



Level Detection

Contents

Capacitive sensors for level detection use their sensing face to detect the product, bulk material or liquid (e.g. plastic granulate, sugar, oil, aqueous media) directly or through a container wall.

Advantage: Their spherical electrical field effectively compensates for build-up on the sensing face of the sensor.

DC 3-wire

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AC/DC 2-wire

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DC 3-wire

Tubular housings

SMARTLEVEL technology

High temperature rated styles

Leak sensor

AC/DC 2-wire

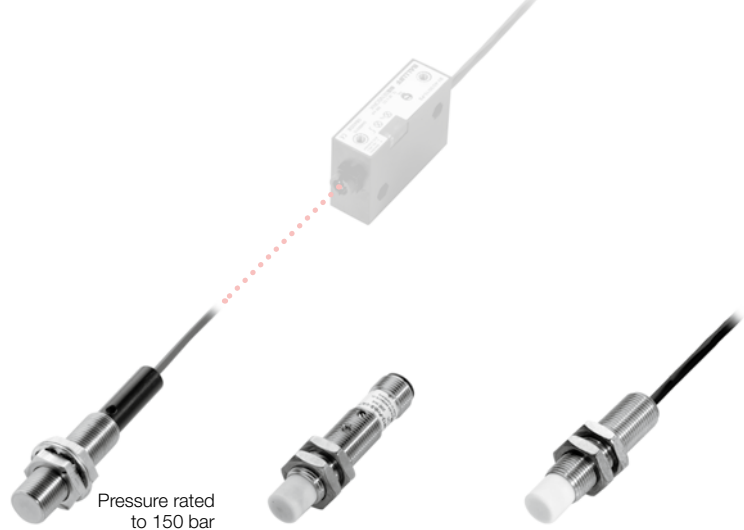
Tubular housings

Electrical devices, connectors and holders see Accessories section starting **page 69**



Level Detection

DC 3-wire · Tubular housings
M12



Pressure rated
to 150 bar

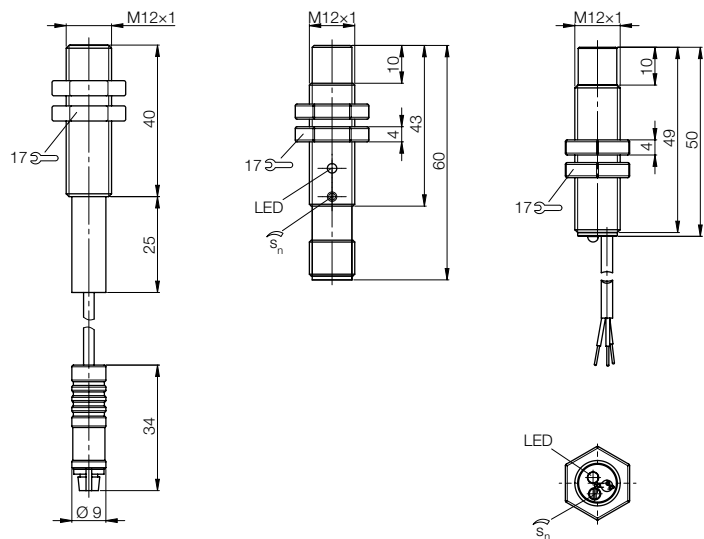
Housing size		M12×1	M12×1	M12×1
Mounting		flush	non-flush	non-flush
Rated switching distance s_n		1 mm	1...8 mm	1...8 mm
With sensor amplifier		Ordering code	BCS00CR	
		Part number	BCS M12EG2-XS10B-BT01-GZ01-501	
PNP	Normally open	Ordering code	BCS0062	BCS005F
		Part number	BCS M12T4D2-PSM80G-S04G	BCS M12T4G1-PSM80G-EP02
PNP	Normally closed	Ordering code	BCS0063	BCS005H
		Part number	BCS M12T4D2-POM80G-S04G	BCS M12T4G1-POM80G-EP02
NPN	Normally open	Ordering code	BCS0064	BCS005J
		Part number	BCS M12T4D2-NSM80G-S04G	BCS M12T4G1-NSM80G-EP02
NPN	Normally closed	Ordering code	BCS0065	BCS005K
		Part number	BCS M12T4D2-NOM80G-S04G	BCS M12T4G1-NOM80G-EP02
Supply voltage U_s		4...8 V DC	12...35 V DC	12...35 V DC
Voltage drop U_a at I_o			≤ 0.8 V	≤ 0.8 V
Rated insulation voltage U_i		75 V DC	75 V DC	75 V DC
Output current max.			200 mA	200 mA
No-load supply current I_o max.			≤ 10 mA	≤ 10 mA
Reverse polarity/short circuit protected		no/yes	yes/yes	yes/yes
Ambient temperature range T_a		0...+70 °C	-30...+70 °C	-30...+70 °C
Switching frequency f			100 Hz	100 Hz
Output function indicator			LED yellow	LED yellow
Degree of protection per IEC 60529		IP 67	IP 65	IP 65
Material	Housing	V2A	V2A	V2A
	Sensing face	PTFE	PTFE	PTFE
	Cover	POM	PA	POM
Wiring		Triax sensor cable, see page 64	M12 connector, 4-pin, A-coded	2 m cable PUR, 3×0.14 mm ²

For sensor amplifiers see
Accessories section
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For direct installation in containers

The non-flush mount sensors for level detection M12...M30 in plastic or PTFE housing provide IP 68 protection (at approx. 5 bar) at the sensing face. Sensors in stainless steel housing meet IP 67 at the sensing face.



Level Detection

DC 3-wire · Tubular housings
M12



Especially
EMC resistant,
above standard

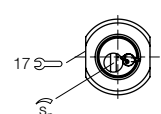
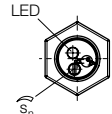
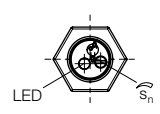
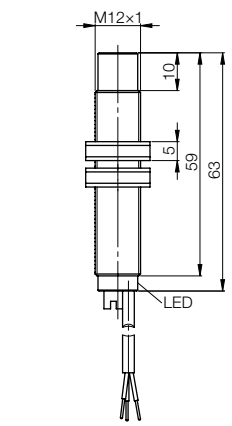
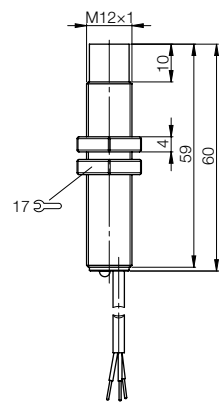
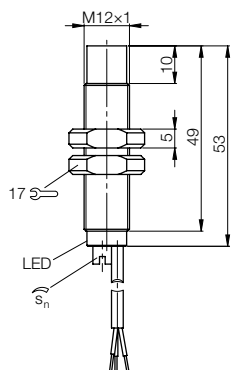
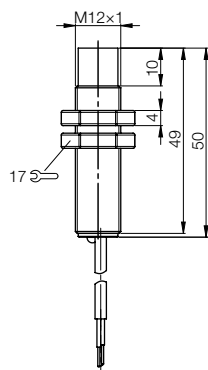
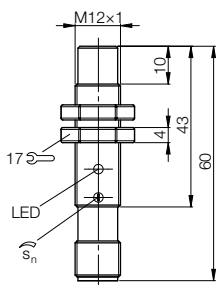


Especially
EMC resistant,
above standard

M12x1 non-flush 1...8 mm	M12x1 non-flush 1...8 mm	M12x1 non-flush 1...8 mm	M12x1 non-flush 1...6 mm	M12x1 non-flush 1...6 mm
BCS005Y BCS M12VWD2-PSM80G-S04G	BCS0059 BCS M12VWG1-PSM80G-EP02	BCS006Z BCS M12TTG1-PSM80G-ET02	BCS006T BCS M12VW1-PSM60G-EP02-E	BCS009J BCS M12TT11-PSM60G-ET02-E
BCS005Z BCS M12WD2-POM80G-S04G	BCS005A BCS M12VWG1-POM80G-EP02	BCS0070 BCS M12TTG1-POM80G-ET02	BCS006U BCS M12VW1-POM60G-EP02-E	BCS009K BCS M12TT11-POM60G-ET02-E
BCS0060 BCS M12VWD2-NSM80G-S04G	BCS005C BCS M12VWG1-NSM80G-EP02	BCS0071 BCS M12TTG1-NSM80G-ET02	BCS006W BCS M12VW1-NSM60G-EP02-E	BCS009L BCS M12TT11-NSM60G-ET02-E
BCS0061 BCS M12VWD2-NOM80G-S04G	BCS005E BCS M12VWG1-NOM80G-EP02	BCS0072 BCS M12TTG1-NOM80G-ET02	BCS006Y BCS M12VW1-NOM60G-EP02-E	BCS009M BCS M12TT11-NOM60G-ET02-E
12...35 V DC ≤ 0.8 V 75 V DC 200 mA ≤ 10 mA yes/yes -30...+60 °C 100 Hz LED yellow IP 65 PVC PVC PA M12 connector, 4-pin, A-coded	12...35 V DC ≤ 0.8 V 75 V DC 200 mA ≤ 10 mA yes/yes -30...+60 °C 100 Hz LED yellow IP 65 PVC PVC PVC 2 m cable PUR, 3×0.14 mm ²	12...35 V DC ≤ 0.8 V 75 V DC 200 mA ≤ 10 mA yes/yes -30...+70 °C 100 Hz LED red IP 65 PTFE PTFE PTFE 2 m cable PTFE, 3×0.2 mm ²	13...35 V DC ≤ 0.8 V 75 V DC 200 mA ≤ 15 mA yes/yes -30...+60 °C 25 Hz LED yellow IP 65 PVC PVC PVC 2 m cable PUR, 3×0.14 mm ²	12...35 V DC ≤ 0.8 V 75 V DC 200 mA ≤ 10 mA yes/yes -30...+60 °C 25 Hz LED red IP 65 PTFE PTFE PTFE 2 m cable PTFE, 3×0.2 mm ²

DC 3-wire
Tubular housings
SMART LEVEL
technology
High temperature
rated styles
Leak sensor

AC/DC 2-wire
Tubular
housings



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connectors and
holders see
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Level Detection

DC 3-wire · Tubular housings
M18

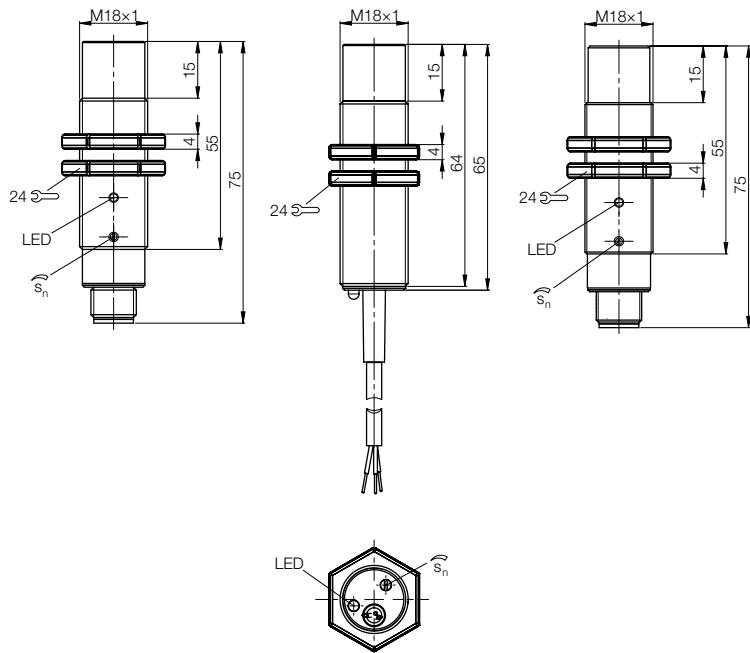


Housing size		M18×1	M18×1	M18×1
Mounting		non-flush	non-flush	non-flush
Rated switching distance s_n		2...15 mm	2...15 mm	2...15 mm
PNP Normally open	Ordering code	BCS006A	BCS005R	BCS0066
	Part number	BCS M18T4G2-PSC15G-S04G	BCS M18T4I1-PSC15G-DV02	BCS M18WG2-PSC15G-S04G
PNP Normally closed	Ordering code	BCS006C	BCS005T	BCS0067
	Part number	BCS M18T4G2-POC15G-S04G	BCS M18T4I1-POC15G-DV02	BCS M18WG2-POC15G-S04G
NPN Normally open	Ordering code	BCS006E	BCS005U	BCS0068
	Part number	BCS M18T4G2-NSC15G-S04G	BCS M18T4I1-NSC15G-DV02	BCS M18WG2-NSC15G-S04G
NPN Normally closed	Ordering code	BCS006F	BCS005W	BCS0069
	Part number	BCS M18T4G2-NOC15G-S04G	BCS M18T4I1-NOC15G-DV02	BCS M18WG2-NOC15G-S04G
Supply voltage U_s		10...35 V DC	10...35 V DC	10...35 V DC
Voltage drop U_d at I_o		≤ 1.5 V	≤ 1.5 V	≤ 1.5 V
Rated insulation voltage U_i (protection class)		75 V DC	75 V DC	75 V DC
Output current max.		300 mA	300 mA	300 mA
No-load supply current I_o max.		≤ 10 mA	≤ 10 mA	≤ 10 mA
Reverse polarity/short circuit protected		yes/yes	yes/yes	yes/yes
Ambient temperature range T_a		-30...+70 °C	-30...+70 °C	-30...+60 °C
Switching frequency f		100 Hz	100 Hz	100 Hz
Output function indicator		LED yellow	LED yellow	LED yellow
Degree of protection per IEC 60529		IP 67	IP 67	IP 67
Material	Housing	V2A	V2A	PVC
	Sensing face	PTFE	PTFE	PVC
	Cover	PA	POM	PA
Wiring		M12 connector, 4-pin, A-coded	2 m cable PVC, 3×0.25 mm ²	M12 connector, 4-pin, A-coded



For direct installation in containers

The non-flush mount sensors for level detection M12...M30 in plastic or PTFE housing provide IP 68 protection (at approx. 5 bar) at the sensing face. Sensors in stainless steel housing meet IP 67 at the sensing face.



Level Detection

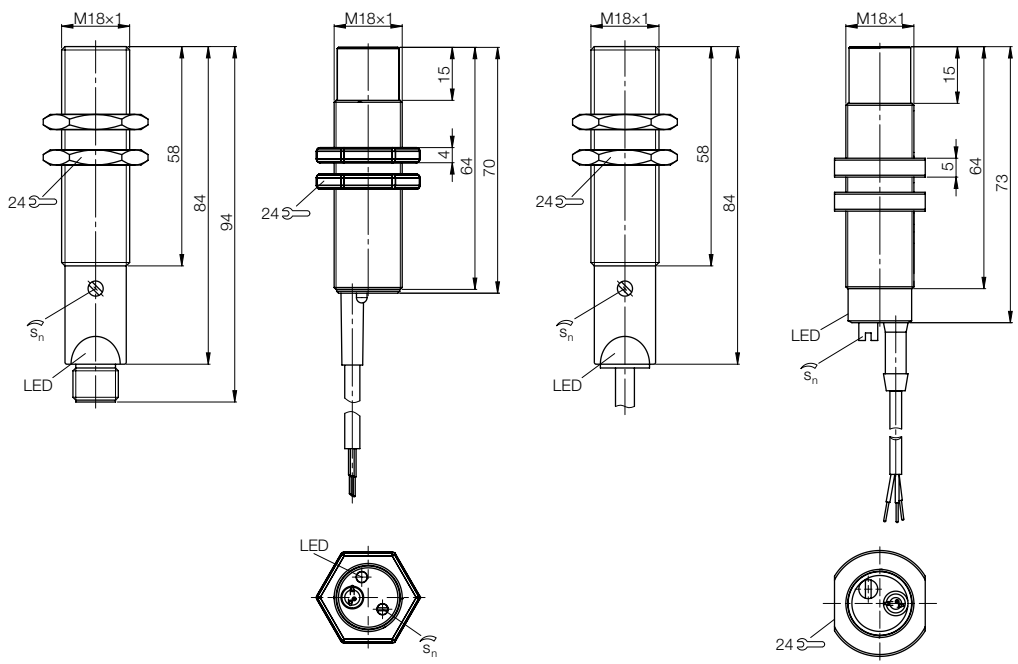
DC 3-wire · Tubular housings
M18



M18x1	M18x1	M18x1	M18x1
non-flush	non-flush	non-flush	non-flush
8 mm	2...15 mm	8 mm	2...15 mm
BCS000H	BCS005L	BCS000E	BCS0073
BCS M18KM3-PSC80G-S04G	BCS M18VW1-PSC15G-DV02	BCS M18KM3-PSC80G-BV02	BCS M18TTI2-PSC15G-AT02
BCS000C	BCS005M	BCS000A	BCS0074
BCS M18KM3-POC80G-S04G-001	BCS M18VW1-POC15G-DV02	BCS M18KM3-POC80G-BV02	BCS M18TTI2-POC15G-AT02
	BCS005N	BCS0009	BCS0075
	BCS M18VW1-NSC15G-DV02	BCS M18KM3-NSC80G-BV02	BCS M18TTI2-NSC15G-AT02
	BCS005P	BCS0008	BCS0076
	BCS M18VW1-NOC15G-DV02	BCS M18KM3-NOC80G-BV02	BCS M18TTI2-NOC15G-AT02
10...36 V DC	10...35 V DC	10...36 V DC	10...35 V DC
≤ 2.5 V	≤ 1.5 V	≤ 2.5 V	≤ 1.5 V
250 V AC (□)	75 V DC	250 V AC (□)	75 V DC
250 mA	300 mA	250 mA	300 mA
≤ 15 mA	≤ 10 mA	≤ 15 mA	≤ 10 mA
yes/yes	yes/yes	yes/yes	yes/yes
-25...+80 °C	-30...+60 °C	-25...+80 °C	-30...+70 °C
50 Hz	100 Hz	50 Hz	100 Hz
LED yellow	LED yellow	LED yellow	LED red
IP 67	IP 67	IP 67	IP 67
PBT	PVC	PBT	PTFE
PBT	PVC	PBT	PTFE
PBT	PBT	PBT	PTFE
M12 connector, 4-pin, A-coded	2 m cable PVC, 3×0.25 mm ²	2 m cable PVC, 3×0.34 mm	2 m cable PTFE, 3×0.2 mm ²


DC 3-wire
Tubular housings
SMART LEVEL
technology
High temperature
rated styles
Leak sensor

AC/DC 2-wire
Tubular
housings



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Level Detection

DC 3-wire · Tubular housings
M30

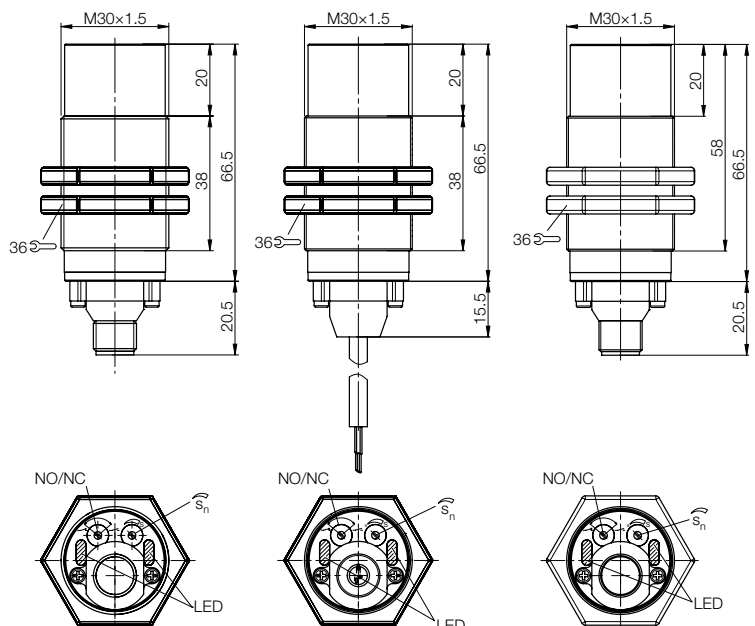


Housing size		M30×1.5	M30×1.5	M30×1.5
Mounting		non-flush	non-flush	non-flush
Rated switching distance s_n		1...30 mm	2...30 mm	1...30 mm
PNP Normally open	Ordering code			
	Part number			
PNP Normally closed	Ordering code			
	Part number			
PNP NO/NC selectable	Ordering code	BCS007L	BCS007J	BCS007F
	Part number	BCS M30T4M2-PPC30G-S04G	BCS M30T4M3-PPC30G-EP02	BCS M30BBM2-PPC30G-S04G
NPN Normally open	Ordering code			
	Part number			
NPN Normally closed	Ordering code			
	Part number			
NPN NO/NC selectable	Ordering code	BCS007M	BCS007K	BCS007H
	Part number	BCS M30T4M2-NPC30G-S04G	BCS M30T4M3-NPC30G-EP02	BCS M30BBM2-NPC30G-S04G
Supply voltage U_s		10...35 V DC	10...35 V DC	10...35 V DC
Voltage drop U_d at I_o		≤ 1.8 V	≤ 1.8 V	≤ 1.8 V
Rated insulation voltage U_i (protection class)		75 V DC	75 V DC	75 V DC
Output current max.		300 mA	300 mA	300 mA
No-load supply current I_o max.		≤ 15 mA	≤ 15 mA	≤ 15 mA
Reverse polarity/short circuit protected		yes/yes	yes/yes	yes/yes
Ambient temperature range T_a		-30...+70 °C	-30...+70 °C	-30...+70 °C
Switching frequency f		100 Hz	100 Hz	100 Hz
Power indicator		LED green	LED green	LED green
Output function indicator		LED yellow	LED yellow	LED yellow
Degree of protection per IEC 60529		IP 64	IP 64	IP 64
Material	Housing	V2A	V2A	PBT
	Sensing face	PTFE	PTFE	PBT
	Cover	PBT/PE	PBT/PE	PBT/PE
Wiring		M12 connector, 4-pin, A-coded	2 m cable PUR 3×0.34 mm ²	M12 connector, 4-pin, A-coded



For direct installation in containers

The non-flush mount sensors for level detection M12...M30 in plastic or PTFE housing provide IP 68 protection (at approx. 5 bar) at the sensing face. Sensors in stainless steel housing meet IP 67 at the sensing face.



Level Detection

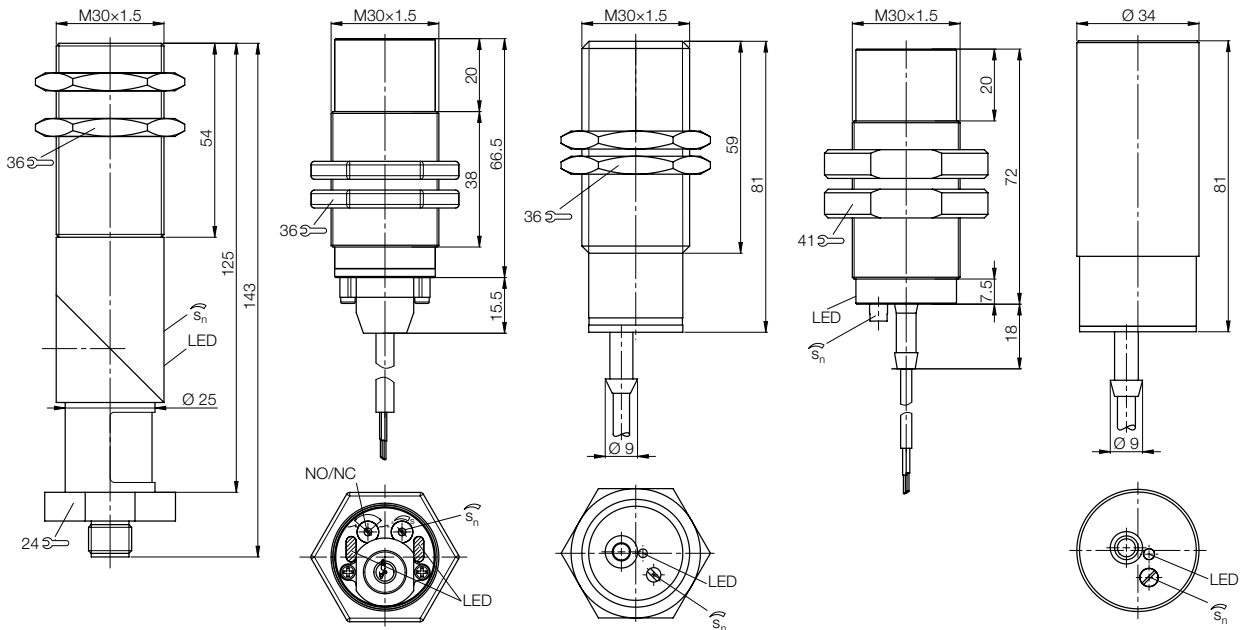
DC 3-wire · Tubular housings
M30, Ø 34 mm



M30×1.5 non-flush 15 mm	M30×1.5 non-flush 1...30 mm	M30×1.5 non-flush 15 mm	M30×1.5 non-flush 2...30 mm	Ø 34 mm non-flush 20 mm
		BCS000R BCS M30KN2-PSC18G-AV02	BCS0077 BCS M30TTH2-PSC30G-AT02	BCS0005 BCS G34KN2-PSC24G-AV02
		BCS000P BCS M30KN2-POC15G-AV02	BCS0078 BCS M30TTH2-POC30G-AT02	BCS0004 BCS G34KN2-POC20G-AV02
BCS000L BCS M30KM7-PPH15G-S04U	BCS007C BCS M30BBM3-PPC30G-EP02			
		BCS000N BCS M30KN2-NSC18G-AV02	BCS0079 BCS M30TTH2-NSC30G-AT02	BCS0003 BCS G34KN2-NSC24G-AV02
		BCS000M BCS M30KN2-NOC15G-AV02	BCS007A BCS M30TTH2-NOC30G-AT02	BCS0002 BCS G34KN2-NOC20G-AV02
	BCS007E BCS M30BBM3-NPC30G-EP02			
10...36 V DC ≤ 2.5 V 250 V AC (□) 250 mA ≤ 16 mA yes/yes -25...+70 °C 40 Hz	10...35 V DC ≤ 1.8 V 75 V DC 300 mA ≤ 15 mA yes/yes -30...+70 °C 100 Hz	10...36 V DC ≤ 2.5 V 250 V AC (□) 250 mA ≤ 15 mA yes/yes -25...+70 °C 40 Hz	10...35 V DC ≤ 1.8 V 75 V DC 300 mA ≤ 10 mA yes/yes -30...+70 °C 100 Hz	10...36 V DC ≤ 2.5 V 250 V AC (□) 250 mA ≤ 13 mA yes/yes -25...+70 °C 40 Hz
LED yellow IP 65	LED green LED yellow IP 64	LED yellow IP 65	LED red IP 67	LED yellow IP 65
PBT	PBT	PBT	PTFE	PBT
PBT	PBT	PBT	PTFE	PBT
PC	PBT/PE	PBT	PTFE	PBT
M12 connector, 4-pin, A-coded	2 m cable PUR 3×0.34 mm ²	2 m cable PVC, 3×0.5 mm	2 m cable PTFE, 3×0.2 mm ²	2 m cable PVC, 3×0.5 mm

DC 3-wire
Tubular housings
SMART LEVEL
technology
High temperature
rated styles
Leak sensor

AC/DC 2-wire
Tubular
housings



Mounting cuff included
in scope of delivery

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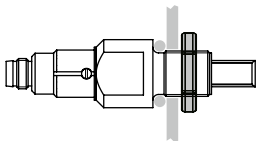
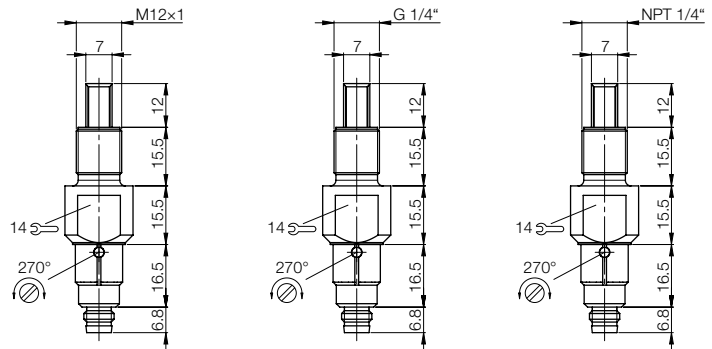
Level Detection

DC 3-wire · Tubular housings
Micro-Level M12, G 1/4", NPT 1/4"

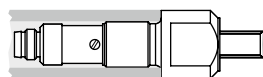


		M12x1 Micro-Level	G 1/4" Micro-Level	NPT 1/4" Micro-Level
Housing size		M12x1 Micro-Level	G 1/4" Micro-Level	NPT 1/4" Micro-Level
Mounting		non-flush	non-flush	non-flush
Rated switching distance s_n		Level adjustable	Level adjustable	Level adjustable
PNP/NPN and NO/NC selectable	Ordering code	BCS009T	BCS009U	BCS009W
	Part number	BCS S41SS01-GPCFNG-S49G	BCS S41SS02-GPCFNG-S49G	BCS S41SS03-GPCFNG-S49G
Supply voltage U_s		10...35 V DC	10...35 V DC	10...35 V DC
Voltage drop U_a at I_a		≤ 3 V	≤ 3 V	≤ 3 V
Rated insulation voltage U_i		75 V DC	75 V DC	75 V DC
Output current max.		50 mA	50 mA	50 mA
No-load supply current I_0 max.		≤ 20 mA	≤ 20 mA	≤ 20 mA
Reverse polarity/short circuit protected		no/yes	no/yes	no/yes
Ambient temperature range T_a		-10...+70 °C	-10...+70 °C	-10...+70 °C
Switching frequency f		5 Hz	5 Hz	5 Hz
Power indicator		LED green	LED green	LED green
Output function indicator		LED yellow	LED yellow	LED yellow
Degree of protection per IEC 60529		IP 67 (Sensing face: IP 68 at max. 10 bar)	IP 67 (Sensing face: IP 68 at max. 10 bar)	IP 67 (Sensing face: IP 68 at max. 10 bar)
Material	Housing	PSU	PSU	PSU
	Sensing face	PSU	PSU	PSU
	Cover	PSU	PSU	PSU
Wiring		M8 connector, 3-pin	M8 connector, 3-pin	M8 connector, 3-pin

Shield (M18 or 1/2") for
Micro-Level sensors
see Accessories section
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Standard mounting uses through-holes with included nut. This can be ignored when threaded holes are used or serve as additional security. Sealing is accomplished using an O-ring or gasket.



Reverse mounting in a tube of any desired length for fashioning "point-switching" rod sensors. Here also sealing can be accomplished using an O-ring or a gasket.

Level Detection

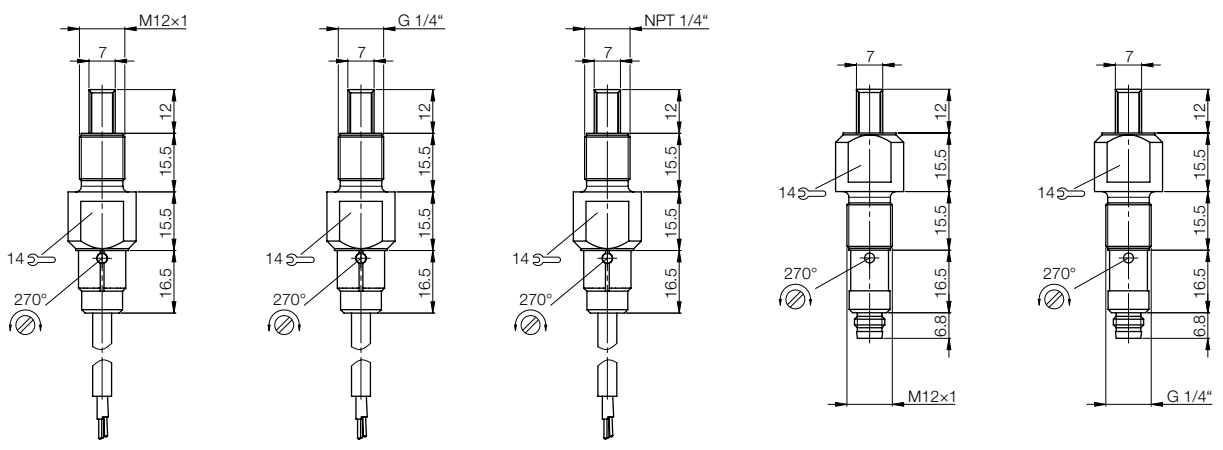
DC 3-wire · Tubular housings
Micro-Level M12, G 1/4", NPT 1/4"



M12x1 Micro-Level non-flush Level adjustable	G 1/4" Micro-Level non-flush Level adjustable	NPT 1/4" Micro-Level non-flush Level adjustable	M12x1 Micro-Level non-flush Level adjustable	G 1/4" Micro-Level non-flush Level adjustable
BCS009N	BCS009P	BCS009R	BCS009Y	BCS009Z
BCS S40SS01-GPCFNG-EP02	BCS S40SS02-GPCFNG-EP02	BCS S40SS03-GPCFNG-EP02	BCS S42SS01-GPCFNG-S49G	BCS S42SS02-GPCFNG-S49G
10...35 V DC	10...35 V DC	10...35 V DC	10...35 V DC	10...35 V DC
≤ 3 V	≤ 3 V	≤ 3 V	≤ 3 V	≤ 3 V
75 V DC	75 V DC	75 V DC	75 V DC	75 V DC
50 mA	50 mA	50 mA	50 mA	50 mA
≤ 20 mA	≤ 20 mA	≤ 20 mA	≤ 20 mA	≤ 20 mA
no/yes	no/yes	no/yes	no/yes	no/yes
-10...+70 °C	-10...+70 °C	-10...+70 °C	-10...+70 °C	-10...+70 °C
5 Hz	5 Hz	5 Hz	5 Hz	5 Hz
LED green	LED green	LED green	LED green	LED green
LED yellow	LED yellow	LED yellow	LED yellow	LED yellow
IP 67	IP 67	IP 67	IP 64	IP 64
(Sensing face: IP 68 at max. 10 bar)	(Sensing face: IP 68 at max. 10 bar)	(Sensing face: IP 68 at max. 10 bar)	(Sensing face: IP 68 at max. 10 bar)	(Sensing face: IP 68 at max. 10 bar)
PSU	PSU	PSU	PSU	PSU
PSU	PSU	PSU	PSU	PSU
PSU	PSU	PSU	PSU	PSU
2 m cable PUR, 3×0.34 mm ²	2 m cable PUR, 3×0.34 mm ²	2 m cable PUR, 3×0.34 mm ²	M8 connector, 3-pin	M8 connector, 3-pin


DC 3-wire
Tubular housings
SMART^{LEVEL}
technology
High temperature
rated styles
Leak sensor

AC/DC 2-wire
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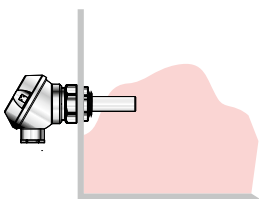
Level Detection

DC 3-wire · Tubular housings
Micro-Level NPT 1/4"
M18



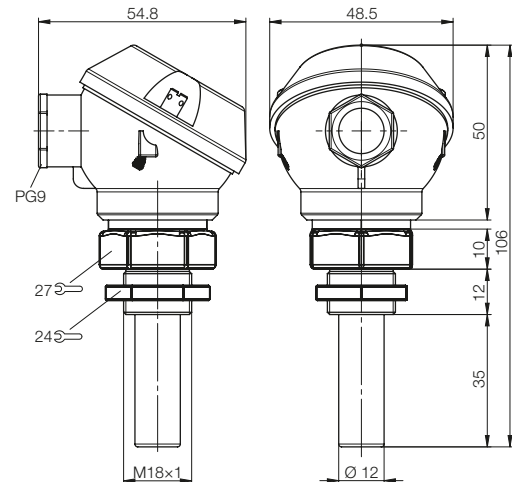
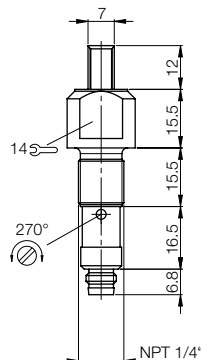
Pressure rated to 10 bar

Housing size		NPT 1/4" Micro-Level	M18x1
Mounting		non-flush	non-flush
Rated switching distance s_n		Level adjustable	Level adjustable
PNP Normally open	Ordering code		BCS006H
	Part number		BCS S01T401-PSCFNG-KM16-T02
PNP Normally closed	Ordering code		BCS006J
	Part number		BCS S01T401-POCFNG-KM16-T02
NPN Normally open	Ordering code		BCS006K
	Part number		BCS S01T401-NSCFNG-KM16-T02
NPN Normally closed	Ordering code		BCS006L
	Part number		BCS S01T401-NOCFNG-KM16-T02
PNP/NPN and NO/NC selectable	Ordering code	BCS00A0	
	Part number	BCS S42SS03-GPCFNG-S49G	
Supply voltage U_s		10...35 V DC	10...35 V DC
Voltage drop U_d at I_o		≤ 3 V	≤ 2.7 V
Rated insulation voltage U_i		75 V DC	75 V DC
Output current max.		50 mA	100 mA
No-load supply current I_o max.		≤ 20 mA	≤ 10 mA
Reverse polarity/short circuit protected		no/yes	yes/yes
Ambient temperature range T_a		-10...+70 °C	-30...+125 °C
Switching frequency f		5 Hz	5 Hz
Power indicator		LED green	
Output function indicator		LED yellow	LED yellow
Degree of protection per IEC 60529		IP 64 (Sensing face: IP 68 at max. 10 bar)	IP 67 (Sensing face: IP 68 at max. 10 bar)
Material	Housing	PSU	Die-case aluminum (GD-Al)
	Sensing face	PSU	PTFE
	Cover	PSU	Die-case aluminum (GD-Al)
Wiring		M8 connector, 3-pin	Screw terminals



Adjustment

Adjustment is made using the trimming potentiometer. The objective is to set a middle value between the turn-on and turn-off point when the sensor is damped. In individual cases when temperature swings are great and very sticky media are used a slight readjustment may be necessary. Otherwise our adjustment instructions for non-flush mount sensor versions apply.



Gasket not included in the scope of delivery

Level Detection

DC 3-wire · Tubular housings
R 3/8", NPTF 3/8"



Pressure rated to 10 bar

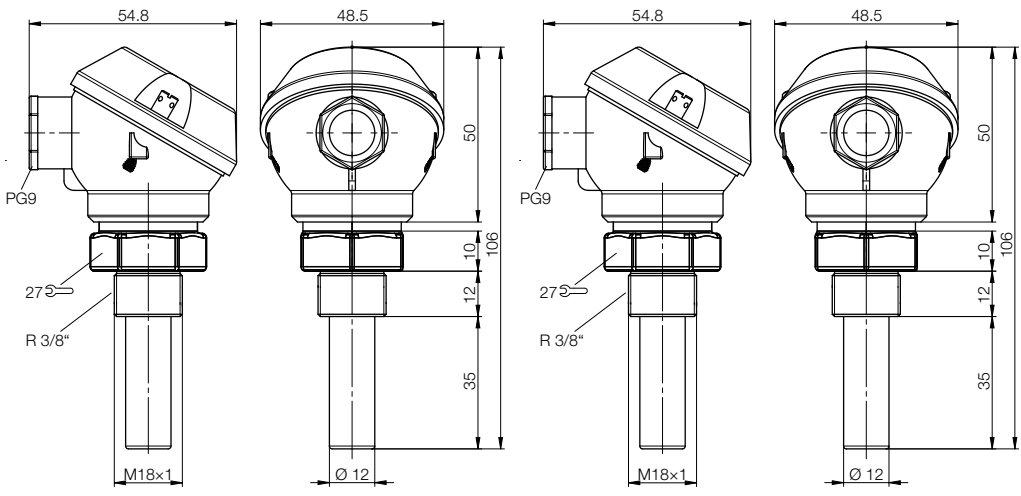


Pressure rated to 10 bar

R 3/8"	NPTF 3/8"
non-flush	non-flush
Level adjustable	Level adjustable
BCS006M	BCS00A6
BCS S02T401-PSCFNG-KM16-T02	BCS S03T401-PSCFNH-KM16-T02
BCS006N	BCS00A7
BCS S02T401-POCFNG-KM16-T02	BCS S03T401-POCFNH-KM16-T02
BCS006P	BCS00A8
BCS S02T401-NSCFNG-KM16-T02	BCS S03T401-NSCFNH-KM16-T02
BCS006R	BCS00A9
BCS S02T401-NOCFNG-KM16-T02	BCS S03T401-NOCFNH-KM16-T02
10...35 V DC ≤ 2.7 V 75 V DC 100 mA ≤ 10 mA yes/yes -30...+125 °C 5 Hz	10...35 V DC ≤ 2.7 V 75 V DC 100 mA ≤ 10 mA yes/yes -30...+125 °C 5 Hz
LED yellow IP 67 (Sensing face: IP 68 at max. 10 bar)	LED yellow IP 67 (Sensing face: IP 68 at max. 10 bar)
Die-case aluminum (GD-Al) PTFE Die-case aluminum (GD-Al) Screw terminals	Die-case aluminum (GD-Al) PTFE Die-case aluminum (GD-Al) Screw terminals

DC 3-wire
Tubular housings
SMART LEVEL
technology
High temperature
rated styles
Leak sensor

AC/DC 2-wire
Tubular
housings



Gasket not included in the scope of delivery

Gasket not included in the scope of delivery

Electrical devices, connectors and holders see Accessories section starting **page 69**



Level Detection

DC 3-wire · **SMARTLEVEL** technology



SMARTLEVEL sensors set new standards

Simply describing **SMARTLEVEL** as a level sensor for reliable sensing of liquid, conductive media does not do it justice. Because

SMARTLEVEL sensors can do far more - precisely when all other types have long since taken in their sails: in applications that were previously either tricky or simply impossible to solve.

SMARTLEVEL sensors go the extra mile.

SMARTLEVEL

- Compensate for moisture, foam and build-up
- Penetrate glass or plastic walls even over 10 mm thick
- Detect aqueous to highly conductive media
- Feature chemically resistant housings made of PTFE

SMARTLEVEL sensors reduce cost

- Adjustment-free installation and
- Freedom from cleaning in most applications
- Reduced use of materials and
- Less construction outlay (e.g. no bypass tubes)

SMARTLEVEL sensors optimize production processes and increase application reliability.

Standard applications with liquid, conductive media

SMARTLEVEL sensors are factory adjusted for standard applications and can reliably detect liquid, conductive media through glass or plastic walls. The factory setting automatically hides glass and plastic walls (approx. 0.5...6 mm) and compensates for internal or external foam, moisture and contamination.

Special applications

SMARTLEVEL sensors can also be used with liquid, conductive media in otherwise tricky or even impossible applications such as seeing through glass and plastic walls even greater than 6 mm thick. If needed, the calibration can be changed at the factory.



Note on cable routing

The connection cable should not be coiled behind the sensor. Instead, shorten the cable if needed or route it loosely.

SMARTLEVEL takes off – in the Airbus A380

Airbus is equipping the rest rooms in their 4-engine large-body A380 with a mixer tap. The heart of this exclusive system in the elegant Airbus design are compact **SMARTLEVEL** capacitive sensors from Balluff. These enable passengers to conveniently select the desired water temperature with the assistance of an LED indicator. The show-stopper: sensing errors are impossible, since **SMARTLEVEL** sensors ignore clinging dirt, liquid films and soap foam. Only hand-touching the faucet results in a switching operating, even if a wet paper towel covers it.



Level Detection

DC 3-wire · **SMARTLEVEL** technology
M18



Housing size		M18x1	M18x1	M18x1
Mounting		non-flush	non-flush	non-flush
Rated switching distance s_n		Self-adjusting	Self-adjusting	Self-adjusting
PNP Normally open	Ordering code	BCS008T	BCS007N	BCS008A
	Part number	BCS M18VVN-PSCFAG-S49G	BCS M18W11-PSCFAG-DV02	BCS M18TTI2-PSCFAG-AT02
PNP Normally closed	Ordering code	BCS008U	BCS007P	BCS008C
	Part number	BCS M18VVN-POCFAG-S49G	BCS M18W11-POCFAG-DV02	BCS M18TTI2-POCFAG-AT02
NPN Normally open	Ordering code	BCS008W	BCS007R	BCS008E
	Part number	BCS M18VVN-NSCFAG-S49G	BCS M18W11-NSCFAG-DV02	BCS M18TTI2-NSCFAG-AT02
NPN Normally closed	Ordering code	BCS008Y	BCS007T	BCS008F
	Part number	BCS M18VVN-NOCFAG-S49G	BCS M18W11-NOCFAG-DV02	BCS M18TTI2-NOCFAG-AT02
Supply voltage U_s		10...35 V DC	10...35 V DC	10...35 V DC
Voltage drop U_d at I_o		≤ 1.8 V	≤ 1.8 V	≤ 1.8 V
Rated insulation voltage U_i		75 V DC	75 V DC	75 V DC
Output current max.		300 mA	300 mA	300 mA
No-load supply current I_o max.		≤ 20 mA	≤ 20 mA	≤ 20 mA
Reverse polarity/short circuit protected		yes/yes	yes/yes	yes/yes
Ambient temperature range T_a		-10...+60 °C	-10...+60 °C	-10...+60 °C
Switching frequency f		2 Hz	2 Hz	2 Hz
Output function indicator		LED yellow	LED yellow	LED red
Degree of protection per IEC 60529		IP 64	IP 64	IP 64
Material	Housing	PVC	PVC	PTFE
	Sensing face	PVC	PVC	PTFE
	Cover	PVC	PBT	PTFE
Wiring		M8 connector, 3-pin	2 m cable PVC, 3×0.25 mm ²	2 m cable PTFE, 3×0.2 mm ²

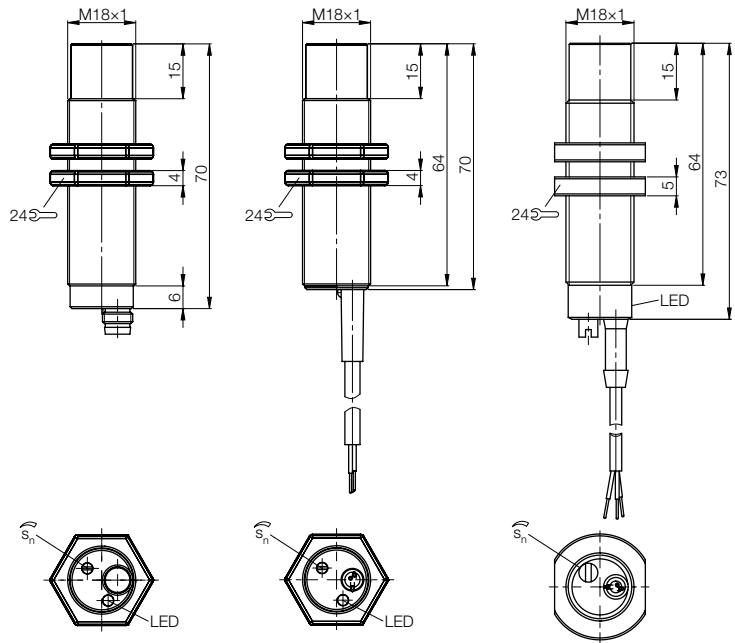
DC 3-wire
Tubular housings
SMARTLEVEL-technology
High temperature rated styles
Leak sensor

AC/DC 2-wire
Tubular housings



For direct installation in containers

The non-flush mount sensors for level detection M12...M30 in plastic or PTFE housing provide IP 68 protection (at approx. 5 bar) at the sensing face. Sensors in stainless steel housing meet IP 67 at the sensing face.



Electrical devices, connectors and holders see Accessories section starting **page 69**



Level Detection

DC 3-wire · **SMARTLEVEL** technology
M30

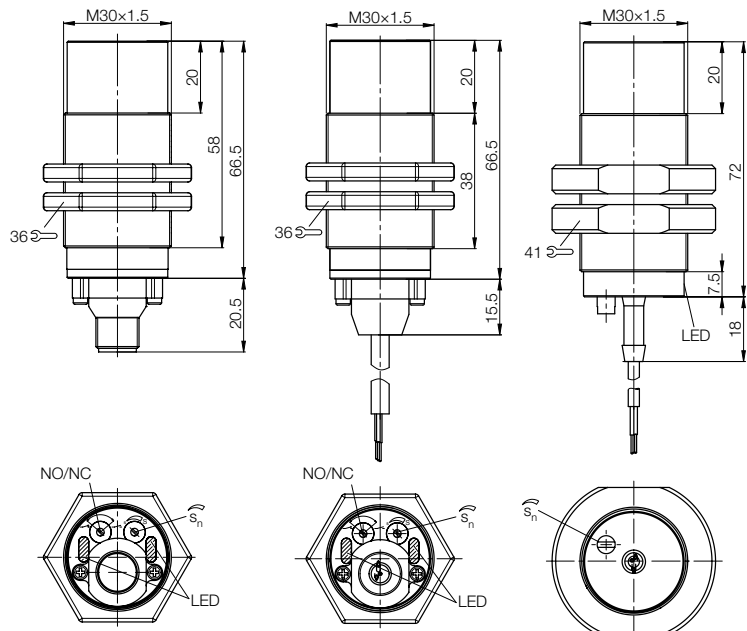


Housing size		M30×1.5	M30×1.5	M30×1.5
Mounting		non-flush	non-flush	non-flush
Rated switching distance s_n		Self-adjusting	Self-adjusting	Self-adjusting
PNP Normally open	Ordering code			BCS0086
	Part number			BCS M30TTH2-PSCFAG-AT02
PNP Normally closed	Ordering code			BCS0087
	Part number			BCS M30TTH2-POCFAG-AT02
PNP NO/NC selectable	Ordering code	BCS007Y	BCS007U	
	Part number	BCS M30BBM2-PPCFAG-S04G	BCS M30BBM3-PPCFAG-EP02	
NPN Normally open	Ordering code			BCS0088
	Part number			BCS M30TTH2-NSCFAG-AT02
NPN Normally closed	Ordering code			BCS0089
	Part number			BCS M30TTH2-NOCFAG-AT02
NPN NO/NC selectable	Ordering code	BCS007Z	BCS007W	
	Part number	BCS M30BBM2-NPCFAG-S04G	BCS M30BBM3-NPCFAG-EP02	
PNP/NPN and NO/NC selectable		Ordering code		
Part number				
Supply voltage U_s		10...35 V DC	10...35 V DC	10...35 V DC
Voltage drop U_a at I_o		≤ 1.8 V	≤ 1.8 V	≤ 1.8 V
Rated insulation voltage U_i		75 V DC	75 V DC	75 V DC
Output current max.		300 mA	300 mA	300 mA
No-load supply current I_o max.		≤ 20 mA	≤ 20 mA	≤ 20 mA
Reverse polarity/short circuit protected		yes/yes	yes/yes	yes/yes
Ambient temperature range T_a		-10...+60 °C	-10...+60 °C	-10...+60 °C
Switching frequency f		2 Hz	2 Hz	2 Hz
Power indicator		LED green	LED green	LED green
Output function indicator		LED yellow	LED yellow	LED red
Degree of protection per IEC 60529		IP 64	IP 64	IP 64
Material	Housing	PBT	PBT	PTFE
	Sensing face	PBT	PBT	PTFE
	Cover	PBT/PE	PBT/PE	PTFE
Wiring		M12 connector, 4-pin, A-coded	2 m cable PUR, 3×0.34 mm ²	2 m cable PTFE, 3×0.2 mm ²



For direct installation in containers

The non-flush mount sensors for level detection M12...M30 and Ø 7×52 mm in plastic or PTFE housing provide IP 68 protection (at approx. 5 bar) at the sensing face. Sensors in stainless steel housing meet IP 67 at the sensing face.



Level Detection

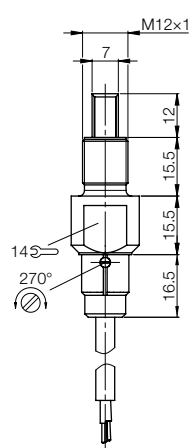
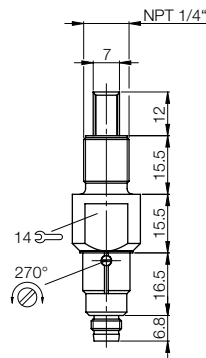
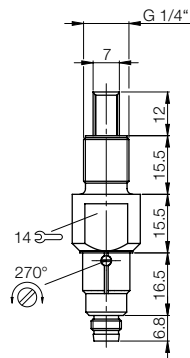
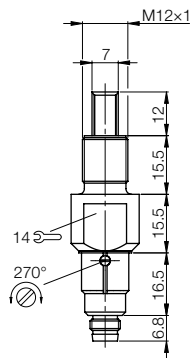
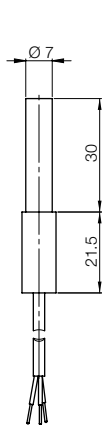
DC 3-wire · **SMARTLEVEL** technology
 Ø 7 mm, Micro-Level M12, G 1/4", NPT 1/4"



DC 3-wire
 Tubular housings
SMARTLEVEL-technology
 High temperature rated styles
 Leak sensor

AC/DC 2-wire
 Tubular housings

Ø 7x52 mm non-flush Self-adjusting	M12x1 Micro-Level non-flush Self-adjusting	G 1/4" Micro-Level non-flush Self-adjusting	NPT 1/4" Micro-Level non-flush Self-adjusting	M12x1 Micro-Level non-flush Self-adjusting
BCS009C				
BCS S20TT01-PSLFAG-ET02				
BCS009E				
BCS S20TT01-POLFAG-ET02				
BCS009F				
BCS S20TT01-NSLFAG-ET02				
BCS009H				
BCS S20TT01-NOLFAG-ET02				
	BCS0095	BCS0096	BCS0097	BCS008Z
	BCS S41SS01-GPCFAG-S49G	BCS S41SS02-GPCFAG-S49G	BCS S41SS03-GPCFAG-S49G	BCS S40SS01-GPCFAG-EP02
10...30 V DC	10...35 V DC	10...35 V DC	10...35 V DC	10...35 V DC
≤ 1.5 V	≤ 3 V	≤ 3 V	≤ 3 V	≤ 3 V
75 V DC	75 V DC	75 V DC	75 V DC	75 V DC
50 mA	50 mA	50 mA	50 mA	50 mA
≤ 20 mA	≤ 20 mA	≤ 20 mA	≤ 20 mA	≤ 20 mA
no/no	no/yes	no/yes	no/yes	no/yes
+5...+100 °C	-10...+105 °C	-10...+105 °C	-10...+105 °C	-10...+105 °C
10 Hz	5 Hz	5 Hz	5 Hz	5 Hz
	LED green	LED green	LED green	LED green
	LED yellow	LED yellow	LED yellow	LED yellow
IP 66	IP 67 (Sensing face: IP 68 at max. 10 bar)	IP 67 (Sensing face: IP 68 at max. 10 bar)	IP 67 (Sensing face: IP 68 at max. 10 bar)	IP 67 (Sensing face: IP 68 at max. 10 bar)
PTFE	PSU	PSU	PSU	PSU
PTFE	PSU	PSU	PSU	PSU
PTFE	PSU	PSU	PSU	PSU
2 m cable PTFE, 3x0.2 mm ²	M8 connector, 3-pin	M8 connector, 3-pin	M8 connector, 3-pin	2 m cable PUR, 3x0.34 mm ²



Shield (M18 or 1/2") for Micro-Level sensors see Accessories section Page 100



Electrical devices, connectors and holders see Accessories section **page 69**



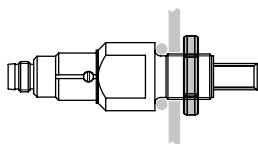
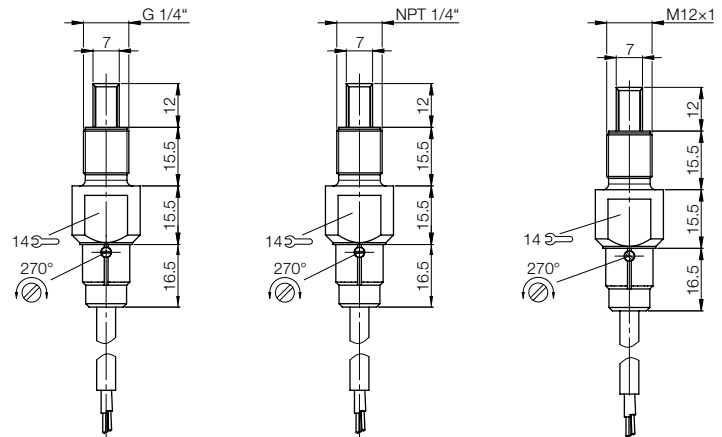
Level Detection

DC 3-wire · **SMARTLEVEL** technology
Micro-Level G 1/4", NPT 1/4", M12

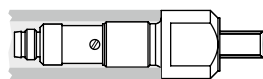


Housing size		G 1/4" Micro-Level	NPT 1/4" Micro-Level	M12x1 Micro-Level
Mounting		non-flush	non-flush	non-flush
Rated switching distance s_n		Self-adjusting	Self-adjusting	Self-adjusting
PNP/NPN and NO/NC selectable	Ordering code	BCS0090	BCS0091	BCS0092*
	Part number	BCS S40SS02-GPCFAG-EP02	BCS S40SS03-GPCFAG-EP02	BCS S40SS01-GPCFAG-EP02-D01
Supply voltage U_s		10...35 V DC	10...35 V DC	10...35 V DC
Voltage drop U_a at I_a		≤ 3 V	≤ 3 V	≤ 3 V
Rated insulation voltage U_i		75 V DC	75 V DC	75 V DC
Output current max.		50 mA	50 mA	50/50 mA push-pull
No-load supply current I_0 max.		≤ 20 mA	≤ 20 mA	≤ 20 mA
Reverse polarity/short circuit protected		no/yes	no/yes	no/yes
Ambient temperature range T_a		-10...+105 °C	-10...+105 °C	-10...+105 °C
Switching frequency f		5 Hz	5 Hz	100 Hz
Power indicator		LED green	LED green	LED green
Output function indicator		LED yellow	LED yellow	LED yellow
Degree of protection per IEC 60529		IP 67 (Sensing face: IP 68 at max. 10 bar)	IP 67 (Sensing face: IP 68 at max. 10 bar)	IP 67 (Sensing face: IP 68 at max. 10 bar)
Material	Housing	PSU	PSU	PSU
	Sensing face	PSU	PSU	PSU
	Cover	PSU	PSU	PSU
Wiring		2 m cable PUR, 3x0.34 mm ²	2 m cable PUR, 3x0.34 mm ²	2 m cable PUR, 3x0.34 mm ²

Shield (M18 or 1/2") for Micro-Level sensors see Accessories section Page 100



Standard mounting uses through-holes with included nut. This can be ignored when threaded holes are used or serve as additional security. Sealing is accomplished using an O-ring or gasket.



Reverse mounting in a tube of any desired length for fashioning "point-switching" rod sensors. Here also sealing can be accomplished using an O-ring or a gasket.

Level Detection

DC 3-wire · **SMARTLEVEL** technology
Micro-Level G 1/4", NPT 1/4", M12



SMARTLEVEL 15



SMARTLEVEL 15



SMARTLEVEL 15



SMARTLEVEL 15

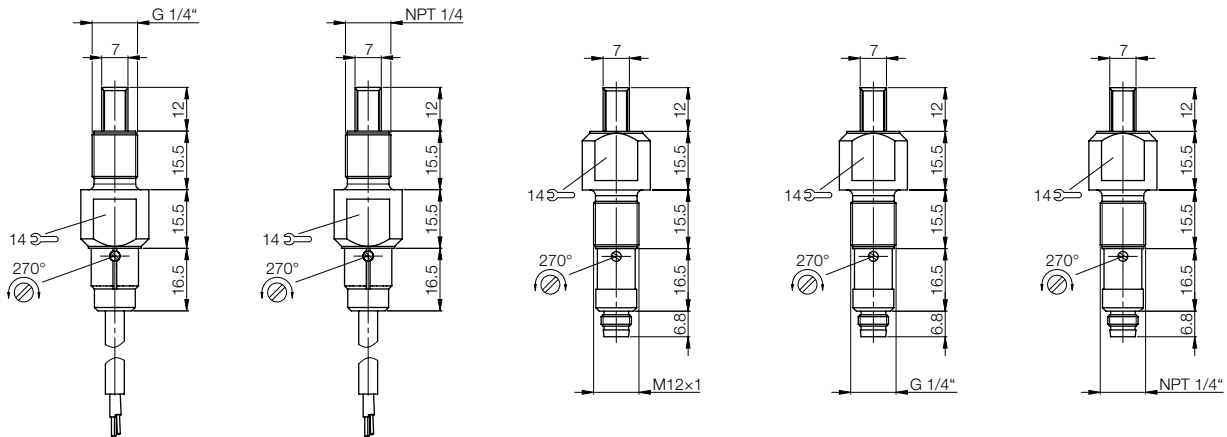


SMARTLEVEL 15

G 1/4" Micro-Level non-flush Self-adjusting BCS0093*	NPT 1/4" Micro-Level non-flush Self-adjusting BCS0094*	M12x1 Micro-Level non-flush Self-adjusting BCS0098	G 1/4" Micro-Level non-flush Self-adjusting BCS0099	NPT 1/4" Micro-Level non-flush Self-adjusting BCS009A
BCS S40SS02-GPCFAG-EP02-D01	BCS S40SS03-GPCFAG-EP02-D01	BCS S42SS01-GPCFAG-S49G	BCS S42SS02-GPCFAG-S49G	BCS S42SS03-GPCFAG-S49G
10...35 V DC	10...35 V DC	10...35 V DC	10...35 V DC	10...35 V DC
≤ 3 V	≤ 3 V	≤ 3 V	≤ 3 V	≤ 3 V
75 V DC	75 V DC	75 V DC	75 V DC	75 V DC
50/50 mA push-pull ≤ 20 mA	50/50 mA push-pull ≤ 20 mA	50 mA ≤ 20 mA	50 mA ≤ 20 mA	50 mA ≤ 20 mA
no/yes	no/yes	no/yes	no/yes	no/yes
-10...+105 °C	-10...+105 °C	-10...+105 °C	-10...+105 °C	-10...+105 °C
100 Hz	100 Hz	5 Hz	5 Hz	5 Hz
LED green	LED green	LED green	LED green	LED green
LED yellow	LED yellow	LED yellow	LED yellow	LED yellow
IP 67 (Sensing face: IP 68 at max. 10 bar)	IP 67 (Sensing face: IP 68 at max. 10 bar)	IP 64 (Sensing face: IP 68 at max. 10 bar)	IP 64 (Sensing face: IP 68 at max. 10 bar)	IP 64 (Sensing face: IP 68 at max. 10 bar)
PSU	PSU	PSU	PSU	PSU
PSU	PSU	PSU	PSU	PSU
PSU	PSU	PSU	PSU	PSU
2 m cable PUR, 3×0.34 mm ²	2 m cable PUR, 3×0.34 mm ²	M8 connector, 3-pin	M8 connector, 3-pin	M8 connector, 3-pin

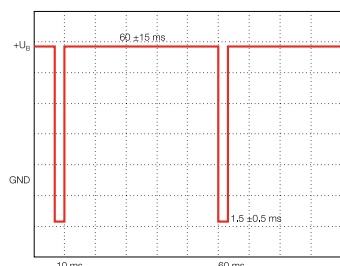
DC 3-wire
Tubular housings
SMARTLEVEL-technology
High temperature rated styles
Leak sensor

AC/DC 2-wire
Tubular housings

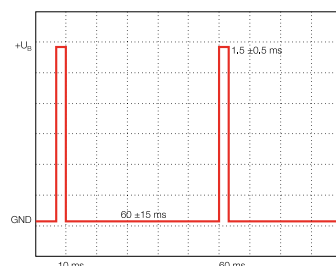


* **i** The continuous self-test signal (CST) is superimposed on the output signal.

Test pulse positive



Test pulse negative



Electrical devices, connectors and holders see Accessories section starting page 69



Level Detection

DC 3-wire · **SMARTLEVEL** technology

Ø 50 mm



SMARTLEVEL 15

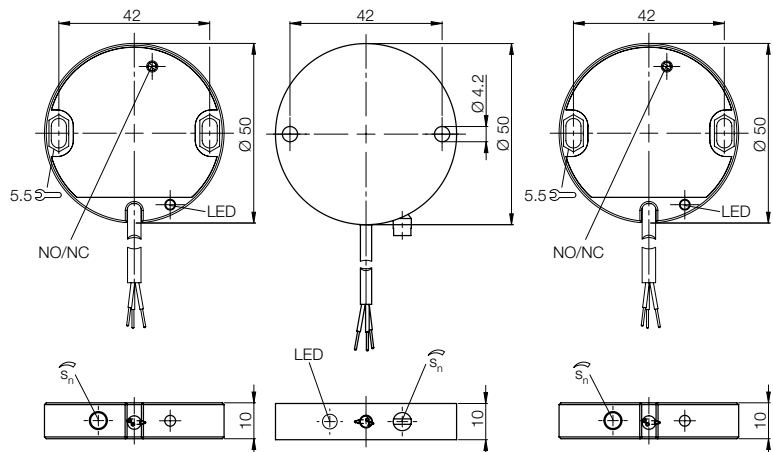
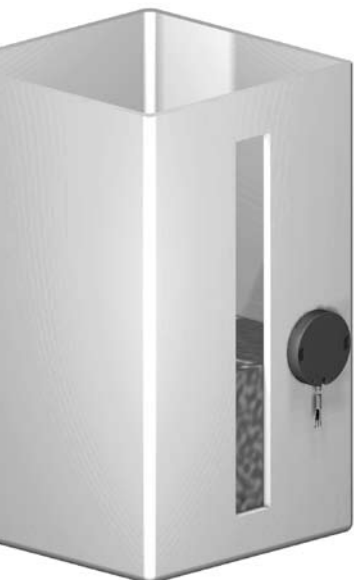


SMARTLEVEL 15



SMARTLEVEL 50

Housing size		Ø 50×10 mm	Ø 50×10 mm	Ø 50×10 mm
Mounting		flush	flush	flush
Rated switching distance s_n		Self-adjusting	Self-adjusting	Self-adjusting
PNP Normally open	Ordering code		BCS0080	BCS00CK
	Part number		BCS D50TT05-PSCFAC-ET02	BCS D50O006-PSFSC-EV02
PNP Normally closed	Ordering code		BCS0081	BCS00CM
	Part number		BCS D50TT05-POCFAC-ET02	BCS D50O006-POFSC-EV02
PNP NO/NC selectable	Ordering code	BCS0084		
	Part number	BCS D50O004-PPCFAC-EV02		
NPN Normally open	Ordering code		BCS0082	BCS00HE
	Part number		BCS D50TT05-NSCFAC-ET02	BCS D50O006-NSFSC-EV02
NPN Normally closed	Ordering code		BCS0083	BCS00C1
	Part number		BCS D50TT05-NOCFAC-ET02	BCS D50O006-NOFSC-EV02
NPN NO/NC selectable	Ordering code	BCS0085		
	Part number	BCS D50O004-NPCFAC-EV02		
PNP/NPN and NO/NC selectable	Ordering code			
Part number				
Supply voltage U_s		10...35 V DC	10...35 V DC	10...35 V DC
Voltage drop U_a at I_o		≤ 1.8 V	≤ 1.8 V	≤ 1.8 V
Rated insulation voltage U_i		75 V DC	75 V DC	75 V DC
Output current max.		300 mA	300 mA	300 mA
No-load supply current I_o max.		≤ 20 mA	≤ 20 mA	≤ 10 mA
Reverse polarity/short circuit protected		yes/yes	yes/yes	yes/yes
Ambient temperature range T_a		-10...+60 °C	-10...+60 °C	-10...+60 °C
Switching frequency f		2 Hz	2 Hz	2 Hz
Power indicator				
Output function indicator		LED yellow	LED red	LED yellow
Degree of protection per IEC 60529		IP 67	IP 67	IP 67
Material	Housing	POM	PTFE	POM
	Sensing face	POM	PTFE	POM
	Cover	POM	PTFE	POM
Wiring		2 m cable PVC, 3×0.25 mm ²	2 m cable PTFE, 3×0.2 mm ²	2 m cable PVC, 3×0.25 mm ²



Level Detection

DC 3-wire · **SMARTLEVEL** technology

Micro-Box 16×34×8 mm

M30



SMARTLEVEL 15



SMARTLEVEL 15



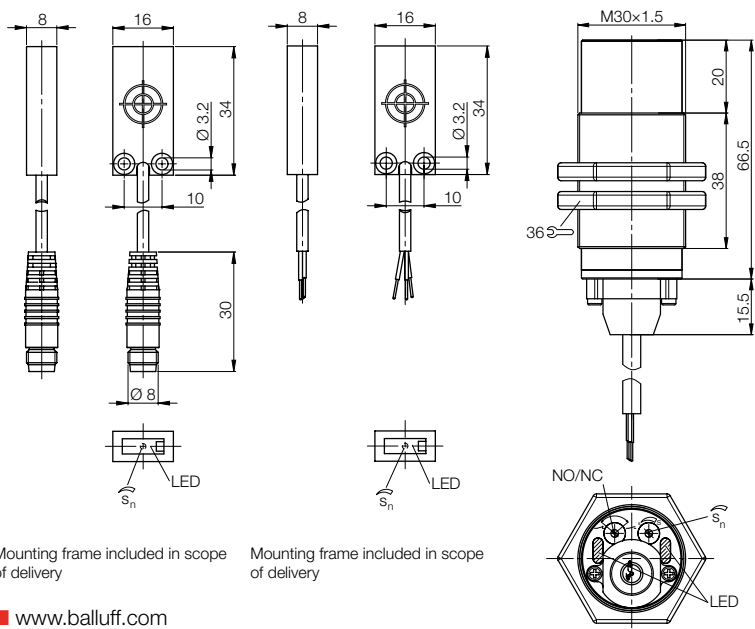
SMARTLEVEL 500+

Available starting 2010

16×34×8 mm Micro-Box flush	16×34×8 mm Micro-Box flush	M30×1.5 non-flush		
Self-adjusting	Self-adjusting	Self-adjusting		
BCS008M	BCS008H			
BCS R08RR01-PSMFAC-EP00,2-GS49	BCS R08RR01-PSMFAC-EP02			
BCS008N	BCS008J			
BCS R08RR01-POMFAC-EP00,2-GS49	BCS R08RR01-POMFAC-EP02			
BCS008P	BCS008K			
BCS R08RR01-NSMFAC-EP00,2-GS49	BCS R08RR01-NSMFAC-EP02			
BCS008R	BCS008L			
BCS R08RR01-NOMFAC-EP00,2-GS49	BCS R08RR01-NOMFAC-EP02			
		BCS008J		
		BCS M30T4M3-GPCFVG-EP02		
12...30 V DC	12...30 V DC	10...30 V DC		
≤ 1.5 V	≤ 1.5 V	≤ 3 V		
75 V DC	75 V DC	75 V DC		
50 mA	50 mA	100/100 mA push-pull		
≤ 10 mA	≤ 10 mA	≤ 15 mA		
yes/yes	yes/yes	no/yes		
-30...+70 °C	-30...+70 °C	-10...+60 °C		
2 Hz	2 Hz	2 Hz		
		LED green		
LED yellow	LED yellow	LED yellow		
IP 67	IP 67	IP 67		
PP	PP	V2A		
PP	PP	PTFE		
PP	PP	PBT/PE		
0.2 m cable PUR, 3×0.14 mm ² with M8 connector, 3-pin	2 m cable PUR, 3×0.14 mm ²	2 m cable PUR, 3×0.34 mm ²		

DC 3-wire
Tubular housings
SMARTLEVEL-technology
High temperature rated styles
Leak sensor

AC/DC 2-wire
Tubular housings



Mounting frame included in scope of delivery

Mounting frame included in scope of delivery

Electrical devices, connectors and holders see Accessories section starting page 69



Level Detection

DC 3-wire · High-temperature rated versions

+250 °C
+482 °F

Balluff high-temperature sensors can be used for level detection of liquid, paste-like or powdery media at high temperatures up to 250 °C.

To withstand such extreme conditions, the housing of the high-temperature rated sensors is made of stainless steel and the sensor heads of PTFE. The sensors are also used with a special Triax sensor cable and a separate amplifier.

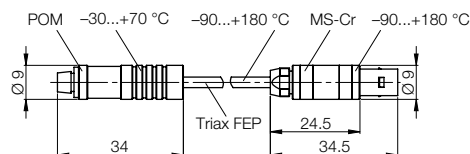


Housing size	
Mounting	
Rated switching distance s_n	
With sensor amplifier	Ordering code
	Part number
Supply voltage U_s	
Ambient temperature range T_a	
Degree of protection per IEC 60529	
Material	Housing
	Sensing face
	Cover
Wiring	

For sensor amplifiers
see Accessories section
Page 71

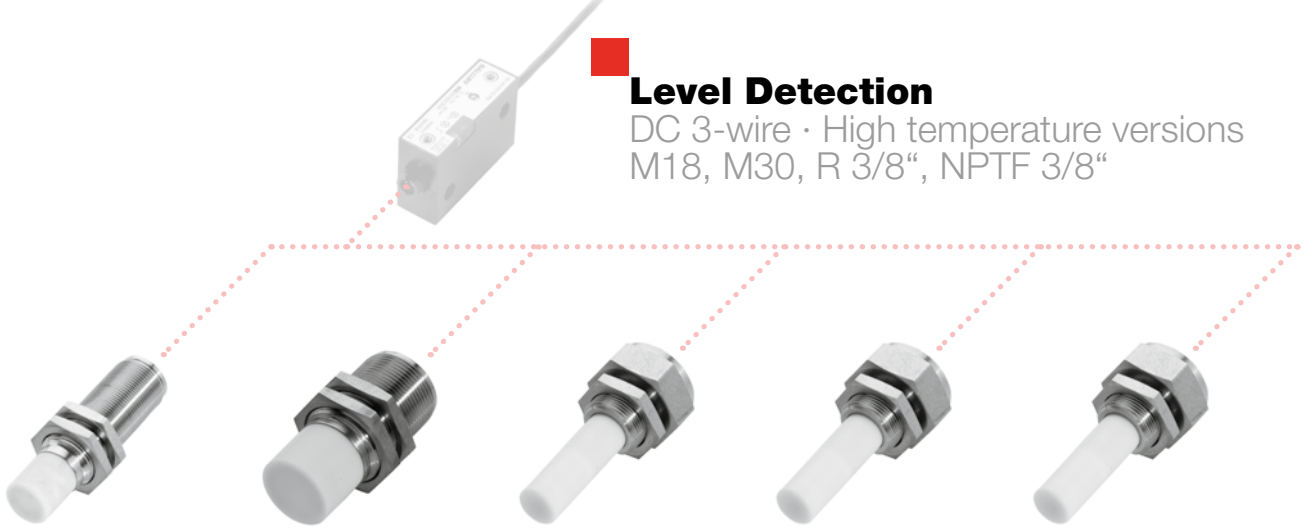


Description	Connectors for high-temperature sensors
Ordering code	BCC04JW
Part number	BCC Z003-020
Ambient temperature range T_a	See drawing
Degree of protection per IEC 60529	IP 54
Wiring	2 m Triax FEP



Level Detection

DC 3-wire · High temperature versions
M18, M30, R 3/8", NPTF 3/8"



M18x1	M30x1.5	M18x1	R 3/8"	NPTF 3/8"
non-flush	non-flush	non-flush	non-flush	non-flush
1...10 mm	1...20 mm	Level adjustable	Level adjustable	Level adjustable
BCS00A1	BCS00A2	BCS00A3	BCS00A4	BCS00A5
BCS M18T4H1-XXS10H-SZ02-T08	BCS M30T4G1-XXS20H-SZ02-T08	BCS S10T401-XXSFNC-SZ02-T07	BCS S10T402-XXSFNC-SZ02-T07	BCS S10T403-XXSFNC-SZ02-T07
4...8 V DC	4...8 V DC	4...8 V DC	4...8 V DC	4...8 V DC
-180...+250 °C	-180...+250 °C	-10...+180 °C	-10...+180 °C	-10...+180 °C
IP 54	IP 54	IP 54 (Sensing face: IP 68 at max. 6 bar)	IP 54 (Sensing face: IP 68 at max. 6 bar)	IP 54 (Sensing face: IP 68 at max. 6 bar)
V2A	V2A	V2A	V2A	V2A
PTFE	PTFE	PTFE	PTFE	PTFE
PTFE/MS-Cr	PTFE/MS-Cr	PTFE/MS-Cr	PTFE/MS-Cr	PTFE/MS-Cr
Triax sensor cable	Triax sensor cable	Triax sensor cable	Triax sensor cable	Triax sensor cable



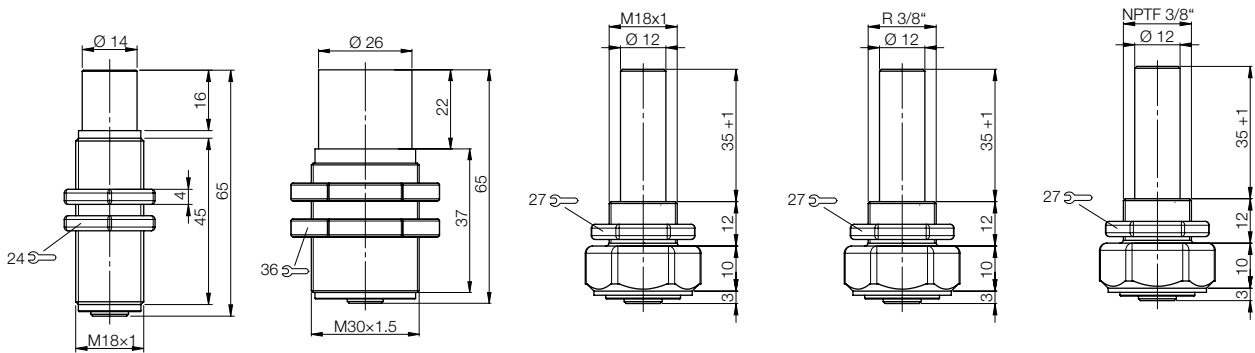
DC 3-wire

Tubular housings

SMARTLEVEL technology

High temperature rated styles

Leak sensor



AC/DC 2-wire

Tubular housings

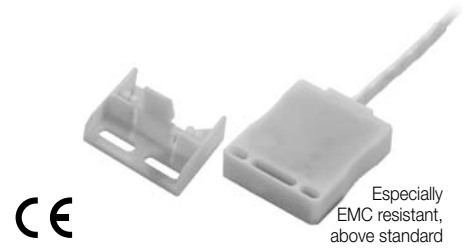
Electrical devices, connectors and holders see Accessories section starting **page 69**



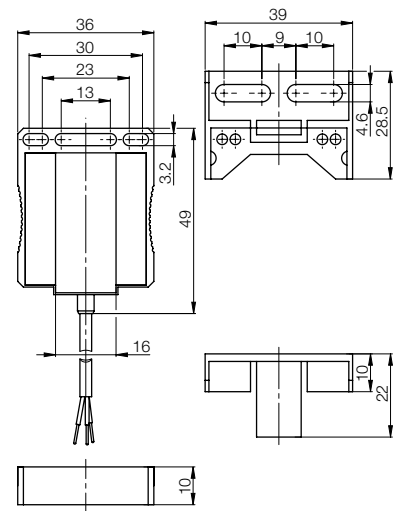
Level Detection

DC 3-wire · Leak sensor
36×44×10 mm

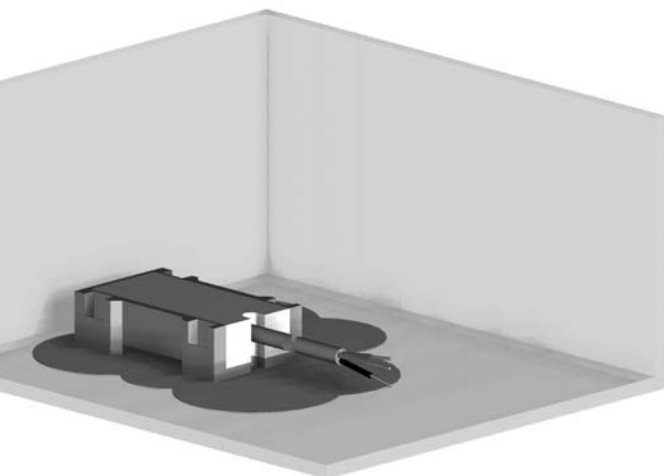
The new Balluff leak sensor detects even the slightest amounts of liquid quickly and reliably. It thereby prevents costly damage in and around the equipment. The sensor features a chemically resistant housing and a PTFE jacketed cable, so that it can be used even in aggressive surroundings such as in the semiconductor industry without being damaged. The included mounting frame allows the sensor to be screwed directly to the floor. Sensor removal from the frame is also quick and easy. High EMC resistance increases operating reliability even further.



Housing size	36×44×10 mm		
Mounting	flush		
Rated switching distance s_n	1.3 mm		
Normally open	PNP/NPN selectable	Ordering code	BCS00H7
		Part number	BCS Z05AA02-GSCFNZ01-DT02
Normally closed	PNP/NPN selectable	Ordering code	BCS00H6
		Part number	BCS Z05AA02-GOCFNZ01-DT02
Supply voltage U_s	18...30 V DC		
Voltage drop U_d at I_o	≤ 2 V		
Rated insulation voltage U_i (protection class)	75 V DC		
Output current max.	50 mA		
No-load supply current I_o max.	≤ 20 mA		
Reverse polarity/short circuit protected	yes/yes		
Ambient temperature range T_a	-10...+70 °C		
Switching frequency f	10 Hz		
Output function indicator	LED red		
Degree of protection per IEC 60529	IP 67		
Material	Housing	PP	
	Sensing face	PP	
	Cover	PP	
Wiring	2 m cable PTFE, 3×0.2 mm ²		



Mounting frame included in scope of delivery



Level Detection

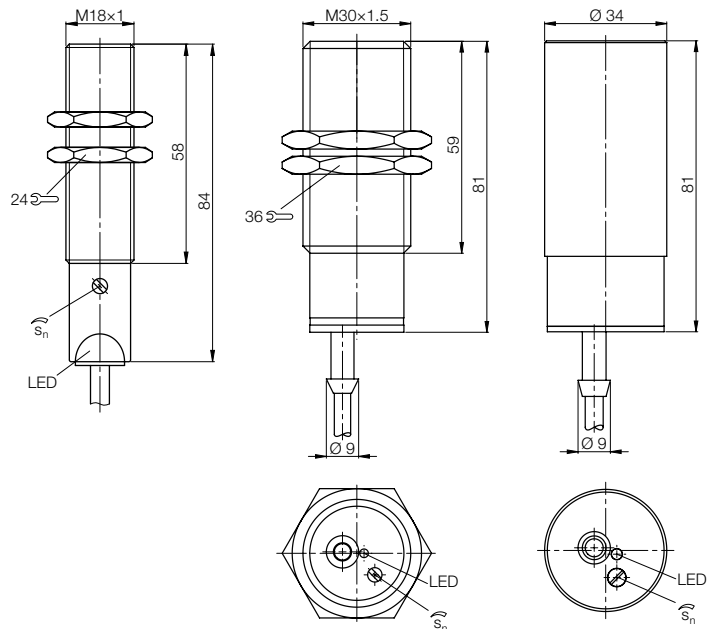
AC/DC 2-wire · Tubular housings
M18, M30, Ø 34 mm



DC 3-wire
Tubular housings
SMARTLEVEL
technology
High temperature
rated styles
Leak sensor

AC/DC 2-wire
Tubular housings

Housing size	M18×1	M30×1.5	Ø 34 mm
Mounting	non-flush	non-flush	non-flush
Rated switching distance s_n	8 mm	15 mm	20 mm
Normally open	Ordering code Part number	Ordering code Part number	Ordering code Part number
	BCS000K BCS M18KM3-UST80G-BV02	BCS000W BCS M30KN2-UST15G-AV02	BCS0007 BCS G34KN2-UST20G-AV02
Normally closed	Ordering code Part number	Ordering code Part number	Ordering code Part number
	BCS000J BCS M18KM3-UOT80G-BV02	BCS000U BCS M30KN2-UOT15G-AV02	BCS0006 BCS G34KN2-UOT20G-AV02
Supply voltage U_s	20...250 V AC/DC	20...250 V AC/DC	20...250 V AC/DC
Voltage drop U_d at I_a	≤ 6 V	≤ 6 V	≤ 6 V
Rated insulation voltage U_i (protection class)	250 V AC (□)	250 V AC (□)	250 V AC (□)
Output current max.	350 mA (AC)/100 mA (DC)	250 mA (AC)	250 mA (AC)
Reverse polarity/short circuit protected	no/no	no/no	no/no
Ambient temperature range T_a	-25...+80 °C	-25...+70 °C	-25...+70 °C
Switching frequency f	25 Hz (AC)/50 Hz (DC)	25 Hz (AC)/50 Hz (DC)	25 Hz (AC)/50 Hz (DC)
Output function indicator	LED yellow	LED yellow	LED yellow
Degree of protection per IEC 60529	IP 67	IP 65	IP 65
Material	Housing Sensing face Cover	PBT PBT PBT	PBT PBT PBT
Wiring	2 m cable PVC, 2×0.34 mm ²	2 m cable PVC, 2×0.34 mm ²	2 m cable PVC, 2×0.5 mm ²



Mounting cuff included in scope of delivery

Electrical devices, connectors and holders see Accessories section starting **page 69**



