

Serie MR402



- 2- dimensional inclination sensor with measurement range $\pm 10^\circ / \pm 45^\circ / \pm 60^\circ$
- High resolution and accuracy
- Comfortable CANopen interface
- Functions:
 - One TPDO (cyclic, event controlled, RTR)
 - Heartbeat producer, EMCY producer
 - Configurable floating averaging
- Four freely configurable, potential-free switching outputs
- Robust, simply mountable ABS-housing
- Temperature range -40°C to $+80^\circ\text{C}$
- Application:
 - Industry automation
 - Agricultural and forestry machines
 - Utility vehicles
 - Crane and hoisting technology

Order key
Type

Inclination Sensor
MR402

General Parameters

Measurement axes	2 (X / Y)
Measurement ranges	$\pm 10^\circ / \pm 45^\circ / \pm 60^\circ$
Resolution	$0.05^\circ / 0.1^\circ / 0.1^\circ$
Calibration accuracy (at 25°C)	$\pm 0.1^\circ$ (zero point and full scale value)
Nonlinearity	max. $\pm 0.2^\circ / 0.3^\circ / 0.4^\circ$
Temperature range (zero point)	max. $\pm 0.008^\circ / \text{K}$
Cut-off frequency	typ. 26 Hz (without averaging)
Sampling rate	7.5 s^{-1}

Characteristics

Interface	CANopen according to CiA DS-301 und CiA DSP-410
Data rates	10k, 20k, 50k, 125k, 250k, 500k, 800k Bit / s, 1 Mbit / s
Functions	TPDO (cyclic, event controlled, RTR), setting of parameters by SDO and object directory, floating averaging, Heartbeat and EMCY producer, output and surveillance of the device's internal temperature ($\pm 2.0 \text{ K}$ accuracy) PhotoMOS relays, synchronically switched, freely configurable

Electrical Parameter

Supply voltage	10 to 30 V DC
Current consumption	105 mA to 40 mA / 150 mA to 60 mA
Current carrying capacity of the switching outputs	0.5 A, max. 30 V DC, short-circuit-proof

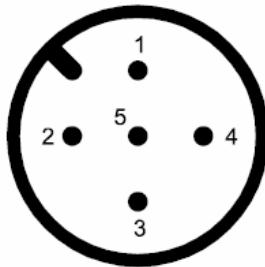
Mechanical Parameter

Connector CAN	sensor connector 5-pole (M12)
Connector switching outputs	sensor connector 8-pole (M12)
Degree of protection	IP65/67
Shock survival	max. 3.500g
Dimensions	58mm x 90mm x 31mm
Mass	about 200 g

Serie MR402

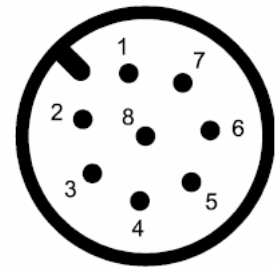
Connector assembly -
allocation (CAN-Bus-
Connector):

- 1 = Shield
- 2 = Supply voltage
(+24V)
- 3 = GND
- 4 = CAN_H
- 5 = CAN_L



Connector assembly -
allocation (Switching output-
Connector):

- 1 = Switching output 0
Allocation +U
- 2 = Switching output 0
Allocation -U
- 3 = Switching output g 1
Allocation +U
- 4 = Switching output 1
Allocation +-U
- 5 = Switching output 2
Allocation +U
- 6 = Switching output 2
Allocation -U
- 7 = Switching output 3
Allocation +U
- 8 = Switching output 3
Allocation -U



MR 402 . X X X X X

Type

Interface

1 = CANopen according to
CiADS 301 and CiADS 410

Supply voltage

1 = 10 to 30V DC

Measurement

- 1 = $\pm 10^\circ$
- 2 = $\pm 45^\circ$
- 3 = $\pm 60^\circ$

Measurement axes

1 = 2 Axis (X / Y)

Connection

- 1 = CAN-Bus-connection
(sensor connector
5-pole (M12))
- 2 = CAN-Bus-connection
(sensor connector
5-pole (M12) with 4
switching outputs
8-pole (M12))

Accessories

- 6099.20.840 5-pole (M12) (Cable \varnothing 6...8 m) screened
- 6099.20.841 8-pole (M12) (Cable \varnothing 6...8 m) screened
- 6099.20.842 5-pole female plug screened incl. Cable (2m PUR, 0.25mm²)
- 6099.20.843 5-pole female plug screened incl. Cable (5m PUR, 0.25mm²)
- 6099.20.844 8-pole female plug screened incl. Cable (2m PUR, 0.25mm²)
- 6099.20.845 8-pole female plug screened incl. Cable (5m PUR, 0.25mm²)