

Angle sensor MEMS, type 0804

Robust MEMS technology for your angle measuring

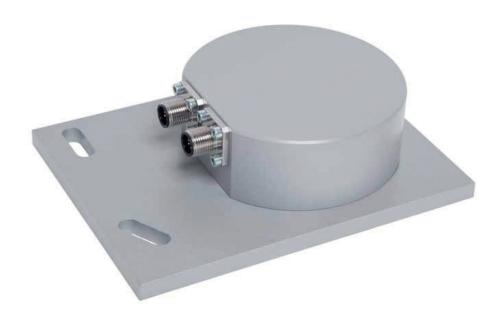
BROSA angle sensors are characterised by their high long-term stability and accuracy. The high-quality finish and the use of robust MEMS technology provide decisive advantages. The MEMS technology used can cope with impacts of up to 3500 g during operation. Other impressive characteristics include a high measuring accuracy, extreme vibration resistance as well as the low installation height for many different applications.

Applications

- Cranes
- · Construction machines
- Machine construction

Features

- Customer-specific design
- Integrated amplifier
- Temperature compensated
- High EMC resistance



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Technical data

Accuracy $\leq \pm 0,3^\circ$ Measurement range0 to 360°, 0 to 90°, 0 to 180° other optional measurement rangesLinearity error $\leq \pm 0,1^\circ$ Hysteresis $\leq \pm 0,1^\circ$ Reproducibility $\leq \pm 0,1^\circ$ Temperature range -40 to $+80$ °CTemperature coefficient $\leq 0,0046$ % / °KSupply voltage9 to 36 VDCOutput signal4 bis 20 mA, optional redundant CANopen, optional Safety, redundantProtection classIP 67 according to DIN EN 60529Interference immunity 200 V/m HF , 100 mA BC 1EmissionDIN EN 55025Climate testsDIN EN 60068-2Vibration resistanceDIN EN 60068-2Electrical connections $M12x1$, 5-pinsElectrical protection classesReverse polarity protection, overvoltage protection and short-circuit protectionMaterialAluminium, saltwater-proof	Resolution	0,01°
other optional measurement ranges Linearity error $≤ \pm 0,1^{\circ}$ Hysteresis $≤ \pm 0,1^{\circ}$ Reproducibility $≤ \pm 0,1^{\circ}$ Temperature range $-40 \text{ to } + 80 \text{ °C}$ Temperature coefficient $≤ 0,0046 \% / ^{\circ}K$ Supply voltage 9 to 36 VDC Output signal 4 bis 20 mA, optional redundant CANopen, optional Safety, redundant Protection class IP 67 according to DIN EN 60529 Interference immunity 200 V/m HF , 100 mA BCI according to ISO 11452, DIN EN 61000-4, ISO 7637 Emission DIN EN 55025 Climate tests DIN EN 60068-2 Vibration resistance DIN EN 60068-2 Electrical connections M12x1, 5-pins Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Accuracy	≤ ±0,3°
Hysteresis $≤ ±0,1^{\circ}$ Reproducibility $≤ ±0,1^{\circ}$ Temperature range $-40 \text{ to } +80 \text{ °C}$ Temperature coefficient $≤ 0,0046 \text{ % / °K}$ Supply voltage 9 to 36 VDC Output signal 4 bis 20 mA, optional redundant CANopen, optional Safety, redundant Protection class IP 67 according to DIN EN 60529 Interference immunity 200 V/m HF, 100 mA BCI according to ISO 11452, DIN EN 61000-4, ISO 7637 Emission DIN EN 55025 Climate tests DIN EN 60068-2 Vibration resistance DIN EN 60068-2 Electrical connections M12x1, 5-pins Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Measurement range	
Reproducibility ≤ ±0,1° Temperature range -40 to +80 °C Temperature coefficient ≤ 0,0046 % / °K Supply voltage 9 to 36 VDC Output signal 4 bis 20 mA, optional redundant CANopen, optional Safety, redundant Protection class IP 67 according to DIN EN 60529 Interference immunity 200 V/m HF, 100 mA BCI according to ISO 11452, DIN EN 61000-4, ISO 7637 Emission DIN EN 55025 Climate tests DIN EN 60068-2 Vibration resistance DIN EN 60068-2 Electrical connections M12x1, 5-pins Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Linearity error	≤ ±0,1°
Temperature range -40 to +80 °C Temperature coefficient ≤ 0,0046 % / °K Supply voltage 9 to 36 VDC Output signal 4 bis 20 mA, optional redundant CANopen, optional Safety, redundant Protection class IP 67 according to DIN EN 60529 Interference immunity 200 V/m HF, 100 mA BCI according to ISO 11452, DIN EN 61000-4, ISO 7637 Emission DIN EN 55025 Climate tests DIN EN 60068-2 Vibration resistance DIN EN 60068-2 Electrical connections M12x1, 5-pins Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Hysteresis	≤ ±0,1°
Temperature coefficient ≤ 0,0046 % / °K Supply voltage 9 to 36 VDC Output signal 4 bis 20 mA, optional redundant CANopen, optional Safety, redundant Protection class IP 67 according to DIN EN 60529 Interference immunity 200 V/m HF, 100 mA BCI according to ISO 11452, DIN EN 61000-4, ISO 7637 Emission DIN EN 55025 Climate tests DIN EN 60068-2 Vibration resistance DIN EN 60068-2 Electrical connections M12x1, 5-pins Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Reproducibility	≤ ±0,1°
Supply voltage 9 to 36 VDC Output signal 4 bis 20 mA, optional redundant CANopen, optional Safety, redundant Protection class IP 67 according to DIN EN 60529 Interference immunity 200 V/m HF, 100 mA BCI according to ISO 11452, DIN EN 61000-4, ISO 7637 Emission DIN EN 55025 Climate tests DIN EN 60068-2 Vibration resistance DIN EN 60068-2 Electrical connections M12x1, 5-pins Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Temperature range	-40 to +80 °C
Output signal 4 bis 20 mA, optional redundant CANopen, optional Safety, redundant Protection class IP 67 according to DIN EN 60529 Interference immunity 200 V/m HF, 100 mA BCI according to ISO 11452, DIN EN 61000-4, ISO 7637 Emission DIN EN 55025 Climate tests DIN EN 60068-2 Vibration resistance DIN EN 60068-2 Electrical connections M12x1, 5-pins Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Temperature coefficient	≤ 0,0046 % / °K
CANopen, optional Safety, redundant Protection class IP 67 according to DIN EN 60529 Interference immunity 200 V/m HF, 100 mA BCI according to ISO 11452, DIN EN 61000-4, ISO 7637 Emission DIN EN 55025 Climate tests DIN EN 60068-2 Vibration resistance DIN EN 60068-2 Electrical connections M12x1, 5-pins Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Supply voltage	9 to 36 VDC
Interference immunity 200 V/m HF, 100 mA BCI according to ISO 11452, DIN EN 61000-4, ISO 7637 Emission DIN EN 55025 Climate tests DIN EN 60068-2 Vibration resistance DIN EN 60068-2 Electrical connections M12x1, 5-pins Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Output signal	
according to ISO 11452, DIN EN 61000-4, ISO 7637 Emission DIN EN 55025 Climate tests DIN EN 60068-2 Vibration resistance DIN EN 60068-2 Electrical connections M12x1, 5-pins Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Protection class	IP 67 according to DIN EN 60529
Climate tests DIN EN 60068-2 Vibration resistance DIN EN 60068-2 Electrical connections M12x1, 5-pins Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Interference immunity	•
Vibration resistance DIN EN 60068-2 Electrical connections M12x1, 5-pins Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Emission	DIN EN 55025
Electrical connections M12x1, 5-pins Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Climate tests	DIN EN 60068-2
Electrical protection classes Reverse polarity protection, overvoltage protection and short-circuit protection	Vibration resistance	DIN EN 60068-2
and short-circuit protection	Electrical connections	M12x1, 5-pins
Material Aluminium, saltwater-proof	Electrical protection classes	
	Material	Aluminium, saltwater-proof

Options

Safety classification according to DIN EN ISO 13849-1 PL c, PL d, PI e*









^{*} Used in parent systems according to DIN EN ISO 13849-1