

Rotary Measuring Technology

Incremental hollow shaft encoder

Large diameter Type 0320



- Sturdy incremental hollow shaft encoder
- Assembled directly to drive shaft without couplings
- Hollow shaft diameter 12 ... 25,4 mm (1")
- This encoder combines the advantage of low profile and high mechanical requirements

Mechanical characteristics:

Speed:	max. 6000 min ⁻¹
Rotor moment of inertia:	appr. 1,8 x 10 ⁻⁶ kgm ²
Starting torque:	< 0,15 Nm
Weight:	appr. 0,6 kg
Protection acc. to EN 60 529:	IP 65
Working temperature:	-20° C ... +60 °C
Operating temperature:	-20° C ... +70 °C
Shaft:	stainless steel
Shock resistance acc. to DIN-IEC 68-2-27	1000 m/s ² , 6 ms
Vibration resistance acc. to DIN-IEC 68-2-6:	100 m/s ² , 10...2000 Hz

Pulse rates available at short notice:

up to 3600

Higher pulse rates on request

Electrical characteristics:

Output circuit:	RS 422 (TTL-compatible)	Push-pull
Supply voltage:	5 V (±5 %)	11 ... 24 V DC (+20 %)
Power consumption (no load) without inverted signal:	-	typ. 55 mA / max. 80 mA
Power consumption (no load) with inverted signals:	typ. 70 mA / max. 100 mA	typ. 80 mA/ max. 150 mA
Permissible load/channel:	max. ±50 mA	max. ±30 mA
Pulse frequency:	max. 50 kHz	max. 50 kHz
Signal level high:	min. 2,5 V	min. U _B -3 V
Signal level low:	max. 0,5 V	max. 2,5 V
Rise time tr	max. 200 ns	max. 1 μs
Fall time tf	max. 200 ns	max. 1 μs
Short circuit proof outputs: ¹⁾	yes ²⁾	yes
Reverse connection protection at U _B :	no	yes
Conforms to CE requirements acc. to EN 61000-6-1, EN 61000-6-4 and EN 61000-6-3		

¹⁾When supply voltage correctly applied

²⁾Only one channel at a time: (when U_B = 5 V, short-circuit to channel, 0 V, or +U_B is permitted.)
(when U_B = 10 ... 30 V short-circuit to channel or 0 V is permitted.)

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Terminal assignment

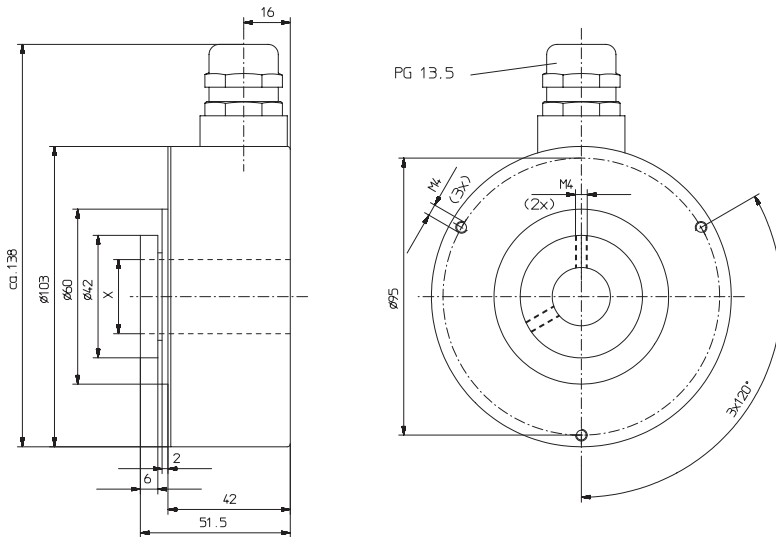
Signal	0 V	+U _B	A	\bar{A}	B	\bar{B}	0	$\bar{0}$	Shield
12 pin plug; Pin:	1	2	3	5	4	6	7	8	PH ¹⁾
Colour:	BK 0,5 mm ²	BU GY PK	BN 0,5 mm ²	YE RD BU	BG	GN	PK	VI	

¹⁾PH = Shield is attached to connector housing

Insulate unused outputs before initial startup.

- Using RS 422 outputs and long cable distances, a wave impedance has to be applied at each cable end.

Dimensions



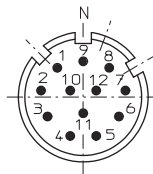
Mounting advice:

Do not connect encoder and drive rigidly to one another at shafts and flanges!

Rotary Measurement Technology
Incremental Encoders

Top view of mating side, male contact base:

12 pin plug



Order code:

05.0320.XXXX.XXXX

Description of order code:
Range
Hollow shaft diameter
12 = 12 mm
14 = 14 mm
15 = 15 mm
16 = 16 mm
18 = 18 mm
20 = 20 mm
22 = 22 mm
24 = 24 mm
25 = 25 mm
75 = 25,4 mm (1")

Pulse rate	(e.g. 360 pulses=> 0360)
Type of connection	1 = Cable radial (1 m PVC-cable) 2 = radial 12 pin plug without mating connector
Output circuit and supply voltage	1 = RS 422 (with inverted signal) 5 V supply voltage 2 = Push-pull (without inverted signal) 11 ... 24 V supply voltage 3 = Push-pull (with inverted signal) 11 ... 24 V supply voltage 4 = RS 422 (with inverted signal) 11 ... 24 V supply voltage