TECHNICAL DATASHEET

Incremental Encoder RI32-O



- Economical Encoder for small applications
- Replacement for RIS & RI31
- Incremental output TTL (5V) / HTL (5V & 10-30-V)
- High efficiency by means of ball bearing
- Small torque
- Applications: laboratory equipment, training equipment, crimping machines, tampon printing machines, miniature grinding machines

ICURO® industry

c UL us LISTED

RoHS

NUMBER OF PULSES

5/ 10 / 20 / 50 / 60 / **100** / 200 / 250 / 256 / 360 / 400 / **500** / 512 / 600 / 720 / **1000** / 1024 / 1500
Other Number of pulses on request.

TECHNICAL DATA
mechanical

Housing diameter	30 mm
Shaft diameter	5 / 6 mm (solid shaft)
Flange (Mounting of housing)	Pilot flange
Protection class shaft input (EN 60529)	IP40
Protection class housing (EN 60529)	IP50
Shaft load axial / radial	5 N / 10 N
Max. Speed	max. 6.000 rpm
Torque	≤ 0,05 Ncm
Vibration resistance (DIN EN 60068-2-6)	100 m/s² (10 ... 2000 Hz)
Shock resistance (DIN EN 60068-2-27)	1000 m/s² (6 ms)
Operating temperature	-10 °C ... +60 °C
Storage temperature	-25 °C ... +85 °C
Material shaft	Stainless steel
Material housing	Plastic
Weight	approx. 50 g
Connection	cable, axial or radial

Specifications subject to change without notice.

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TECHNICAL DATA
electrical

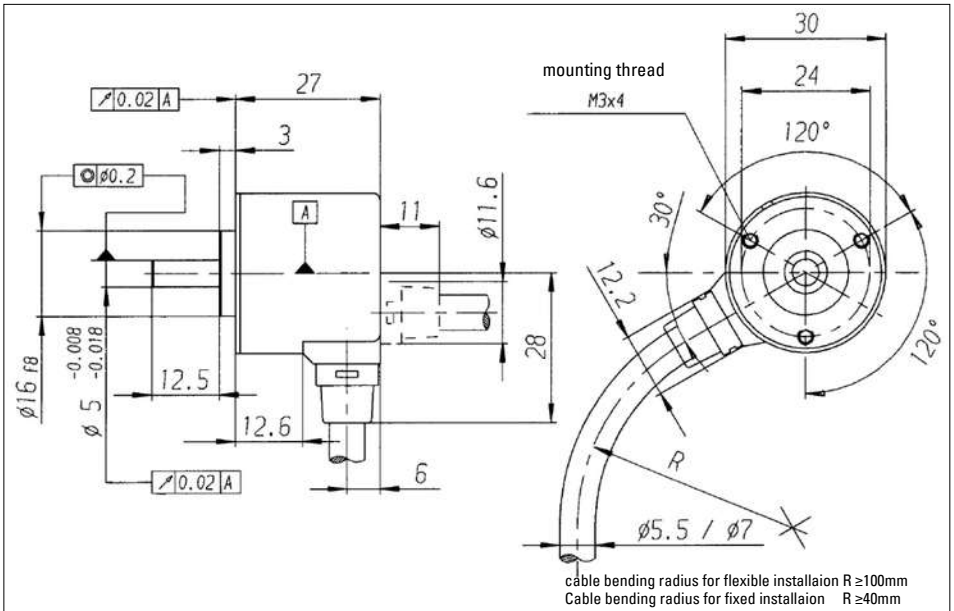
General design	per DIN EN 0160, protection class III, contamination level 2, Overvoltage class II
Supply voltage [1]	Push Pull (D), DC 5 V ±10 % Push Pull (K), DC 5 V ±10 % or DC 10 - 30 V
Max. current w/o load.	40 mA (DC 5 V), 30 mA (DC 24 V, at Push Pull), 60mA (DC 10V)
Max. pulse frequency	DC 5V: 300 kHz DC 10-30V: 200 kHz
Standard Output Versions [2]	Push Pull (K): A, B, N, $\overline{\text{Alarm}}$ Push Pull (D): A, B, N, $\overline{\text{Alarm}}$ 5V, ±30mA
Pulse width error	± max. 25° electrical
Number of pulses	5 ... 1500
Alarm output	NPN-O.C., max. 5 mA
Pulse shape	Square wave
Pulse duty factor	1:1

[1] At Push Pull (K) pole protection
[2] Output (K) short circuit proof.

ELECTRICAL CONNECTIONS
Cable PVC

Cable PVC	Output circuit	
Color	**Push Pull (K)**	**Push Pull (D)**
white (0,14mm²)	Channel A	Channel A
green (0,14mm²)	Channel B	Channel B
yellow (0,14mm²)	Channel N	Channel N
yellow/black (0,14mm²)	$\overline{\text{Alarm}}$	$\overline{\text{Alarm}}$
red (0,5mm²)	DC 10 - 30 V	DC 5 V
black (0,5mm²)	GND	GND

DIMENSIONED DRAWINGS
(5mm shaft, R.14)



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TECHNICAL DATASHEET

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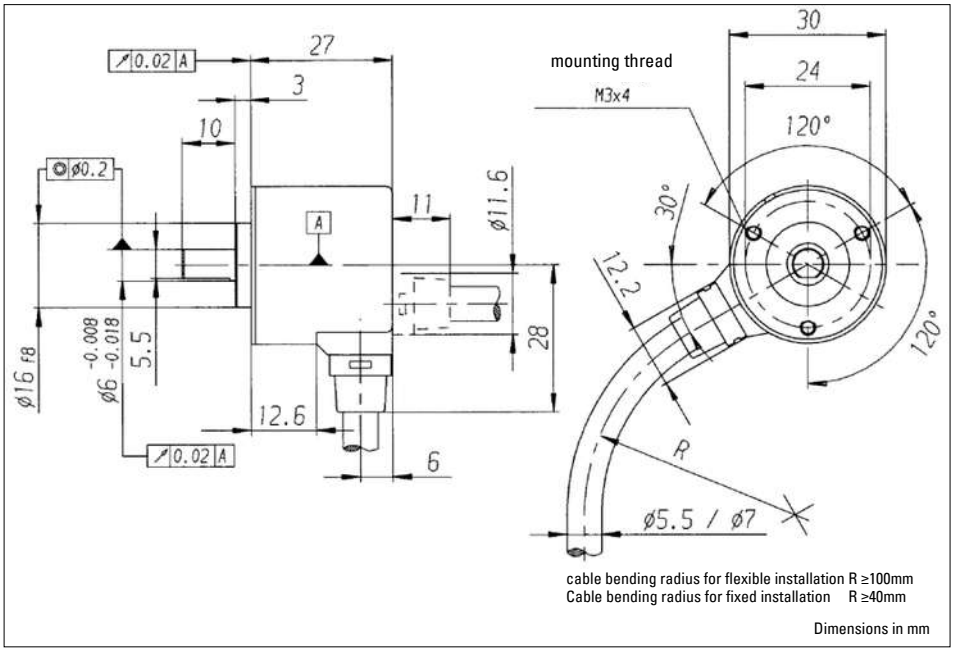
DIMENSIONED DRAWINGS (6mm shaft, R.11)



cable bending radius for flexible installation R ≥100mm
Cable bending radius for fixed installation R ≥40mm

Dimensions in mm

ORDERING INFORMATION

Type	Number of pulses	Supply voltage [1]	Flange, Protection, Shaft [3,4]	Output [2]	Connection
RI32-O	**5 … 1500**	**A** DC 5 V **E** DC 10 - 30 V	**R.14** Pilot, IP40, 5 mm **R.11** Pilot, IP40, 6 mm	**K** Push Pull **D** Push Pull 5V	**A** PVC-cable axial **B** PVC-cable radial

[1] DC 10-30 V: only with output „K“ available
[2] Output code „K“: short circuit proof
[3] R.11, flattened, see dimensional drawing
[4] R.14, not flattened

ORDERING INFORMATION Cable length

The cable outlet (connection A, B) are available with various lengths of cable. To order your desired cable length, please add the respective code to the end of your ordering code.

Code	Cable length	Code	Cable length
without Code	1,5 m	-P0	15 m
-D0	3 m	-U0	20 m
-F0	5 m	-V0	25 m
-K0	10 m	-W0	30 m
Example: Cable 3 m length: ...B-D0			

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Accessories

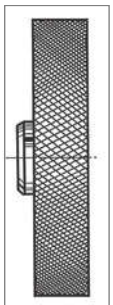
FLEXIBLE COUPLINGS



Plastic coupling

	Diameter d1/d2	Item.-No.
Plastic coupling	5 mm / 6 mm	3 520 033
Plastic coupling	6 mm / 6 mm	1 761 026
Plastic coupling	5 mm / 6 mm	3 520 034

MEASURE WHEELS



Tread 2

TREAD 2
With glued-on rubber profile, white knobbed covering, particularly adhesive Rubber covering, low-wear.

Application: e.g. for paper and cardboard, cable measurement, grease-free metals, fleece, raw or surface-treated wood, soft and hard plastics.

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