

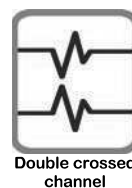
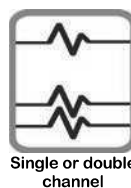
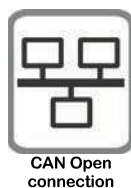
- Angle and length transducer for work area management
- MEMS technology angular sensor
- Single channel. Possible to have it with double channel for PL d (EN13849-1) systems
- Voltage, current, ratiometric or CAN bus output
- Electrical connection with M12x1 connectors
- Standard length: 8.5 and 12.5 meters
- PA12-coated 7x7 AISI 316 stainless steel rope
- Waterproof, compact aluminium body
- Easy to install
- Right or left side mounting version
- Provided with a plastic casing to protect the pulley

On request

- Special length
- Electrical connection with cable

Typical fields of application: truck mounted cranes, mobile cranes, aerial platforms, and generic mobile machines.

Note: the user/installer is responsible for evaluating the values and, thus, the safety of the application



Technical data

Power supply	5±0.2 V _{DC}	from 9 to 33 V _{DC}		
Outputs	10% to 90% V _{IN} ratiometric	0.5 ÷ 4.5 V _{DC}	CAN bus	from 4 to 20 mA
Maximum output current	10 mA	10 mA	-	-
Current consumption ⁽¹⁾ [double]	10 [20] mA	30 [60] mA		30+20 [60+40] mA

⁽¹⁾ Device supply current (and max output load for 4 to 20 mA version) for single and double channel version

Measurable length	up to 12.5m
Length transducer (linearity, hysteresis, repetibility) accuracy	± 1.0% FS
Length transducer resolution	0.03% FS
Length transducer temperature drift	< 100 ppm / °C
Angular range	from 0 to 360 degrees
Angular transducer accuracy	± 0.5 degrees
Angular transducer resolution	0.1 degrees
Angular transducer temperature drift	± 0.01 degrees / °C
Rope diameter (with coating)	1.5 (2.0) mm
Rope breaking force	> 1000 N (greater than)
Min/max force to pull out the rope	9,5 N (± 40 %)
Max wire speed	3 m/s
Max wire acceleration	5 m/s ²
Operating temperature	from -25 to +70 °C
Maximum weight	2.3 kg
Housing material	aluminium body/ plastic pulley and casing
Standard protection grade (electronics and spring box)	IP65
CE conformity	EMC Directive: 2014/30/EU Machine Directive: 2006/42/EC
EMC: Immunity Emission	EN 61000-6-2 EN61000-6-3
Vibration resistance: Sinus	EN 60068-2-6: 5 g, 10 to 150 Hz
MTTFd (electronic board)	EN 13849-1: ≥ 100 years
Maximum number of mechanical cycles	1x10 ⁵ (2.5x10 ⁵ on request)

Ordering Code

A/S	08.5	D	W	090090	UL	5	F4	99	M26	D	N	P1	C
Transducer type	Length	Channels	Rotation direction	Rotation angles	Rope output	Steel rope	Suppl. rope	Electrical output	Electrical connection	Electrical outlet	CAN termination	Potentiometer	Casing type
Length	x x . y	Available lengths: 8.5 m, 12.5 m											
Channels	S	Single channel											
	D	Double channel											
	R	Double channel with crossed signals											
Rotation direction	W	Clockwise rotation direction (see "Available fittings configurations")											
	C	Counterclockwise rotation direction (see "Available fittings configurations")											
Rotation angles	A N 1 A N 2	AN1: angle opposed to rotation direction AN2: angle concordant to rotation direction (see "Available angle configurations")											
Rope output	U R	Steel rope outlet on upper right side											
	U L	Steel rope outlet on upper left side											
	L R	Steel rope outlet on lower right side											
	L L	Steel rope outlet on lower left side											
Steel rope	5	AISI 316 stainless steel polyamide coated rope PA12 \varnothing 1.5/2.0 mm 7x7											
Supplementary rope	F 4	Supplementary steel rope length (Standard: 04 meters)											
Electrical output	4	Current output: 4 to 20 mA (44 if double)											
	5	Ratiometric output: 10% to 90% V_{IN} . $V_{IN}=+5 V_{DC}$ (55 if double)											
	7	CAN output: CAN Open (77 if double)											
	9	Voltage output: 0.5÷4.5 V_{DC} . $V_{IN}=9\div33 V_{DC}$ (99 if double)											
Electrical connection	c a b	Electrical wiring harness code (see "Electrical connections" on the right)											
Electrical outlet	L	Electrical connector used: left											
	R	Electrical connector used: right											
	D	Electrical connector used: both (for double transducers)											
CAN termination	N	Without internal CAN bus termination											
Potentiometer	P 1	Potentiometer type: 10 K Ω , 10 rounds, 1×10^5 cycles											
	P 4	Potentiometer type: 10 K Ω , 10 rounds, 2.5×10^5 cycles											
Casing type	C	With a plastic casing to protect the pulley											

Custom configurations are available on request.

Available fittings configurations

Rotation direction - Rotation angles - Rope output



Available configurations:
W AN1AN2 UL
W AN1AN2 LL

Available configurations:
C AN1AN2 UR
C AN1AN2 LR

Available angle configurations

AN1	AN2	Range
090	090	180°
135	135	270°
180	180	360°

Electrical connections

Current output (4 to 20 mA)

M12 plug

Code: M65 single channel

Code: M66 double channel

Code: M66 double channel

1: $V_{IN}=9$ to 33 V_{DC}

2: Negative power supply

3: Angle signal 4: Length signal



Voltage output (0.5 to 4.5 V_{DC})

M12 plug

Code: M25 single channel

Code: M26 double channel

Code: M26 double channel

1: $V_{IN}=9$ to 33 V_{DC}

2: Negative power supply

3: Angle signal 4: Length signal



Ratiometric output (10% to 90% V_{IN})

M12 plug

Code: M45 single channel

Code: M46 double channel

Code: M46 double channel

1: $V_{IN}=5 V_{DC}$

2: Negative power supply

3: Angle signal 4: Length signal



CAN Open output

M12 plug

Code: M07 single or double channel

Code: M07 single or double channel

1: Cable shield

2: $V_{IN}=9$ to 33 V_{DC}

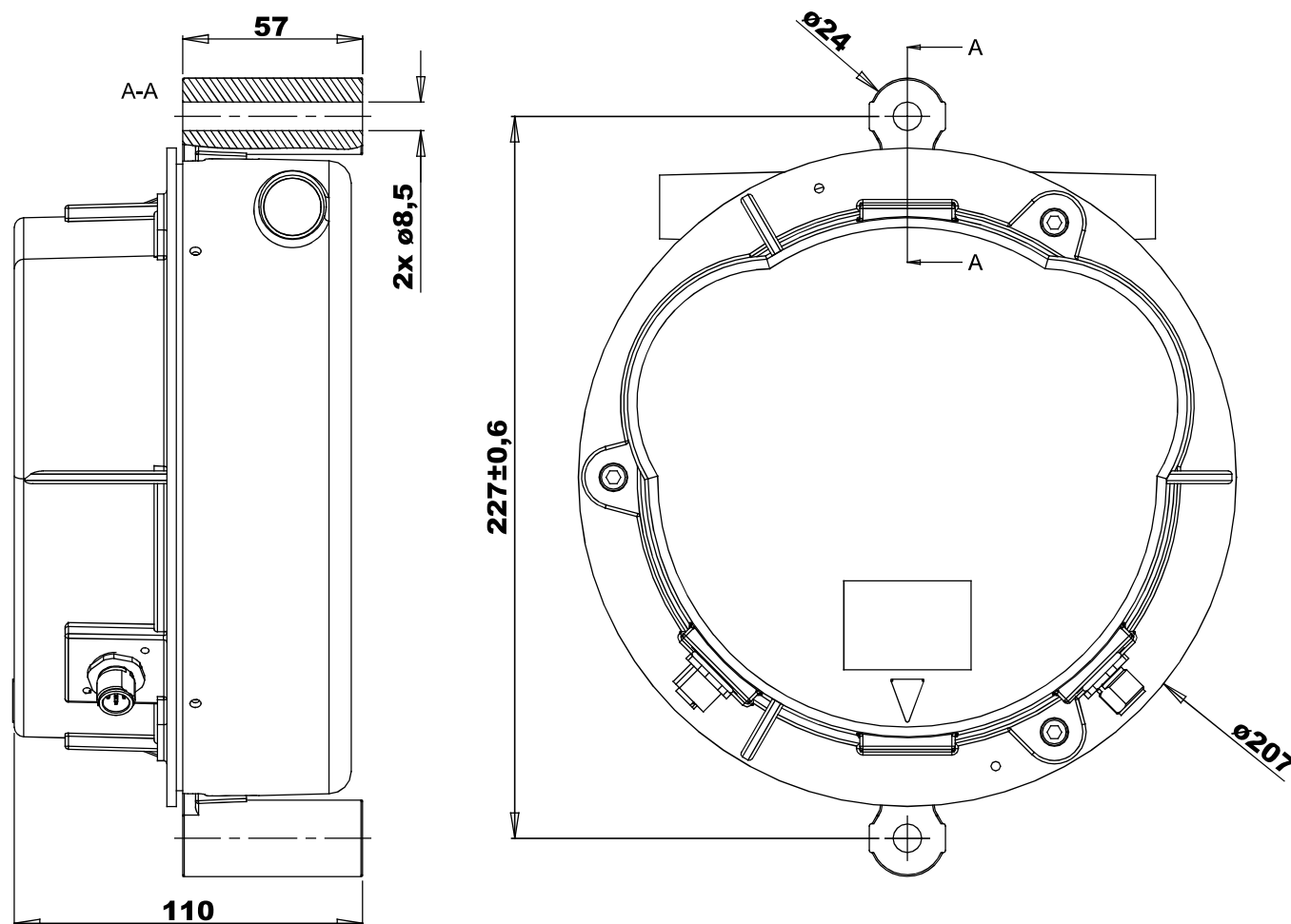
3: Negative power supply

4: CH

5: CL



Dimensions [mm]



Accessories

Type	Description	Code	Notes
Counterpart Connector	M12 receptacle connector: loose connector with 4pin, screw terminals.	7.003.045	
Extension cable	Length 5000mm, multipolar cable for dynamic installations, 4 conductors (brown, grey, black, yellow/green) sections 0.5mm ² , external grey jacket with excellent resistance to abrasive action, ordinary industrial oils and chemical agents. M12 4pin receptacle connector.	7.180.431	
Extension cable	Length 10000mm, multipolar cable for dynamic installations, 4 conductors (brown, grey, black, yellow/green) sections 0.5mm ² , external grey jacket with excellent resistance to abrasive action, ordinary industrial oils and chemical agents. M12 4pin receptacle connector.	7.180.433	
CAN Counterpart Connector	M12 receptacle connector: loose connector with 5pin, screw terminals.	7.003.059	
CAN Extension cable	Length 5000mm, multipolar cable for dynamic installations, 2x2xAWG22 conductors (brown, white, yellow, green) , external purple jacket with excellent resistance to abrasive action, ordinary industrial oils, chemical agents and UV. M12 5pin receptacle connector.	7.180.469	
CAN Extension cable	Length 10000mm, multipolar cable for dynamic installations, 2x2xAWG22 conductors (brown, white, yellow, green), external purple jacket with excellent resistance to abrasive action, ordinary industrial oils, chemical agents and UV. M12 5pin receptacle connector.	7.180.409	
CAN Counterpart Connector	M12 plug connector: loose connector with 5pin, screw terminals.	7.003.071	
CAN Extension cable	Length 5000mm, multipolar cable for dynamic installations, 2x2xAWG22 conductors (brown, white, yellow, green), external purple jacket with excellent resistance to abrasive action, ordinary industrial oils, chemical agents and UV. M12 5pin plug connector.	7.180.486	
CAN Extension cable	Length 10000mm, multipolar cable for dynamic installations, 2x2xAWG22 conductors (brown, white, yellow, green), external purple jacket with excellent resistance to abrasive action, ordinary industrial oils, chemical agents and UV. M12 5pin plug connector.	7.180.514	
CAN Network Termination	M12 5 pin receptacle connector cap with CAN network termination.	7.003.069	
CAN Network Termination	M12 5 pin plug connector cap with CAN network termination.	7.003.070	