

Level Detection

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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.

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DC 3-wire

Tubular housings

SMART technology

High temperature rated styles

Leak sensor

AC/DC 2-wire

Tubular housings

For power supplies, amplifiers, connectors and mounting brackets see accessories section starting **page 55**

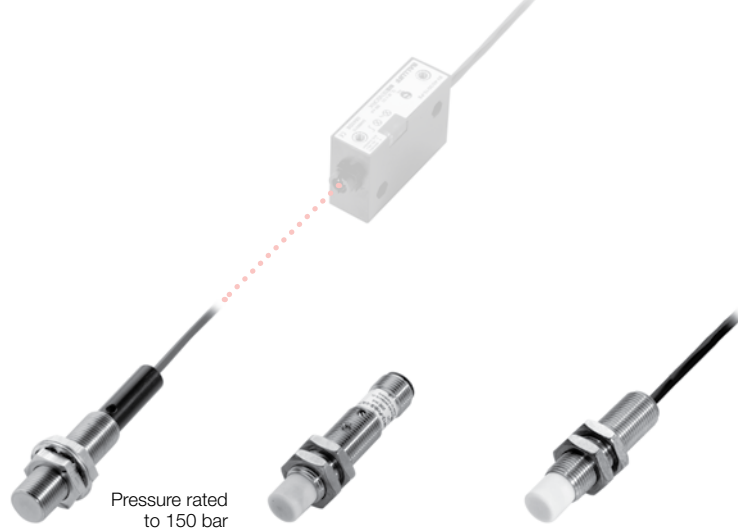


Level Detection

DC 3-wire Tubular housings
M12

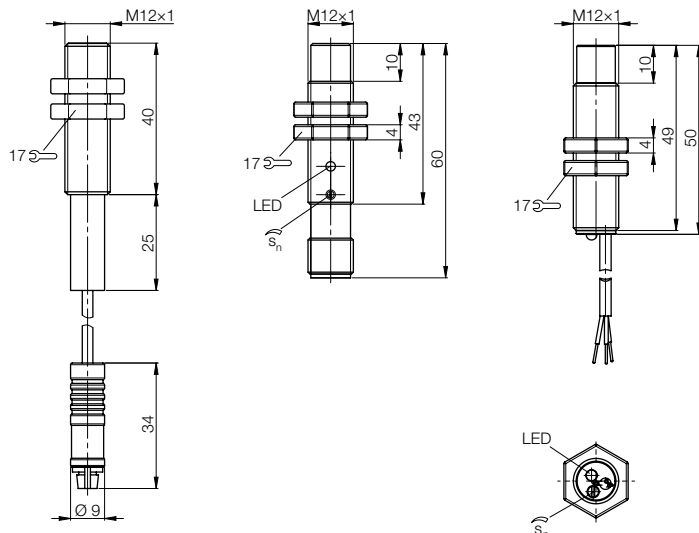


Pressure rated
to 150 bar



Housing size	M12x1	M12x1	M12x1
Mounting	flush	non-flush	non-flush
Rated switching distance s_n	1 mm	1...8 mm	1...8 mm
With sensor amplifier	Ordering code Part number	BCS00CR BCS M12EG2-XXS10B-BT01-GZ01-501	
PNP Normally open	Ordering code Part number	BCS0062 BCS M12T4D2-PSM80G-S04G	BCS005F BCS M12T4G1-PSM80G-EP02
PNP Normally closed	Ordering code Part number	BCS0063 BCS M12T4D2-POM80G-S04G	BCS005H BCS M12T4G1-POM80G-EP02
NPN Normally open	Ordering code Part number	BCS0064 BCS M12T4D2-NSM80G-S04G	BCS005J BCS M12T4G1-NSM80G-EP02
NPN Normally closed	Ordering code Part number	BCS0065 BCS M12T4D2-NOM80G-S04G	BCS005K BCS M12T4G1-NOM80G-EP02
Supply voltage U_s	4...8 V DC	12...35 V DC	12...35 V DC
Voltage drop U_d 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		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 Sensing face Cover	V2A PTFE POM	V2A PTFE POM
Wiring	Triax sensor cable, see page 64	M12 connector, 4-pin, A-coded	2 m cable PUR, 3x0.14 mm ²

For sensor amplifiers see
Accessories section
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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



**DC 3-wire
Tubular
housings**

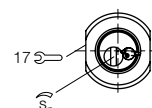
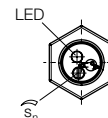
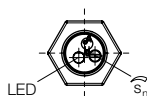
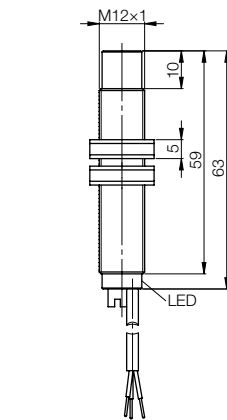
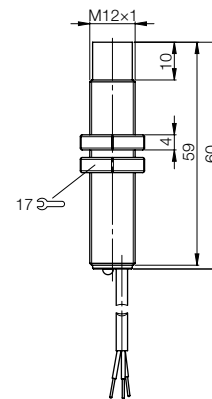
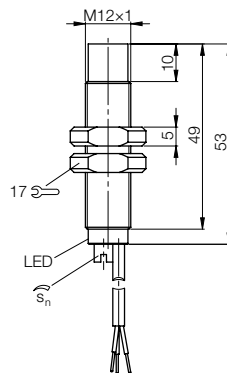
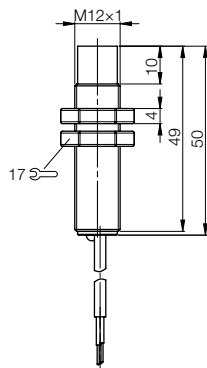
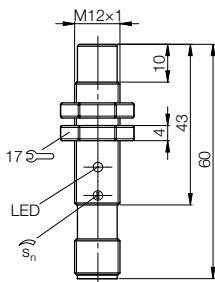
SMARTLEVEL
technology

High temperature
rated styles
Leak sensor

**AC/DC
2-wire**

Tubular
housings

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 M12VVD2-PSM80G-S04G	BCS0059 BCS M12VVG1-PSM80G-EP02	BCS006Z BCS M12TTG1-PSM80G-ET02	BCS006T BCS M12VW11-PSM60G-EP02-E	BCS009J BCS M12TT11-PSM60G-ET02-E
BCS005Z BCS M12VVD2-POM80G-S04G	BCS005A BCS M12VVG1-POM80G-EP02	BCS0070 BCS M12TTG1-POM80G-ET02	BCS006U BCS M12VW11-POM60G-EP02-E	BCS009K BCS M12TT11-POM60G-ET02-E
BCS0060 BCS M12VVD2-NSM80G-S04G	BCS005C BCS M12VVG1-NSM80G-EP02	BCS0071 BCS M12TTG1-NSM80G-ET02	BCS006W BCS M12VW11-NSM60G-EP02-E	BCS009L BCS M12TT11-NSM60G-ET02-E
BCS0061 BCS M12VVD2-NOM80G-S04G	BCS005E BCS M12VVG1-NOM80G-EP02	BCS0072 BCS M12TTG1-NOM80G-ET02	BCS006Y BCS M12VW11-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, 3x0.14 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, 3x0.2 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, 3x0.14 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, 3x0.2 mm ²



For power
supplies,
amplifiers,
connectors
and mounting
brackets see
accessories
section starting
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Level Detection

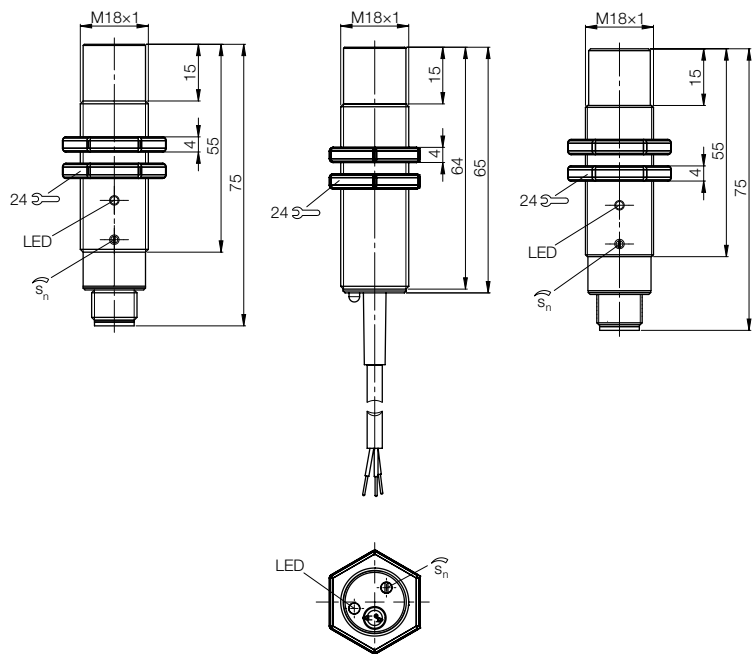
DC 3-wire Tubular housings
M18



Housing size		M18x1	M18x1	M18x1
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_a		≤ 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_0 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, 3x0.25 mm ²	M12 connector, 4-pin, A-coded



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

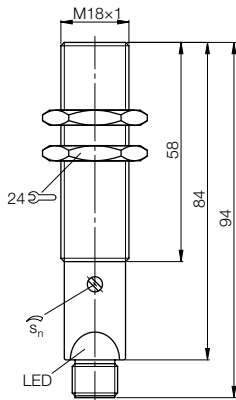


M18x1 non-flush 8 mm*	M18x1 non-flush 2...15 mm	M18x1 non-flush 8 mm*	M18x1 non-flush 2...15 mm
BCS000H BCS M18KM3-PSC80G-S04G	BCS005L BCS M18VW1-PSC15G-DV02	BCS000E BCS M18KM3-PSC80G-BV02	BCS0073 BCS M18TTI2-PSC15G-AT02
BCS000C BCS M18KM3-POC80G-S04G-001	BCS005M BCS M18VW1-POC15G-DV02	BCS000A BCS M18KM3-POC80G-BV02	BCS0074 BCS M18TTI2-POC15G-AT02
	BCS005N BCS M18VW1-NSC15G-DV02	BCS0009 BCS M18KM3-NSC80G-BV02	BCS0075 BCS M18TTI2-NSC15G-AT02
	BCS005P BCS M18VW1-NOC15G-DV02	BCS0008 BCS M18KM3-NOC80G-BV02	BCS0076 BCS M18TTI2-NOC15G-AT02
10...36 V DC ≤ 2.5 V 75 V DC 250 mA ≤ 15 mA yes/yes -25...+80 °C 50 Hz LED yellow IP 67 PBT PBT PBT M12 connector, 4-pin, A-coded	10...35 V DC ≤ 1.5 V 75 V DC 300 mA ≤ 10 mA yes/yes -30...+60 °C 100 Hz LED yellow IP 67 PVC PVC PBT 2 m cable PVC, 3x0.25 mm ²	10...36 V DC ≤ 2.5 V 75 V DC 250 mA ≤ 15 mA yes/yes -25...+80 °C 50 Hz LED yellow IP 67 PBT PBT PBT 2 m cable PVC, 3x0.34 mm	10...35 V DC ≤ 1.5 V 75 V DC 300 mA ≤ 10 mA yes/yes -30...+70 °C 100 Hz LED red IP 67 PTFE PTFE PTFE 2 m cable PTFE, 3x0.2 mm ²

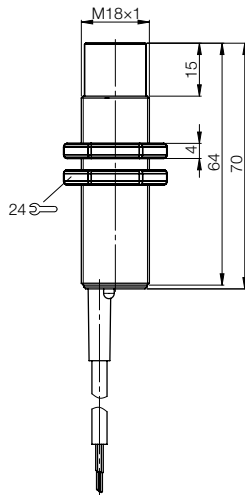


**DC 3-wire
Tubular
housings**
SMARTLEVEL
technology
High temperature
rated styles
Leak sensor

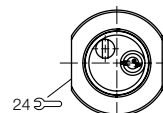
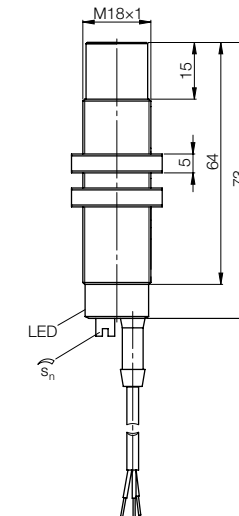
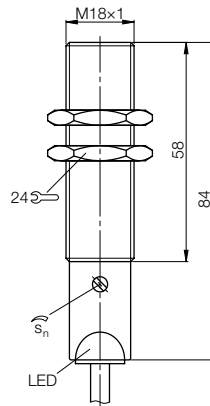
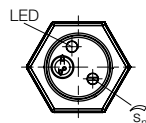
**AC/DC
2-wire**
Tubular
housings



* Flush mounting
reduces the effective
switching distance by
50%.



* Flush mounting
reduces the effective
switching distance by
50%.



For power
supplies,
amplifiers,
connectors
and mounting
brackets see
accessories
section starting
page 55



Level Detection

DC 3-wire Tubular housings
M30

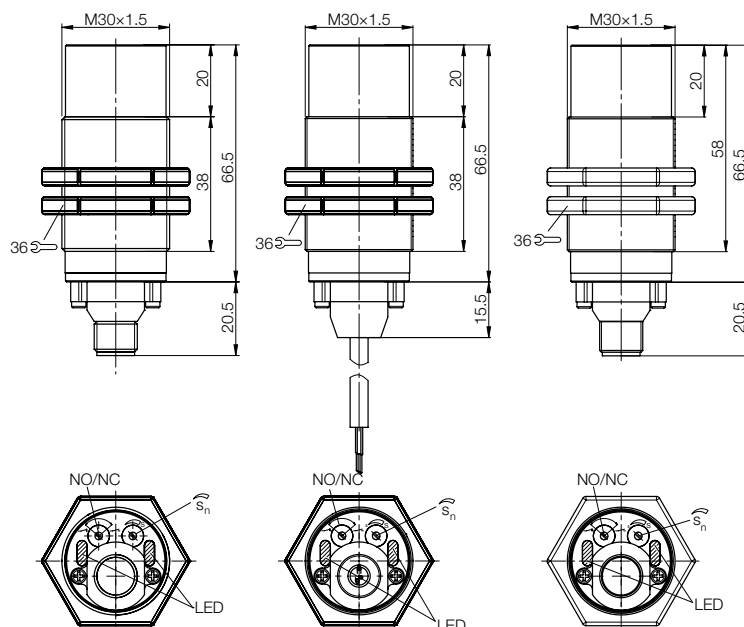


Housing size		M30x1.5	M30x1.5	M30x1.5
Mounting		non-flush	non-flush	non-flush
Rated switching distance s_n		1...30 mm	2...30 mm	1...30 mm
PNP Normally open	Ordering code			
	Part number			
PNP Normally closed	Ordering code			
	Part number			
PNP NO/NC selectable	Ordering code	BCS007L	BCS007J	BCS007F
	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 3x0.34 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

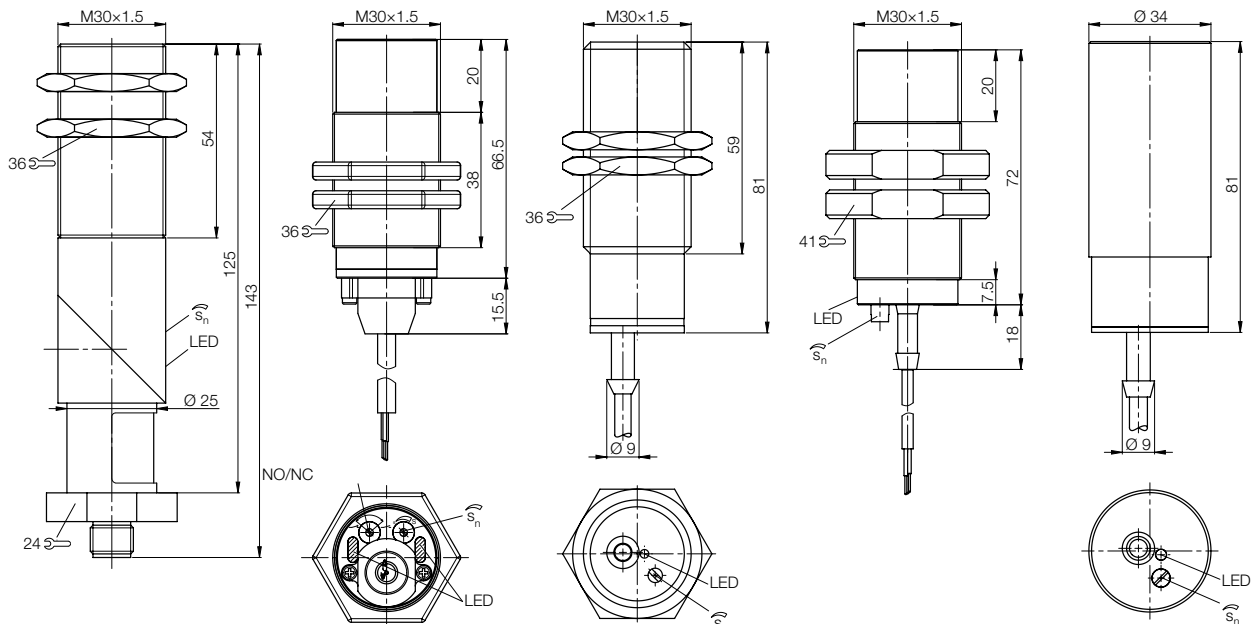
DC 3-wire Tubular housings
M30, Ø 34 mm



M30x1.5 non-flush 15 mm*	M30x1.5 non-flush 1...30 mm	M30x1.5 non-flush 15 mm*	M30x1.5 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 (I) 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 (I) 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 (I) 250 mA ≤ 13 mA yes/yes -25...+70 °C 40 Hz
LED yellow IP 65 PBT PBT PC M12 connector, 4-pin, A-coded	LED green LED yellow IP 64 PBT PBT PBT/PE 2 m cable PUR 3x0.34 mm ²	LED yellow IP 65 PBT PBT PBT 2 m cable PVC, 3x0.5 mm	LED red IP 67 PTFE PTFE PTFE 2 m cable PTFE, 3x0.2 mm ²	LED yellow IP 65 PBT PBT PBT 2 m cable PVC, 3x0.5 mm



DC 3-wire Tubular housings
SMARTLEVEL technology
High temperature rated styles
Leak sensor
AC/DC 2-wire Tubular housings



For power supplies, amplifiers, connectors and mounting brackets see accessories section starting **page 55**



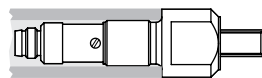
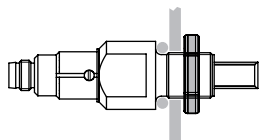
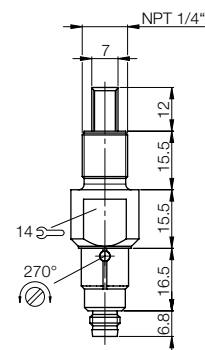
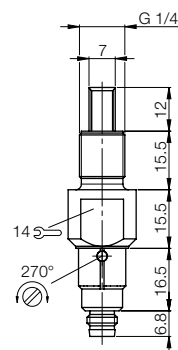
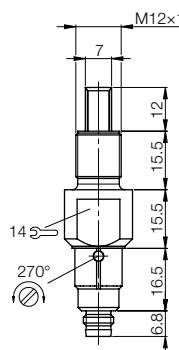
Level Detection

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



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_d at I_o		≤ 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_o 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 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K
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
Page 87



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, sealing can also 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"



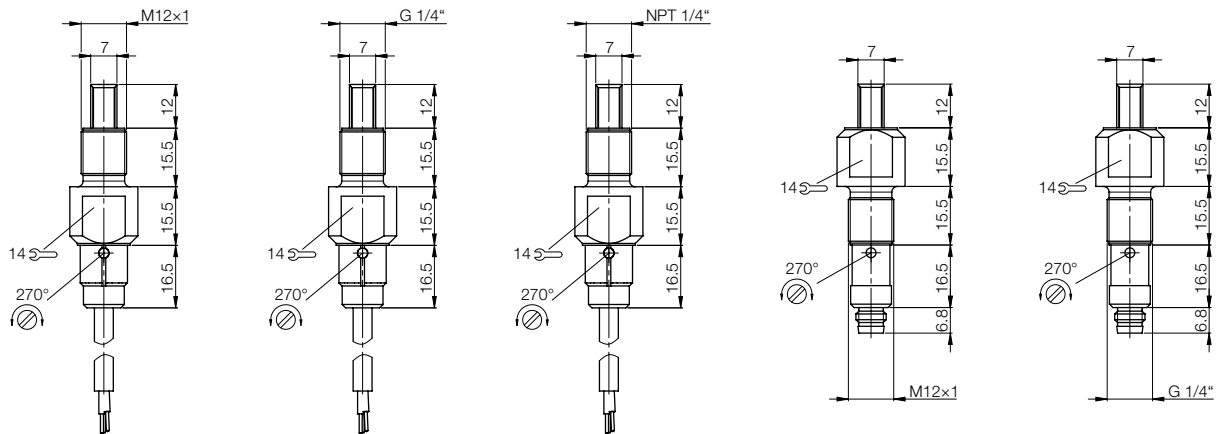
M12x1 Micro-Level non-flush Level adjustable BCS009N	G 1/4" Micro-Level non-flush Level adjustable BCS009P	NPT 1/4" Micro-Level non-flush Level adjustable BCS009R	M12x1 Micro-Level non-flush Level adjustable BCS009Y	G 1/4" Micro-Level non-flush Level adjustable BCS009Z
BCS S40SS01-GPCFNG-EP02	BCS S40SS02-GPCFNG-EP02	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 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K
PSU	PSU	PSU	PSU	PSU
PSU	PSU	PSU	PSU	PSU
PSU	PSU	PSU	PSU	PSU
2 m cable PUR, 3x0.34 mm ²	2 m cable PUR, 3x0.34 mm ²	2 m cable PUR, 3x0.34 mm ²	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



For power
supplies,
amplifiers,
connectors
and mounting
brackets see
accessories
section starting
page 55



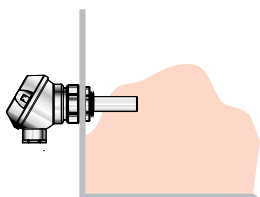
Level Detection

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



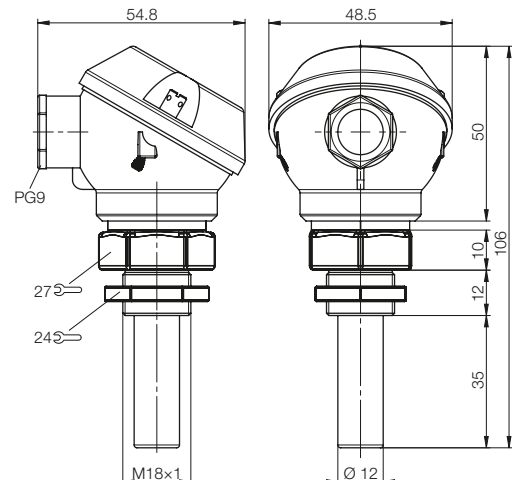
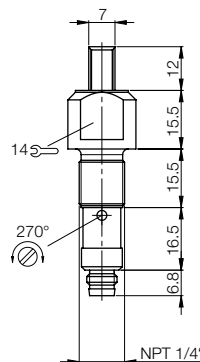
Pressure rated to 10 bar

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 68 at max. 10 bar/ IP 69K	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.



O-ring not included

Level Detection

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



Pressure rated to 10 bar



Pressure rated to 10 bar



DC 3-wire Tubular housings

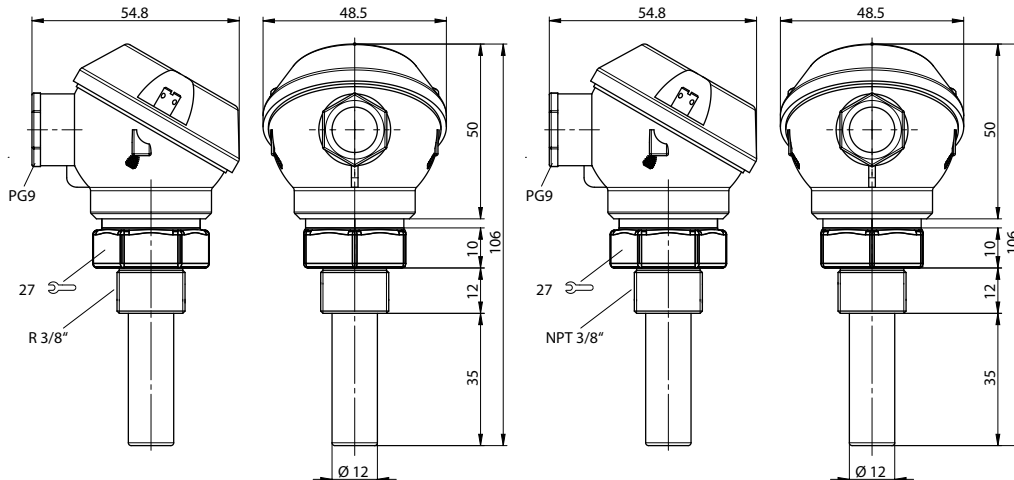
SMARTLEVEL technology

High temperature rated styles
Leak sensor

AC/DC 2-wire

Tubular housings

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	10...35 V DC
≤ 2.7 V	≤ 2.7 V
75 V DC	75 V DC
100 mA	100 mA
≤ 10 mA	≤ 10 mA
yes/yes	yes/yes
-30...+125 °C	-30...+125 °C
5 Hz	5 Hz
LED yellow	LED yellow
IP 67	IP 67
(Sensing face: IP 68 at max. 10 bar)	(Sensing face: IP 68 at max. 10 bar)
Die-case aluminum (GD-Al)	Die-case aluminum (GD-Al)
PTFE	PTFE
Die-case aluminum (GD-Al)	Die-case aluminum (GD-Al)
Screw terminals	Screw terminals



For power supplies, amplifiers, connectors and mounting brackets see accessories section starting **page 55**



Level Detection

DC 3-wire **SMARTLEVEL** technology

SMARTLEVEL



SMARTLEVEL sensors set new standards

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

SMARTLEVEL sensors can solve applications that were previously tricky or even impossible.

SMARTLEVEL

- Compensate for moisture, foam and build-up
- Penetrate glass or plastic walls up to 12 mm thick
- Detect aqueous to highly conductive media
- Feature chemically resistant housings made of PTFE

SMARTLEVEL sensors reduce cost

- Adjustment-free installation
- Freedom from cleaning in most applications
- Reduced use of materials
- 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.



Note on cable routing

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

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.





Housing size		M18×1	M18×1	M18×1
Mounting		non-flush	non-flush	non-flush
Rated switching distance s_n		Self-adjusting	Self-adjusting	Self-adjusting
PNP	Normally open	Ordering code BCS008T	Ordering code BCS007N	Ordering code BCS008A
		Part number BCS M18VN-PSCFAG-S49G	Part number BCS M18WI1-PSCFAG-DV02	Part number BCS M18TTI2-PSCFAG-AT02
PNP	Normally closed	Ordering code BCS008U	Ordering code BCS007P	Ordering code BCS008C
		Part number BCS M18VN-POCFAG-S49G	Part number BCS M18WI1-POCFAG-DV02	Part number BCS M18TTI2-POCFAG-AT02
NPN	Normally open	Ordering code BCS008W	Ordering code BCS007R	Ordering code BCS008E
		Part number BCS M18VN-NSCFAG-S49G	Part number BCS M18WI1-NSCFAG-DV02	Part number BCS M18TTI2-NSCFAG-AT02
NPN	Normally closed	Ordering code BCS008Y	Ordering code BCS007T	Ordering code BCS008F
		Part number BCS M18VN-NOCFAG-S49G	Part number BCS M18WI1-NOCFAG-DV02	Part number 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_a		≤ 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_0 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

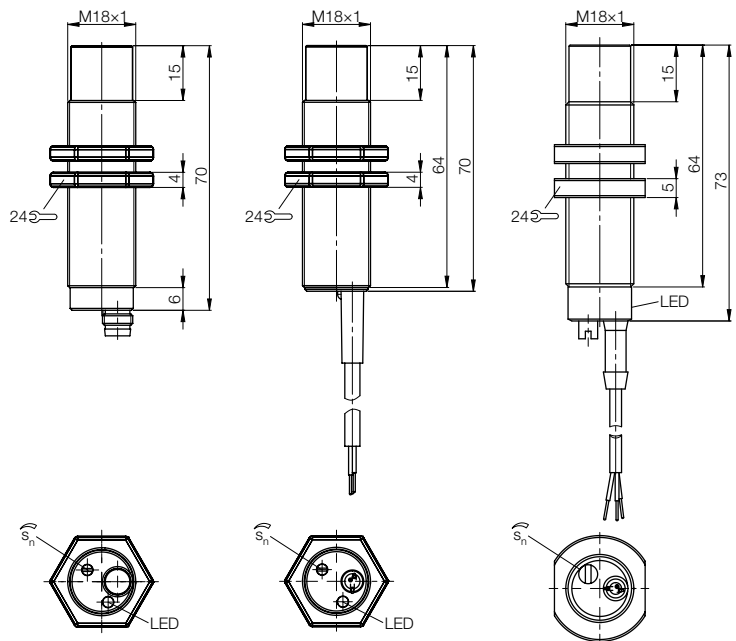
AC/DC 2-wire

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.



For power supplies, amplifiers, connectors and mounting brackets see accessories section starting **page 55**



Level Detection

DC 3-wire **SMARTLEVEL** technology
M30

SMARTLEVEL



SMARTLEVEL 15



SMARTLEVEL 15



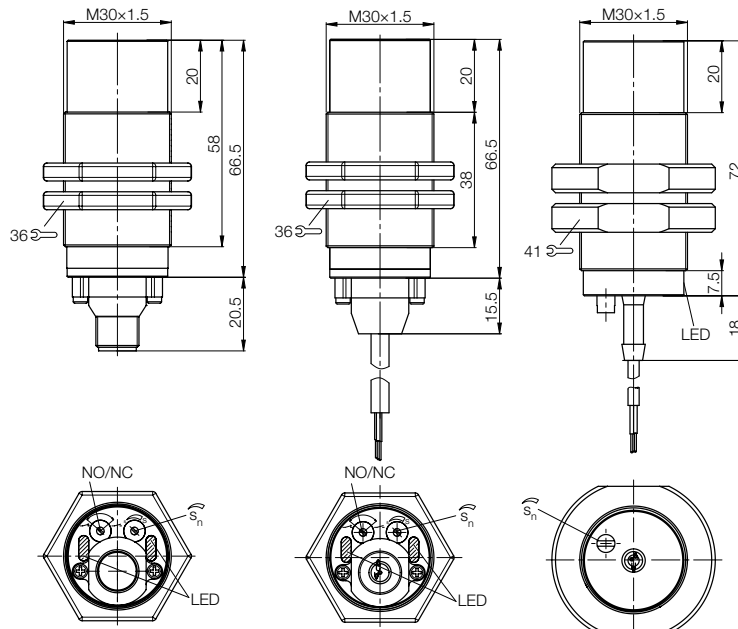
SMARTLEVEL 15

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_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
Power indicator		LED green	LED green	LED red
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"



SMARTLEVEL 15



SMARTLEVEL 15



SMARTLEVEL 15



SMARTLEVEL 15



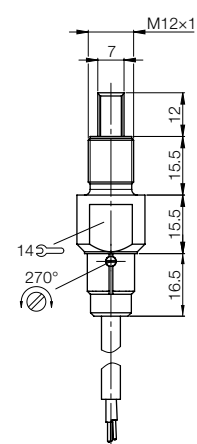
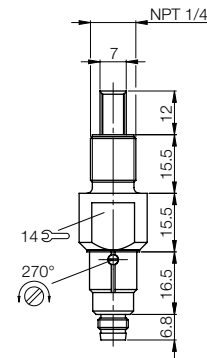
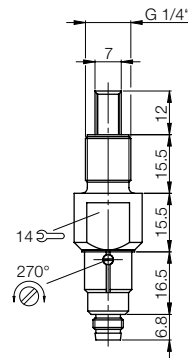
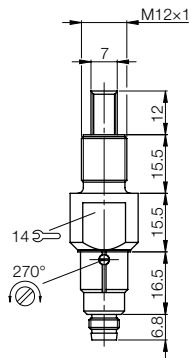
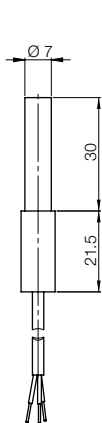
SMARTLEVEL 15

Ø 7x52 mm non-flush Self-adjusting BCS009C BCS S20TT01-PSLFAG-ET02 BCS009E BCS S20TT01-POLFAG-ET02	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
BCS009F BCS S20TT01-NSLFAG-ET02				
BCS009H BCS S20TT01-NOLFAG-ET02				
	BCS0095 BCS S41SS01-GPCFAG-S49G	BCS0096 BCS S41SS02-GPCFAG-S49G	BCS0097 BCS S41SS03-GPCFAG-S49G	BCS008Z BCS S40SS01-GPCFAG-EP02
10...30 V DC ≤ 1.5 V 75 V DC 50 mA ≤ 20 mA no/no +5...+100 °C 10 Hz	10...35 V DC ≤ 3 V 75 V DC 50 mA ≤ 20 mA no/yes -10...+105 °C 5 Hz	10...35 V DC ≤ 3 V 75 V DC 50 mA ≤ 20 mA no/yes -10...+105 °C 5 Hz	10...35 V DC ≤ 3 V 75 V DC 50 mA ≤ 20 mA no/yes -10...+105 °C 5 Hz	10...35 V DC ≤ 3 V 75 V DC 50 mA ≤ 20 mA no/yes -10...+105 °C 5 Hz
IP 66	IP 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K
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



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

AC/DC 2-wire
 Tubular housings



Shield (M18 or 1/2") for
 Micro-Level sensors
 see Accessories section
 Page 86



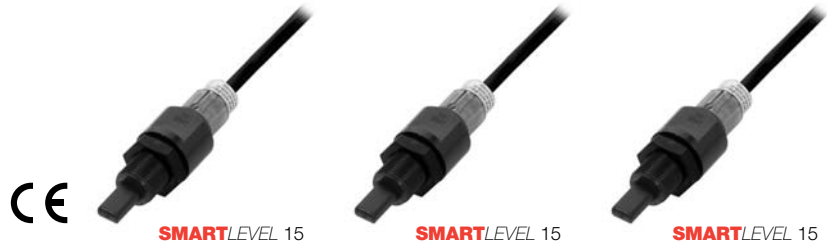
For power supplies, amplifiers, connectors and mounting brackets see accessories section starting **page 55**



Level Detection

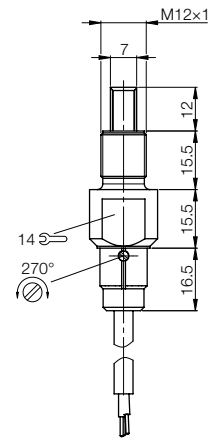
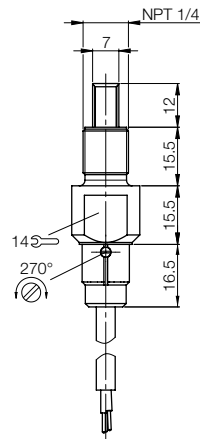
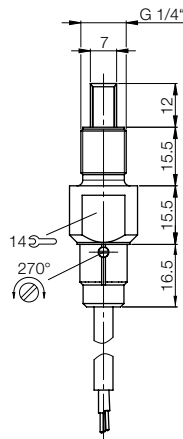
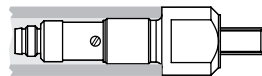
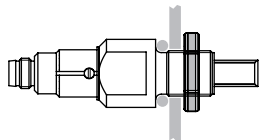
DC 3-wire **SMARTLEVEL** technology
Micro-Level, NPT 1/4", M12

SMARTLEVEL



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_d at I_o		≤ 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_o 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 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K
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 86



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, sealing can also be accomplished using an O-ring or a gasket.

Level Detection

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

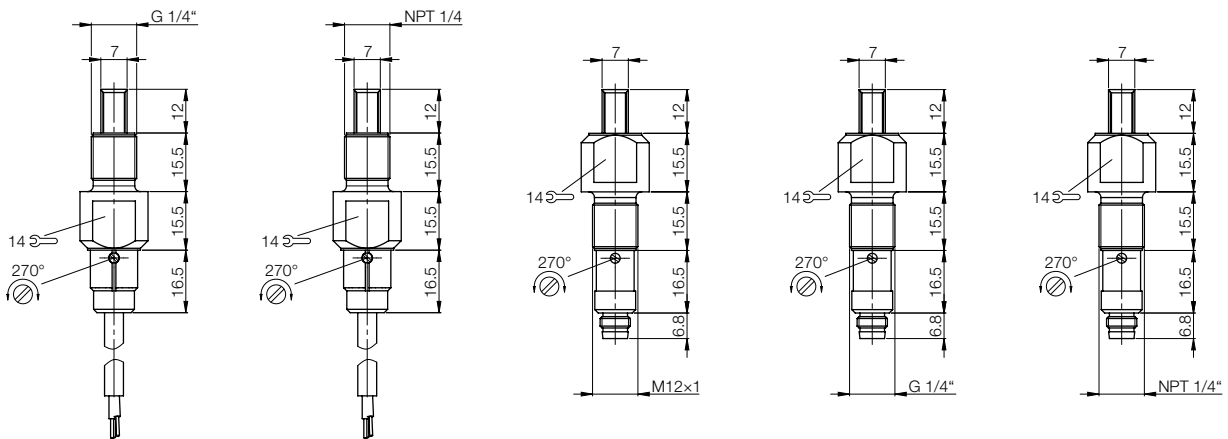


SMARTLEVEL 15	SMARTLEVEL 15	SMARTLEVEL 15	SMARTLEVEL 15	SMARTLEVEL 15
G 1/4" Micro-Level	NPT 1/4" Micro-Level	M12x1 Micro-Level	G 1/4" Micro-Level	NPT 1/4" Micro-Level
non-flush	non-flush	non-flush	non-flush	non-flush
Self-adjusting	Self-adjusting	Self-adjusting	Self-adjusting	Self-adjusting
BCS0093*	BCS0094*	BCS0098	BCS0099	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	50/50 mA push-pull	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...+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 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K	IP 68 at max. 10 bar/ IP 69K
PSU	PSU	PSU	PSU	PSU
PSU	PSU	PSU	PSU	PSU
PSU	PSU	PSU	PSU	PSU
2 m cable PUR, 3x0,34 mm ²	2 m cable PUR, 3x0,34 mm ²	M8 connector, 3-pin	M8 connector, 3-pin	M8 connector, 3-pin



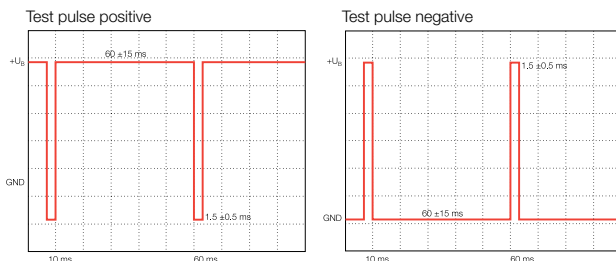
DC 3-wire
Tubular housings
SMART-technology
High temperature rated styles
Leak sensor

AC/DC 2-wire
Tubular housings



For power supplies, amplifiers, connectors and mounting brackets see accessories section starting **page 55**

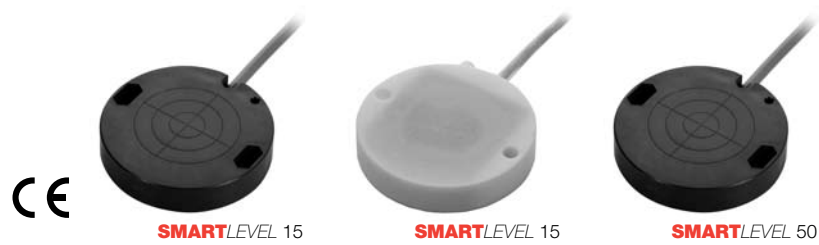
* **i** The continuous self-test signal (CST) is superimposed on the output signal.



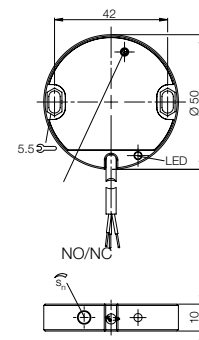
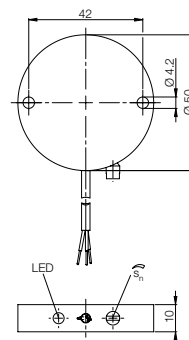
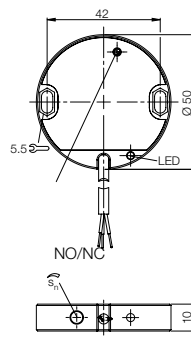
Level Detection

DC 3-wire **SMARTLEVEL** technology
 Ø 50 mm

SMARTLEVEL



		SMARTLEVEL 15	SMARTLEVEL 15	SMARTLEVEL 50
Housing size		Ø 50x10 mm	Ø 50x10 mm	Ø 50x10 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_d at I_a		≤ 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_0 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, 3x0.25 mm ²	2 m cable PTFE, 3x0.2 mm ²	2 m cable PVC, 3x0.25 mm ²



Level Detection

DC 3-wire **SMARTLEVEL** technology
 Micro-Box 16x34x8 mm
 M30



SMARTLEVEL 15



SMARTLEVEL 15



SMARTLEVEL 500+

Consult factory for availability



	16x34x8 mm Micro-Box	16x34x8 mm Micro-Box	M30x1.5		
	flush	flush	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			
			BCS00HJ		
			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 mA		
	≤ 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 yellow	LED yellow	LED green		
	IP 67	IP 67	LED yellow		
	PP	PP	IP 67		
	PP	PP	V2A		
	PP	PP	PTFE		
	PP	PP	PBT/PE		
	0.2 m cable PUR, 3x0.14 mm ² with M8 connector, 3-pin	2 m cable PUR, 3x0.14 mm ²	2 m cable PUR, 3x0.34 mm ²		

DC 3-wire

Tubular housings

SMARTLEVEL-technology

High temperature rated styles

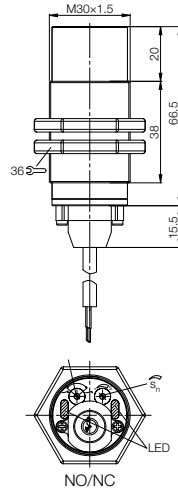
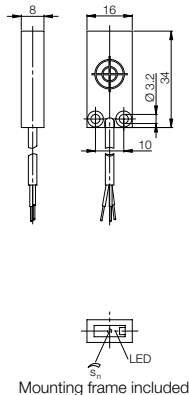
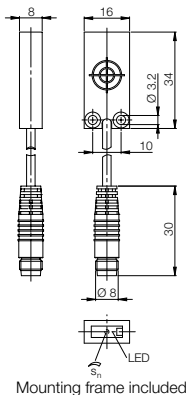
Leak sensor

AC/DC

2-wire

Tubular housings

For power supplies, amplifiers, connectors and mounting brackets see accessories section starting **page 55**



Level Detection

DC 3-wire High-temperature rated

+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 shielded sensor cable and a separate amplifier.

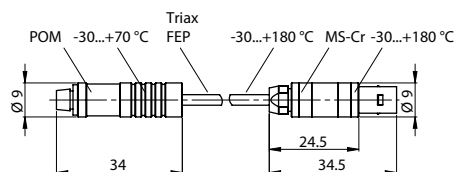


Housing size	
Mounting	
Rated switching distance s_n	
With sensor amplifier	Ordering code
	Part number
Supply voltage U_s	
Ambient temperature range T_a	
Degree of protection per IEC 60529	
Material	Housing Sensing face Cover
Wiring	

For sensor amplifiers
see Accessories section
Page 57

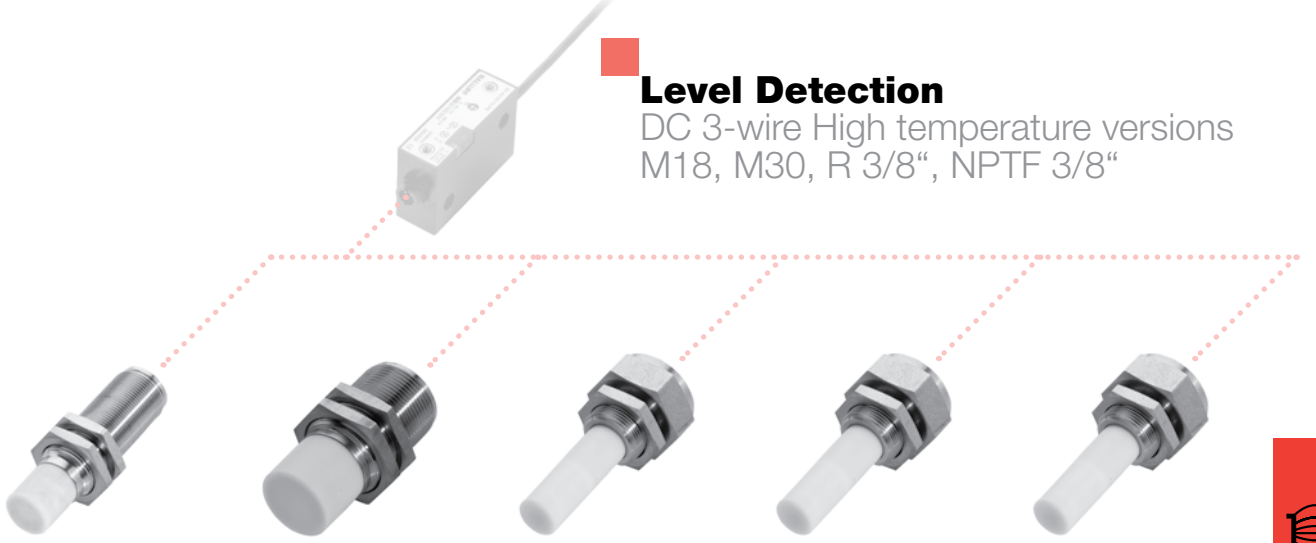


Description	Connectors for high-temperature sensors
Ordering code	BCC04JW
Part number	BCC Z003-020
Ambient temperature range T_a	-10...+70° C
Degree of protection per IEC 60529	IP 54
Wiring	2 m Triax FEP



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

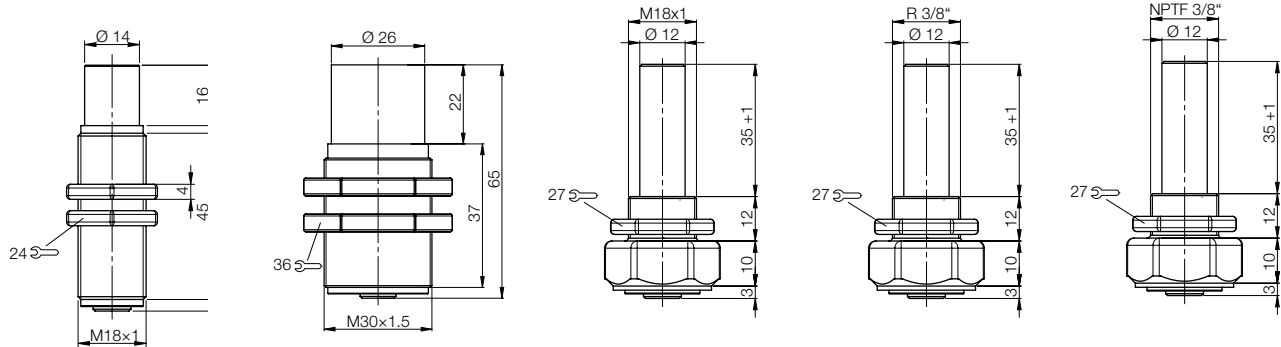
SMARTLEVEL-
technology

High temperature rated styles

Leak sensor

AC/DC 2-wire

Tubular housings



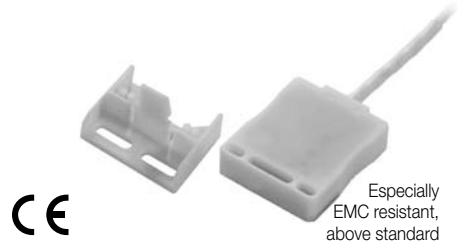
For power supplies, amplifiers, connectors and mounting brackets see accessories section starting **page 55**



Level Detection

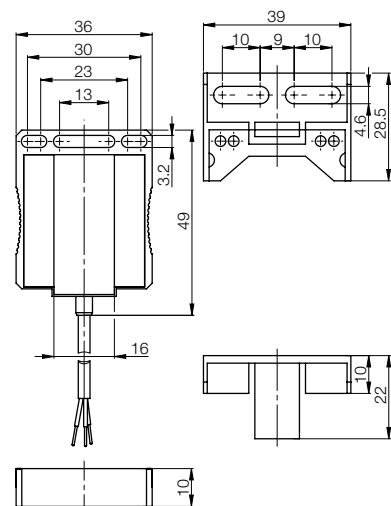
DC 3-wire Leak sensor
36x44x10 mm

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.



Especially
EMC resistant,
above standard

Housing size	36x44x10 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, 3x0.2 mm ²		



Mounting frame included in scope
of delivery

Level Detection

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



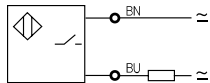
Housing size	M18x1	M30x1.5	Ø 34 mm
Mounting	non-flush	non-flush	non-flush
Rated switching distance s_n	8 mm	15 mm	20 mm
Normally open	Ordering code Part number	BCS000K BCS M18KM3-UST80G-BV02	BCS000W BCS M30KN2-UST15G-AV02
Normally closed	Ordering code Part number	BCS000J BCS M18KM3-UOT80G-BV02	BCS0006 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_o	≤ 6 V	≤ 6 V	≤ 6 V
Rated insulation voltage U_i (protection class)	250 V AC (I)	250 V AC (I)	250 V AC (I)
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	PBT	PBT
	Sensing face	PBT	PBT
	Cover	PBT	PBT
Wiring	2 m cable PVC, 2x0.34 mm ²	2 m cable PVC, 2x0.34 mm ²	2 m cable PVC, 2x0.5 mm ²

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

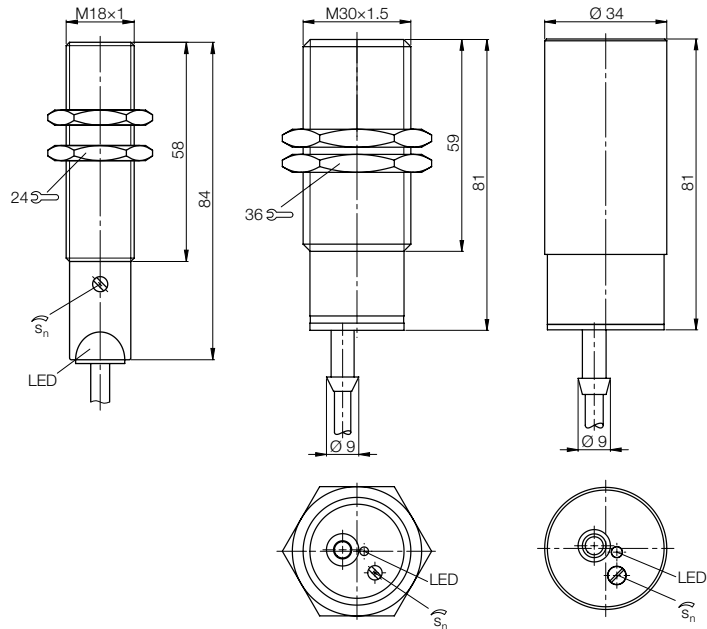
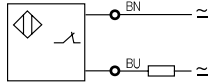
AC/DC 2-wire
Tubular housings

Wiring Diagrams

AC/DC N/O 2-wire (Cable)



AC/DC N/C 2-wire (Cable)



Mounting cuff included

For power supplies, amplifiers, connectors and mounting brackets see accessories section starting **page 55**



