

Elektrischer Anschluss/Electrical Connection

Signal	For cabel Ø6 mm, 8-core, color	For cable connector M12, 8-pin, pin
GND	Blue	1
+U _B	Brown	2
A	Black	3
\bar{A}	Violet	4
B	White	5
\bar{B}	Grey	6
0	Orange	7
$\bar{0}$	Yellow	8
Shield	-	-

Technische Daten

Allgemeine Daten

Erfassungsart	optische Abtastung
Impulszahl	max. 1024

Elektrische Daten

Betriebsspannung	U _B	4,75 ... 30 V DC 5 V DC bei RS-422
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Leerlaufstrom	I ₀	max. 55 mA
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Ausgang

Ausgangstyp	Gegentakt, inkremental oder RS-422, inkremental
Spannungsfall	U _d ≤ 2,5 V (< 2,5 V)
Laststrom	pro Kanal max. 30 mA, kurzschlussfest (pro Kanal max. 20 mA, kurzschlussfest)
Ausgangsfrequenz	max. 100 kHz (max. 100 kHz)
Anstiegszeit	980 ns (225 ns)
Abfallzeit	t _{off} 980 ns (225 ns)

Anschluss

Kabel	Ø6 mm, 8 x 0,128 mm ² Anschlusskabel mit M12-Stecker, 8-polig, L = 0,2 m
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Normenkonformität

Schutzart	DIN EN 60529, IP54
Klimaprüfung	DIN EN 60068-2-3, keine Betauung
Störaussendung	EN 61000-6-4:2007/A1:2011
Störfestigkeit	EN 61000-6-2:2005
Schockfestigkeit	DIN EN 60068-2-27, 100 g, 6 ms
Schwingungsfestigkeit	DIN EN 60068-2-6, 10 g, 10 ... 2000 Hz

Umgebungsbedingungen

Arbeitstemperatur	-10 ... 70 °C (14 ... 158 °F)
Lagertemperatur	-25 ... 85 °C (-13 ... 185 °F)

Mechanische Daten

Material	
Gehäuse	Polycarbonat
Flansch	Aluminium 3.1645
Welle	Edelstahl 1.4305 / AISI 303 (V2A)
Masse	ca. 180 g
Drehzahl	max. 6000 min ⁻¹
Trägheitsmoment	≤ 4,3 gcm ²
Anlaufdrehmoment	≤ 0,2 Ncm
Wellenbelastung	
Winkelversatz	1 °
Axialversatz	max. 1 mm
Lebensdauer	≥ 2 x 10 ⁹ Umdrehungen (max. Wellenbelastung)

Zulassungen und Zertifikate

UL-Zulassung	cULus Listed, General Purpose, Class 2 Power Source
Maximal zulässige Umgebungstemperatur	≤ 60 °C (≤ 140 °F)

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Inkremental-Drehgeber Incremental rotary encoder

TSI40N



Doc. No.: 45-4857A

DIN A3 -> DIN

Part. No.: T30768

Date: 2019-02

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Technical Data

General specifications

Detection type	photoelectric sampling
Pulse count	max. 1024

Electrical specifications

Operating voltage	U _B	4,75 ... 30 V DC 5 V DC for RS-422
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No-load supply current	I ₀	max. 55 mA
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Output

Output type	push-pull, incremental or RS-422, incremental
Voltage drop	U _d ≤ 2,5 V (< 2,5 V)
Load current	max. per channel 30 mA, short-circuit protected (max. per channel 20 mA, conditionally short-circuit proof)
Output frequency	max. 100 kHz (max. 100 kHz)
Rise time	980 ns (225 ns)
De-energized delay	t _{off} 980 ns (225 ns)

Connection

Cable	Ø6 mm, 8 x 0,128 mm ² connection with plug M12, 8-pin, L = 0.2 m
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Standard conformity

Degree of protection	DIN EN 60529, IP54
Climatic testing	DIN EN 60068-2-3, no moisture condensation
Emitted interference	EN 61000-6-4:2007/A1:2011
Noise immunity	EN 61000-6-2:2005
Shock resistance	DIN EN 60068-2-27, 100 g, 6 ms
Vibration resistance	DIN EN 60068-2-6, 10 g, 10 ... 2000 Hz

Ambient conditions

Operating temperature	-10 ... 70 °C (14 ... 158 °F)
Storage temperature	-25 ... 85 °C (-13 ... 185 °F)

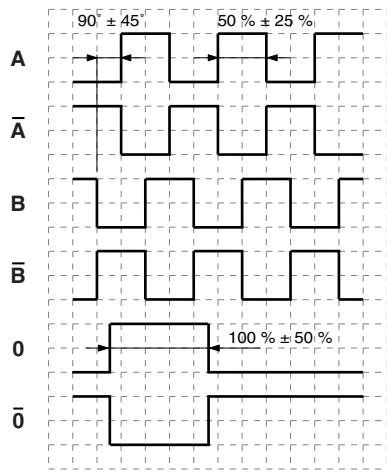
Mechanical specifications

Material	
Housing	Polycarbonate
Flange	3.1645 aluminum
Shaft	Stainless steel 1.4305 / AISI 303
Mass	approx. 180 g
Rotational speed	max. 6000 min ⁻¹
Moment of inertia	≤ 4,3 gcm ²
Starting torque	≤ 0,2 Ncm
Shaft load	
Angle offset	1 °
Axial offset	max. 1 mm
Life span	≥ 2 x 10 ⁹ revolutions (max. shaft loading)

Approvals and certificates

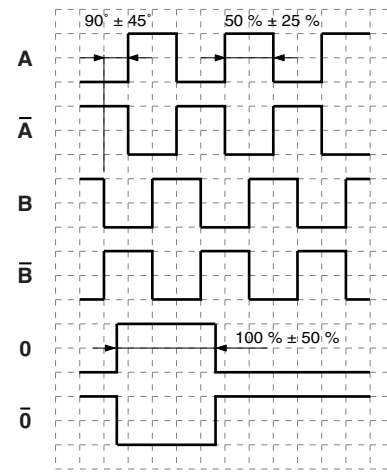
UL approval	cULus Listed, General Purpose, Class 2 Power Source
Maximum permissible ambient temperature	≤ 60 °C (≤ 140 °F)

Signalausgänge



⌚ cw - mit Blick auf die Welle

Signal outputs



⌚ cw - with view onto the shaft