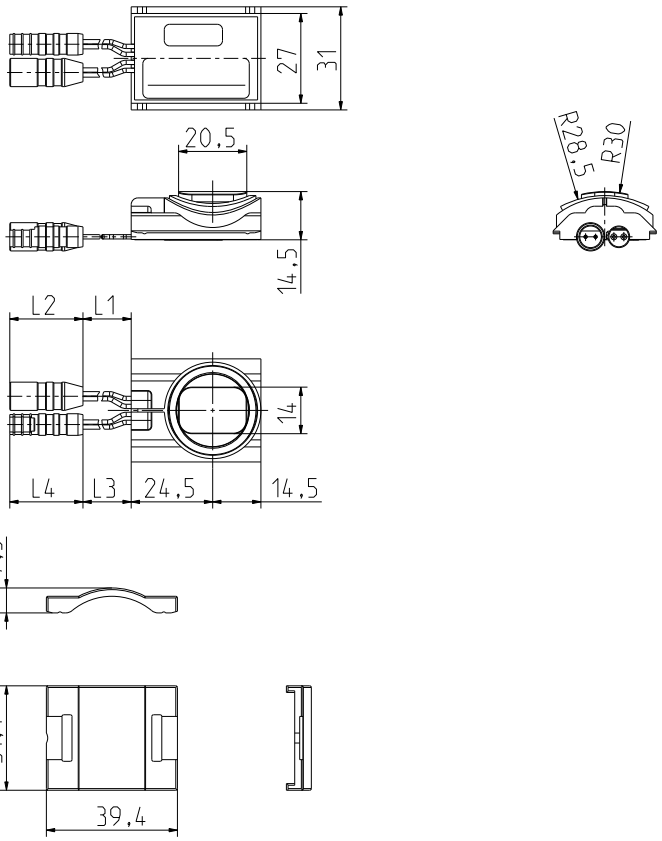
A
2 mm for IR Window round 2 mm thickness
3 mm for IR Window round 3 mm thickness
2 mm (0.08 in) / 3 mm (0.12 in)



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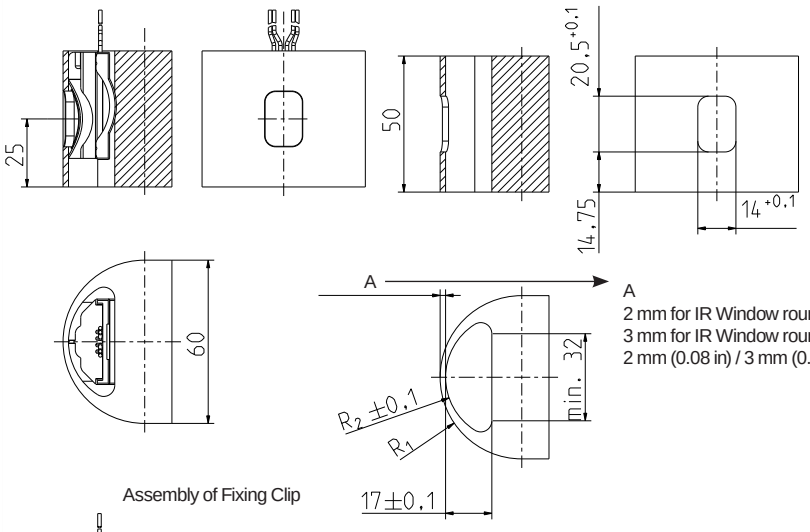
Series IRS-UWS-x

Sensor with squared window.

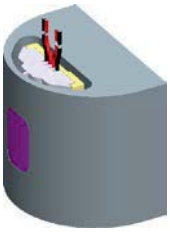




Installation example for sensor with squared window.



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



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Series IRS-UWS-x

Version with optional piezo switch



Technical Data		
Type	Piezo switch	
Construction	flat operator, 3 mm height*	
Connection	strands (red/black) and female connector	
T-Ambient	75	°C max
Protection type	IP 68 according to EN 60529	
Lifetime	typical 50 millionen cycles	

* on request also available with illuminated ring (LED)

Materials	
Housing	Stainless steel
O-ring	n.a.

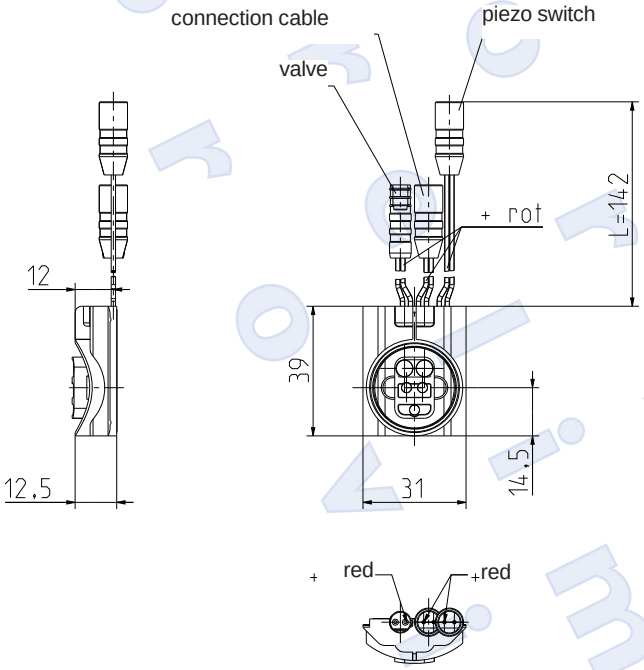
Options			
Standard cable length			
Valve	With twin strand (red/blue) and female connector	252 $^{+10}$ (9.92 $^{+0.4}$ in)	mm
Power supply	With twin strand (red/black) and male connector	187 $^{+10}$ (7.36 $^{+0.4}$ in)	mm
Piezo switch	With strands (red/black) and female connector	280 $^{+10}$ (11.0 $^{+0.4}$ in)	mm

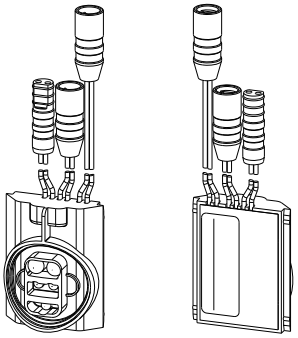
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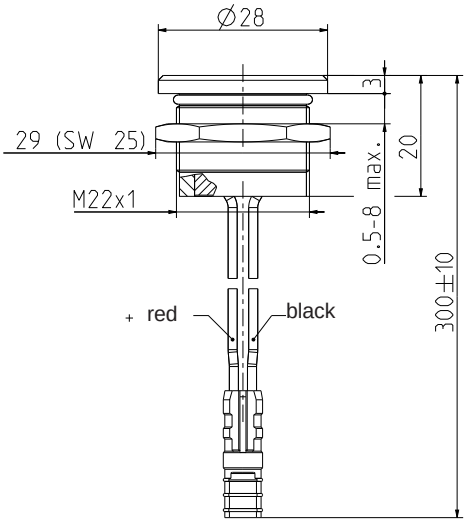
Series IRS-UWS-x

IR-Sensor with connection for piezo switch or other push buttons.





Piezo switch





Product Information
Preliminary

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