

CD50 – POTENTIOMETRIC OR GAUGE BRIDGE OUTPUT MEASUREMENT RANGE UP TO 1250 MM

Specifications:

Measurement range	0 up to 1250 mm
Output signal	1k Ω potentiometric output (other values on demand) 500 Ω 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
Standard linearity	from +/-0.50% f.s to +/-0.10% f.s depending the measurement range (see ordering reference below)
Protection class	IP54 (option IP67)
Max. Velocity	10 M/S
Max. Acceleration	7 M/S ² (before cable deformation)
Weight	$\approx$ 2000 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	$\approx$ 6,40 N	$\approx$ 6,50 N
100	$\approx$ 6,30 N	$\approx$ 6,50 N
250	$\approx$ 6,00 N	$\approx$ 6,50 N
500	$\approx$ 5,50 N	$\approx$ 6,50 N
750	$\approx$ 5,00 N	$\approx$ 6,50 N
1000	$\approx$ 4,50 N	$\approx$ 6,50 N
1200	$\approx$ 4,00 N	$\approx$ 6,50 N
1250	$\approx$ 4,00 N	$\approx$ 6,50 N

Ordering reference:

	CD50	1000	R01K	L15	K02	OP	xx	xx
Model	CD50							
Measurement range	1250 = 0 to 1250 mm <i>Or other ranges between 0 and 1250mm</i>							
Output signal	R01K = 1k Ω potentiometric output (<i>other values on demand</i>) P05K = 500 gauge bridge							
Linearity	L50 = +/- 0.50% f.s.(standard for 50mm $\geq$ Measuring range $\leq$ 250 mm) L25 = +/- 0.25% f.s.(standard for 250mm > Measuring range $\leq$ 500 mm) (optional for 50mm $\geq$ Measuring range $\leq$ 250 mm) L15 = +/- 0.15% f.s.(standard for 500mm > Measuring range $\leq$ 1250 mm) (optional for 250mm > Measuring range $\leq$ 500 mm) L10 = +/- 0.10% f.s.(option optional for 500mm > Measuring range $\leq$ 1250 mm)							
Connection	C = Male connector M16 – DIN 3 pins (version R01K) C = Male connector M16 – DIN 8 pins (version P05K) L4 = Male connector M12 – 4 pins (A coding) K = PVC cable - 8 wires - axial + ex: 02 for cable 2 meters long <i>Other connection available on demand</i>							
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							



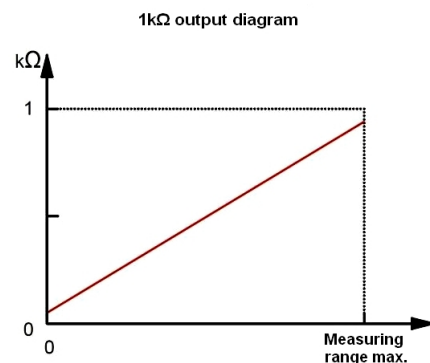
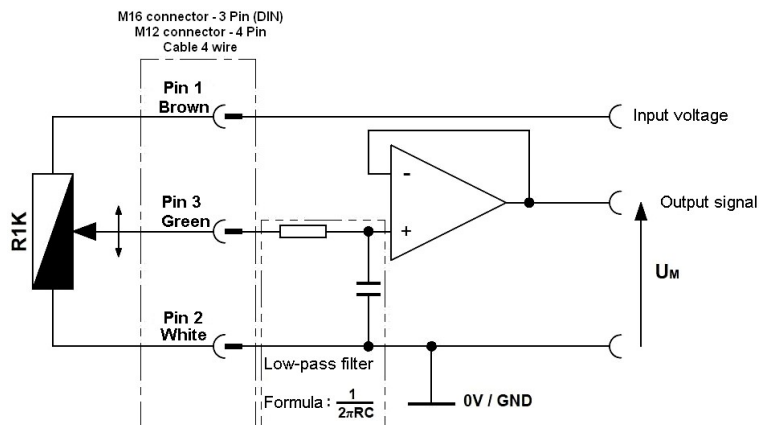
Tel : +33 (0)3 88 02 09 02 / Fax : +33 (0)3 88 02 09 03 / E-mail : info@ak-industries.com / Web : <http://www.ak-industries.com>

Electrical characteristics

Potentiometric version 1 K Ω : (other values on demand)

Temperature drift +/- 50 ppm/°C

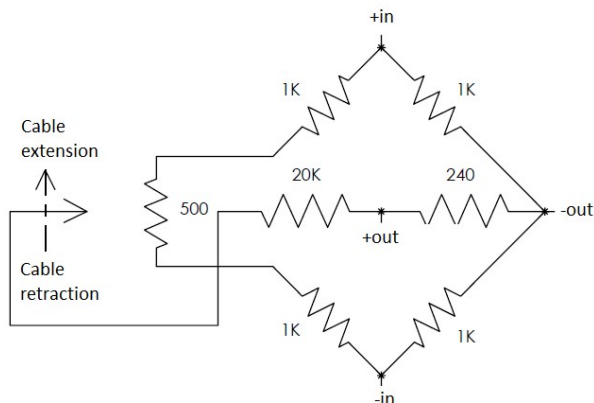
Example of wiring diagram with input stage :



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 10M Ω)

Bridge output P05K :

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



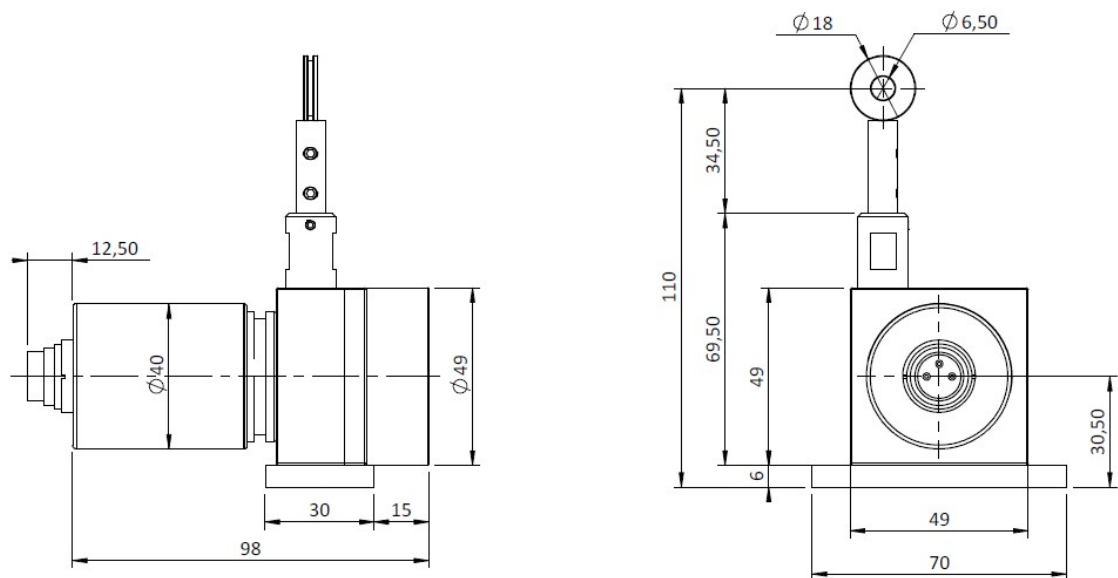
Connection :

Male connector M16 3 pins (DIN) R01K only	Male connector M12 4 pins R01K or P05K	Male connector M16 8 pins (DIN) P05K only	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 -

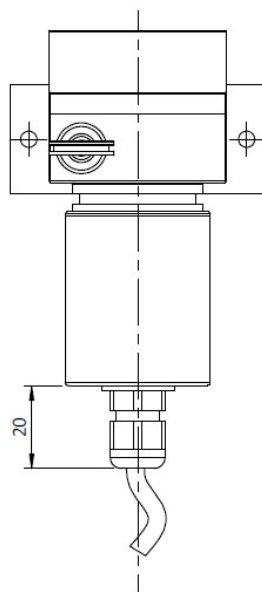
Sensor side view	Sensor side view	Sensor side view

Dimensional drawing

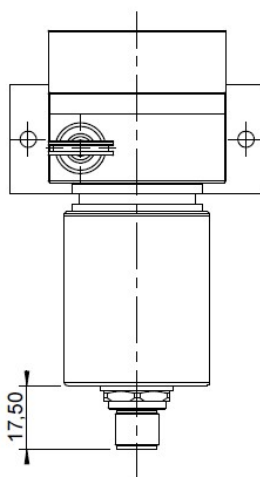
POTENTIOMETRIC VERSION



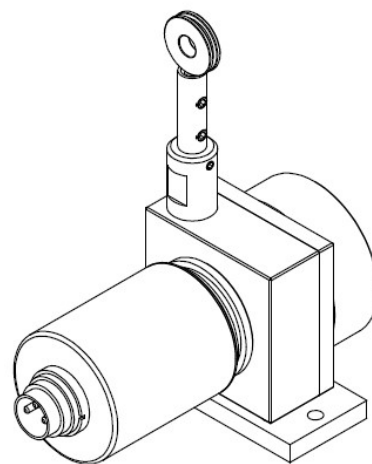
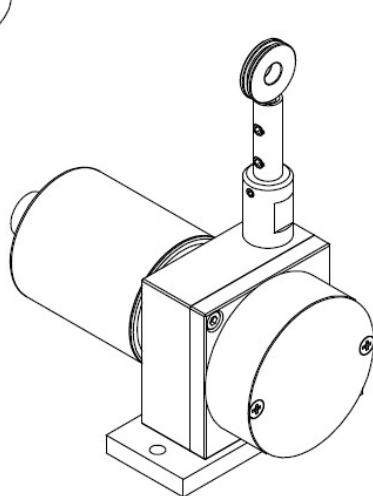
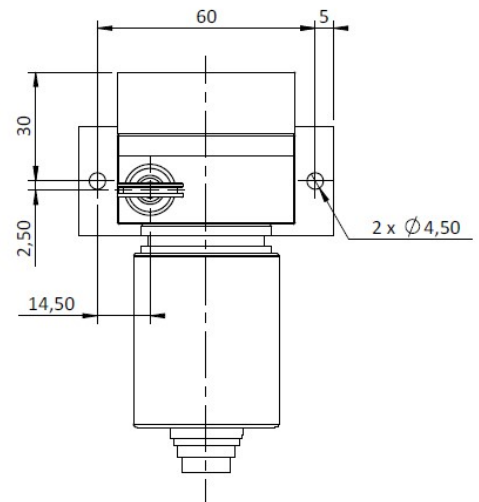
K Connection
(PVC cable – 4 wires)



L4 Connection
(M12 – 4 pins connector)

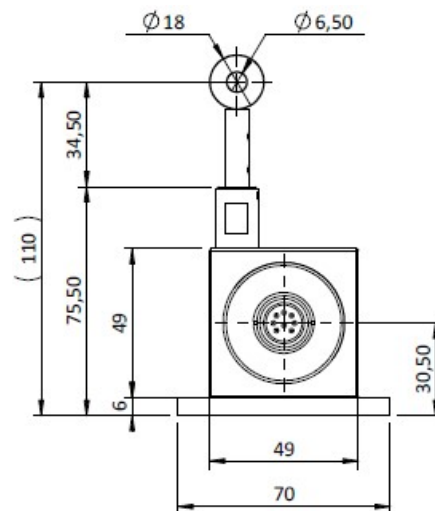
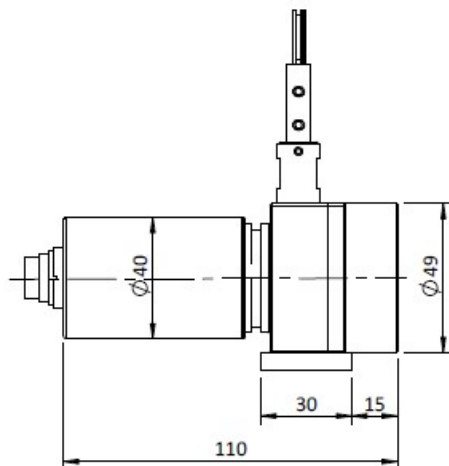


C Connection
(M16 – 3 pins (DIN) connector)

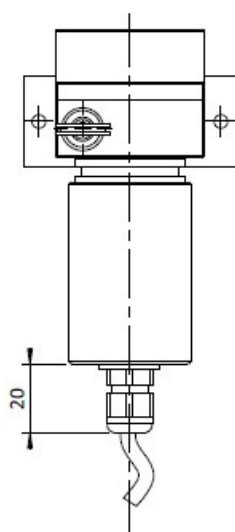


Dimensional drawing

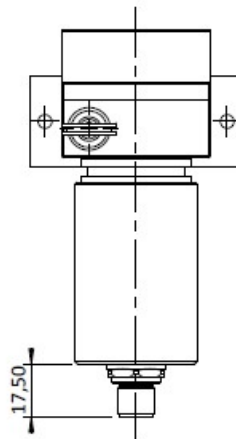
BRIDGE OUTPUT VERSION



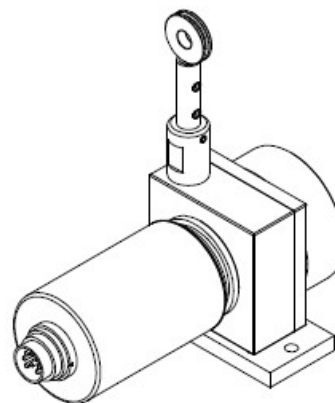
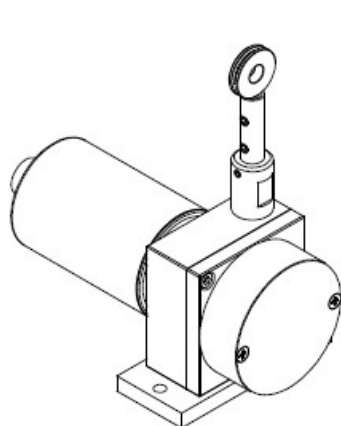
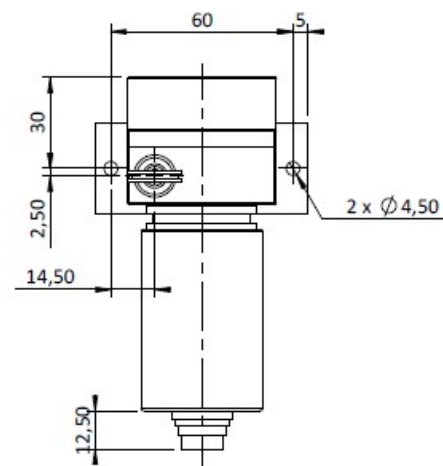
K Connection
(PVC cable – 4 wires)



L4 Connection
(M12 - 4 pins connector)



C Connection
(M16 – 3 pins (DIN) connector)

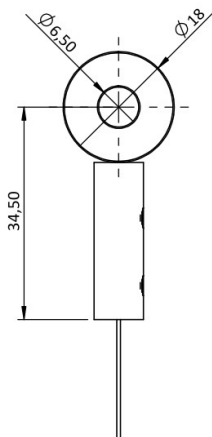


Options :

Cable attachment with a lug :

Standard

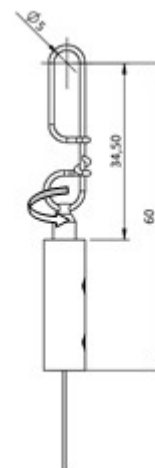
The attachment lug is fixed with a M6 screw or a clevis.



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.



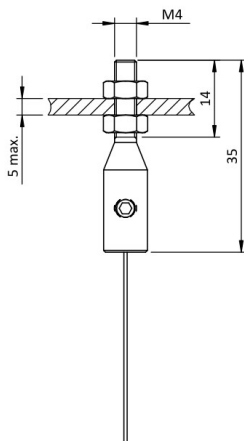
Cable attachment fitted with a M4 threaded rod:

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

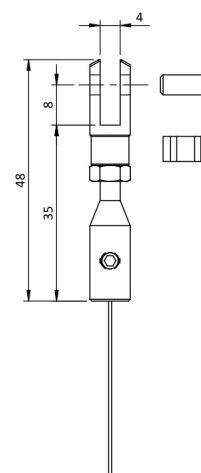
Never screw the threaded rod into a fixed nut, a twist of the measurement cable would damage it.



Cable attachment with a clevis :

OP-CP

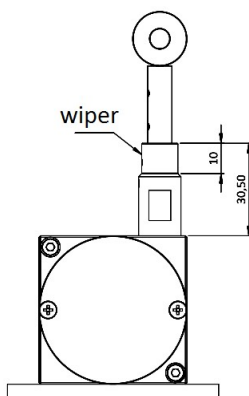
The attachment of the clevis is done using a pin (provided).



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.

