

TECHNICAL DATASHEET

Incremental Encoder RI42-O



- Economical miniature encoder
- High protection IP65
- Incremental output HTL or TTL
- High mechanical efficiency
- Up to 4.096 steps with 1.024 pulses
- 10.000 rpm continuous operation
- Applications: textile machinery

ICURO®
industry



Number of pulses

5 / 10 / 20 / 25 / 30 / 50 / 60 / 72 / **100** / 128 / 144 / 200 / 250 / 300 / 360 / 400 / **500** / 512 / 600 / 720 / 900 / **1000** / 1024 / 1250 / 2500 / 3600
Other number of pulses on request

TECHNICAL DATA mechanical

Housing diameter	40 mm
Shaft diameter	6 mm (Solid shaft)
Flange (Mounting of housing)	Pilot flange
Protection class shaft input (EN 60529)	IP64
Protection class housing (EN 60529)	IP65
Shaft load axial / radial ¹	5 N / 10 N
Max. speed ¹	max. 10.000 U/min
Starting torque	≤ 1 Ncm
Vibration resistance ¹ (DIN EN 60068-2-6)	100 m/s ² (10 ... 2000 Hz)
Shock resistance ¹ (DIN EN 60068-2-27)	1000 m/s ² (6 ms)
Operating temperature ¹	0 °C ... +60 °C
Storage temperature	-25 °C ... +85 °C
Material shaft	Aluminum
Material housing	Plastic
Weight	approx. 75 g
Connection	Cable, axial

¹ higher values on request

Specifications subject to change without notice.

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**TECHNICAL DATA
electrical**

General design	as per DIN VDE 0160, protection class III, contamination level 2, overvoltage class I
Supply voltage ¹	Push-pull (D): DC 5 V ±10 % Push-pull (K): ± 10% DC 5 V or DC 10 - 30 V Push-pull antivalent (I): DC 10-30 V
Max. current w/o load	40 mA (DC 5 V), 30 mA (DC 24 V, with push-pull K, I)
Max. pulse frequency	DC 5 V: 300 kHz DC 10 - 30 V: 200 kHz DC 10 - 24 V: 50 kHz
Standard Output versions ²	Push Pull (K): A, B, N, <u>Alarm</u> Push Pull (D): A, B, N, <u>Alarm</u> Push Pull complementary (I): A, B, N, <u>A</u> , <u>B</u> , <u>N</u> , <u>Alarm</u>
Pulse width error	± max. 25° electrical
Number of pulses	5 ... 1024
Alarm output	NPN-O.C., max. 5 mA
Pulse shape	Square wave
Pulse duty factor	1:1

¹ With push-pull (K): pole protection

² Output code (K): short-circuit-proof

**ELECTRICAL CONNECTION
Cable PVC**

Cable PVC	Output circuit		
Colour	Push Pull (K)	Push Pull (D)	Push Pull complementary (I)
white	Channel A	Channel A	Channel A
white/brown			Channel <u>A</u>
green	Channel B	Channel B	Channel B
green/brown			Channel <u>B</u>
yellow	Channel N	Channel N	Channel N
yellow/brown			Channel <u>N</u>
yellow/black	Alarm	Alarm	Alarm
yellow/red			Sense V _{cc}
red	DC 10 - 30 V	DC 5 V	DC 10 - 30 V
black	GND	GND	GND

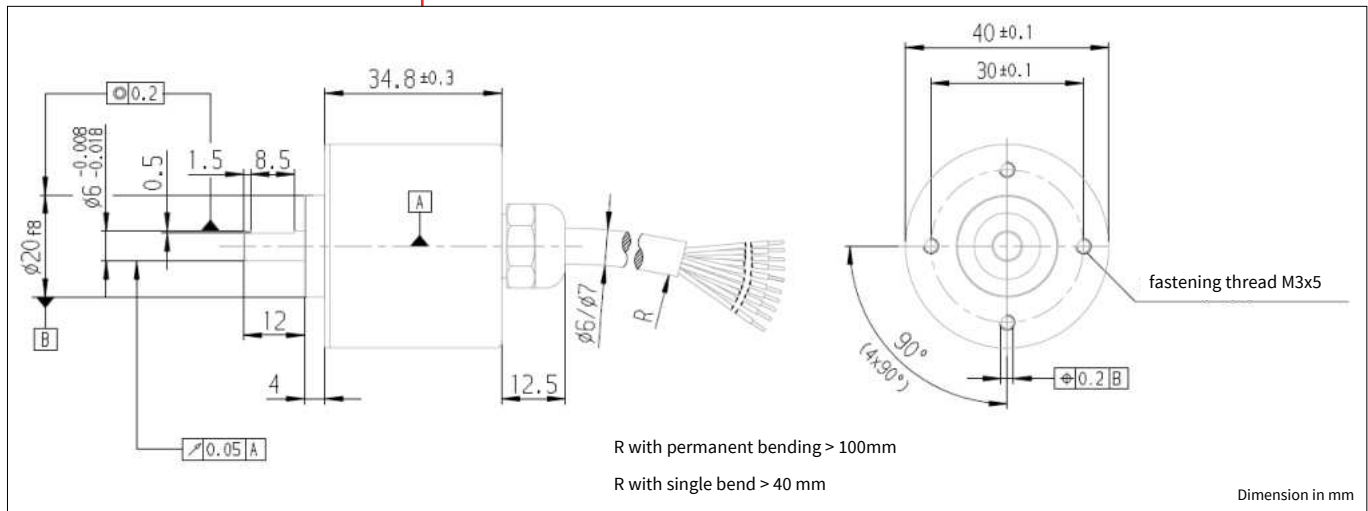
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DIMENSION DRAWING



ORDERING INFORMATION

Type	Number of pulses	Power voltage ^{1,2}	Flange, Protection, Shaft	Output ³	Connection
					
RI42-O	5 ... 3600	A DC 5 V E DC 10 - 30 V	R.41 Pilot, IP64 , 6 mm	K Push Pull I Push Pull, complementary D Push Pull 5V	A PVC-cable, axial

¹ DC 5 V: only with output D available
² DC 10-30 V: only with output K,I available
³ Output K, I short circuit proof

ORDERING INFORMATION

The cable outlet (connection A) is available with different cable lengths. To obtain the desired cable length, please put the corresponding code at the end of the order key. For variants with a plug at the end of the cable, insert the code between the selection of cable length and plug. Other cable lengths on request.

Code	Cable length	Code	Cable length
without Code	1,5 m	-U0	20 m
-D0	3 m	-V0	25 m
-F0	5 m	-W0	30 m
-K0	10 m	-X0	40 m
-P0	15 m	-Y0	50 m

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TECHNICAL DATASHEET
Incremental Encoder RI42-O
Accessories
FLEXIBLE COUPLINGS

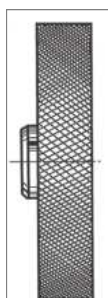

Isolated disk coupling



Helical coupling



Plastic coupling

MEASURING WHEELS


Tread 2

	Bore diameter d1/d2	Item.-No.
Isolated disk coupling	6 mm / 6 mm	3 520 081
Isolated disk coupling	6 mm / 10 mm	3 520 082
Isolated disk coupling	6 mm / 9,53 mm	3 520 084
Plastic coupling	5 mm / 6 mm	3 520 033
Plastic coupling	6 mm / 6 mm	1 761 026
Helical coupling 19/28	5 mm / 6 mm	3 520 035
Helical coupling 19/28	6 mm / 6 mm	0 070 653
Helical coupling 25/32	6 mm / 9,53 mm	3 520 052
Helical coupling 25/32	6 mm / 10 mm	3 520 066

Tread 2

With glued-on rubber profile, white studded covering, especially more adhesive Rubber covering, low wear. Application: e.g. for paper and cardboard, cable measurement, fat-free metals, fleece, raw or surface-treated wood, soft and hard plastics.

Bore Ø	Circumference	Tread	Width of bearing surface	Bore - Ø in mm	Item.-No.
6,37cm	0,2 m	2	12	6 H7	0 601 048

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