

Angle digital transducer

TAC MkII Series



- Programmable digital device to measure tilt on one axis
- Working range ±90°, ±135°, ±180°
- MEMS technology angular sensor (no moving parts)
- Factory programmed on custom request
- Voltage, current, ratiometric or CAN bus output
- Double device version in single housing
- Hardware and software filters to remove vibrations and interferences
- Inputs/outputs protected against polarity reversal, over voltages and short
- Housed in a tough and compact shell made of glass fiber reinforced Nylon 6
- Electrical connection with M12x1 connectors

On request:

Customizable angle range

Typical fields of application: mounted cranes, mobile cranes, aerial platforms, industrial automation 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		30+20 [60+40] mA

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

	<u>-</u>
Angular range	from 0 to 360 degrees
Angular transducer (linearity, hysteresis, repetibility) accuracy	±0.50 degrees
Angular transducer resolution	0.1degrees
Angular transducer temperature drift	± 0.01 degrees /°C
Std cable length	30 cm
Operating temperature	from -40 to +80 °C
Maximum weight	0.25 kg
Housing material	glass fiber reinforced Nylon 6
Coating	Two components polyurethane
Standard protection grade	IP66 / IP67
CE conformity	EMC Directive: 2014/30/EU
EMC: Immunity Emission	EN 61000-6-2 EN61000-6-3 EN 13309 ⁽³⁾
Vibration resistance: Sinus	EN 60068-2-6: 10 g, 10 – 150 Hz
Shock resistance: Shock	EN 60068-2-27: 200 g, 6 ms
MTTFd (electronic board)	EN 13849-1: ≥ 100 years (for every channel)

Excluding Pulse 5 (ISO 7637)



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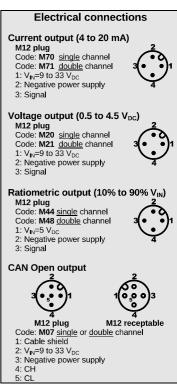
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Ordering Code

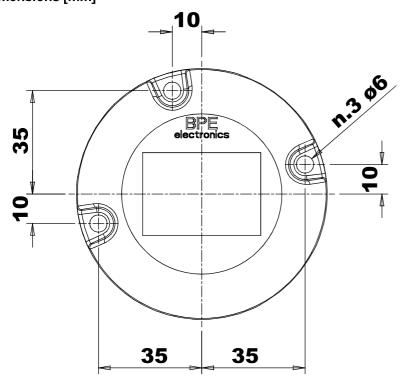
TAC	D	W	180	99	M21	N	N	
Transducer type	Channels	Rotation direction	Rotation angles	Output type	Electrical connection	CAN termination	Mechanical fitting	

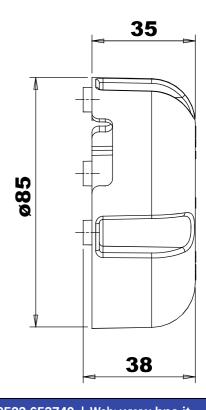
Channels	S D R	Single channel Double channel Double channel with crossed signals
Rotation direction	W C	Clockwise rotation direction Counterclockwise rotation direction
Rotation angles	1 8 0 2 7 0 3 6 0	± 90° ± 135° ± 180° For CAN version only
Output type	4 _ 5 _ 7 _ 9 _	
Electrical connection	c a b	Electrical wiring harness code (see "Electrical connections" on the right)
CAN termination	N	Without embedded CAN bus termination
Mechanical fitting	N	Standard (see drawing below)

Custom configurations are available on request.



Dimensions [mm]







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Accessories

Туре	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, 3 conductors (brown, blue, yellow/green) sections 0.5mm², external black jacket with excellent resistance to abrasive action, ordinary industrial oils and chemical agents. M12 4pin receptacle connector.	7.180.347	
Extension cable	Length 10000mm, multipolar cable for dynamic installations, 3 conductors (brown, blue, yellow/green) sections 0.5mm², external black jacket with excellent resistance to abrasive action, ordinary industrial oils and chemical agents. M12 4pin receptacle connector.	7.180.342	
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	