

Cable transducer

Interface CANopen®

Measuring length absolute up to 2.3 m

BMMS K23 CANopen® - MAGRES



BMMS K23 CANopen® with flange connector M12

Features

- Magnetic sensing method
- Resolution: 0.1 mm/step
- Interface CANopen®
- Measuring length up to 2.3 m
- Removable stickers for water outlet
- Extremely light thanks to housing of plastic and aluminum
- Available as redundant versions

Technical data - electrical ratings

Voltage supply	10...30 VDC
Consumption typ.	50 mA (24 VDC, w/o load)
Initializing time	≤500 ms (not redundant) ≤800 ms (redundant)
Interface	CANopen®
Function	Linear position feedback
Profile conformity	CANopen® CiA DSP 301, DSP 305, DS 406
Resolution	0.1 mm/step
Linearity	±0.13 % full scale output (f.s.o.)
Absolute accuracy	±0.26 % f.s.o. (+25 °C) ±0.34 % f.s.o. (-40...+85 °C)
Sensing method	Magnetic
Code	Binary
Code sequence	Programmable
Interference immunity	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4
Programmable parameters	Operating modes Total resolution Scaling
Diagnostic functions	Position or parameter error Multiturn sensing

Technical data - mechanical design

Protection DIN EN 60529	IP 65 (encoder)
Materials	Encoder housing: aluminium Cable-pull housing: PA6 GF30 Cable: Stainless steel cable coated with polyamide
Operating temperature	-40...+85 °C (not redundant) -40...+65 °C (redundant)
Service life	Typ. >500000 strokes
Measuring length	2.3 m
Cable acceleration	≤50 m/s ²
Cable diameter	0.45 mm
Pull-in force	>3 N
Pull-out force	≤9 N
Relative humidity	95 % temporary condensing
Resistance	DIN EN 60068-2-6 Vibration 10 g, 10-2000 Hz DIN EN 60068-2-27 Shock 50 g, 11 ms
Weight approx.	400 g
Connection	Flange connector M12, 5-pin Cable 2 m
Bending radius	Cable: >55 mm
Special characteristics	Coated electronic
Instruction	Please consider the assembly instructions

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Part number

BMMS K235N

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Measuring wire fixation
H Mount with hook

Connection
5 Cable 2 m, radial
N Flange connector M12, 5-pin, radial

Resolution
12/18 12/18 bit single-/multiturn

Voltage supply / signals
24B 10...30 VDC / CANopen®
24R 10...30 VDC / CANopen® redundant

Accessories

Connectors and cables

10153968	Female connector M12, 5-pin, straight, without cable
11046266	Female connector M12, 5-pin, straight, shielded, 5 m cable
10156842	Cable with male/female M12, 5-pin, angled, A-coded, 5 m
11144306	Cable with male/female M12, 5-pin, straight, A-coded, 5 m
10146775	Female connector M12, 8-pin, straight, without cable

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Terminal significance

+Vs	Encoder voltage supply.
0 V	Encoder ground connection relating to +Vs.
CAN_L	CAN bus signal (dominant Low).
CAN_H	CAN bus signal (dominant High).
CAN_GND	GND relating to CAN interface.

CANopen® features

Bus protocol	CANopen® ISO / DIS 11898
Device profile	CANopen® - CiA DSP 406, V 3.0 (Device Class 2, CAN 2.0B)
Operating modes	- Event-triggered / Time-triggered - Remotely-requested - Sync (cyclic) / Sync (acyclic)
Preset	Parameter for setting the cable transducer to a requested position value assigned to a defined position of the system. The offset of cable transducer zero point and mechanical zero point is stored in the cable transducer.
Rotating direction	Parameter for defining the rotating direction in which there have to be ascending or descending position values.
Scaling	Parameter defining the steps.
Diagnosis	The cable transducer supports the following error warnings: - Position error redundancy system - Position and parameter error - Lithium battery voltage (multiturn)
Node Monitoring	Heartbeat
Default	50 kbit/s, Node ID 1

Terminal assignment

Cable

for connection reference **-5**

Core colour	Signals
white	0 V
brown	+Vs
green	CAN_H
yellow	CAN_L
grey	CAN_GND
pink	n.c.
blue	d.u.
red	d.u.

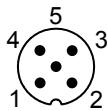
Screen: connected to housing

Cable data: 8 x 0.14 mm²

Flange connector M12, 5-pin

for connection reference **-N**

Pin	Non redundant	Redundant
1	n.c.	CAN_GND
2	+Vs	+Vs
3	CAN_GND	0 V
4	CAN_H	CAN_H
5	CAN_L	CAN_L



Cable transducer

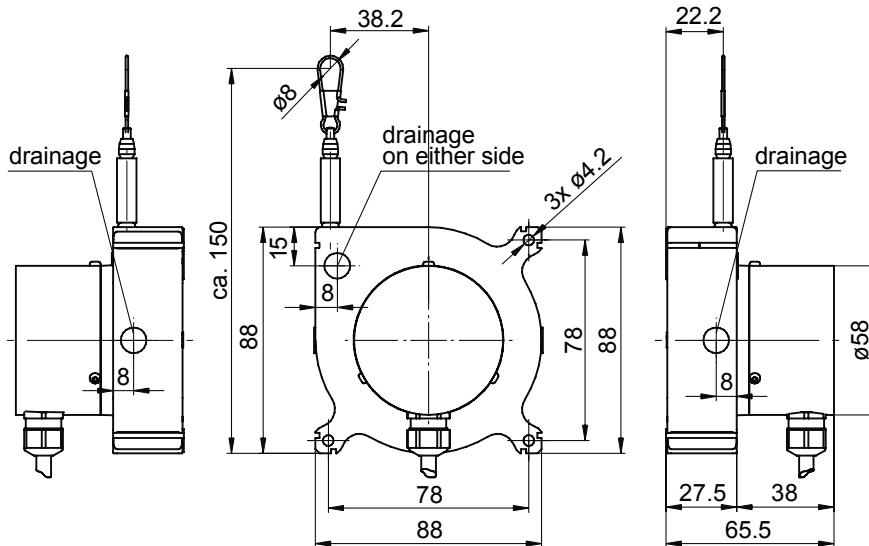
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Dimensions

BMMS K23 with cable radial



BMMS K23 with flange connector M12

