

Magnetic sensors for rotative applications

MDFK 08

features

- competitively priced angular measurement solution using ring magnet or magnetic rotor
- 2 and 3 channel version
- channel A/B 90° shifted and zero pulse
- 8-/10-fold interpolation

description

Magnet encoders provide angular information by non-contact tracking of a multi-pole ring magnet based on a magneto resistive sensor. Depending on the angle between the sensor and the magnetic field, the device generates analog signals containing the angular information. These signals are further fed into an electronics circuit for additional conditioning and processing. The rugged and easy to mount sensor generates 1024 pulses (1280 pulses for the 8101 version) when used in conjunction with a ring magnet of 16 pole pairs. Angular resolution of the device can be partly determined by selecting appropriate ring magnets. The IP 67 protected sensor contains absolutely no moving parts and is not subject to any wear when in operation. Air gap between magnet and sensor can be up to 0,8 mm without sacrificing system accuracy.

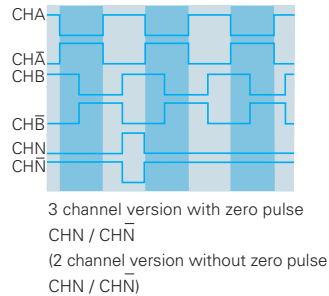


technical data	MDFK 08G2101	MDFK 08T7101	MDFK 08T8101
	push-pull	2 channel compl.	3 channel compl.
voltage supply range +Vs	8 - 30 VDC	5 VDC ±5%	5 VDC ±5%
supply current	35 mA	55 mA	30 mA
switching current	30 mA	RS 422	RS 422
switchng frequency	160'000 Hz	160'000 Hz	160'000 Hz
voltage drop	<4 VDC (I _{out} = 20 mA)	RS 422	RS 422
output circuit A/B	push-pull	TTL (RS 422)	TTL (RS 422)
output signal	CH A/B	CH A/Ā/B/B̄	CH A/Ā/B/B̄/N/N̄
air gap	max. 0,8 mm	max. 0,8 mm	max. 0,8 mm
resolution	256 pulses	256 pulses	320 pulses
puls/revolution	ring magnet 16 pole-pairs	ring magnet 16 pole-pairs	ring magnet 16 pole-pairs
interpolation	8-fold*	8-fold*	10-fold*
max. measuring steps	1024 steps	1024 steps	1280 steps
short circuit protection	yes	yes	yes
reverse polarity protection	yes	no	no
temperature range	-25...+85 °C	-25...+85 °C	-25...+85 °C
housing matrial	PC	PC	PC
max. protection class	IP 67	IP 67	IP 67
connection cable PUR	4 x 0,25 mm ²	6 x 0,14 mm ²	8 x 0,14 mm ²

*lower interpolation rates on request

output type	part numbers
2 channel push-pull	MDFK 08G2101
2 channel complementary RS 422	MDFK 08T7101
3 channel complementary RS 422	MDFK 08T8101

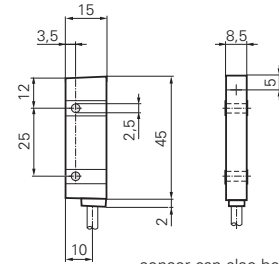
output signals RS 422



output signals 2 channel push-pull

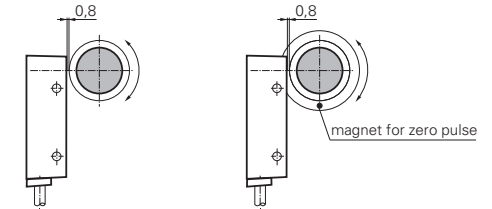


dimensions



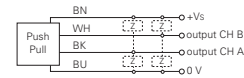
sensor can also be mounted with self-tapping screws (M3)

mounting + sense of rotation



CH A is leading CH B by 90° when rotating CW.

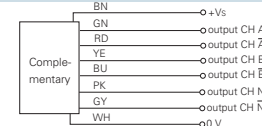
2 channel push-pull



2 channel complementary RS 422



3 channel complementary RS 422



accessories 2 channel version

ring magnet 36 poles material ferrite part nr. 130144

ring magnet 32 poles material Tromadur part nr. 131625

accessories 3 channel version

magnet rotor 32 poles (zeropulse) part nr. 132124

For more information consult the accessories page.

pin assignment 2 channel push-pull

color	abbreviation	signals
brown	BN	+Vs
blue	BU	GND
black	BK	CH A
white	WH	CH B

pin assignment 2 channel complementary RS 422

color	abbreviation	signals
brown	BN	+Vs
green	GN	CH A
pink	PK	CH A
yellow	YE	CH B
grey	GY	CH B
white	WH	GND

pin assignment 3 channel complementary RS 422

color	abbreviation	signals
brown	BN	+Vs
green	GN	CH A
red	RD	CH A
yellow	YE	CH B
blue	BU	CH B
pink	PK	CH N
grey	GY	CH N
white	WH	GND