

CD120 – DRAW WIRE SENSOR

INCREMENTAL OUTPUT – MEASUREMENT RANGE UP TO 3500 MM

SPECIFICATIONS

Maximum measuring range	3500 mm
Sensing device	Incremental optical encoder
Output signal	Push-Pull - RS422 compatible
Supply	5Vdc
	8 ... 30 Vdc
Resolution	1 up to 100 pulses/mm
Material	Body and cover - aluminium (RoHS)
Cable diameter	Measuring cable – Stainless steel
	0,60 mm
Connection	Male connector M23 – 12-pin CW
	Male connector M16 – 8-pin DIN
	Male connector M12 – 8-pin (A-coding)
	PVC cable – shielded – LIYCY 8 x 0.14mm ²
Linearity	up to +/- 0,01% f.s
Protection class	IP65 (IP67 optional)
Max. Velocity	10 m/s
Max. Acceleration	7 m/s ² (before cable deformation)
Weight	~ 2000 g
Operating temperature	-20° to +100°C
Storage temperature	-40° to +100°C



CABLE FORCES

Measurement range in mm	Min. pull-out force	Max. pull-out force
3500	≈ 13.00 N	≈ 18.00 N

ORDERING REFERENCE

CD120 – 3500 – 020 – PPCAO – L05 – AR1 – OP – AC – ...

Model	CD120	Measurement range	3500 = 0 to 3500 mm Or other ranges between 0 and 3500mm	Resolution	001 = 1 pulse/mm ↓ 100 = 100 pulses/mm All resolution between 1 and 100 pulses/mm	Output stage	PP = Push-Pull output, RS422 compatible	Supply	A = 5Vdc C = 8 ... 30 Vdc	Output signals	A = A ; A/ ; B ; B/ ; 0 ; 0/ (0 calibrated on A and B) (0 gated A & B – A before B when the measuring cable is pulled) Other output signals available on demand	Technology	O = Optical	Linearity	L05 = +/- 0.05% f.s. L01 = +/- 0.01% f.s. (optional)	Connections	A = Male connector M23 - 12 pins CW D = Male connector M16 - 8 pins DIN F = Male connector M12 - 8 pins G = PVC cable 8 wires Other output termination available on demand	Orientation	A = Axial R = Radial	Electrical connection (refer to the connection table on page 2)	1 = Standard Other connection available on demand	Cable length if output connection G	/xx = example /03 for 3 meters of cable	OP options	AC = Complete anodizing BR = Cleaning brush for the cable CP = Fixing of the measuring cable with a clevis IP67 = Protection class of encoder IP67 M4 = Fixing of the measuring cable with a M4 threaded rod TEV = Water evacuation holes
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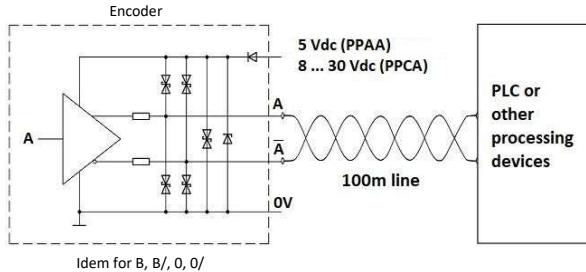
ELECTRICAL CHARACTERISTICS

PPAA electronics

Output stage: Push-Pull – compatible RS422
 Power supply: 5Vdc
 Consumption without load: at 5Vdc = 50 mA
 Protected against over-voltage, polarity inversion and overcurrent

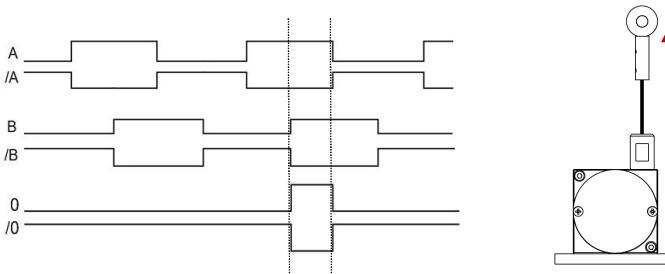
PPCA electronics

Output stage: Push-Pull – compatible RS422
 Power supply: 8 ... 30Vdc
 Consumption without load:
 at 8Vdc = 55 mA
 at 12Vdc = 50 mA
 at 24Vdc = 30 mA
 at 30Vdc = 25 mA
 Protected against over-voltage, polarity inversion and overcurrent

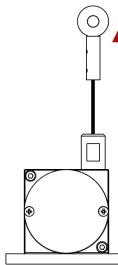


Output signals

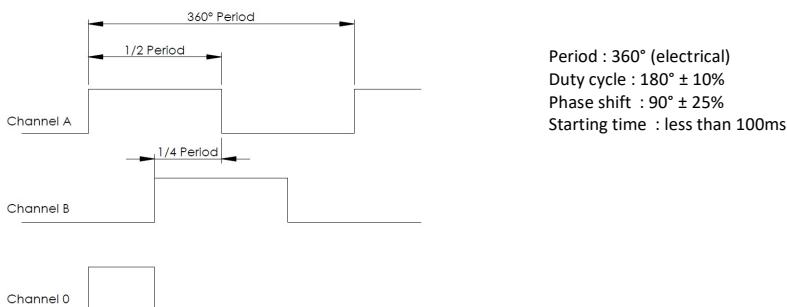
0 calibrated to A and B



A channel (rising edge) before B channel when the measuring cable is pulled.



Signals tolerance



STANDARD CONNECTIONS (TYPE 1)

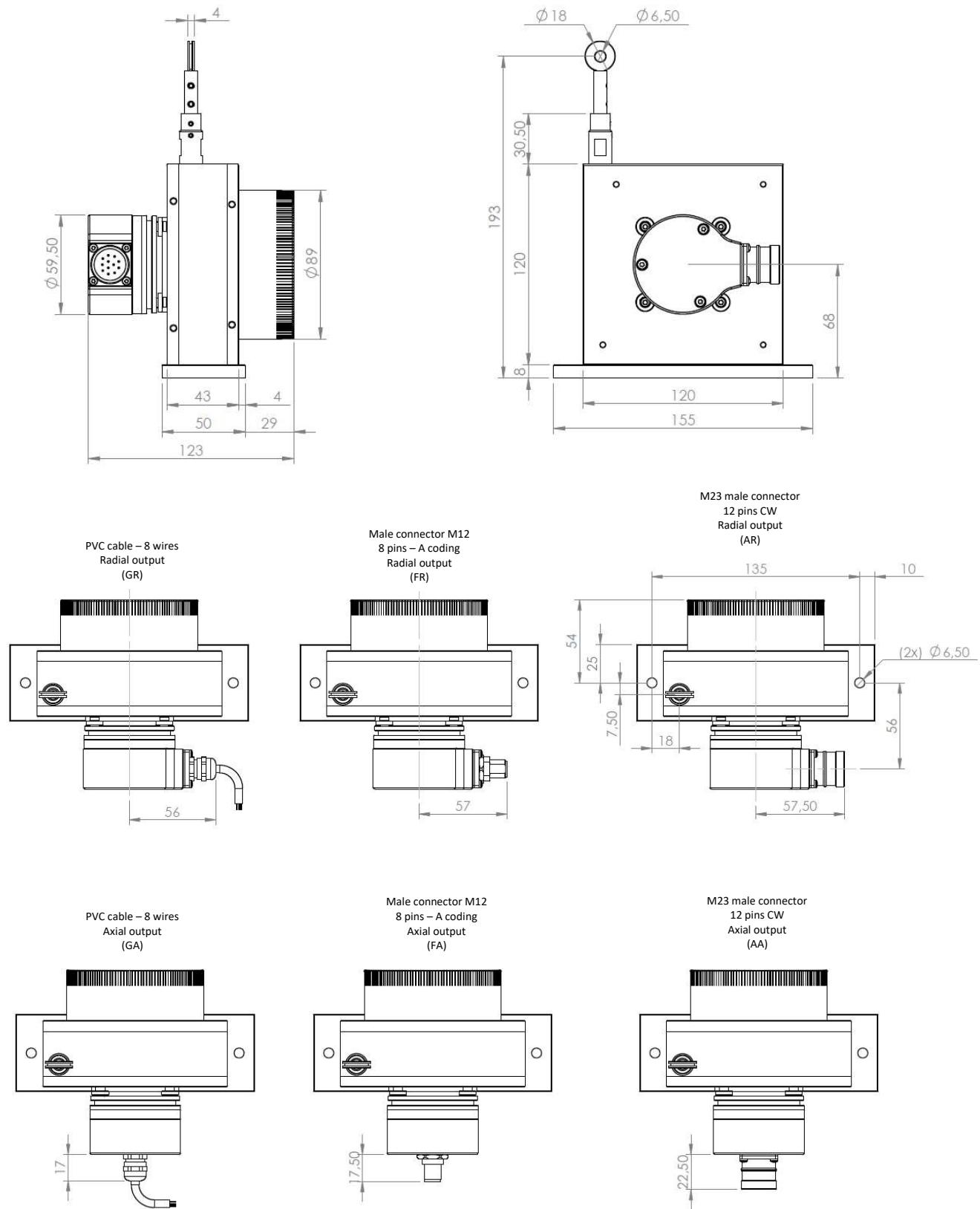
Standard connection	M23 - 12 pins CW	M16 - 8 pins (DIN)	M12 - 8 pins	Cable 8 wires
Power -	1	1	1	White
Power +	2	2	2	Brown
Channel A	3	3	3	Green
Channel B	4	4	4	Yellow
Channel 0	5	5	5	Grey
Channel A/	6	6	6	Pink
Channel B/	7	7	7	Blue
Channel 0/	8	8	8	Red
nc	9-10-11-12	/	/	/

Sensor-side view

Sensor-side view

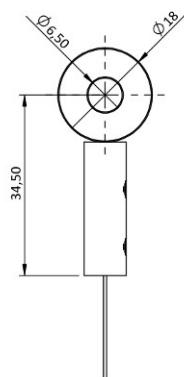
Sensor-side view





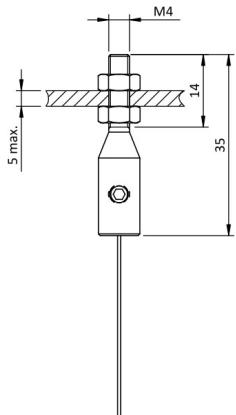
Cable attachment with a lug :**Standard**

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

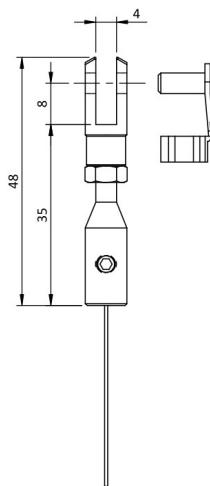
**Cable attachment fitted with a M4 threaded rod:****OP-M4**

The rod attachment uses a threaded rod with 2 nuts (provided).

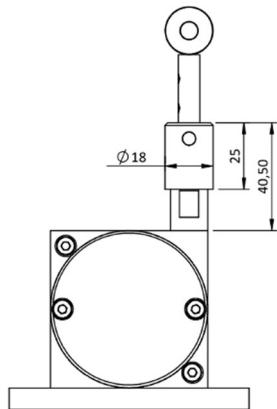
The required thickness of the plate does not exceed 5 mm.

**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.

