

CAPACITIVE SENSORS M18 x 1

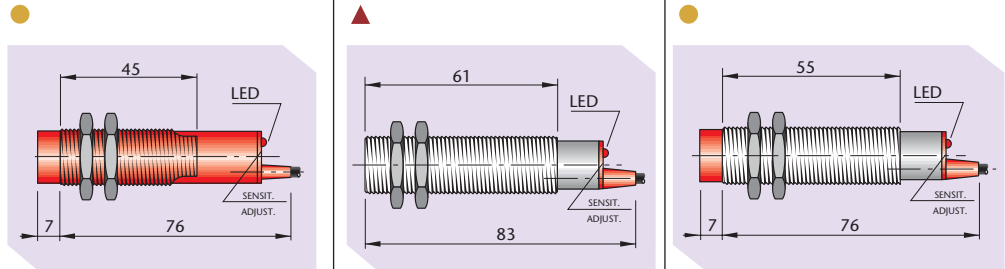


CYLINDRICAL HOUSING PLASTIC OR METALLIC
4 WIRES D.C.
VERSION-C

- ▲ **EMBEDDABLE** (FLUSH MOUNTING)
- **NOT EMBEDDABLE** (NON FLUSH MOUNTING)

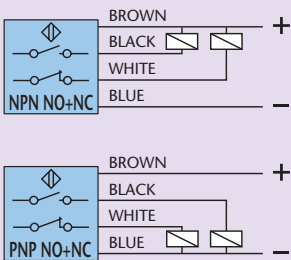
TECHNICAL CHARACTERISTICS

Dimensions mm



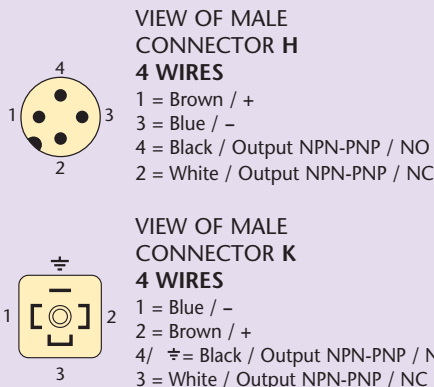
AMPLIFIED 4 WIRES D.C. ANTI-PHASE	NPN	NO+NC	SC18P - CE10 NPN NO + NC	SC18M - C5 NPN NO + NC	SC18M - CE10 NPN NO + NC
	PNP	NO+NC	SC18P - CE10 PNP NO + NC	SC18M - C5 PNP NO + NC	SC18M - CE10 PNP NO + NC
Switching distance (Sn) adjustable		mm	0 ÷ 10	0 ÷ 5	0 ÷ 10
Continuous voltage (residual ripple ≤10%)		V		10 ÷ 30	
Hysteresis (%Sn)		mm		In relation to Sn	
Switching frequency		Hz		10	
Repeatability (at constant temperature)		mm		< 0.5	
Max output current		mA		200	
Absorption at 24Vdc		mA		≤ 10	
Voltage drop (sensor ON)		V		< 1.8	
Short circuit protection				Incorporated	
Led				Incorporated	
Temperature limits		°C		- 20 ÷ + 70	
Degree of protection		IP		65	
Housing			Red plastic makrolon	Nickelled brass	
Cable PVC		2m		4 x 0.25 mm ²	
Connector plug			-	H (On request)	
Protection housing					

WIRING DIAGRAMS

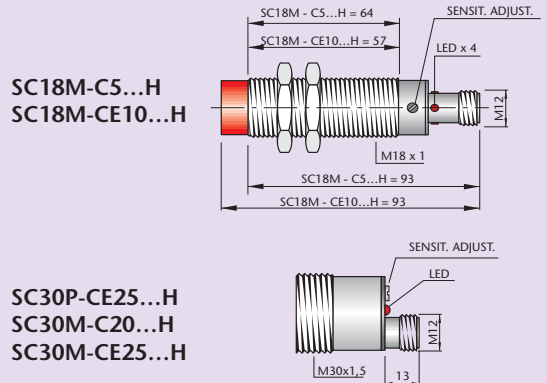


N.B.: On request is available cable for sensors with different length 3.5 - 7.5 - 5 - 10 metres.

CONNECTION WITH H - K PLUGS FOR THE CONNECTORS SEE PAGE 85



MODELS AVAILABLE WITH H PLUG FOR M12 CONNECTORS

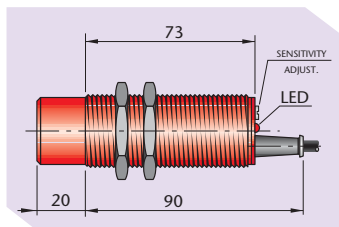


CAPACITIVE SENSORS M30 x 1.5

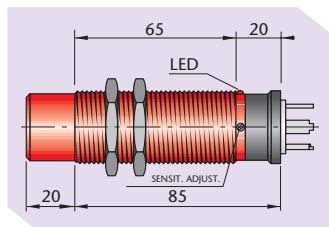


CYLINDRICAL HOUSING PLASTIC OR METALLIC
4 WIRES D.C.
VERSION-C

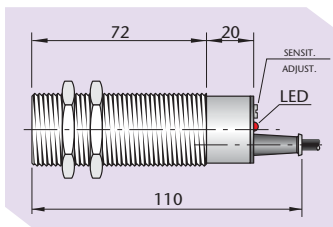
● *



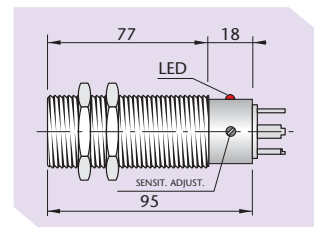
●



▲



▲



SC30P - CE25 NPN NO + NC*

SC30P - CE25 NPN NO + NC K

SC30M - C20 NPN NO + NC

SC30M - C20 NPN NO + NC K

SC30P - CE25 PNP NO + NC*

SC30P - CE25 PNP NO + NC K

SC30M - C20 PNP NO + NC

SC30M - C20 PNP NO + NC K

0 ÷ 25

0 ÷ 25

0 ÷ 20

0 ÷ 20

10 ÷ 55

In relation to Sn

10

< 1

300

≤ 10

< 1.8

Incorporated

Incorporated

- 20 ÷ + 70

67

65

67

65

Red plastic makrolon

Nickelled brass

4 x 0.25 mm²

4 x 0.25 mm²

H (on request)

K (type 12)

H (on request)

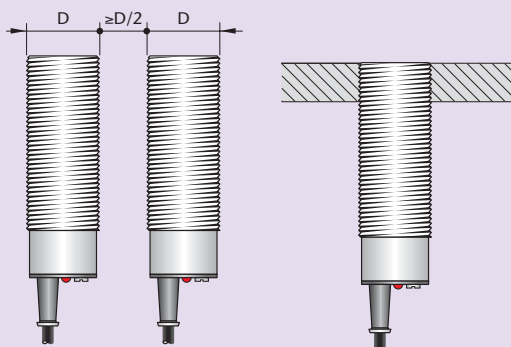
K (type 12)

Possible mounting (SCM-P)

Possible mounting (SCM-K)

INSTRUCTIONS FOR CORRECT INSTALLATION

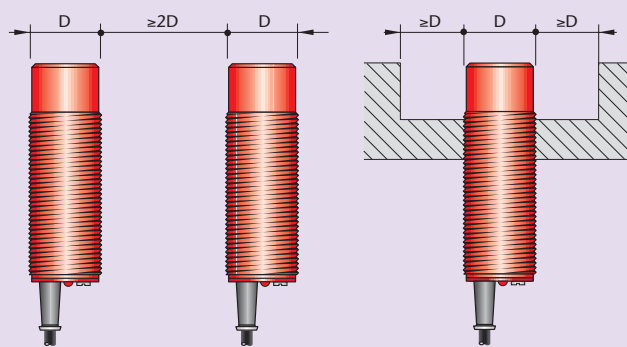
EMBEDDABLE



Side by side mounting

Flush mounting

NOT EMBEDDABLE



Side by side mounting

Non flush mounting

* This models can be supplied with protection ESD=27KV. When ordering add 27KV to the description.

CAPACITIVE SENSORS M30 x 1.5

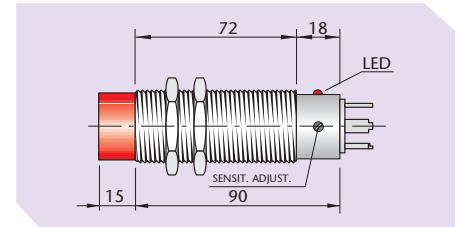
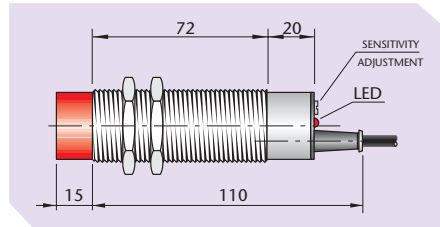


CYLINDRICAL HOUSING METALLIC
4 WIRES D.C.
VERSION-C

- ▲ **EMBEDDABLE** (FLUSH MOUNTING)
- **NOT EMBEDDABLE** (NON FLUSH MOUNTING)

TECHNICAL CHARACTERISTICS

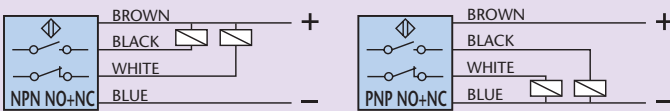
Dimensions mm



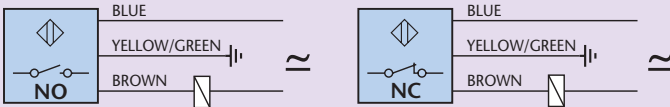
AMPLIFIED 4 WIRES D.C. ANTI PHASE	NPN	NO+NC	SC30M - CE25 NPN NO + NC	SC30M - CE25 NPN NO + NC K
	PNP	NO+NC	SC30M - CE25 PNP NO + NC	SC30M - CE25 PNP NO + NC K
AMPLIFIED 2 WIRES A.C./D.C.		NO		
		NC		
Switching distance (Sn) adjustable	mm	0 ÷ 25	0 ÷ 25	0 ÷ 25
Continuous voltage (residual ripple ≤10%)	V		10 ÷ 55	
Alternating voltage 50÷60 Hz	V			
Hysteresis (%Sn)	mm		In relation to Sn	
Switching frequency	Hz		10	
Repeatability (at constant temperature)	mm		< 1	
Max output current	mA		300	
Min output current	mA			
Max peak current for 20 ms	A			
Absorption at 24Vdc	mA		≤ 10	
Residual current	mA			
Voltage drop (sensor ON)	V		< 1.8	
Short circuit protection			Incorporated	
Led			Incorporated	
Temperature limits	°C		- 20 ÷ + 70	
Degree of protection	IP	67		65
Housing			Nickelled brass	
Cable PVC	2m	4 x 0.25 mm ²		
Connector plug		H (on request)		K (type 12)
Protection housing				Possible mounting (SCM-K)

WIRING DIAGRAMS

VERSION C



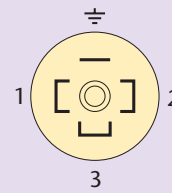
VERSION A



N.B.: On request is available cable for sensors with different length
3.5 - 7.5 - 5 - 10 metres.

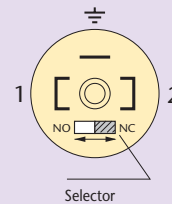
CONNECTION WITH K PLUG

FOR CONNECTORS TYPE 12 (PAGE 85)



VIEW OF MALE CONNECTOR K

- 1 = Blue / -
- 2 = Brown / +
- 4 / ⚡ = Black / Output NPN - PNP / NO
- 3 = White / Output NPN - PNP / NC



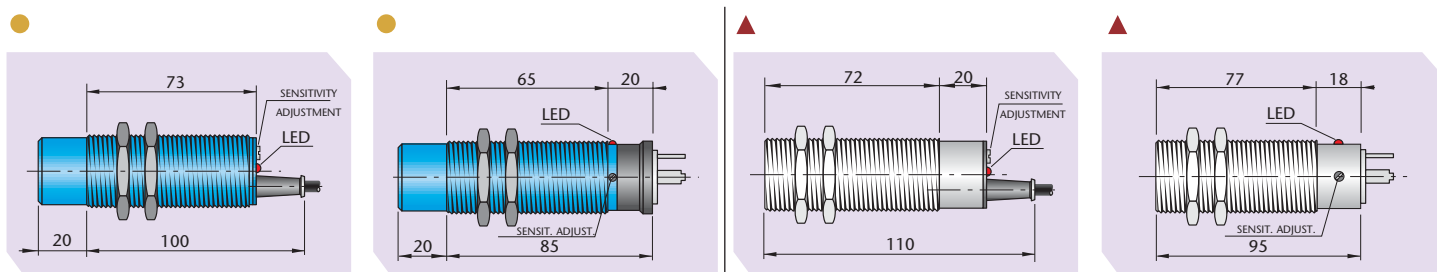
VIEW OF MALE CONNECTOR K

- 1 / 2 = NO - NC Programmable

CAPACITIVE SENSORS M30 x 1.5



CYLINDRICAL HOUSING PLASTIC OR METALLIC
2 WIRES A.C./D.C.
VERSION-A

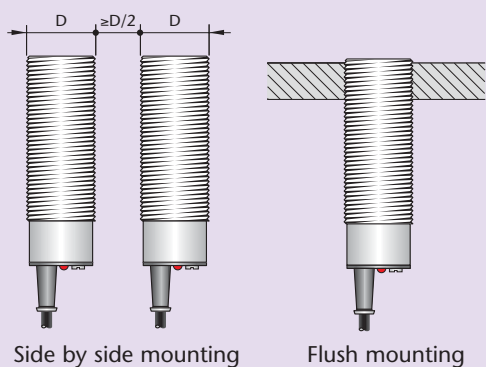


SC30P - AE25 NO*	SC30P - AE25 NO/NC K	SC30M - A20 NO*	SC30M - A20 NO/NC K
SC30P - AE25 NC*	PROGRAMMABLE	SC30M - A20 NC*	PROGRAMMABLE
0 ÷ 25	0 ÷ 25	0 ÷ 20	0 ÷ 20
20 ÷ 250			
20 ÷ 250			
In relation to Sn			
10			
< 1			
500			
10 (Min. release current)			
1.5			
≤ 2			
< 6			
Incorporated (Up to 50V in d.c.)			
Incorporated			
- 20 ÷ + 70			
67	65	67	65
Blue plastic makrolon		Nickelled brass	
3 x 0.50 mm ²		3 x 0.50 mm ²	
Possible mounting (SCM-P)		K (type 12)	
Possible mounting (SCM-K)		K (type 12)	

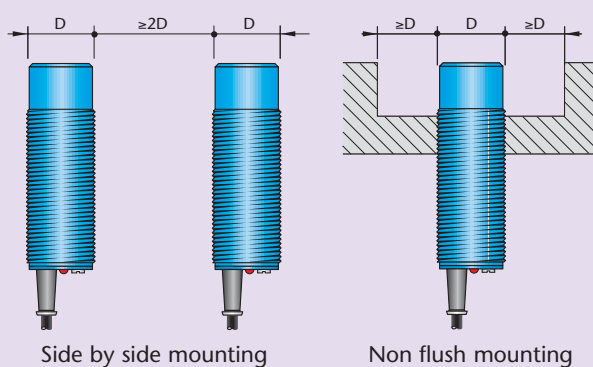
CAPACITIVE

INSTRUCTIONS FOR CORRECT INSTALLATION

EMBEDDABLE



NOT EMBEDDABLE



* Models with NO/NC programmable output are available on request.

CAPACITIVE SENSORS M30 x 1.5



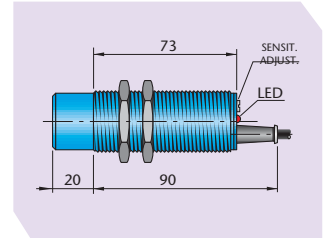
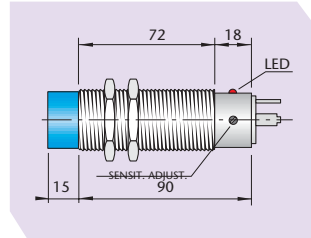
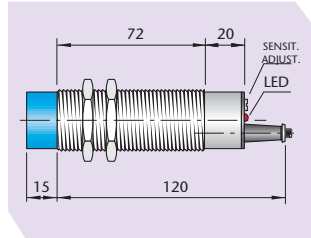
CYLINDRICAL HOUSING METALLIC
2 WIRES A.C./D.C.
VERSION-A

CYLINDRICAL HOUSING PLASTIC
RELAY OUTPUT
VERSION-R

● **NOT EMBEDDABLE**
(NON FLUSH MOUNTING)

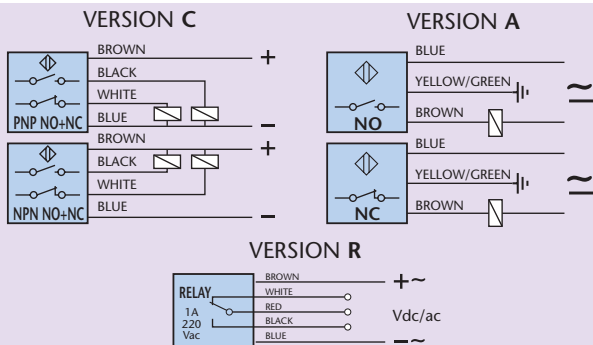
TECHNICAL CHARACTERISTICS

Dimensions mm



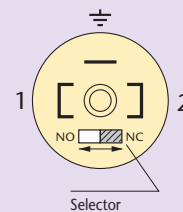
AMPLIFIED 4 WIRES D.C. ANTIPHASE	NPN	NO+NC			
	PNP	NO+NC			
AMPLIFIED 2 WIRES A.C./D.C.		NO	SC30M - AE25 NO*	SC30M - AE25 NO/NC K	SC30P - RE 25
		NC	SC30M - AE25 NC*	PROGRAMMABLE	RELAY CHANGEOVER
Switching distance (Sn) adjustable	mm		0 ÷ 25		0 ÷ 25
Continuous voltage (residual ripple ≤10%)	V		20 ÷ 250		18 ÷ 50
Alternating voltage 50÷60 Hz	V		20 ÷ 250		18 ÷ 240
Hysteresis (%Sn)	mm		In relation to Sn		In relation to Sn
Switching frequency	Hz		10		10
Repeatability (at constant temperature)	mm		< 1		< 1
Max output current	mA		500		Changeover 1A - 220Vac
Min output current	mA		10 (Min. release current)		
Max peak current for 20 ms	A		1.5		
Absorption	mA				< 20 Relay on
Residual current	mA		≤ 2		
Voltage drop (sensor ON)	V		< 6		
Short circuit protection			Incorporated (Up to 50V in d.c.)		
Led			Incorporated		Incorporated
Temperature limits	°C		- 20 ÷ + 70		- 20 ÷ + 70
Degree of protection	IP		67	65	67
Housing			Nickelled brass		Red plastic makrolon
Cable PVC	2m		3 x 0.50 mm ²		5 x 0.35 mm ²
Connector plug				K (type 12)	
Protection housing				Possible mounting (SCM-K)	Possible mounting (SCM-P)

WIRING DIAGRAMS



N.B.: On request is available cable for sensors with different length
3.5 - 7.5 - 5 - 10 metres.

CONNECTION WITH K PLUG FOR CONNECTOR TYPE 12 (PAGE 85)



VIEW OF MALE CONNECTOR K
1 / 2 = \approx NO - NC Programmable

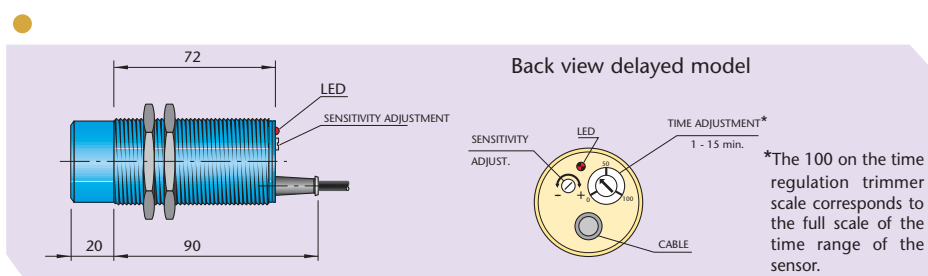
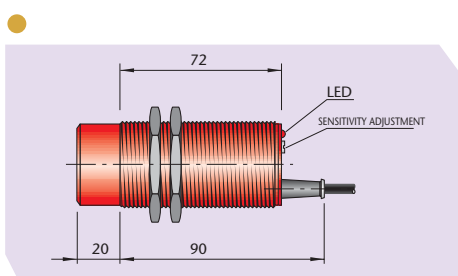
* Models with NO/NC programmable output are available on request.

CAPACITIVE SENSORS M40 x 1.5



CYLINDRICAL HOUSING PLASTIC
4 WIRES D.C.
VERSION-C

CYLINDRICAL HOUSING PLASTIC
2 WIRES A.C./D.C.
STANDARD AND DELAYED MODELS
VERSION-A



SC40P - CE35 NPN NO + NC
SC40P - CE35 PNP NO + NC

SC40P - AE35 NO
SC40P - AE35 NC

SC40P - AE35 TE/TD NO
SC40P - AE35 TE/TD NC

0 ÷ 35
10 ÷ 55

20 ÷ 250

0 ÷ 35

20 ÷ 250

In relation to Sn

In relation to Sn

10

10

In relation to delay

< 2

< 2

300

500

300

10 (Min. release current)

20

< 10

1.5

< 1.8

≤ 2

< 3

Incorporated

Incorporated (Up to 50V in d.c.)

< 6

Incorporated

Incorporated

- 20 ÷ + 70

- 20 ÷ + 70

67

67

65

Red plastic makrolon

Blue plastic makrolon

4 x 0.25 mm²

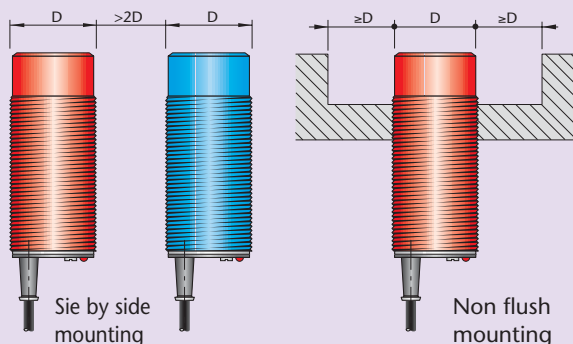
3 x 0.50 mm²

2 x 0.50 mm²

On request protection housing with 2 inch fixing

INSTRUCTIONS FOR CORRECT INSTALLATION

NOT EMBEDDABLE



SC40P-AE35 DELAYED - AVAILABLE RANGE

SC40P-AE35 TE NO, delay on energization N.O. contact.
In the absence of material the sensor has an open contact. When the material enters the sensing area, the delay set starts. At the end of this time the contact closes. When the material leaves the sensing area, the contact opens instantaneously.

SC40P-AE35 TE NC, delay on energization N.C. contact.
In the absence of material the contact of the sensor is closed. When material enters the sensing area, the contact opens. When material leaves the area, the delay set starts, after which the contact closes.

SC40P-AE35 TD NO, delay on de-energization N.O. contact.
In the absence of material the contact of the sensor is open. When material enters the sensing area, the contact closes. When material leaves the area, the delay set starts, after which the contact opens.

SC40P-AE35 TD NC, delay on de-energization N.C. contact.
In the absence of material the contact of the sensor is closed. When material enters the sensing area, the delay set starts, after which the contact opens. When material leaves the area, the contact closes instantaneously.

RANGE OF STANDARD TIME DELAY
FROM 1 to 15 minutes.

DELAYED PROGRAMMABLE CAPACITIVE SENSOR SC30P-RE25T TYPE



SPECIFICATIONS

This proximity sensor belongs to the capacitive sensor family, it supplies a signal to the external load which can be delayed up to 10 min. when any material solid or liquid (water, glass, wood, metal, coffee, powders etc.) come into the sensing area, it is used principally as a level control.

This model is completely programmable regarding the delay in energization and de-energization with open or closed output, the sensor does in fact contain a 1A 220V changeover relay.

Due to its versatility, programmability and high power output compared to a normal electronic sensor, the stocking of product for the wholesaler is simplified as is the adaptability of the switch to any application.

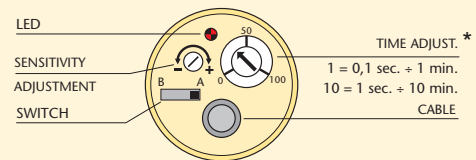
This sensor can be used with the protection housing SCM-R which is of POM and therefore satisfies the most severe abrasion resistance requirements.

When used as a level control, this housing allows for the sensor to be substituted whenever required.

TECHNICAL CHARACTERISTICS

Switching distance Sn adjustable	mm	0 ÷ 25
Multivoltage power supply	V	18 ÷ 50 Vdc 18÷240 Vac (50÷60 Hz)
Hysteresis (%Sn)	mm	Depending on Sn
Max. switching frequency	Hz	Depending on delay
Repeatability (at a constant temper.)	mm	< 1
Max. output current	mA	Changeover 1 A - 220 Vac
Absorption (relay activated)	mA	20
LED		Incorporated
Temperature limit	°C	-20 ÷ +70
Degree of protection	IP	65
Standard range of delay	min.	1 - 10 (on request higher)
Housing		Plastic (Makrolon)
Cable PVC	2 m	5 x 0,35 mm ²
Protection housing		Possible mounting

BACK VIEW



* The 100 on the time regulation trimmer scale corresponds to the full scale of the time range of the sensor.

PROGRAMMABLE FUNCTION TABLE

FUNCTION	SWITCH POS.	RELAY OUTPUT WIRES COLOUR
TE NO	B	Red / Black
TE NC	A	Red / Black
TD NO	A	Red / White
TD NC	B	Red / White

PROGRAMMABLE FUNCTIONS

FUNCTION TE NO - delay on energization N.O. contact.

In the absence of material the sensor has an open contact. When the material enters the sensing area, the delay set starts. At the end of this time the contact closes. When the material leaves the sensing area, the contact opens instantaneously.

FUNCTION TE NC - delay on energization N.C. contact.

In the absence of material the contact of the sensor is closed. When material enters the sensing area, the contact opens. When material leaves the area, the delay set starts, after which the contact closes.

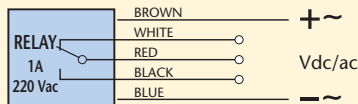
FUNCTION TD NO - delay on de-energization N.O. contact.

In the absence of material the contact of the sensor is open. When material enters the sensing area, the contact closes. When material leaves the area, the delay set starts, after which the contact opens.

FUNCTION TD NC - delay on de-energization N.C. contact.

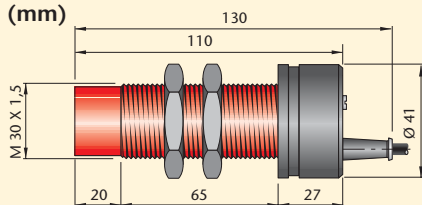
In the absence of material the contact of the sensor is closed. When material enters the sensing area, the delay set starts, after which the contact opens. When material leaves the area, the contact closes instantaneously.

WIRING DIAGRAM

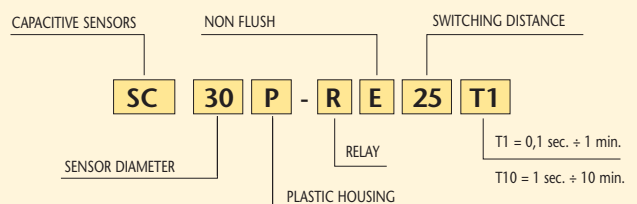


Multivoltage power supply 18÷50 Vdc / 18÷240 Vac.

DIMENSIONS (mm)



IDENTIFICATION REFERENCE



N.B.: On request is available cable for sensors with different length 3.5 - 5 - 7.5 - 10 metres.

PROTECTION HOUSING FOR CAPACITIVE SENSORS SCM

SPECIFICATIONS

This is used as a waterproof protective cover for the SC30M series with connector and SC30P series with cable output both for A.C. and D.C. supply.

The SCM housing is of non toxic material (POM) and is provided with a 1 1/2" GAS thread which allows for its installation by using a standard fitting. This type of installation means that the sensor can be rapidly removed for testing without allowing the loss material from the container and protects the sensor from abrasion.

Furthermore the use of the housing eliminates to a large degree variation in the sensitivity of the sensor due to deposits of material.

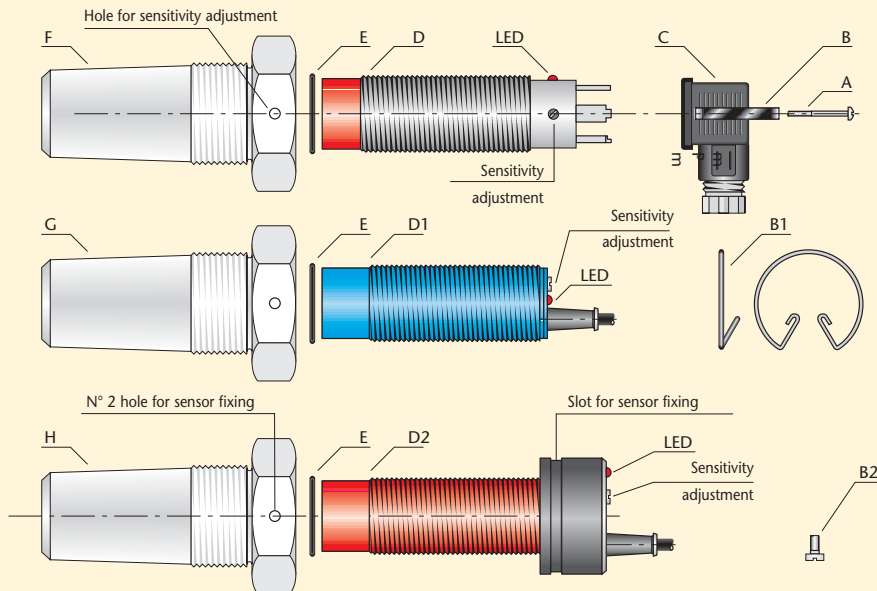
It is also available the protection housing for SC40P capacitive sensors.



INSTALLATION PROCEDURE: HOUSING + SENSOR

DESCRIPTION:

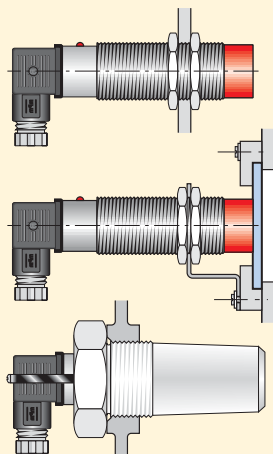
- A - Screw
- B - Fixing spring K type
- B1 - Fixing spring P type
- B2 - N° 2 screw M4x8 mm
- C - Connector
- D - Capacitive sensor with connector
- D1 - Capacitive sensor with cable
- D2 - Capacitive sensor with relay output
- E - Packing ring
- F - SCM-K housing
- G - SCM-P housing
- H - SCM-R housing



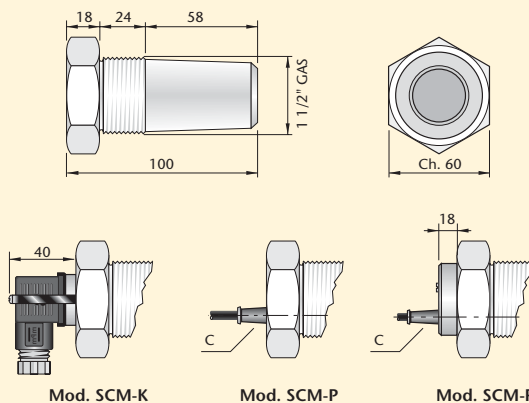
N.B.: There are two types of housing available depending on the type of spring used, **SCM-K** for sensors with connector (**SC30P-CE25K / SC30P-AE25K / SC30M-AE25K**), **SCM-P** for sensors with cable or H plug M12 (**SC30P-CE25 / SC30P-AE25**), **SCM-R** for sensors with relay output and cable (**SC30P-RE25T**). The protection is supplied with complete accessories for mounting.

EXAMPLE

- 1 TRADITIONAL INSTALLATION IN THE CONTAINER WALL
- 2 INSTALLATION WITH A PLASTIC WINDOW (THICKNESS ≤ 6mm)
- 3 INSTALLATION WITH SCM PROTECTION HOUSING



DIMENSIONS (mm)



C = flexible rubber cable exit