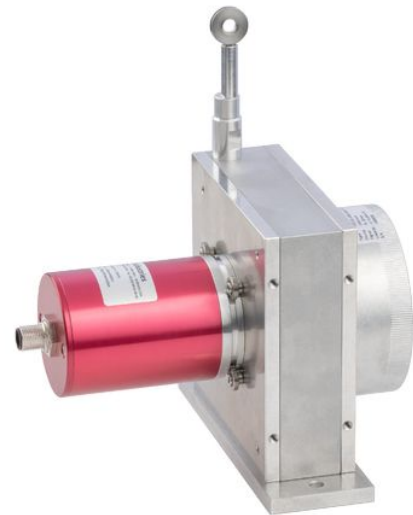


CD120 – DRAW WIRE SENSOR - ANALOG OUTPUT MEASUREMENT RANGE UP TO 3000 MM

SPECIFICATIONS

Max. measuring range	3000 mm
Output signal	0...10V ; 0...5V 4...20mA (2, 3 or 4 wires) 0...20mA (3 or 4 wires)
Resolution	Infinite (depends on the operating system)
Material	Body and cover – Aluminum (RohS) Measuring cable – Stainless steel
Cable diameter	0,60 mm
Detection element	Precision potentiometer
Connection	Male connector M16 – DIN 8 pins Male connector M12 – 4 pins (A coding) Shielded PVC cable – 4 x 0,25mm ² (LIYCY)
Linearity	up to +/- 0.10% f.s.
Protection class	IP65 (option IP67)
Max. Velocity	10 M/S
Max. Acceleration	7 M/S ² (before cable deformation)
Weight	≈ 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
3000	≈ 13,00 N	≈ 18,00 N

ORDERING REFERENCE

CD120 – **3000** – **U010** – **L15** – **K02** – **OP** – **xx** – **xx**

Model	CD120
Measurement range	3000 = 0 to 3000 mm <i>Or other ranges between 0 and 3000mm</i>
Output signal	U010 = 0...10V (galvanic isolation) U005 = 0...5V (galvanic isolation) I420 = 4...20mA (current loop – 2 wires) I420T = 4...20mA (current generator – 3 wires) I020T = 0...20mA (current generator – 3 wires) I420G = 4...20mA (current generator – 4 wires) I020G = 0...20mA (current generator – 4 wires)
Linearity	L15 = +/- 0.15% f.s. L10 = +/- 0.10% f.s.
Connection	C = Male connector M16 – DIN 8 pins L4 = Male connector M12 – 4 pins (A coding) K = Shielded PVC cable + ex: 02 for cable 2 m <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 EN = Measuring cable coated with polyamide (<i>Measurement range limited to 2500 mm</i>) IP67 = Protection class of electronics IP67 M4 = Fixing of the measuring cable with a M4 threaded rod TEV = Water evacuation holes

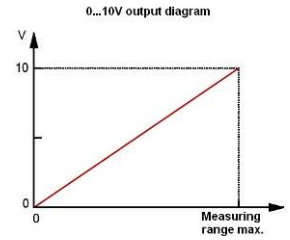
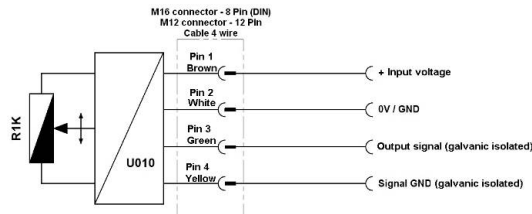


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ELECTRICAL CHARACTERISTICS

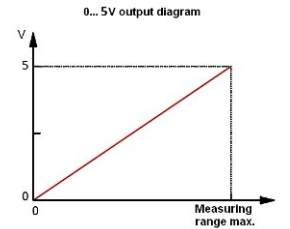
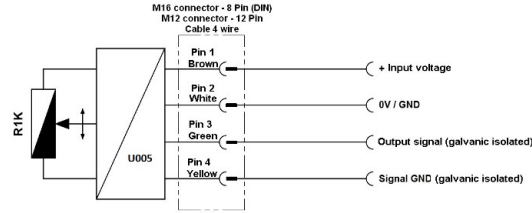
Analog version 0 ... 10V :

Input voltage	11 ... 30Vdc (52mA max)
Output voltage	0 ... 10V
Output current	10mA max
Galvanic isolation	3KV
Protection	- Short circuit - Polarity reversal
Temperature drift	+/-100 ppm/°C



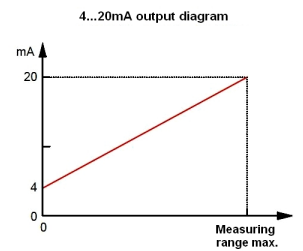
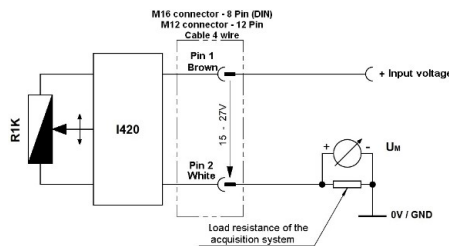
Analog version 0 ... 5V :

Input voltage	6.5 ... 30 Vdc (52mA max)
Output voltage	0 ... 5V
Output current	10mA max
Galvanic isolation	3KV
Protection	- Short circuit - Polarity reversal
Temperature drift	+/-100 ppm/°C



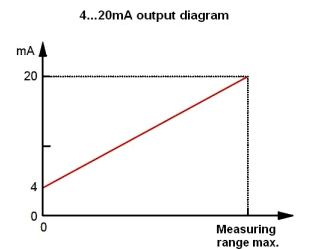
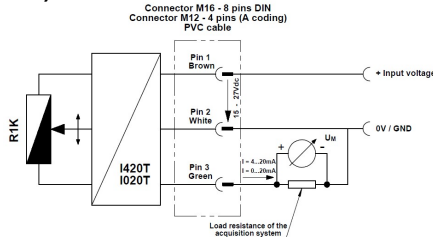
Analog version 4 ... 20mA : (Current loop – 2 wires)

Input voltage	12 ... 27 Vdc (32mA max)
Output current	4 ... 20mA
Protection	- Short circuit - Polarity reversal
Temperature drift	+/-100 ppm/°C



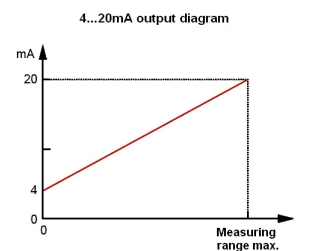
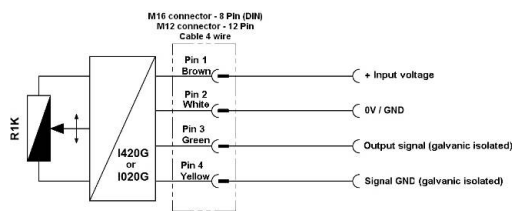
Analog version 4 ... 20mA or 0 ... 20mA : (Current generator – 3 wires)

Input voltage	12 ... 27 Vdc (32mA max)
Output current	4 ... 20mA or 0 ... 20mA
Output current	10mA max
Galvanic isolation	3KV
Protection	- Short circuit - Polarity reversal
Temperature drift	+/-100 ppm/°C



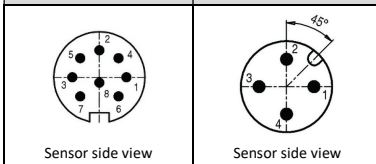
Analog version 4...20mA or 0...20mA : (Current generator – 4 wires)

Input voltage	12 ... 27 Vdc (75mA max)
Output current	4 ... 20mA or 0 ... 20mA
Output current	22 mA max.
Galvanic isolation	3KV
Protection	- Short circuit - Polarity reversal
Temperature drift	+/-100 ppm/°C

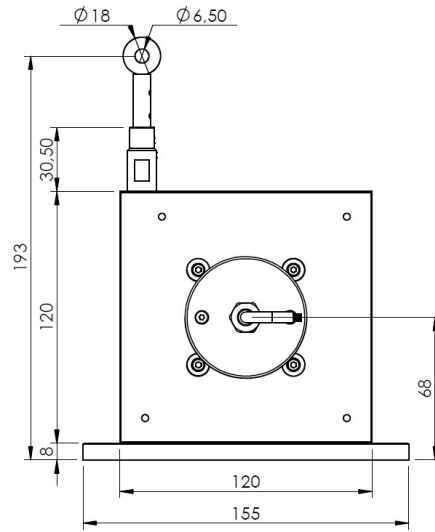
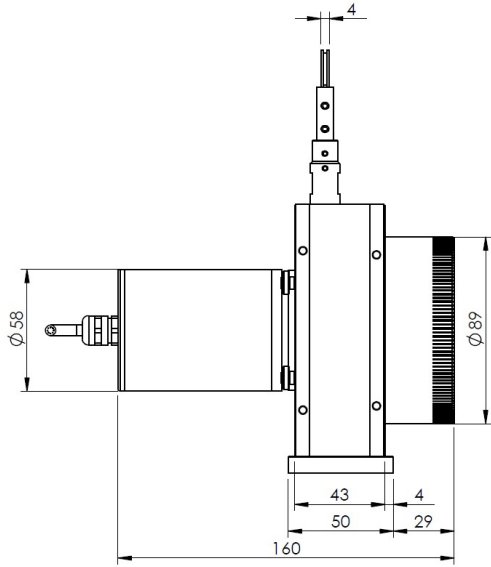


STANDARD PIN OR WIRE ASSIGNMENT

Male connector M16 8 pins (DIN)	Male connector M12 4 pins (DIN)	PVC cable 4 wire	U010V or U005V (voltage output)	I420 (current loop – 2 wires)	I420T ou I020T (current generator – 3 wires)	I420G or I020G (current generator – 4 wires)
1	1	Brown	Input voltage +	Signal +	Input voltage +	Input voltage +
2	2	White	Input voltage GND	Signal -	Input voltage GND	Input voltage GND
3	3	Green	Signal +	/	Signal +	Signal +
4	4	Yellow	Signal GND	/	/	Signal GND



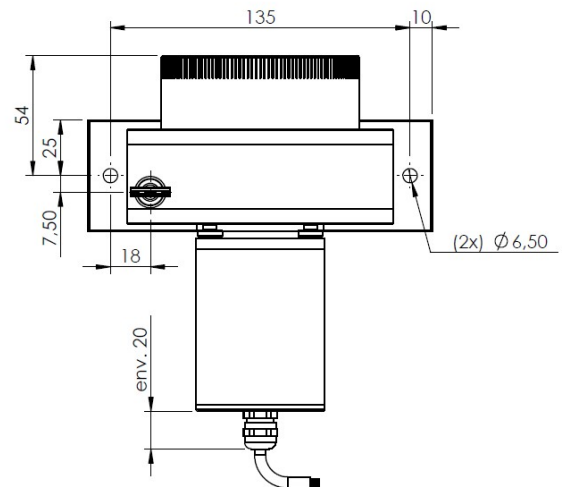
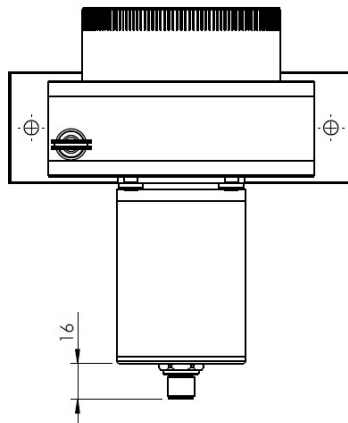
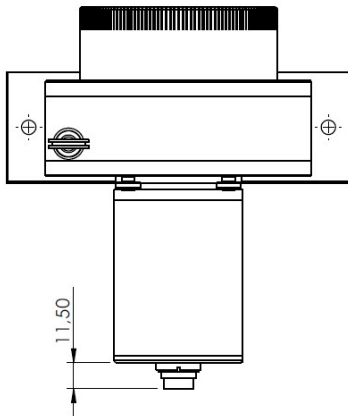
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C connection
connector M16
8 pins DIN

L4 connection
connector M12
4 pins (A coding)

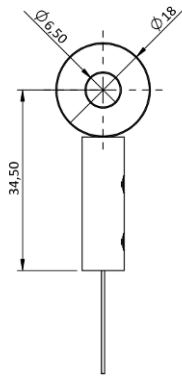
K connection
PVC cable



Cable attachment with a lug:

Standard

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



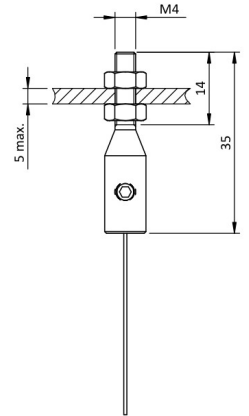
Cable attachment fitted with a M4 threaded rod:

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

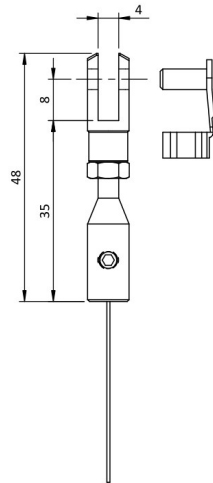
Never screw the threaded rod into a fixed nut, a twist of the measurement cable would damage it.



Cable attachment with a clevis:

OP-CP

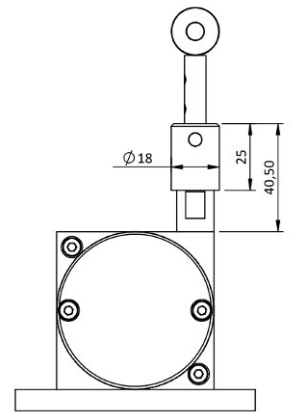
The attachment of the clevis is done using a pin (provided).



Cable cleaning brush:

OP-BR

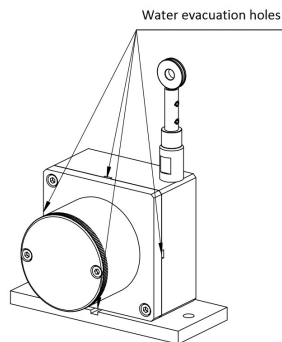
The cleaning brush wipes the cable in dusty or humid environments.



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.







CONNECTOR

Connector to be assembled





	M16 Female angled connector DIN 8 contacts P/N : 5100-008	M16 Female straight connector DIN 8 contacts P/N : 5100-026	M12 Female angled connector 4 contacts - A-coding P/N : 5100-020	M12 Female straight connector 4 contacts - A-coding P/N : 5100-065
Degree of protection	IP67			
Temperature range from/to	-25 °C / 85 °C			
Termination	Solder		Screw	
Cable outlet	Ø4 à Ø6 mm			
Cross-sectional area	max. 0.75 mm² / AWG 18			
	Good resistance to oil and chemicals			
				

Pre-assembled connector

Connection for I420 electronics

Cable length	M16 Female angled connector	M16 Female straight connector	M12 Female angled connector	M12 Female straight connector
2 m	RAL-M16F8-C-I420-002	RAL-M16F8-D-I420-002	RAL-M12F4-C-I420-002	RAL-M12F4-D-I420-002
5 m	RAL-M16F8-C-I420-005	RAL-M16F8-D-I420-005	RAL-M12F4-C-I420-005	RAL-M12F4-D-I420-005
10 m	RAL-M16F8-C-I420-010	RAL-M16F8-D-I420-010	RAL-M12F4-C-I420-010	RAL-M12F4-D-I420-010
Other cable lengths available on request				

Connection for I420T/I020T electronics

Cable length	M16 Female angled connector	M16 Female straight connector	M12 Female angled connector	M12 Female straight connector
2 m	RAL-M16F8-C-I420T-002	RAL-M16F8-D-I420T-002	RAL-M12F4-C-I420T-002	RAL-M12F4-D-I420T-002
5 m	RAL-M16F8-C-I420T-005	RAL-M16F8-D-I420T-005	RAL-M12F4-C-I420T-005	RAL-M12F4-D-I420T-005
10 m	RAL-M16F8-C-I420T-010	RAL-M16F8-D-I420T-010	RAL-M12F4-C-I420T-010	RAL-M12F4-D-I420T-010
Other cable lengths available on request				

Connection for U010 / U005 / I420G / I020G electronics

Cable length	M16 Female angled connector	M16 Female straight connector	M12 Female angled connector	M12 Female straight connector
2 m	RAL-M16F8-C-U010-002	RAL-M16F8-D-U010-002	RAL-M12F4-C-U010-002	RAL-M12F4-D-U010-002
5 m	RAL-M16F8-C-U010-005	RAL-M16F8-D-U010-005	RAL-M12F4-C-U010-005	RAL-M12F4-D-U010-005
10 m	RAL-M16F8-C-U010-010	RAL-M16F8-D-U010-010	RAL-M12F4-C-U010-010	RAL-M12F4-D-U010-010
Other cable lengths available on request	