

Bus absolute multi-turn encoder

ProCoder - BPMV

features

- resolution 29 Bit
- 8192 steps per revolution programmable
- 16 Bit multi-turn, 65536 revolutions
- extrem resistant against mechanical shock 2000m/s² and vibration resistant 200 m/s²
- high temperature resistance -20...+85 °C
- self diagnostic



BPMV58S



BPMV58K

general data

voltage supply	10 - 30 VDC with reverse voltage protection
supply current	max. 100 mA (without load), at 24 VDC
max. resolution	29 Bit, programmable singleturn 1 up to 8192 steps/rev. multi-turn 1 up to 65536 steps/rev.
code switching speed	max. 800 kHz
measuring deviation scan	0,0025 degrees at 400 kHz 0,05 degrees at 800 kHz
preset	value over resolution range in state Data Exchange as output data for which parameters are to be set.
bitrate	9,6 kBits/s up to 12 MBits/s
protocol/profile	profibus profil for encoders
adress	adjustable over Jog-dial
sense of rotation	selectable, standard ascending position values when looking onto flange side and clockwise rotation of the shaft.
security	the electrical connection and the bus cover shouldn't be assembled or dissembled when the device is under power.

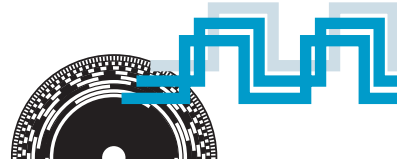
mechanical data

max. revolutions	mechanical 12'000 /min electrical 6'000 /min
inertia torque rotor	2 x 10 ⁻⁶ kgm ²
starting torque	< 0,010 Nm (without sealing ring) < 0,015 Nm (with sealing ring)
max. shaft load	axial: < 20 N radial: < 40 N
stock live span	depending on ambient conditions (typ. 10 ⁹ revolutions)
max. protection class	IP 54 (shaft without sealing) IP 65 (shaft with sealing)
material	housing: steel bus cover flanges: aluminum
weight	approx. 600 g

ambient conditions

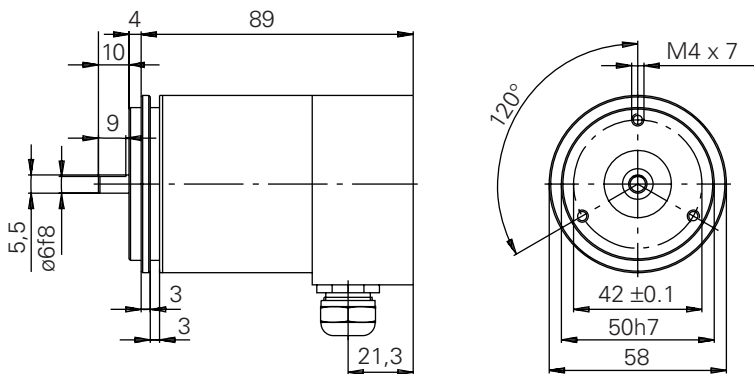
temperature range	-20...+85 °C
relative humidity	max. rel. humidity 95% non condensing
vibration	IEC 68 section 2-6 (≤ 200 m/s ² / 16-2000 Hz)
shock	IEC 68 section 2-27 (≤ 2000 m/s ² / 6 ms)
noise immunity*	EN 50 082 - 2 EN 61000 - 4 - 2 to 4 severity degree 3
emitted interference	EN 50 081 - 2

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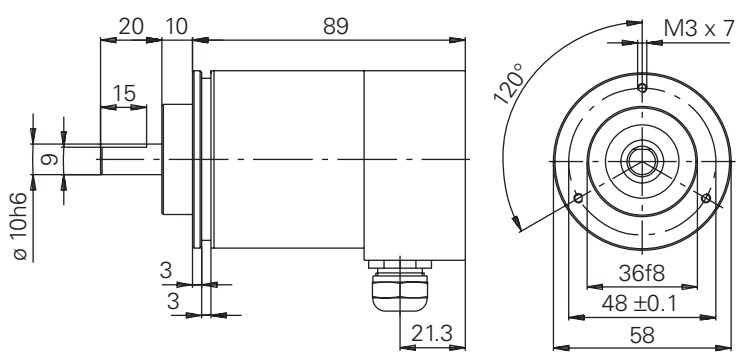


dimensions and connection dimensions

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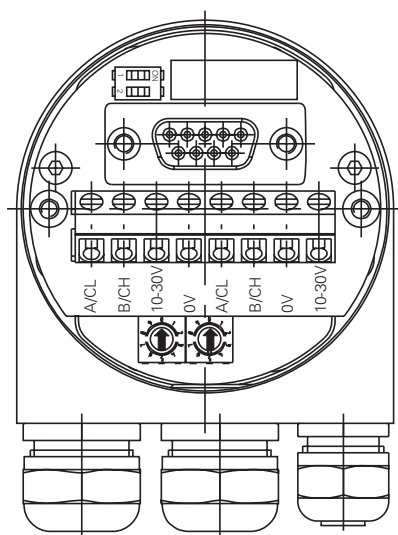
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Absolute bus multi-turn encoder

ProCoder

view into bus cover



description of connectors

- A/CL negative serial data emitter/receiver. Data line A for incoming or outgoing data bus.
- B/CH positive serial data emitter/receiver. Data line B for incoming or outgoing data bus.
- 10 - 30 V (UB) supply voltage of the encoder
- 0 V (GND) encoder ground connection. UB refers to ground

settings of user position



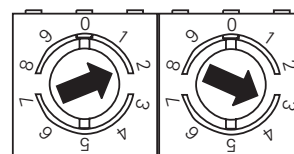
Participant X



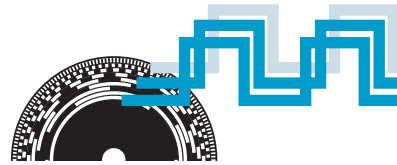
Last participant

settings of user address

adress adjustable over Jog-dial.
For example: user adress 23



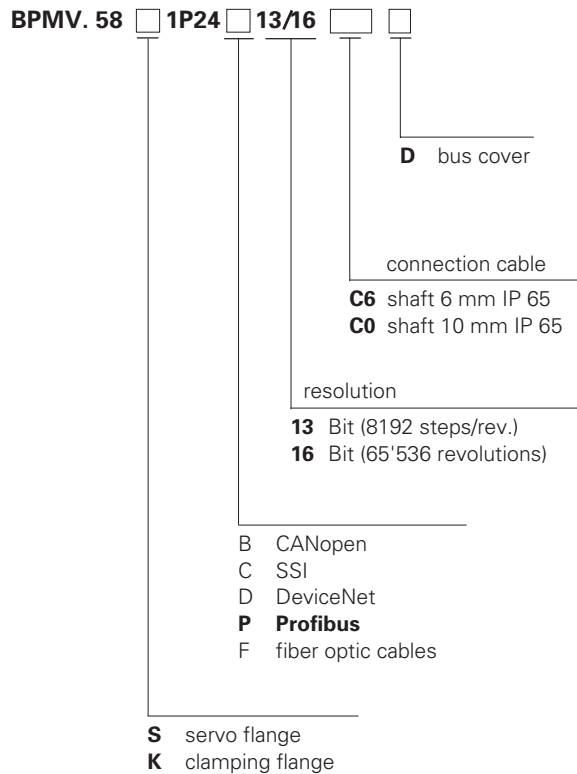
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Profibus features

Bus Profile	Profibus DP
Device Class	1 und 2
Data Exch. functions	Input: Position value Output: Preset value
Preset value	The "Preset" parameter allows the encoder to be set to a desired actual value corresponding to a defined shaft position of the system.
Parameters	Sense of rotation: The parameter for sense of rotation for which the output code is to increase or decrease can be set via the operating parameter. Scaling: The parameters for steps per rotation (max. 18 Bit) and for the entire resolution (max. 32 Bit) can be set.
Diagnosis	The encoder provides the following error messages: alarm message: - LED failure, aging - code disc, failure - receiver failure - max. revolution exceeded Before falling below the min. battery voltage value the encoder gives a warning signal out.

order designation



accessories

Typ BPMV58S servo flange

mounting adapter	part nr. 117667
screws and servo clamps	part nr. 117668

Typ BPMV58K clamping flange

mounting angle	part nr. 117698
fixing excenter + screws	part nr. 117668
spring washer clutch drilling 6 mm / 10 mm	part nr. 141132
spring washer clutch drilling 6 mm / 6 mm	part nr. 141131
spring washer clutch drilling 10 mm / 10 mm	part nr. 141133
GSD file + user manual	part nr. 141134