SC50.01 – DRAW WIRE SENSOR
POTENTIOMETRIC OR GAUGE BRIDGE OUTPUT – MEASUREMENT RANGE UP TO 1250 MM

SPECIFICATIONS

Measurement range	0 up to 1250 mm
Output signal	1kΩ potentiometric output (other values on demand) 2mV/V gauge bridge output
Resolution	Quasi infinite (depends on the operating system)
Material	Body and cover - aluminum (RohS) Measuring cable – Stainless steel 316L
Cable diameter	0,51 mm
Detection element	Precision potentiometer
Connection	Male connector M16 – 3 pins DIN (for R01K output) Male connector M16 – 8 pins DIN (for P05K output) Male connector M12 – 4 pins (A-coding) PVC cable – Shielded – LIYCY 4 x 0.25mm²
Standard linearity	from +/-0.50% f.s to +/-0.10% f.s depending the measurement range (see ordering reference below)
Protection class	IP65 (option IP67)
Max. Velocity	10 M/S
Max. Acceleration	7 M/S² (before cable deformation)
Weight	≈ 700 g
Operating temperature	-20° to +80°C
Storage temperature	-30° to +80°C

CABLE FORCES

Measurement range in mm	Min. pull-out force	Max. pull out force
50	≈ 6,40 N	≈ 6,50 N
100	≈ 6,30 N	≈ 6,50 N
250	≈ 6,00 N	≈ 6,50 N
500	≈ 5,50 N	≈ 6,50 N
750	≈ 5,00 N	≈ 6,50 N
1000	≈ 4,50 N	≈ 6,50 N
1200	≈ 4,00 N	≈ 6,50 N
1250	≈ 4,00 N	≈ 6,50 N

ORDERING REFERENCE

SC50.01 – 1000 – R01K – L15 – K02 – OP – xx – xx

Model

SC50.01

Measurement range

1250 = 0 to 1250 mm

Or other ranges between 0 and 1250mm

Output signal

R01K = 1kΩ potentiometric output ***(other values on demand)***

P05K = 2mV/V gauge bridge

Linearity

L50 = +/- 0.50% f.s.(standard for **50mm ≥ Measuring range ≤ 250 mm**)

L25 = +/- 0.25% f.s.(standard for **250mm > Measuring range ≤ 500 mm**)
(optional for **50mm ≥ Measuring range ≤ 250 mm**)

L15 = +/- 0.15% f.s.(standard for **500mm > Measuring range ≤ 1250 mm**)
(optional for **250mm > Measuring range ≤ 500 mm**)

L10 = +/- 0.10% f.s.(optional for **500mm > Measuring range ≤ 1250 mm**)

Connection

C3 = Male connector M16 – DIN 3 pins **(version R01K)**

C8 = Male connector M16 – DIN 8 pins **(version P05K)**

L4 = Male connector M12 – 4 pins (A coding)

K = Shielded PVC cable + ex: **02** for cable 2 meters long

Other connection available on demand

Options OP

AC = Complete anodizing

BR = Cleaning brush for the measuring cable

BT = Low temperature (down to -30°C)

CP = Fixing of the measuring cable with a clevis

EM = Fixing of the measuring cable with a clip

EN = Measuring cable coated with polyamide

IP67 = Protection class of electronics IP67

M4 = Fixing of the measuring cable with a M4 threaded rod

RAC = Cable dust wiper

TEV = Water evacuation hole

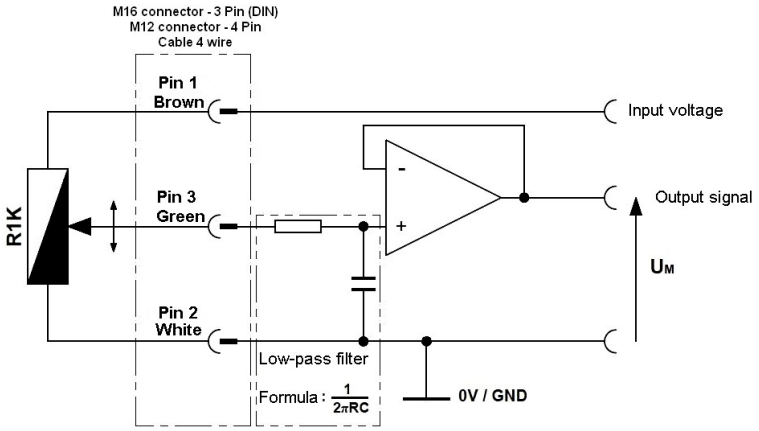
SENSING, S.L www.sensores-de-medida.es sensing@sensing.es +34 91 622 24 38

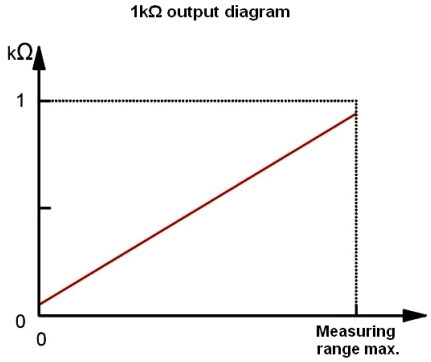
ELECTRICAL CHARACTERISTICS

Potentiometric version 1 KΩ : (other values on demand)

Temperature drift +/-50 ppm/°C

Example of wiring diagram with input stage :

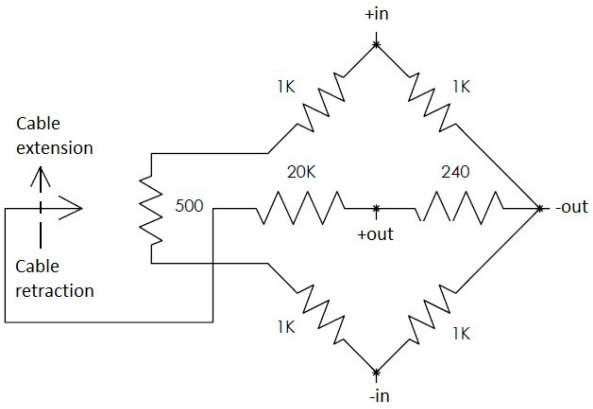




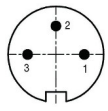
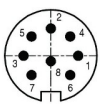
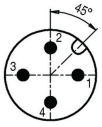
To ensure a good linearity, wire the potentiometer as a voltage divider and never as a rheostat.
The input resistance of the operating system must be very high (greater than 10MΩ)

Bridge output P05K :

Impedance of 500Ω
Full scale output : 2mV/V
Zero offset not available
Please consult us for an adjustable version.

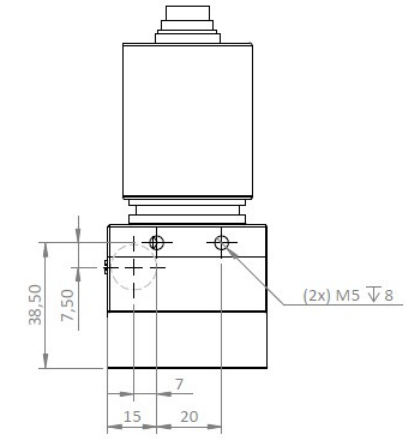


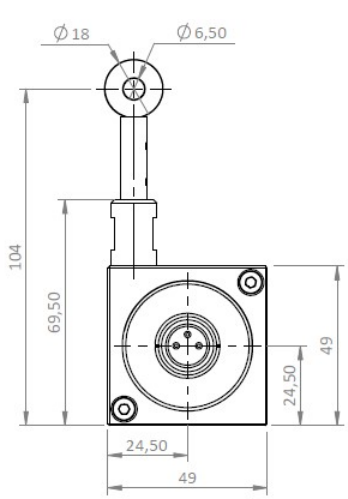
CONNECTIONS

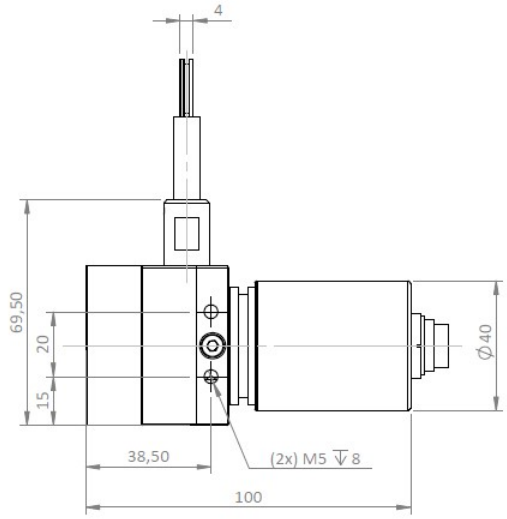
Male connector M16 - 3 pin (DIN) **R01K only**	Male connector M16 - 8 pins (DIN) **P05K only**	Male connector M12 - 4 pins (A-coding) R01K or P05K	PVC cable 4 wires	R01K	P05K
1	1	1	Brown	Input voltage +	Input voltage +
2	2	2	White	Input voltage GND	Input voltage GND
3	3	3	Green	Signal +	Signal +
/	4	4	/	/	Signal -
 Sensor side view	 Sensor side view	 Sensor side view			

DIMENSIONAL DRAWING

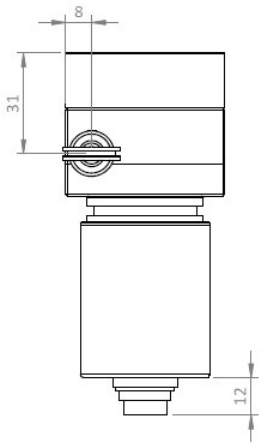
POTENTIOMETRIC VERSION



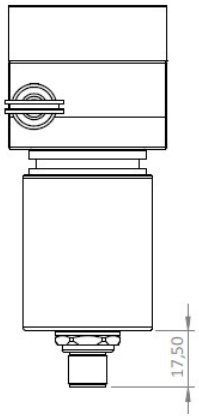




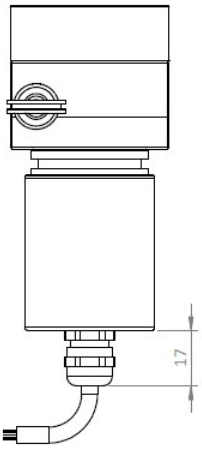
C Connection
(Connector M16 – 3 pins DIN)



L4 Connection
(Connector M12 – 4 pins A-coding)

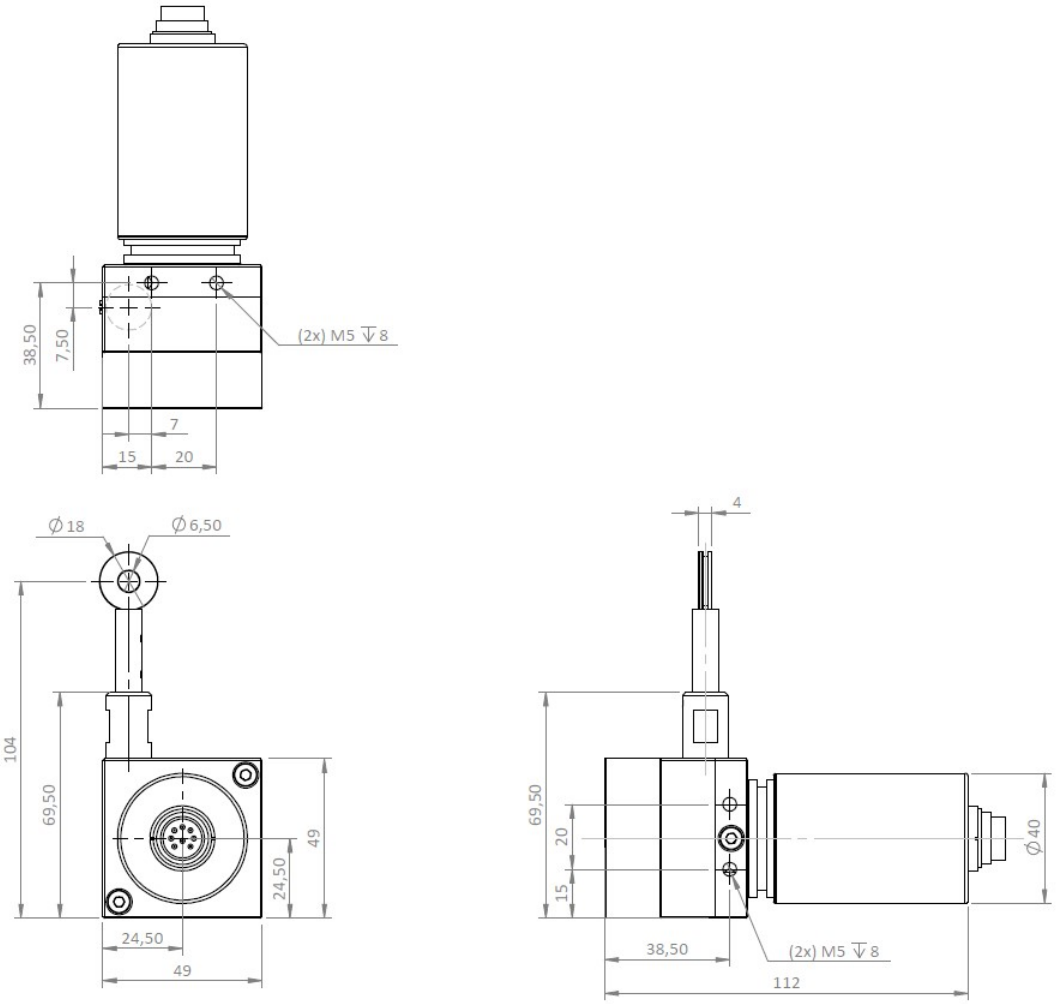


K Connection
(Shielded PVC cable)

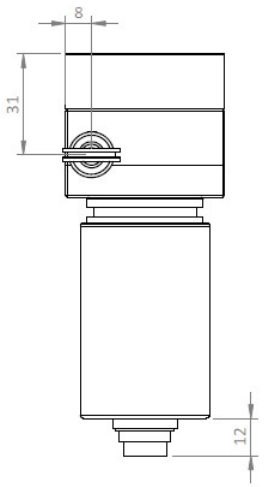


DIMENSIONAL DRAWING

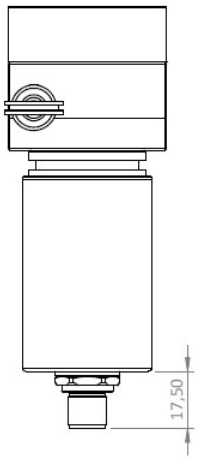
BRIDGE OUTPUT VERSION



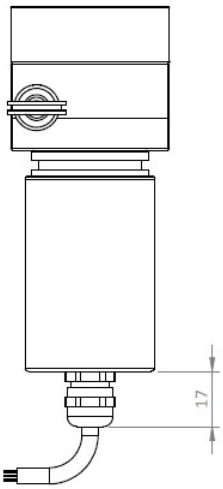
C Connection
(Connector M16 – 8 pins DIN)



L4 Connection
(Connector M12 – 4 pins A-coding)



K Connection
(Shielded PVC cable)

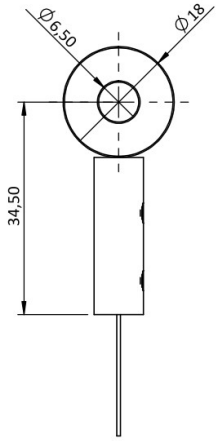


OPTIONS

Cable attachment with a lug :

Standard

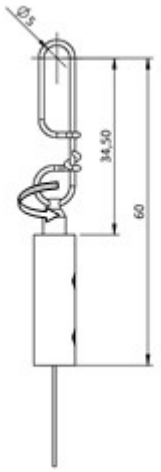
The attachment lug is fixed with a M6 screw or a clevis.



Cable attachment with a clip :

OP-EM

This fastening system allows a rotation about its axis.
The clip is fixed with a M4 screw or a clevis.

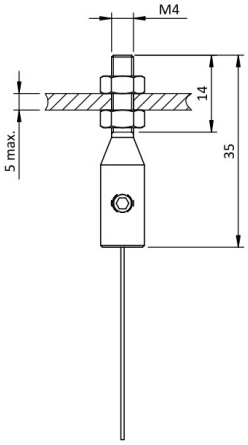


Cable attachment fitted with a M4 threaded rod:

OP-M4

The rod attachment uses a threaded rod with 2 nuts (provided).
The required thickness of the plate does not exceed 5 mm.

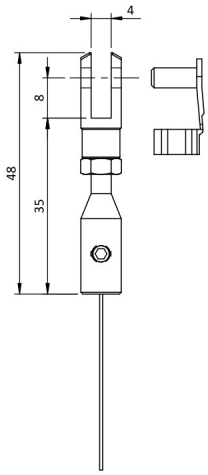
Caution
Never screw the threaded rod into a fixed nut, a twist of the measurement cable would damage it.



Cable attachment with a clevis :

OP-CP

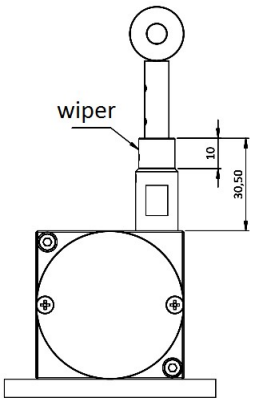
The attachment of the clevis is done using a pin (provided).



Cable dust wiper:

OP-RAC

The dust wiper cleans the cable in dusty or humid environments.



Water evacuation holes:

OP-TEV

The holes allow the natural flow of fluids out of the sensor in order to avoid their accumulation in the system.