

## Economy Types



- Economy encoder
- High protection IP 65
- Push-pull or NPN-O.C.
- Applications, e.g.
  - textile machinery

## NUMBER OF PULSES

5 / 10 / 20 / 25 / 28 / 32 / 50 / 60 / 72 / 100 / 128 / 144 / 200 / 250 / 256 / 288 / 300 / 360 / 400 / 500 / 512 / 600 / 720 / 900 / 1000 / 1024  
 Other number of pulses on request

TECHNICAL DATA  
mechanical

Shaft diameter	6 mm
Absolute max. shaft load	radial 10 N, axial 5 N
Absolute max. speed	10 000 min <sup>-1</sup>
Torque	≤ 1 Ncm
Protection class (EN 60529)	Housing IP 65, bearings IP 64
Operating temperature	0 ... +60 °C
Storage temperature	-25 ... +85 °C
Vibration resistance (IEC 68-2-6)	100 m/s <sup>2</sup> (10 ... 2000 Hz)
Shock resistance (IEC 68-2-27)	1000 m/s <sup>2</sup> (6 ms)
Connection	1.5 cable axial <sup>1</sup>
Material	Housing: plastic, Flange: aluminium
Flange	Pilot flange
Weight approx.	75 g

<sup>1</sup> Other cable length on request

TECHNICAL DATA  
electrical

General design	as per DIN VDE 0160, protection class III, contamination level 2, overvoltage class II
Supply voltage (SELV)	with push-pull (D): DC 5 V ±10 % with push-pull (K): DC 5 V <sup>1</sup> ±10 % oder DC 10 - 30 V <sup>1</sup> with push-pull complementary (I): DC 10 - 30 V <sup>1</sup> at NPN-O.C. (S): DC 10 - 24 V <sup>1</sup>
Max. current w/o load	40 mA (DC 5V), 30 mA (DC 24V) with push-pull (K,I) 40 mA (DC 24V), bei NPN-O.C. (S)
Standard output versions	push-pull <sup>2</sup> / push-pull complementary <sup>2</sup> /NPN-O.C. <sup>3</sup>

<sup>1</sup> Pole protection

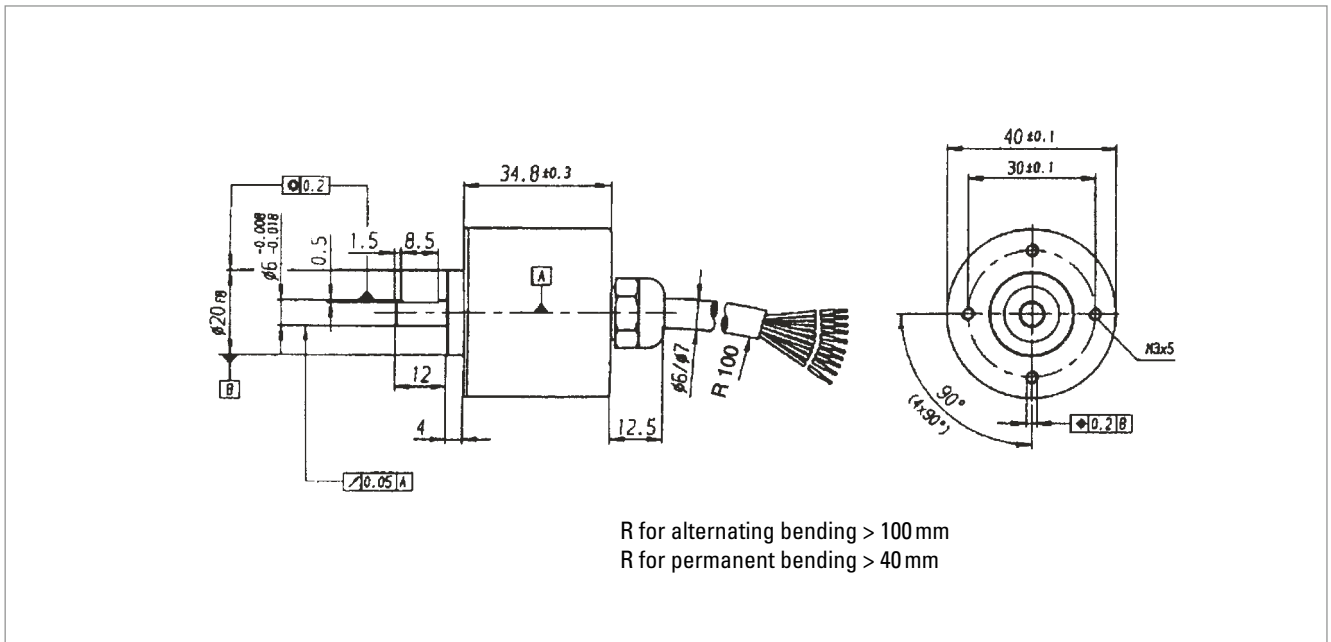
<sup>2</sup> Output description and technical data see chapter "Technical basics"

<sup>3</sup> NPN-O.C. with internal pull-up resistor = 10 KΩ, max. pulse frequency = 50 KHz, max. output lead = ± 30 mA, tolerance ± 30° electrical, delay time 4μs

# Incremental Shaft Encoders Economy Types

## Type RI 42

### DIMENSIONAL DRAWINGS



### PIN ASSIGNMENT

Colour (PVC)	Output circuit push-pull (K, D), Open Collector (S)	push-pull complementary (I)
white	Channel A	Channel A
white/brown		Channel $\bar{A}$
green	Channel B	Channel B
green/brown		Channel $\bar{B}$
yellow	Channel N	Channel N
yellow/brown		Channel $\bar{N}$
yellow/black	Alarm	Alarm
yellow/red		Sense $V_{CC}$
red	DC 5/10 - 30/10 - 24 V	DC 10 - 30 V
black	GND	GND

### ORDERING INFORMATION

Type	Model	Number of pulses	Supply voltage	Flange, Protection, Shaft	Output	Connection
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>RI42-</b>	<b>0</b> Standard	<b>5 ... 1 024</b>	<b>A</b> DC 5 V <sup>1</sup> <b>E</b> DC 10 - 30 V <sup>2</sup> <b>C</b> DC 10 - 24 V <sup>3</sup>	<b>R.41</b> Pilot, IP64, 6 mm	<b>K</b> push-pull <sup>4</sup> short circuit proof <b>D</b> push-pull 5 V, $\pm 30$ mA <b>S</b> Open Collector NPN <b>I</b> push-pull complementary	<b>A</b> Cable axial

<sup>1</sup> only with output K, D

<sup>2</sup> only with output K, I

<sup>3</sup> only with output S

<sup>4</sup>  $\pm 10$  mA at 5 V,  $\pm 30$  mA at 10 - 30 V