



# AMPLIFIED CAPACITIVE SENSORS



Ø 18

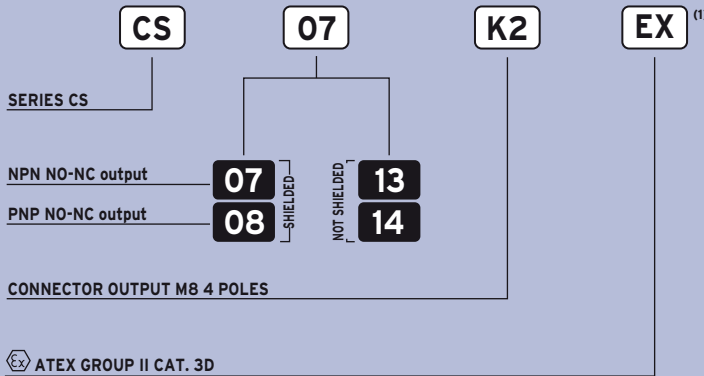
12÷30 V DC - 4 WIRES NPN OR PNP OUTPUT

- Metal housing
- Adjustable range, 9-turn trimmer
- Nickel-plated brass
- High noise immunity
- High temperature stability

CS Series



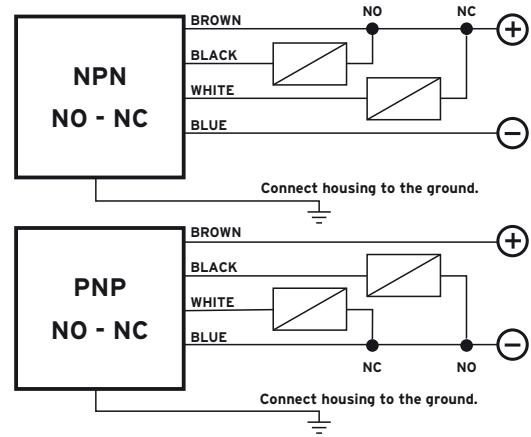
## IDENTIFICATION CODE



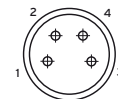
	SHIELDED	NOT SHIELDED
NOMINAL SWITCHING DISTANCE (S <sub>n</sub> )	1÷5 mm	1÷10 mm
NOMINAL VOLTAGE	12 ÷ 30 VDC (-15/+10%)	
RESIDUAL RIPPLE	≤ 10%	
HYSTERESIS	Depending on the sensing distance	
MAX. CURRENT OUTPUT	200 mA	
ABSORPTION AT 24 VDC	≤ 20 mA	
VOLTAGE DROP (Sensor ON)	≤ 1.8 V (I = 100 mA)	
OPERATION LED	Yellow	
SENSITIVITY ADJUSTMENT	Trimmer 9 turns	
SWITCHING FREQUENCY	10 Hz	
START UP DELAY	≤ 100 ms	
REPEATABILITY (at even temperature)	≤ 5%	
SHORT CIRCUIT PROTECTION	Present	
ELECTRIC PROTECTIONS	Against polarity reversal - inductive loads	
TEMPERATURE LIMITS	- 25 ÷ +70 °C	
PROTECTION DEGREE	IP 67	
CABLE LENGTH	2 m	
CABLE SECTION	4 x 0.25 mm <sup>2</sup>	
HOUSING MATERIAL	Nickel-plated brass	
WEIGHT - cable output -	160 g	
WEIGHT - K2 connector output -	120 g	

<sup>(1)</sup> Device marking Ex II 3D IP67 T6X.

## WIRING DIAGRAMS



## CONNECTION WITH CONNECTOR M8 (K2)



View of quadripole male connector

### CONTACTS CONFIGURATION

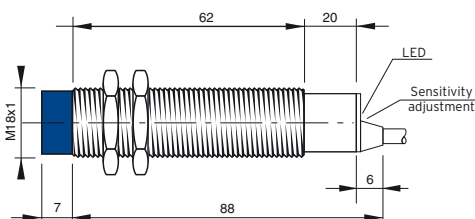
Output	Contacts numbers			
	1	2	3	4
NPN/PNP NO+NC	+	NC	-	NO

## SENSITIVITY ADJUSTMENT

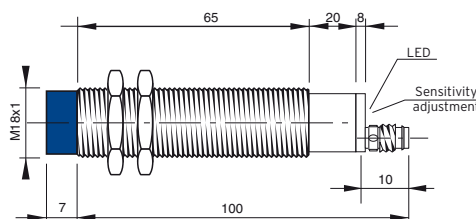
The sensitivity adjustment must be done when the sensor is installed in a definite and steady position. The regulation must be done in a position half way between minimum and maximum, because, being air dielectric, a strong humidity variation could cause, if the regulation is very light, nuisance tripping. The sensing distance of the sensor depends on the kind of material to detect and on its dimensions (see table about reduction factors). The distance could change according to temperature variations. To increase the sensitivity twist the trimmer clock-wise, to decrease do it anti clock-wise.

## DIMENSIONS (mm)

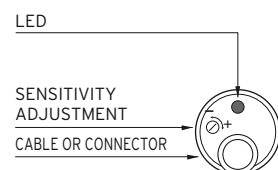
CONFIGURATION WITH CABLE



CONFIGURATION WITH M8 (K2) CONNECTOR



Ø 18 BACK VIEW



**Note:** the front part in blue refers to not shielded models