Combination of external IR sensor and bi stable axial cartridge valve

Series 050-B07-06Y/-09Y

Fixing clip

Sensor

IR-windows

Characteristics

- external IR-sensor with micro controller
- compact design of sensor unit
- long term performance capability
- low bias current for longer battery life
- easy to assemble and service
- short response time on detection of user
- automatic detection range adjustment on Power-On to environment
- Check of battery voltage and low voltage signal
- resin moulded electronic, protection type IP 65
- Shower functionality 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
- preset values changeable by optional available remote control

Applications

- control unit for sanitary faucet or urinal
- flushes
- shower fittings
- irrigation systems
- industrial appliances

Description

Opto-electronical sensor unit available only in combination with bi stable axial cartridge valves 050-B07-06X /-09X (see separate data sheet) for use in faucet, urinal, toilet or shower.

Non contact activation by IR proximity sensor.

A LED flashes each time to signal that the detection area had been entered or left.
All versions may be equipped with an optional push-button, which starts the flow of water immediately.

Compact design for easy integration of sensor at minimum required space.
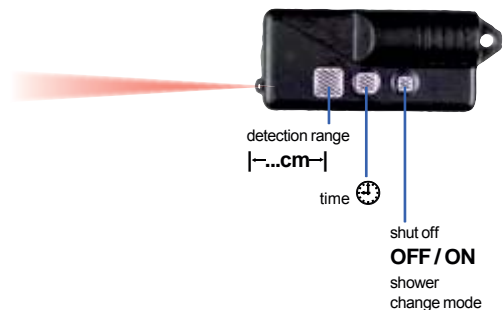
The power consumption allows, using common batteries, a surpassing long durability and safe operation.

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.

detection range
|–...cm–|

time

shut off
OFF / ON
shower
change mode

Combination of external IR sensor and bi stable axial cartridge valve

A.u.K. Müller

Series 050-B07-06Y/-09Y

IR-window

thickness 2+3 mm

thickness 2+3 mm
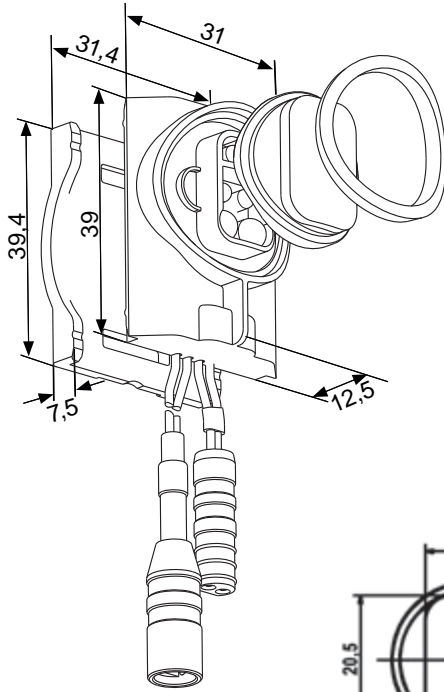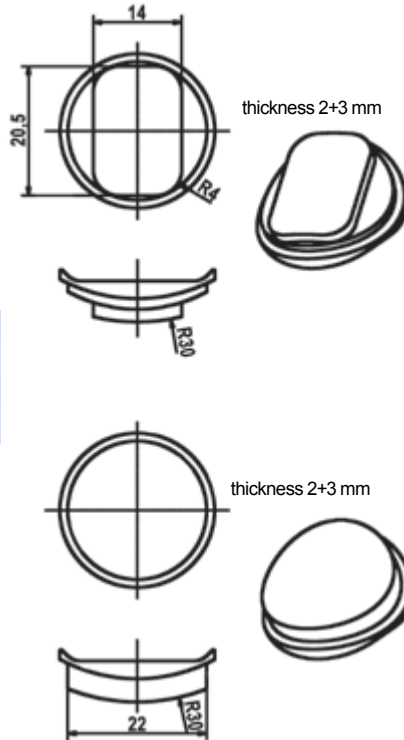
Materials

Housing	POM
IR-windows	Makrolon
Clamp	Makrolon
Window strip	EP rubber

Options

standard cable length		
with leads and connector	100	mm
with leads and connector	120	mm

Technical Data

Type	opto electronical IR-sensor	
T-Ambient	60	°C max
Nominal voltage	6	V DC
	9	V DC
Operating voltage	5,0 - 6,0 V DC open/close	
	7,5 - 9,0 V DC open/close	
Signal of low voltage level	< 5,0 V LED flashing	
	< 4,7 V LED persistent signal, valve will be closed permanent	
	< 7,5 V LED flashing	
	< 7,0 V LED persistent signal, valve will be closed permanent	
Battery voltage detection	automatically	
Protection type	IP 65 according to EN 60529	
IR detection range	automatically on Power ON, depending on functionality	

050-B07-06X /-09X (see separate data sheet)

Lifetime of valve	min. 280.000 cycles / 5 years	
Lifetime of battery	6 V Lithium (min. 1.300 mAh) approx. 4 years ...	
	9 V Alkaline (min. 600 mAh) approx. 2,7 years ...	
	... for 150 actuations / day	

Faucet functionality - default settings

Response time	≤ 0,5	sec
Detection range	260	mm (± 15%) w/o IR-window
Turn off delay	1	sec (± 0,5 sec)
Siphon filling	every 24	h
Max. time of flow	120	sec (± 25 %)

Urinal functionality - default settings

Detection range	650	mm (± 25%) w/o IR-window
Min. length of stay	7,5	sec (± 25%)
Flushing time	5,5	sec (± 1 sec)
Enforced flush	every 24	h

WC functionality - default settings

Detection range	650	mm (±25%) w/o IR-window
Min. length of stay	5,0	sec (± 25%)
Flushing time delay	5,0	sec (± 10%)
Flushing time	3,0	sec (± 10%)

Shower functionality - default settings BDM (Power On)

Detection range	650	mm (±25%) w/o IR-window
Min. length of stay	2,0	sec (± 25%)
Max. time of flow	300	sec (± 1%)
Turn off delay	3,25	sec (± 15%)

Shower functionality - default settings HDM

Detection range	80	mm (±15%) w/o IR-window
Max. time of flow	120	sec (± 1%)

Options				
IR - remote control available				**push button on request**
faucet	**detection range**	30 - 260	mm	Yes
	turn off delay	0,5 - 8,0	sec	
	permanent - OFF	enable/ disable		
urinal	**detection range**	120 - 800	mm	Yes
	flushing time	0,5 - 15,5	sec	
	permanent - OFF	enable/ disable		
WC	**detection range**	120 - 800	mm	Yes
	flushing time	0,5 - 15,5	sec	
	permanent - OFF	enable/ disable		
shower BDM mode	**detection range**	120 - 800	mm	Yes
	flow time	300	sec	
	turn off delay	0,5 - 8	sec	
	HDM mode	enable/ disable		
BDM mode HDM mode	**permanent - OFF**	enable/ disable		
shower HDM mode	**detection range**	40, 80, 120 , 160	mm	
	flow time max.	10 - 310	sec	
	BDM mode	enable/ disable		

The optional push button starts the flush or flow procedure immediately.
BDM = body detection mode
HDM = hand detection mode

Power Saving Mode:
For **faucet**, **urinal** and **WC** applications 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.
If the sensor is covered for more than "X" seconds 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 batteries energy. It also prevents accidental operation of the valve during installation.

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