At a glance

Capacitive sensors

Capacitive sensors with high application potential

Capacitive sensors operate contactless, reactionless and wear-free. Both, electrically conductive and non-conductive materials are detected reliably. Capacitive sensors can thus be applied in systems in which inductive sensors would be inappropriate.

In addition to distance and position, capacitive sensors measure deflection, thickness, filling level, eccentricity, concentricity, deformation, wear and vibration.

The functional principle of capacitive sensors is based on the arrangement of two conductors (plates) separated by a dielectric (insulator). An electric field created through the potential difference between the two conductors is stored in the dielectric. The change of field strength (capacitance) in the dielectric is used as a measure. Non-conductive materials are detected through the change of field strength in the dielectric whereby a probe on the one hand and the ambient on the other hand represent the two conductors. Conductive materials are detected through the change of material as well as through the change of distance between the conductors.

The effective switching distances of capacitive sensors can vary considerably. A maximum switching distance is achieved with metallic objects. Reduction factors do not have to be observed as with conventional inductive sensors. With regard to other materials, the switching distance is reduced in dependance to the dielectric constant of the target object. The higher the value the higher the switching distance. The switching distance of nearly all capacitive sensors can be adjusted with a potentiometer.

Capacitive sensors are laid out for temperature ranges between -25 and +70 °C by default. Special version are also available for temperatures up to +100 °C.

Based on the novel technology, the close-up range suppression of TURCK sensors works also with conductive clingage. TURCK also offers a solution for electromagnetic sensitivity. The product portfolio comprises sensors with EMC filter, making them insensitive to radiated and conducted HF interference and burst.

Capacitive sensors are available in cylinder and rectangular design. Alongside the standard plastic and metal versions, sensors enclosed in a Dyflor housing are also available for extra protection against chemically aggressive environments.

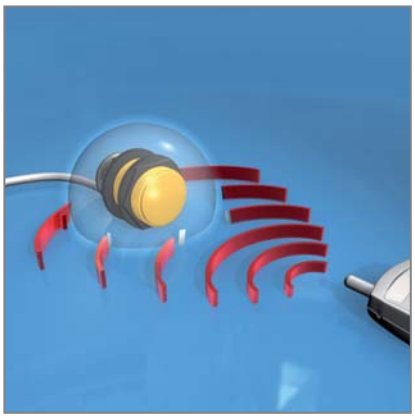
Our strengths - your advantages

Novel close-up range suppression

Capacitive sensors react to all materials with a permittivity greater than 1. This may lead to interferences during operation in the event of wetting, condensation or icing on the sensor surface. Residue and humidity may also lead to detection failures. In order to rule out this effect, a signal is produced with an electrode close to the sensor surface, antagonizing the main signal. A zone is thus created near the electrode in which dirt and humidity are not detected by the sensor. Based on the novel technology, the close-up range suppression of TURCK sensors works also with conductive clingage.

Wear-free detection of conducting and non-conducting materials.

Capacitive proximity sensors are designed for contactless and wear-free detection of electrically conducting and non-conducting objects. These all-rounders are thus suited for many applications. In addition to distance and position, capacitive sensors measure deflection, thickness, eccentricity, concentricity, deformation, wear, vibration and above all filling levels of liquid and solid substances.



All-round protection against interferences

Capacitive sensors work reliably and safe, even under rough environmental conditions. Special protective measures ensure failsafe operation of the sensors in ambients subject to high electromagnetic interference. The sensors are also ESD immune. Automatic wetting compensation eliminates moreover interferences caused by wetting and condensation.

advantages

Rectangular design, high-performance technology within the smallest space

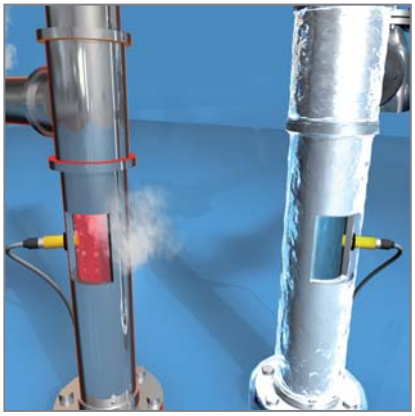
The rectangular devices offer high-quality components and high functionality in a rugged housing. These sensors moreover convince through easy and convenient mounting. The prescribed free zones are considerably smaller, lowering the construction effort while enhancing the system availability. You save time and money.

Cylindrical design, metal or plastic version

Whether metal or plastic housing, the product range of standard cylindrical sensors is large, offering devices with diameters between 12 mm and 40 mm. The flush mountable sensors generate an almost linear detection field.

Besides the usual reliability, capacitive TURCK sensors feature standard functions such as automatic wetting compensation, excellent EMC and ESD properties and they are flexibly mounted.

For special applications



High-temperature resistant sensors

A growing number of applications require sensors resisting temperatures beyond the standard range of -25 … +70 °C. For this purpose TURCK has developed capacitive sensors which meet exactly these requirements.

The sensors feature temperature-resistant components as well as cleverly designed, fanless passive cooling concepts approved in demanding laboratory tests. These sensors resist temperatures in a range of -25 °C …+100 °C

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AC 2-wire sensors

Capacitive AC 2-wire sensors are available as M12, M18, M30 and CK40 types.

The 2-wire sensors can be used to replace mechanical switches in existing systems.

The established wiring, normally two wires, can still be used. Cutting down on the amount of wiring safes time.

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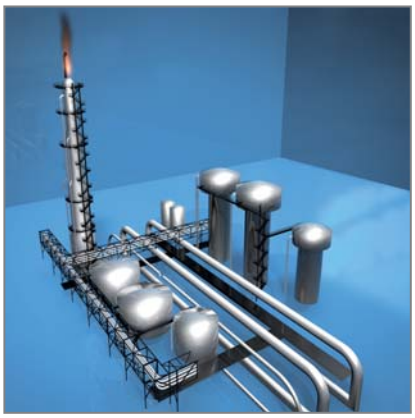

NAMUR sensors

NAMUR sensors are approved for zone 0 and 1. They are polarized 2-wire devices, changing their internal resistance depending on the attenuation (continuous linear/current characteristics). They can be connected to external switching amplifiers which convert current variations into a binary output signal. The advantage: With an approved switching amplifier, they can be applied in Ex-areas and monitor wire-break and short-circuit.

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BCF sensors for demanding applications

Conventional sensors do not operate reliably in demanding ambients. Residue and humidity on the active face may inhibit proper operation of the sensor. These problems are now ruled out with the new BCF series. Even conductive clingage are not a problem any more, thanks to the novel technology.

The sensors are immune to radiated and conducted HF interference, burst as well as electrostatic discharge (ESD).

- Suited for highly viscous media
- Increased EMI and RFI shielding

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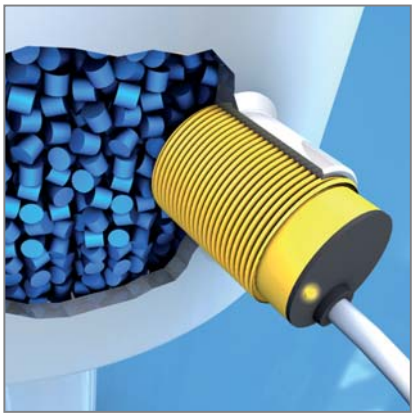

BCC sensors for level control

The BCC sensors blank out all interferences during the monitoring process. They are EMC and ESD immune. A laterally mounted shield and an integrated processing unit inhibit predamping when mounted in metal flanges. The full switching distance is thus available.

- Detection of smallest pellets
- Same switching distance, even when mounted in metal barrels
- Excellent EMC and ESD properties

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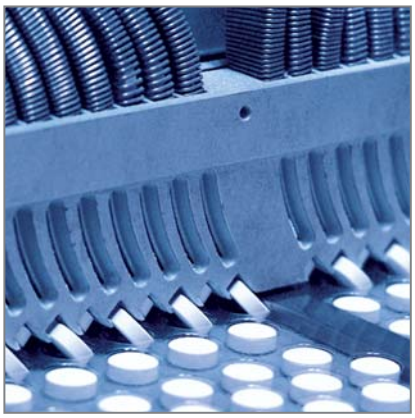

Chemical-resistant sensors

The capacitive sensors (PVDF) are the ideal solution for any application of the pharmaceutical, chemical or food industry. They help to optimize all kinds of applications for instance in dairies, breweries, industrial bakeries, frozen food production, packaging and filling machinery.

PVDF materials belong to the group of fluoride plastics. They are extremely resistant due to the high fluorine content. They also feature a high creep strength under constant load as well as good heat and cold properties.

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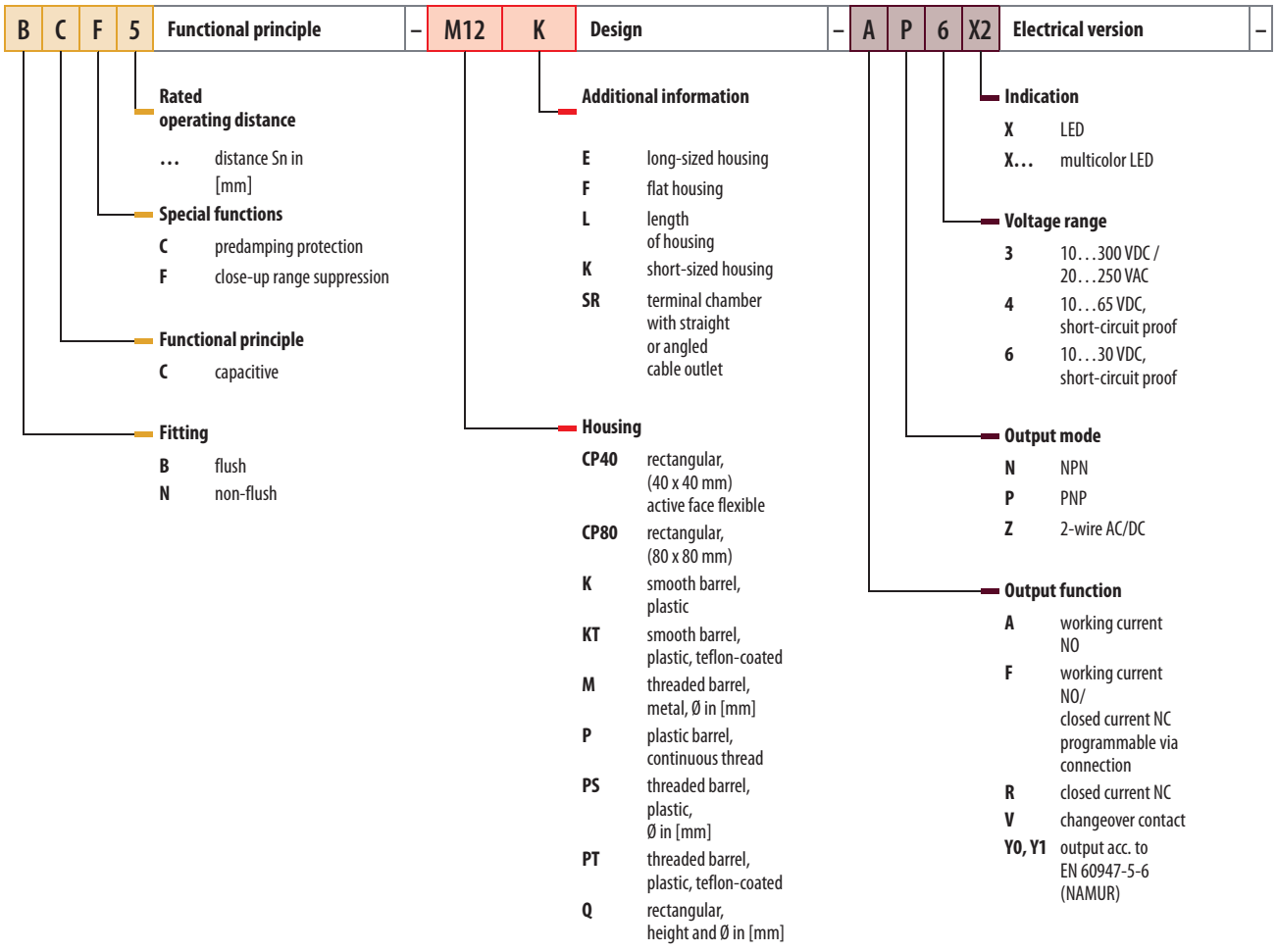
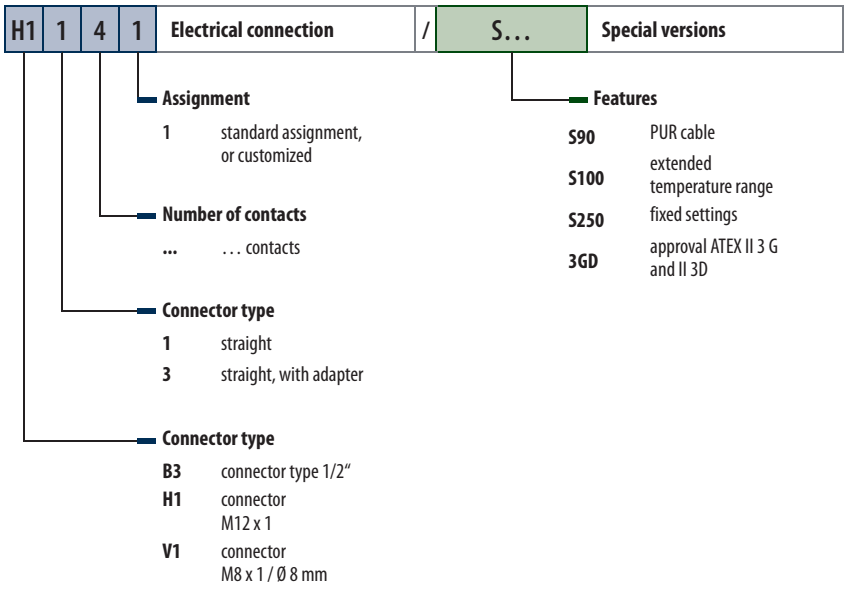
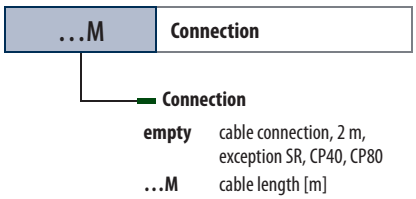
Type code


B C F 5 Functional principle – M12 K Design – A P 6 X2 Electrical version –
Rated operating distance
... distance Sn in [mm]
Special functions
C predamping protection
F close-up range suppression
Functional principle
C capacitive
Fitting
B flush
N non-flush
Additional information
E long-sized housing
F flat housing
L length of housing
K short-sized housing
SR terminal chamber with straight or angled cable outlet
Housing
CP40 rectangular, (40 x 40 mm) active face flexible
CP80 rectangular, (80 x 80 mm)
K smooth barrel, plastic
KT smooth barrel, plastic, teflon-coated
M threaded barrel, metal, Ø in [mm]
P plastic barrel, continuous thread
PS threaded barrel, plastic, Ø in [mm]
PT threaded barrel, plastic, teflon-coated
Q rectangular, height and Ø in [mm]
Indication
X LED
X... multicolor LED
Voltage range
3 10...300 VDC / 20...250 VAC
4 10...65 VDC, short-circuit proof
6 10...30 VDC, short-circuit proof
Output mode
N NPN
P PNP
Z 2-wire AC/DC
Output function
A working current NO
F working current NO/ closed current NC programmable via connection
R closed current NC
V changeover contact
Y0, Y1 output acc. to EN 60947-5-6 (NAMUR)


H1 1 4 1
Electrical connection
/
S...
Special versions
Assignment
1 standard assignment, or customized
Number of contacts
... ... contacts
Connector type
1 straight
3 straight, with adapter
Connector type
B3 connector type 1/2"
H1 connector M12 x 1
V1 connector M8 x 1 / Ø 8 mm
Features
S90 PUR cable
S100 extended temperature range
S250 fixed settings
3GD approval ATEX II 3 G and II 3D


...M
Connection
Connection
empty cable connection, 2 m, exception SR, CP40, CP80
...M cable length [m]

Designs and variants

	Page 247, 269	Page 245	Page 245	Page 246
				
	QF5.5	**Q08**	**Q10**	**Q14**
Design	rectangular QF5.5, 20.3 x 5.5 x 54 mm	rectangular Q08, 20 x 8 x 32 mm	rectangular Q10, 25 x 10.8 x 42 mm	rectangular Q14, 30 x 14 x 55.5 mm
Switching distance	5 mm, 10 mm,	5 mm,	8 mm,	10 mm,
Electrical connection	cable	connector, Ø 8 mm cable	connector cable	connector, M8 x 1 cable
Output	2-wire DC NAMUR 3-wire DC PNP 3-wire DC NPN	3-wire DC PNP 3-wire DC NPN	3-wire DC PNP 3-wire DC NPN	3-wire DC PNP 3-wire DC NPN

	Page 246	Page 273	Page 248, 266	Page 248, 267
				
	Q20	**Q20L60**	**CP40**	**CP80**
Design	rectangular Q20, 40 x 20 x 68 mm	rectangular Q20L60, 30 x 20 x 60 mm	rectangular CP40, 40 x 40 x 114 mm	rectangular CP80, 80 x 40.5 x 80 mm
Switching distance	20 mm,	10 mm,	20 mm,	50 mm,
Electrical connection	connector, M8 x 1 connector, M12 x 1 cable	connector, M12 x 1 cable	connector, M12 x 1 terminal chamber	connector, M12 x 1 terminal chamber
Output	3-wire DC PNP 3-wire DC NPN	3-wire DC PNP	2-wire AC 4-wire DC PNP 4-wire DC NPN	2-wire AC 4-wire DC PNP 4-wire DC NPN

Designs and variants

	Page 251	Page 251, 263	Page 277	Page 252, 264
				
	M12	**M18**	**S185**	**M30**
Design	threaded barrel M12 x 1	threaded barrel M18 x 1	threaded barrel M18 x 1	threaded barrel M30 x 1.5
Switching distance	3 mm,	5 mm,	5 mm,	10 mm,
Electrical connection	cable	connector, 1/2“ connector, M12 x 1 cable cable with connector, M12 x 1	cable	connector, 1/2“ connector, M12 x 1 cable terminal chamber
Output	3-wire DC PNP 3-wire DC NPN	2-wire DC NAMUR 2-wire AC 3-wire DC PNP 3-wire DC NPN	3-wire DC PNP 3-wire DC NPN	2-wire DC NAMUR 2-wire AC 3-wire DC PNP 4-wire DC PNP 4-wire DC NPN

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	K34	**K40**
Design	smooth barrel 34 mm	smooth barrel 40 mm
Switching distance	15 mm,	20 mm,
Electrical connection	connector, M12 x 1 cable terminal chamber	connector, M12 x 1 terminal chamber
Output	2-wire AC 3-wire DC PNP 3-wire DC NPN 4-wire DC PNP 4-wire DC NPN	4-wire DC PNP 4-wire DC NPN

Rectangular design

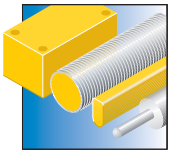
Rectangular shaped capacitive sensors are the compact solution for your facilities. The rugged housing and high-quality components provide additional options for installation and detection. The 8 mm Q08 as well as the variable CP80 convince through easy mounting and short blind zones.

The rectangular types thus simplify the assembly and enhance the operability of your systems.

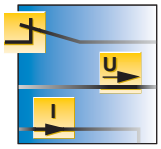
Features

- Stable and resistant housings
- Large switching distances
- Excellent EMC immunity
- Easy to mount
- Connector and cable versions

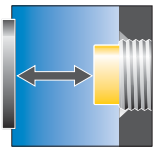
Properties



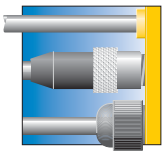
Design
From the small Q08 to the big sized CP80



Electrical versions
3/4-wire DC, PNP/NPN

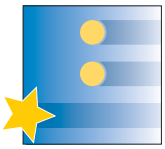


Switching distances
5 mm versions for close-range detection, 50 mm versions for long ranges



Electrical connections
2 m cable PVC/PUR, M8 x 1 plug connection, Ø 8 mm and M12 x 1

Materials
Rugged and chemical resistant plastic and metal housings



Special features
Fine adjustment via potentiometer

Q08 – 3-wire DC – Fixed settings

General data

Dimensions	20 x 8 x 32 mm	**Protection class**	IP67
Switching distance	5 mm,	**Material housing**	GD-Zn
Operating voltage	10…30 VDC	**Material active face**	PA
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	Electrical connection	Material cable	w	d
BC5-Q08-RP6X2/S250	, PNP	cable	PVC 2 m	w006	d086
BC5-Q08-RP6X2-V1131/S250	, PNP	connector, Ø 8 mm	-	w003	d089
BC5-Q08-AP6X2/S250	, PNP	cable	PVC 2 m	w004	d086
BC5-Q08-AP6X2-V1131/S250	, PNP	connector, Ø 8 mm	-	w001	d089
BC5-Q08-AN6X2/S250	, NPN	cable	PVC 2 m	w005	d086
BC5-Q08-AN6X2-V1131/S250	, NPN	connector, Ø 8 mm	-	w002	d089

Q10 – 3-wire DC – Fixed settings

General data

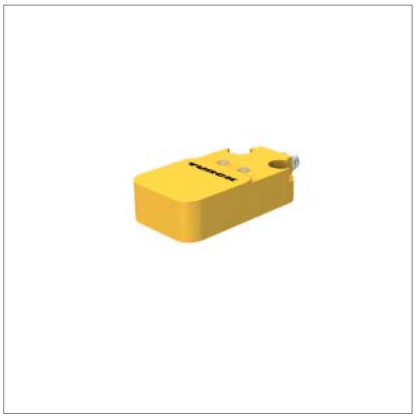
Dimensions	25 x 10.8 x 42 mm	**Protection class**	IP67
Switching distance	8 mm,	**Material housing**	PBT
Operating voltage	10…30 VDC	**Material active face**	PBT
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	Electrical connection	Material cable	w	d
BC8-Q10-RP6X2/S250	, PNP	cable	PVC 2 m	w006	d092
BC8-Q10-RP6X2-V1131/S250	, PNP	connector, M8 x 1	-	w003	d091
BC8-Q10-AP6X2/S250	, PNP	cable	PVC 2 m	w004	d092
BC8-Q10-AP6X2-V1131/S250	, PNP	connector, M8 x 1	-	w001	d091
BC8-Q10-AN6X2/S250	, NPN	cable	PVC 2 m	w005	d092
BC8-Q10-AN6X2-V1131/S250	, NPN	connector, M8 x 1	-	w002	d091

w Wiring diagrams on page 832 ff d Dimension drawings on page 842 ff a Accessories on page 736 ff

Q14 – 3-wire DC – Fine adjustment via potentiometer



General data

Dimensions	30 x 14 x 55.5 mm	**Protection class**	IP67
Switching distance	10 mm,	**Material housing**	PBT
Operating voltage	10…65 VDC	**Material active face**	PBT
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	Electrical connection	Material cable	w	d
BC10-Q14-RP4X2	⊣⌒, PNP	cable	PUR 2 m	w006	d328
BC10-Q14-AP4X2-V1131	_⌒, PNP	connector, M8 x 1	-	w001	d327
BC10-Q14-AP4X2	_⌒, PNP	cable	PUR 2 m	w004	d328
BC10-Q14-AN4X2-V1131	_⌒, NPN	connector, M8 x 1	-	w002	d327
BC10-Q14-AN4X2	_⌒, NPN	cable	PUR 2 m	w005	d328

Q20 – 3-wire DC – Fine adjustment via potentiometer

General data

Dimensions	40 x 20 x 68 mm	**Protection class**	IP67
Switching distance	20 mm,	**Material housing**	PBT
Operating voltage	10…65 VDC	**Material active face**	PBT
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	Electrical connection	Material cable	w	d
BC20-Q20-RP4X2-V1131	⊣⌒, PNP	connector, M8 x 1	-	w003	d331
BC20-Q20-RP4X2-H1143	⊣⌒, PNP	connector, M12 x 1	-	w003	d329
BC20-Q20-RP4X2	⊣⌒, PNP	cable	PUR 2 m	w006	d330
BC20-Q20-AP4X2-H1141	_⌒, PNP	connector, M12 x 1	-	w001	d329
BC20-Q20-AP4X2	_⌒, PNP	cable	PUR 2 m	w004	d330
BC20-Q20-AN4X2-H1141	_⌒, NPN	connector, M12 x 1	-	w002	d329
BC20-Q20-AN4X2	_⌒, NPN	cable	PUR 2 m	w005	d330

QF5.5 – 3-wire DC – Fine adjustment via potentiometer

General data

Dimensions	20.3 x 5.5 x 54 mm	**Protection class**	IP67
Switching distance	10 mm,	**Material housing**	PP
Electrical connection	cable	**Material active face**	PP
Operating voltage	10…30 VDC	**Material cable**	PUR 2 m
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	w	d
BC10-QF5,5-AP6X2	_⌒_, PNP	w004	d332
BC10-QF5,5-AN6X2	_⌒_, NPN	w005	d332

QF5.5 – 3-wire DC – Fixed settings

General data

Dimensions	20.3 x 5.5 x 54 mm	**Protection class**	IP67
Output	_⌒_, PNP	**Material housing**	PP
Electrical connection	cable	**Material active face**	PP
Operating voltage	10…30 VDC	**Material cable**	PUR 2 m
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Switching distance	w	d
BC5-QF5,5-AP6X2/S250	5 mm,	w004	d333
BC10-QF5,5-AP6X2/S250	10 mm,	w004	d333

w Wiring diagrams on page 832 ff d Dimension drawings on page 842 ff a Accessories on page 736 ff

CP40 – 4-wire DC – Fine adjustment via potentiometer

General data

Dimensions	40 x 40 x 114 mm	**Protection class**	IP67
Switching distance	20 mm,	**Material housing**	PBT
Operating voltage	10…65 VDC	**Material active face**	PBT
Ambient temperature	-25…+70 °C		

Variable orientation of active face in 9 directions

Types and data – selection table

Type	Output	Electrical connection	w	d
BC20-CP40-VP4X2-H1141	, PNP	connector, M12 x 1	w008	d335
BC20-CP40-VP4X2	, PNP	terminal chamber	w014	d334
BC20-CP40-VN4X2	, NPN	terminal chamber	w013	d334

CP80 – 4-wire DC – Fine adjustment via potentiometer

General data

Dimensions	80 x 40.5 x 80 mm	**Protection class**	IP67
Switching distance	50 mm,	**Material housing**	PBT
Operating voltage	10…65 VDC	**Material active face**	PBT
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	Electrical connection	w	d
NC50-CP80-VP4X2-H1141	, PNP	connector, M12 x 1	w008	d337
NC50-CP80-VP4X2	, PNP	terminal chamber	w014	d336
NC50-CP80-VN4X2	, NPN	terminal chamber	w013	d336

w Wiring diagrams on page 832 ff
d Dimension drawings on page 842 ff
a Accessories on page 736 ff

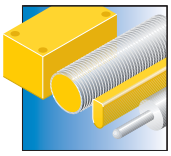
Cylindrical design - metal

Cylindrically shaped capacitive sensors feature high switching distances and are available in a vast range of types. M12, M18 and M30 chrome-plated threaded barrels are available with connection cable or plug connection. Besides the usual reliability, capacitive sensors feature standard properties such as automatic wetting compensation, excellent EMC and ESD properties and more flexibility with respect to mounting.

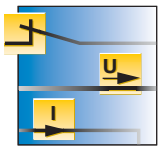
Features

- Excellent reliability
- Automatic wetting compensation
- Excellent EMC properties
- ESD immunity
- Mounting flexibility

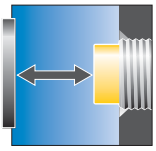
Properties



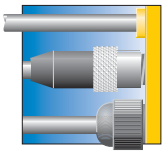
Design
Threaded barrel
M12 x 1 and M30 x 1.5



Electrical versions
3/4-wire NO/NC contact as well as antivalent PNP/NPN output

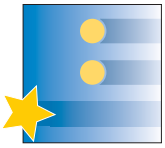


Switching distances
From 3 mm flush to 10 mm non-flush on all metals and non-metals



Electrical connections
2 m connection cable or M12 x 1 plug connection

Materials
Nickel-plated brass or stainless steel threaded barrel versions offer many application possibilities



Special features
Fine adjustment via potentiometer

M12 – 3-wire DC – Fine adjustment via potentiometer

General data

Dimensions	Ø12 x 60 mm	**Protection class**	IP67
Switching distance	3 mm,	**Material housing**	CuZn-Cr
Electrical connection	cable	**Material active face**	ABS
Operating voltage	10…30 VDC	**Material cable**	PVC 2 m
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	w	d
BC3-M12-RP6X	, PNP	w006	d338
BC3-M12-AP6X	, PNP	w004	d338
BC3-M12-AN6X	, NPN	w005	d338

M18 – 3-wire DC – Fixed settings

General data

Dimensions	Ø18 x 83 mm	**Ambient temperature**	-25…+70 °C
Switching distance	5 mm,	**Protection class**	IP67
Electrical connection	connector, M12 x 1	**Material housing**	CuZn-Cr
Operating voltage	10…65 VDC	**Material active face**	PBT

Types and data – selection table

Type	Output	w	d
BC5-M18-RP4X-H1141/S250	, PNP	w015	d339
BC5-M18-AP4X-H1141/S250	, PNP	w001	d339
BC5-M18-AN4X-H1141/S250	, NPN	w002	d339

w Wiring diagrams on page 832 ff d Dimension drawings on page 842 ff a Accessories on page 736 ff

M18 – 3-wire DC – Fine adjustment via potentiometer

General data

Dimensions	Ø18 x 74 mm	**Protection class**	IP67
Switching distance	5 mm,	**Material housing**	CuZn-Cr
Electrical connection	cable	**Material active face**	PBT
Operating voltage	10…65 VDC	**Material cable**	PVC 2 m
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	w	d
BC5-M18-RP4X	, PNP	w006	d340
BC5-M18-AP4X	, PNP	w004	d340
BC5-M18-AN4X	, NPN	w005	d340

M30 – 3-wire DC – Fine adjustment via potentiometer

General data

Switching distance	10 mm,	**Protection class**	IP67
Operating voltage	10…65 VDC	**Material housing**	CuZn-Cr
Ambient temperature	-25…+70 °C	**Material active face**	PA

Types and data – selection table

Type	Dimensions	Output	Electrical connection	Material cable	w	d
BC10-M30K-VP4X-H1141	Ø30 x 60 mm	, PNP	connector, M12 x 1	-	w008	d341
BC10-M30K-VP4X	Ø30 x 62.5 mm	, PNP	cable	PVC 2 m	w007	d342
BC10-M30K-VN4X-H1141	Ø30 x 60 mm	, NPN	connector, M12 x 1	-	w010	d341
BC10-M30K-VN4X	Ø30 x 62.5 mm	, NPN	cable	PVC 2 m	w018	d342

w Wiring diagrams on page 832 ff
d Dimension drawings on page 842 ff
a Accessories on page 736 ff

Cylindrical design - plastic

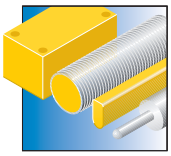
Cylindrically shaped capacitive sensors feature high switching distances and are available in a vast range of types. The standard types come in plastic housings and sizes from Ø 12 mm to Ø 40 mm, with connection cable, plug connection or terminal chamber.

Besides the usual reliability, capacitive sensors feature standard properties such as automatic wetting compensation, excellent EMC and ESD properties and more flexibility with respect to mounting.

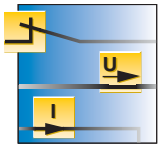
Features

- Excellent reliability
- Automatic wetting compensation
- Excellent EMC properties
- ESD immunity
- Mounting flexibility

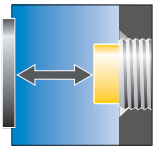
Properties



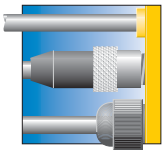
Design
Cylindrical versions M12 x 1, M18 x 1, M30 x 1.5, Ø 34 mm and Ø 40 mm



Electrical versions
3/4-wire NO/NC contact as well as antivalent PNP/NPN output

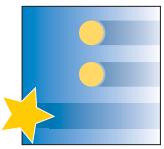


Switching distances
From 3 mm to 20 mm flush mountable on all metals and non-metals



Electrical connections
2 m connection cable or M12 x 1 plug connection

Materials
Plastic housings PA, PBT, PVDF and ABS



Special features
Fine adjustment via potentiometer, protection class IP67

S12 – 3-wire DC – Fine adjustment via potentiometer

General data

Dimensions	Ø12 x 63 mm	**Protection class**	IP67
Switching distance	3 mm,	**Material housing**	PA
Electrical connection	cable	**Material active face**	PA
Operating voltage	10…30 VDC	**Material cable**	PVC 2 m
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	w	d
BC3-S12-RP6X	, PNP	w006	d343
BC3-S12-AP6X	, PNP	w004	d343
BC3-S12-AN6X	, NPN	w005	d343

S18 – 3-wire DC – Fixed settings

General data

Dimensions	Ø18 x 83 mm	**Ambient temperature**	-25…+70 °C
Switching distance	5 mm,	**Protection class**	IP67
Electrical connection	connector, M12 x 1	**Material housing**	PA
Operating voltage	10…65 VDC	**Material active face**	PA

Types and data – selection table

Type	Output	w	d
BC5-S18-RP4X-H1141/S250	, PNP	w015	d344
BC5-S18-AP4X-H1141/S250	, PNP	w001	d344
BC5-S18-AN4X-H1141/S250	, NPN	w002	d344

w Wiring diagrams on page 832 ff d Dimension drawings on page 842 ff a Accessories on page 736 ff

S18 – 3-wire DC – Fine adjustment via potentiometer

General data

Switching distance	5 mm,	**Protection class**	IP67
Operating voltage	10…65 VDC	**Material housing**	PA
Ambient temperature	-25…+70 °C	**Material active face**	PA

Types and data – selection table

Type	Dimensions	Output	Electrical connection	Material cable	w	d
BC5-S18-RP4X-0,15-RS4	Ø18 x 70 mm	, PNP	cable with connector, M12 x 1	PVC 0.15 m	w015	d346
BC5-S18-RP4X	Ø18 x 74 mm	, PNP	cable	PVC 2 m	w006	d345
BC5-S18-AP4X	Ø18 x 74 mm	, PNP	cable	PVC 2 m	w004	d345
BC5-S18-AN4X	Ø18 x 74 mm	, NPN	cable	PVC 2 m	w005	d345

S30 – 4-wire DC – Fine adjustment via potentiometer

General data

Switching distance	10 mm,	**Protection class**	IP67
Operating voltage	10…65 VDC	**Material housing**	PA
Ambient temperature	-25…+70 °C	**Material active face**	PA

Types and data – selection table

Type	Dimensions	Output	Electrical connection	Material cable	w	d
BC10-S30-VP4X-H1141	Ø30 x 71 mm	, PNP	connector, M12 x 1	-	w008	d347
BC10-S30-VP4X	Ø30 x 62.5 mm	, PNP	cable	PVC 2 m	w007	d348
BC10-S30-VN4X-H1141	Ø30 x 71 mm	, NPN	connector, M12 x 1	-	w010	d347
BC10-S30-VN4X	Ø30 x 62.5 mm	, NPN	cable	PVC 2 m	w018	d348

K34 – 3-wire DC – Fine adjustment via potentiometer

General data

Dimensions	Ø34 x 74.5 mm	**Ambient temperature**	-25…+70 °C
Switching distance	15 mm,	**Protection class**	IP67
Electrical connection	connector, M12 x 1	**Material housing**	PBT
Operating voltage	10…65 VDC	**Material active face**	PBT

Types and data – selection table

Type	Output	w	d
BC15-K34-AP4X-H1141	, PNP	w001	d349
BC15-K34-AN4X-H1141	, NPN	w002	d349

K34 – 4-wire DC – Fine adjustment via potentiometer

General data

Dimensions	Ø34 x 80 mm	**Protection class**	IP67
Switching distance	15 mm,	**Material housing**	PBT
Electrical connection	cable	**Material active face**	PBT
Operating voltage	10…65 VDC	**Material cable**	PVC 2 m
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	w	d
BC15-K34-VP4X	, PNP	w007	d350
BC15-K34-VN4X	, NPN	w018	d350

w Wiring diagrams on page 832 ff d Dimension drawings on page 842 ff a Accessories on page 736 ff

KT34 – 4-wire DC – Fine adjustment via potentiometer

General data

Dimensions	Ø34 x 80 mm	**Protection class**	IP67
Switching distance	20 mm,	**Material housing**	PVDF
Electrical connection	cable	**Material active face**	PVDF
Operating voltage	10…65 VDC	**Material cable**	2 m
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	w	d
NC20-KT34-VP4X2	, PNP	w007	d351
NC20-KT34-VN4X2	, NPN	w018	d351

K40SR – 4-wire DC – Fine adjustment via potentiometer

General data

Dimensions	Ø40 x 90 mm	**Protection class**	IP67
Switching distance	20 mm,	**Material housing**	ABS
Operating voltage	10…65 VDC	**Material active face**	ABS
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	Electrical connection	w	d
BC20-K40SR-VP4X2	, PNP	terminal chamber	w014	d352
BC20-K40SR-VN4X2-H1141	, NPN	connector, M12 x 1	w010	d353
BC20-K40SR-VN4X2	, NPN	terminal chamber	w013	d352

w Wiring diagrams on page 832 ff
d Dimension drawings on page 842 ff
a Accessories on page 736 ff

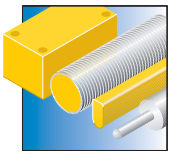
High-temperature resistant sensors

A growing number of applications require sensors resisting temperatures beyond the standard range of -25 … +70 °C. For this purpose TURCK has developed capacitive sensors which meet exactly these requirements. The sensors feature temperature resistant components as well as cleverly designed passive cooling concepts, approved in demanding laboratory tests. These sensors resist temperatures from -25 °C to +100 °C.

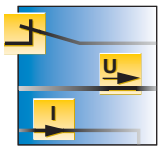
Features

- For temperatures up to +100 °C
- Automatic wetting compensation
- Excellent EMC properties
- ESD immunity

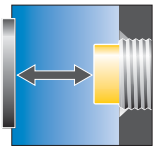
Properties



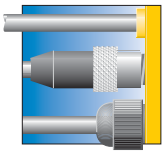
Design
Threaded barrel
M12 x 1 and M18 x 1



Electrical versions
3-wire DC and NAMUR

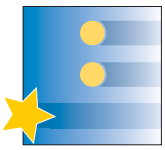


Switching distances
3 mm and 5 mm flush mounting



Electrical connections
2 m cable

Materials
Rugged, temperature resistant housing materials, application optimized cable qualities



Special features
Fixed settings via potentiometer,
-25 °C to +100 °C

+100°C – S12 – 3-wire DC

Type	BC3-S12-AP6X/S100	**Protection class**	IP67
Dimensions	Ø12 x 63 mm	**Material housing**	PA
Switching distance	3 mm,	**Material active face**	PA
Output	_⌒_, PNP	**Material cable**	PUR 2 m
Electrical connection	cable	**Wiring diagram**	w004
Operating voltage	10…30 VDC	**Dimension drawing**	d343
Ambient temperature	-25…+100 °C		

+100°C – S18 – NAMUR

Type	BC5-S18-Y1X/S100	**Protection class**	IP67
Dimensions	Ø18 x 74 mm	**Material housing**	PA
Switching distance	5 mm,	**Material active face**	PA
Output	NAMUR	**Material cable**	silicone 2 m
Electrical connection	cable	**Wiring diagram**	w019
Operating voltage	8.2 VDC	**Dimension drawing**	d345
Ambient temperature	-25…+100 °C		

+100°C – S185 – 3-wire DC

General data

Dimensions	Ø18 x 74.5 mm	**Protection class**	IP67
Switching distance	5 mm,	**Material housing**	PVDF
Electrical connection	cable	**Material active face**	PVDF
Operating voltage	10…65 VDC	**Material cable**	PVC 2 m
Ambient temperature	-25…+100 °C		

Types and data – selection table

Type	Output	w	d
BC5-S185-AP4X/S100	_⌒_, PNP	w004	d354
BC5-S185-AN4X/S100	_⌒_, NPN	w005	d354

w Wiring diagrams on page 832 ff d Dimension drawings on page 842 ff a Accessories on page 736 ff

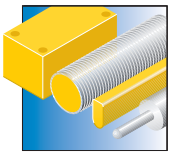
AC -2-wire sensors

AC 2-wire sensors are easily installed, they replace mechanical switches in existing systems and simplify wiring. The established wiring, normally two wires, can still be used. Cutting down on the amount of wiring safes time.

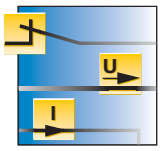
Features

- Automatic wetting compensation
- Excellent EMC properties
- Large switching distances

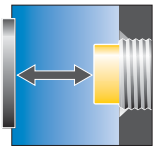
Properties



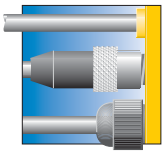
Design
Cylindrical Ø 18, 30 and 34 mm, rectangular 40 x 40 and 80 x 80 mm



Electrical versions
2-wire AC, NO/NC or programmable version

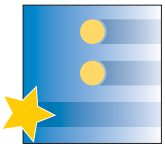


Switching distances
5 mm flush, 50 mm non-flush



Electrical connections
2 m connection cable, terminal chamber or 1/2-20 UNF plug connection

Materials
Chrome-plated brass and rugged plastic



Special features
Fine adjustment via potentiometer, protection class IP67

M18 – 2-wire AC – Fixed settings

General data

Dimensions	Ø18 x 82 mm	**Ambient temperature**	-25…+70 °C
Switching distance	5 mm,	**Protection class**	IP67
Electrical connection	connector, 1/2"	**Material housing**	CuZn-Cr
Operating voltage	20…250 VAC	**Material active face**	PBT

Types and data – selection table

Type	Output	w	d
BC5-M18-RZ3X-B3331/S250	, 2-wire	w061	d183
BC5-M18-AZ3X-B3331/S250	, 2-wire	w060	d183

M18 – 2-wire AC – Fine adjustment via potentiometer

General data

Dimensions	Ø18 x 74 mm	**Protection class**	IP67
Switching distance	5 mm,	**Material housing**	CuZn-Cr
Electrical connection	cable	**Material active face**	PBT
Operating voltage	20…250 VAC	**Material cable**	PVC 2 m
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	w	d
BC5-M18-RZ3X	, 2-wire	w062	d340
BC5-M18-AZ3X	, 2-wire	w031	d340

w Wiring diagrams on page 832 ff d Dimension drawings on page 842 ff a Accessories on page 736 ff

S18 – 2-wire AC – Fine adjustment via potentiometer

General data

Dimensions	Ø18 x 74 mm	**Protection class**	IP67
Switching distance	5 mm,	**Material housing**	PA
Electrical connection	cable	**Material active face**	PA
Operating voltage	20…250 VAC	**Material cable**	PVC 2 m
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	w	d
BC5-S18-RZ3X	, 2-wire	w038	d345
BC5-S18-AZ3X	, 2-wire	w020	d345

M30 – 2-wire AC – Fine adjustment via potentiometer

General data

Switching distance	10 mm,	**Protection class**	IP67
Operating voltage	20…250 VAC	**Material housing**	CuZn-Cr
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Dimensions	Output	Electrical connection	Material active face	Material cable	w	d
BC10-M30K-RZ3X-B3131	Ø30 x 71 mm	, 2-wire	connector, 1/2“	-	-	w061	d355
BC10-M30K-RZ3X	Ø30 x 62.5 mm	, 2-wire	cable	PA	PVC 2 m	w062	d342
BC10-M30K-AZ3X-B3131	Ø30 x 71 mm	, 2-wire	connector, 1/2“	-	-	w060	d355
BC10-M30K-AZ3X	Ø30 x 62.5 mm	, 2-wire	cable	PA	PVC 2 m	w031	d342

S30 – 2-wire AC – Fine adjustment via potentiometer

General data

Switching distance	10 mm,	**Protection class**	IP67
Operating voltage	20…250 VAC	**Material housing**	PA
Ambient temperature	-25…+70 °C	**Material active face**	PA

Types and data – selection table

Type	Dimensions	Output	Electrical connection	Material cable	w	d
BCF10-S30-RZ3X-B3131	Ø30 x 71 mm	, 2-wire	connector, 1/2"	-	w063	d356
BCF10-S30-RZ3X	Ø30 x 62.5 mm	, 2-wire	cable	PVC 2 m	w038	d348
BCF10-S30-AZ3X-B3131	Ø30 x 71 mm	, 2-wire	connector, 1/2"	-	w025	d356
BCF10-S30-AZ3X	Ø30 x 62.5 mm	, 2-wire	cable	PVC 2 m	w020	d348
BC10-S30-RZ3X-B3131	Ø30 x 71 mm	, 2-wire	connector, 1/2"	-	w063	d356
BC10-S30-RZ3X	Ø30 x 62.5 mm	, 2-wire	cable	PVC 2 m	w038	d348
BC10-S30-AZ3X-B3131	Ø30 x 71 mm	, 2-wire	connector, 1/2"	-	w025	d356
BC10-S30-AZ3X	Ø30 x 62.5 mm	, 2-wire	cable	PVC 2 m	w020	d348

K34 – 2-wire AC – Fine adjustment via potentiometer

General data

Dimensions	Ø34 x 80 mm	**Protection class**	IP67
Switching distance	15 mm,	**Material housing**	PBT
Electrical connection	cable	**Material active face**	PBT
Operating voltage	20…250 VAC	**Material cable**	PVC 2 m
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	w	d
BCF15-K34-RZ3X	, 2-wire	w038	d350
BCF15-K34-AZ3X	, 2-wire	w020	d350
BC15-K34-RZ3X	, 2-wire	w038	d350
BC15-K34-AZ3X	, 2-wire	w020	d350

w Wiring diagrams on page 832 ff d Dimension drawings on page 842 ff a Accessories on page 736 ff

P30SR – 2-wire AC – Fine adjustment via potentiometer

Type	BC10-P30SR-FZ3X2	**Ambient temperature**	-25…+70 °C
Dimensions	Ø30 x 115 mm	**Protection class**	IP67
Switching distance	10 mm,	**Material housing**	ABS
Output	connection programmable	**Material active face**	ABS
Electrical connection	terminal chamber	**Wiring diagram**	w029
Operating voltage	20…250 VAC	**Dimension drawing**	d357

K34SR – 2-wire AC – Fine adjustment via potentiometer

Type	BC15-K34SR-FZ3X2	**Ambient temperature**	-25…+70 °C
Dimensions	Ø34 x 106 mm	**Protection class**	IP67
Switching distance	15 mm,	**Material housing**	PBT
Output	connection programmable	**Material active face**	PBT
Electrical connection	terminal chamber	**Wiring diagram**	w029
Operating voltage	20…250 VAC	**Dimension drawing**	d358

CP40 – 2-wire AC – Fine adjustment via potentiometer

Type	BC20-CP40-FZ3X2	**Ambient temperature**	-25…+70 °C
Dimensions	40 x 40 x 114 mm	**Protection class**	IP67
Switching distance	20 mm,	**Material housing**	PBT
Output	connection programmable	**Material active face**	PBT
Electrical connection	terminal chamber	**Wiring diagram**	w029
Operating voltage	20…250 VAC	**Dimension drawing**	d334

Variable orientation of active face in 9 directions

CP80 – 2-wire AC – Fine adjustment via potentiometer

Type	NC50-CP80-FZ3X2	**Ambient temperature**	-25…+70 °C
Dimensions	80 x 40.5 x 80 mm	**Protection class**	IP67
Switching distance	50 mm,	**Material housing**	PBT
Output	connection programmable	**Material active face**	PBT
Electrical connection	terminal chamber	**Wiring diagram**	w029
Operating voltage	20…250 VAC	**Dimension drawing**	d336

w Wiring diagrams on page 832 ff
d Dimension drawings on page 842 ff
a Accessories on page 736 ff

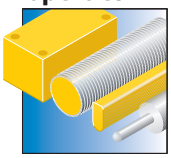
NAMUR sensors

NAMUR sensors are approved for the zones 0 and 1. They are polarized 2-wire devices, changing their internal resistance in dependence on the attenuation (continuous linear/current characteristics). They can be connected to external switching amplifiers which convert current variations into binary output signals. The advantage: With an approved switching amplifier, they can be applied in Ex-areas as well as monitor wire-break and short-circuit continuously.

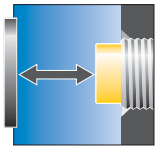
Features

- Integrated sensor monitoring
- Automatic wetting compensation
- Excellent EMC properties
- Ex-area approved

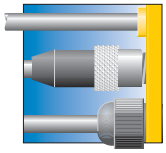
Properties



Design
Threaded barrel
M18 x 1, M30 x 1.5 and rectangular QF5.5

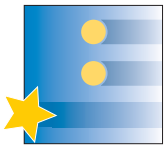


Switching distances
5 mm and 10 mm, flush mountable



Electrical connections
2 m cable PVC and silicone

Materials
Polypropylene and polyamide housings



Special features
Fixed settings, ATEX and SIL approvals, extended temperature range

QF5.5 – NAMUR – Fixed settings

Type	BC5-QF5,5-Y1X/S250	**Protection class**	IP67
Dimensions	20.3 x 5.5 x 54 mm	**Material housing**	PP
Switching distance	5 mm,	**Material active face**	PP
Output	NAMUR	**Material cable**	PVC 2 m
Electrical connection	cable	**Wiring diagram**	w019
Operating voltage	nom. 8.2 VDC	**Dimension drawing**	d359
Ambient temperature	-25…+70 °C		

S18 – NAMUR – Fine adjustment via potentiometer

General data

Dimensions	Ø18 x 74 mm	**Operating voltage**	nom. 8.2 VDC
Switching distance	5 mm,	**Protection class**	IP67
Output	NAMUR	**Material housing**	PA
Electrical connection	cable	**Material active face**	PA

Types and data – selection table

Type	Ambient temperature	Material cable	w	d
BC5-S18-Y1X/S100	-25…+100 °C	silicone 2 m	w019	d345
BC5-S18-Y1X	-25…+70 °C	PVC 2 m	w019	d345

S30 – NAMUR – Fine adjustment via potentiometer

Type	BC10-S30-Y1X	**Protection class**	IP67
Dimensions	Ø30 x 62.5 mm	**Material housing**	PA
Switching distance	10 mm,	**Material active face**	PA
Output	NAMUR	**Material cable**	PVC 2 m
Electrical connection	cable	**Wiring diagram**	w019
Operating voltage	nom. 8.2 VDC	**Dimension drawing**	d348
Ambient temperature	-25…+70 °C		

w Wiring diagrams on page 832 ff
d Dimension drawings on page 842 ff
a Accessories on page 736 ff

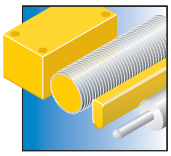
BCF sensors with close-up range suppression

Thanks to the new switching technology in combination with optimized electrode and compensation features, the BCFs work reliably under difficult application conditions. Even conductive coatings are not a problem at all. To avoid HF crosstalk and other interferences, the potentiometer is located in a less sensitive area of the circuit, this applies to all capacitive TURCK sensors. Even applications that are subject to strong interferences do not require additional protective measures. All sensors of the BCF series are immune to radiated and conducted HF interference, burst as well as electrostatic discharge (ESD).

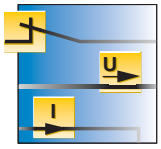
Features

- Automatic wetting compensation
- Increased EMI and RFI shielding
- High protection class
- Novel close-up range suppression

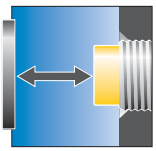
Properties



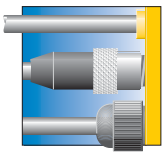
Design
Cylinders Ø 18, Ø 30 and Ø 34 mm and rectangular Q20L60



Electrical versions
2, 3 and 4-wire, PNP or NPN, NO or NC



Switching distances
5 … 15 mm, flush mounting



Electrical connections
2 m cable PVC/PUR, M12 x 1 plug connection

Materials
PA or PBT housings

Special features
Close-up range suppression
EMC shielded

BCF – S18 – 3-wire DC – Fixed settings

General data

Dimensions	Ø18 x 83 mm	**Ambient temperature**	-25…+70 °C
Switching distance	5 mm,	**Protection class**	IP67
Electrical connection	connector, M12 x 1	**Material housing**	PA
Operating voltage	10…65 VDC	**Material active face**	PA

Types and data – selection table

Type	Output	w	d
BCF5-S18-AP4X-H1141/S250	_⌒_, PNP	w001	d344
BCF5-S18-AN4X-H1141/S250	_⌒_, NPN	w002	d344

BCF – S18 – 3-wire DC – Fine adjustment via potentiometer

General data

Dimensions	Ø18 x 74 mm	**Ambient temperature**	-25…+70 °C
Switching distance	5 mm,	**Protection class**	IP67
Electrical connection	cable	**Material housing**	PA
Operating voltage	10…65 VDC	**Material active face**	PA

Types and data – selection table

Type	Output	Material cable	w	d
BCF5-S18-RP4X/S90	⊣⌒_, PNP	PUR 2 m	w006	d345
BCF5-S18-RN4X	⊣⌒_, NPN	PVC 2 m	w064	d345
BCF5-S18-AP4X/S90	_⌒_, PNP	PUR 2 m	w004	d345
BCF5-S18-AP4X	_⌒_, PNP	PVC 2 m	w004	d345
BCF5-S18-AN4X	_⌒_, NPN	PVC 2 m	w005	d345

w Wiring diagrams on page 832 ff d Dimension drawings on page 842 ff a Accessories on page 736 ff

BCF – S30 – 4-wire DC – Fine adjustment via potentiometer

General data

Switching distance	10 mm,	**Protection class**	IP67
Operating voltage	10…65 VDC	**Material housing**	PA
Ambient temperature	-25…+70 °C	**Material active face**	PA

Types and data – selection table

Type	Dimensions	Output	Electrical connection	Material cable	w	d
BCF10-S30-VP4X-H1141	Ø30 x 71 mm	, PNP	connector, M12 x 1	-	w008	d347
BCF10-S30-VP4X	Ø30 x 62.5 mm	, PNP	cable	PVC 2 m	w007	d348
BCF10-S30-VN4X-H1141	Ø30 x 71 mm	, NPN	connector, M12 x 1	-	w010	d347
BCF10-S30-VN4X	Ø30 x 62.5 mm	, NPN	cable	PVC 2 m	w018	d348

BCF – K34 – 2-wire AC – Fine adjustment via potentiometer

General data

Dimensions	Ø34 x 80 mm	**Protection class**	IP67
Switching distance	15 mm,	**Material housing**	PBT
Electrical connection	cable	**Material active face**	PBT
Operating voltage	20…250 VAC	**Material cable**	PVC 2 m
Ambient temperature	-25…+70 °C		

Types and data – selection table

Type	Output	w	d
BCF15-K34-RZ3X	, 2-wire	w038	d350
BCF15-K34-AZ3X	, 2-wire	w020	d350

BCF – Q20L60 – 3-wire DC – Fine adjustment via potentiometer

General data

Dimensions	30 x 20 x 60 mm	**Ambient temperature**	-25…+70 °C
Switching distance	10 mm,	**Protection class**	IP67
Output	, PNP	**Material housing**	PC
Operating voltage	10…65 VDC	**Material active face**	PC

Types and data – selection table

Type	Electrical connection	Material cable	w	d
BCF10-Q20L60-AP4X-H1141	connector, M12 x 1	-	w001	d361
BCF10-Q20L60-AP4X	cable	PVC 2 m	w004	d360

w Wiring diagrams on page 832 ff
d Dimension drawings on page 842 ff
a Accessories on page 736 ff

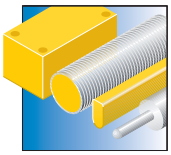
BCC sensors for level control

The BCC sensors blank out all interferences during the monitoring process and feature excellent EMC and ESD properties. A laterally mounted shield and an integrated processing unit inhibit predamping when mounted in metal flanges. The full switching distance is thus available.

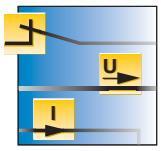
Features

- Automatic wetting compensation
- Excellent EMC properties
- High ESD immunity
- Detection of smallest pellets

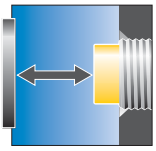
Properties



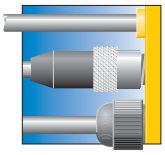
Design
Threaded barrel,
M30 x 1.5



Electrical versions
3/4-wire NO/NC, PNP as well as antivalent PNP/NPN output

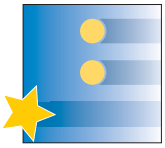


Switching distances
10 mm, flush mounting



Electrical connections
2 m cable, M12 x 1 plug connection

Materials
Polyamide housing



Special features
ESD immunity,
lateral predamping protection

BCF – S30 – 3-wire DC – Fine adjustment via potentiometer

General data

Switching distance	10 mm,	**Protection class**	IP67
Operating voltage	10…65 VDC	**Material housing**	PA
Ambient temperature	-25…+70 °C	**Material active face**	PA

Types and data – selection table

Type	Dimensions	Output	Electrical connection	Material cable	w	d
BCC10-S30-VP4X-H1141	Ø30 x 71 mm	, PNP	connector, M12 x 1	-	w008	d347
BCC10-S30-RP4X-H1143	Ø30 x 71 mm	, PNP	connector, M12 x 1	-	w003	d347
BCC10-S30-RP4X	Ø30 x 62.5 mm	, PNP	cable	PVC 2 m	w006	d348
BCC10-S30-AP4X-H1141	Ø30 x 71 mm	, PNP	connector, M12 x 1	-	w001	d347
BCC10-S30-AP4X	Ø30 x 62.5 mm	, PNP	cable	PVC 2 m	w004	d348

w Wiring diagrams on page 832 ff d Dimension drawings on page 842 ff a Accessories on page 736 ff

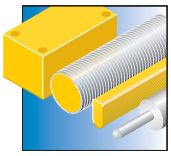
Chemical-resistant sensors

The capacitive sensors (PVDF) are the ideal solution for any application of the pharmaceutical, chemical or food industry. The broad range of functional features of TURCK sensors help to optimize all kinds of applications, for instance, in dairies, breweries, the manufacture of bakery products and frozen foods, or packaging and filling procedures. PVDF materials belong to the group of fluoride plastics. They are extremely resistant due to the high fluorine content. They also feature a high tracking resistance under constant load, good cold properties and excellent temperature resistance.

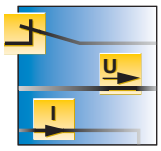
Features

- Excellent chemical resistance
- Automatic wetting compensation
- Excellent EMC properties
- Large switching distances

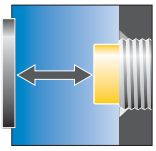
Properties



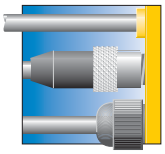
Design
Cylinders Ø 18, Ø 30 mm



Electrical versions
3-wire NO contact or antivalent PNP/NPN switching, NAMUR

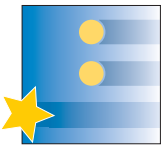


Switching distances
10 mm, flush mounting



Electrical connections
2 m cable PVC or PUR

Materials
Threaded barrel, plastic PVDF



Special features
Chemical resistant

S185 – 3-wire DC – Fine adjustment via potentiometer

Type	BC5-S185-AP4X	**Protection class**	IP67
Dimensions	Ø18 x 74.5 mm	**Material housing**	PVDF
Switching distance	5 mm,	**Material active face**	PVDF
Output	, PNP	**Material cable**	PVC 2 m
Electrical connection	cable	**Wiring diagram**	w004
Operating voltage	10…65 VDC	**Dimension drawing**	d354
Ambient temperature	-25…+70 °C		

PT30 – 3-wire DC – Fine adjustment via potentiometer

General data

Dimensions	Ø30 x 80 mm	**Protection class**	IP67
Switching distance	10 mm,	**Material housing**	PVDF
Electrical connection	cable	**Material active face**	PVDF
Ambient temperature	-25…+70 °C	**Material cable**	PVC 2 m

Types and data – selection table

Type	Output	Operating voltage	w	d
BC10-PT30-Y0X	NAMUR	nom. 8.2 VDC	w019	d362
BC10-PT30-VP4X2	, PNP	10…65 VDC	w007	d362
BC10-PT30-VN4X2	, NPN	10…65 VDC	w018	d362

w Wiring diagrams on page 832 ff
d Dimension drawings on page 842 ff
a Accessories on page 736 ff