

## Industrial types

## Hollow shaft



- Through shaft
- High accuracy by means of integrated flexible coupling
- Safe shaft mounting
- Application e.g.:
  - textile machines
  - motors
  - drives
  - copiers

## NUMBER OF PULSES

1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 / 35 / 40 / 45 / 50 / 60 / 64 / 70 / 72 / 80 / **100** / 125 / 128 / 144 / 150 / 180 / 200 / **250** / 256 / 300 / 314 / 350 / 360 / 375 / 400 / 460 / 480 / **500** / 512 / 600 / 625 / 720 / 900 / **1000** / **1024** / **1250** / 1500 / 1600 / 1800 / 2000 / 2048 / **2500** / 3000 / 3480 / **3600** / 4000 / **4096** / **5000**

Other number of pulses on request

Preferably available versions are printed in bold type.

TECHNICAL DATA  
mechanical

Shaft diameter	10 mm hollow shaft 12 mm hollow shaft
Required dimension of mounting shaft	Ø 10 mm, tolerance g8 (-0.005 ... -0.027 mm) Ø 12 mm, tolerance g8 (-0.006 ... -0.033 mm)
Balance tolerances	
Misalignment axial	± 0.4 mm
Misalignment parallel	0.4 mm
Misalignment angular	1°
Absolute max. speed	max. 3000 min <sup>-1</sup>
Torque	≤ Ncm (IP64)
Moment of inertia	approx. 65 gcm <sup>2</sup> (10 mm shaft) approx. 95 gcm <sup>2</sup> (12 mm shaft)
Protection class (EN 60529)	Housing IP64, bearings IP64
Operating temperature an Welle	-10 ... +70 °C
Storage temperature	-25 ... +85 °C
Vibration resistance (IEC 68-2-6)	10 g = 100 m/s <sup>2</sup> (10 ... 2 kHz)
Shock resistance (IEC 68-2-27)	100 g = 1000 m/s <sup>2</sup> (6 ms)
Connection	Cable radial, 1.5 m <sup>1</sup>
Housing	Aluminium
Flange	Synchro flange
Weight	approx. 210 g

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

# Incremental Shaft Encoders Type RI 58-H

## Industrial types Hollow shaft

### TECHNICAL DATA electrical

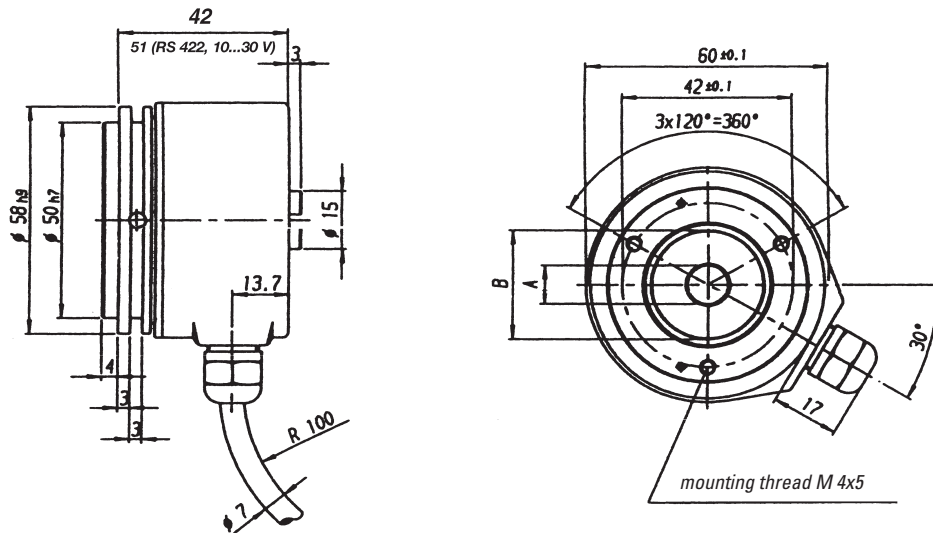
General design	as per DIN VDE 0160, protection class III, contamination level 2, overvoltage class II	
Supply voltage	with RS 422 + Sense (T): DC 5 V ± 10 % with RS 422 + Alarm (R): DC 5 V ± 10 % oder DC 10 - 30 V <sup>1</sup> with push-pull (K, I): DC 10 - 30 V <sup>1</sup>	
Max. current w/o load	40 mA (DC 5 V), 60 mA (DC 10 V), 30 mA (DC 24 V)	
Standard output versions <sup>2</sup>	RS 422 (R):	A, B, N, $\bar{A}$ , $\bar{B}$ , $\bar{N}$ , $\bar{Alarm}$
	RS 422 (T):	A, B, N, $\bar{A}$ , $\bar{B}$ , $\bar{N}$ , Sense
	push-pull (K):	A, B, N, $\bar{Alarm}$
	push-pull complementary (I):	A, B, N, $\bar{A}$ , $\bar{B}$ , $\bar{N}$ , $\bar{Alarm}$

<sup>1</sup> Pole protection with supply voltage DC 10 - 30 V

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

### DIMENSIONAL DRAWINGS

#### Synchro flange



R for alternating bending > 100 mm  
R for permanent bending > 40 mm

∅ Hollow shaft	Required dimension of mounting shaft (g8)
10 mm	-0.005 ... -0.027 mm
12 mm	-0.006 ... -0.033 mm

Dimensions in mm

Dim.:	∅	
A	10 mm*	12 mm*
B	28 mm	33 mm

\* Tolerance  
H7 = 0 ... +0.018 mm

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### PIN ASSIGNMENT

Connecting cable		Output	
Colour	Lead $\varnothing$	RS 422 T and R	push-pull K and I
red	0.5 mm <sup>2</sup>	DC 5/10 - 30 V	DC 10 - 30 V
red/yellow	0.14 mm <sup>2</sup>	Sense VCC	Sense VCC
white	0.14 mm <sup>2</sup>	Channel A	Channel A
white/brown	0.14 mm <sup>2</sup>	Channel $\bar{A}$	Channel $\bar{A}$ <sup>1</sup>
green	0.14 mm <sup>2</sup>	Channel B	Channel B
green/brown	0.14 mm <sup>2</sup>	Channel $\bar{B}$	Channel $\bar{B}$ <sup>1</sup>
yellow	0.14 mm <sup>2</sup>	Channel N	Channel N
yellow/brown	0.14 mm <sup>2</sup>	Channel $\bar{N}$	Channel $\bar{N}$ <sup>1</sup>
black	0.5 mm <sup>2</sup>	GND	GND
black/yellow	0.14 mm <sup>2</sup>	Alarm /Sense GND <sup>2</sup>	Alarm
screen <sup>3</sup>		screen <sup>3</sup>	screen <sup>3</sup>

<sup>1</sup> only push-pull complementary (I)

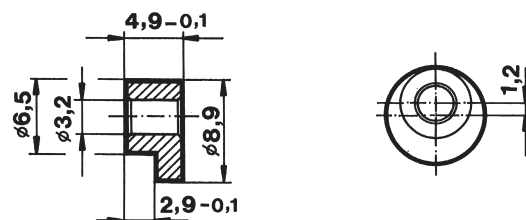
<sup>2</sup> depending on ordering code

<sup>3</sup> connected with encoder housing

### ORDERING INFORMATION

Type	Model	Number of pulses	Supply voltage	Flange, Protection, Shaft	Output	Connection
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>RI58-</b>	<b>H</b> Hollow shaft	<b>1 ... 5 000</b>	<b>A</b> DC 5 V <sup>1</sup> <b>E</b> DC 10 - 30 V <sup>2</sup> (only with push-pull)	<b>S.42</b> Synchro, IP64, 10 mm <b>S.47</b> Synchro, IP64, 12 mm	<b>K</b> push-pull <b>T</b> RS 422+ Sense <b>R</b> RS 422+ Alarm <b>I</b> push-pull complementary	<b>B</b> PVC cable radial
<sup>1</sup> with output T, R <sup>2</sup> with output K, I, R						

### ACCESSORIES



Clamping eccentric (set of tree)  
Ordering code 0 070 655

Dimensions in mm