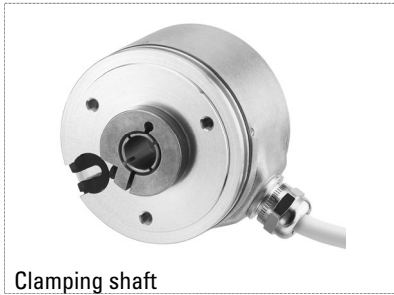


TECHNICAL DATASHEET

Incremental Encoder RI58-G / RI58TG / RI58CG



Clamping shaft

- Direct mounting without coupling
- Through hollow shaft Ø 14 mm and 15 mm
- Easy installation by means of clamping ring
- Fixing of flange by means of a stator coupling or set screw
- Applications: actuators, motors

ICURO®
industry



NUMBER OF PULSES	RI58-G	50 / 360 / 500 / 1024 / 2048 / 2500 / 4096 / 5000 Other number of pulses on request
NUMBER OF PULSES	RI58TG	50 / 360 / 500 / 1024 / 2048 / 2500 Other number of pulses on request
NUMBER OF PULSES	RI58CG	4096 / 5000 Other number of pulses on request

TECHNICAL DATA mechanical

Housing diameter	58 mm
Shaft diameter	14 mm / 15 mm (Through hollow shaft)
Flange (Mounting of housing)	Synchro flange
Mounting of shaft	Front clamping ring, Rear clamping ring, Center bolt
Protection class shaft input (EN 60529)	IP64
Protection class housing (EN 60529)	IP64
Shaft tolerance	Ø 14/ 15 mm, tolerance g8
Max. speed	max. 4.000 U/min
Starting torque typ.	≤ 2 Ncm
Moment of inertia	approx. 60 gcm ²
Vibration resistance (DIN EN 60068-2-6)	10 g = 100 m/s ² (10 ... 2000 Hz)
Shock resistance (DIN EN 60068-2-27)	100 g = 1000 m/s ² (6 ms)
Operating temperature	RI58-G: -10 °C ... +70 °C RI58TG: -40 °C ... +100 °C RI58CG: -40 °C ... +70 °C
Storage temperature	-25 °C ... +85 °C
Material housing	Aluminum
Weight	approx. 210 g
Connection	cable, radial

Irrtümer und Änderungen vorbehalten

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TECHNICAL DATASHEET

Incremental Encoder RI58-G / RI58TG / RI58CG

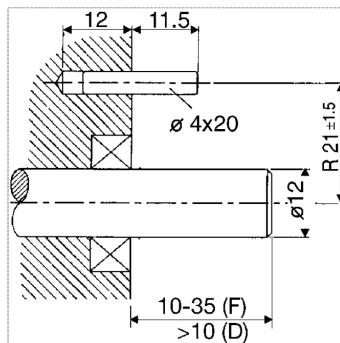
TECHNICAL DATA electrical

General design	As per DIN EN 61010-1, protection class III, contamination level 2, overvoltage class II
Supply voltage ¹	RS422 + Sense (T): DC 5 V ±10 % RS422 + Alarm (R): ± 10% DC 5 V or DC 10 - 30 V Push-pull (K), Push-pull complementary (I): DC 10-30 V
Current w/o load typ.	40 mA (DC 5 V), 60 mA (DC 10 V), 30 mA (DC 24 V)
Max. pulse frequency	RS422: 300 kHz Push-pull: 200 kHz
Standard output versions	RS422 + Alarm (R): A, B, N, \overline{A} , \overline{B} , \overline{N} , \overline{Alarm} RS422 + Sense (T): A, B, N, \overline{A} , \overline{B} , \overline{N} , Sense Push-pull (K): A, B, N, \overline{Alarm} Push-pull complementary (I): A, B, N, \overline{A} , \overline{B} , \overline{N} , \overline{Alarm}
Pulse width error	± max. 25° electrical
Number of pulses	50 ... 2.500
Alarm output	NPN-O.C., max. 5 mA
Pulse shape	Square wave
Pulse duty factor	1:1

¹ With push-pull (K): pole protection

MOUNTING INSTRUCTIONS

In order to be able to compensate an axial and radial misalignment of the shaft, the encoder flange must not be fixed rigidly. Fix the flanges by means of a stator coupling (e.g. hubshaft with tether) as torque support (see "Accessories") or by means of a cylindrical pin:



Dimensions in mm

also apply for all other shaft diameter

Mounting = D (Clamping ring)

Preparation of the machine flange ¹

(all mounting versions):

In the machine flange a straight pin must be installed (diameter 4x16 resp. 4x20, DIN 6325).

This pin is required as a torque support.

¹ Or as an option: stator coupling as torque support

Irrtümer und Änderungen vorbehalten

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TECHNICAL DATASHEET

Incremental Encoder RI58-G / RI58TG / RI58CG

ELECTRICAL CONNECTIONS Cable PVC (Connection codes B)

Cable PVC (B)	Output circuit			
Colour	RS422 + Sense (T)	RS422 + Alarm (R)	push-pull (K)	push-pull complementary (I)
white	Channel A	Channel A	Channel A	Channel A
white/brown	Channel \bar{A}	Channel \bar{A}		Channel \bar{A}
green	Channel B	Channel B	Channel B	Channel B
green/brown	Channel \bar{B}	Channel \bar{B}		Channel \bar{B}
yellow	Channel N	Channel N	Channel N	Channel N
yellow/brown	Channel \bar{N}	Channel \bar{N}		Channel \bar{N}
yellow/black	Sense GND	$\bar{A}larm$	$\bar{A}larm$	$\bar{A}larm$
yellow/red	Sense V cc	Sense V cc		Sense V cc
red	DC 5 V	DC 5/10 - 30 V	DC 5/10 - 30 V	DC 5/10 - 30 V
black	GND	GND	GND	GND
Cable screen ¹	Cable screen ¹		Cable screen ¹	Cable screen ¹

¹ connected with encoder housing

ELECTRICAL CONNECTIONS Cable TPE (Connection codes F)

Cable TPE (F)	Output circuit			
Colour	RS422 + Sense (T)	RS422 + Alarm (R)	push-pull (K)	push-pull complementary (I)
brown	Channel A	Channel A	Channel A	Channel A
green	Channel \bar{A}	Channel \bar{A}		Channel \bar{A}
grey	Channel B	Channel B	Channel B	Channel B
pink	Channel \bar{B}	Channel \bar{B}		Channel \bar{B}
red	Channel N	Channel N	Channel N	Channel N
black	Channel \bar{N}	Channel \bar{N}		Channel \bar{N}
violet (white) ¹	Sense GND	$\bar{A}larm$	$\bar{A}larm$	$\bar{A}larm$
blue	Sense V cc	Sense V cc		Sense V cc
brown/green	DC 5 V	DC 5/10 - 30 V	DC 5/10 - 30 V	DC 5/10 - 30 V
white/green	GND	GND	GND	GND
Cable screen ²	Cable screen ²	Cable screen ²	Cable screen ²	Cable screen ²

¹ white with RS422 + Sense (T)

² connected with encoder housing

Irrtümer und Änderungen vorbehalten

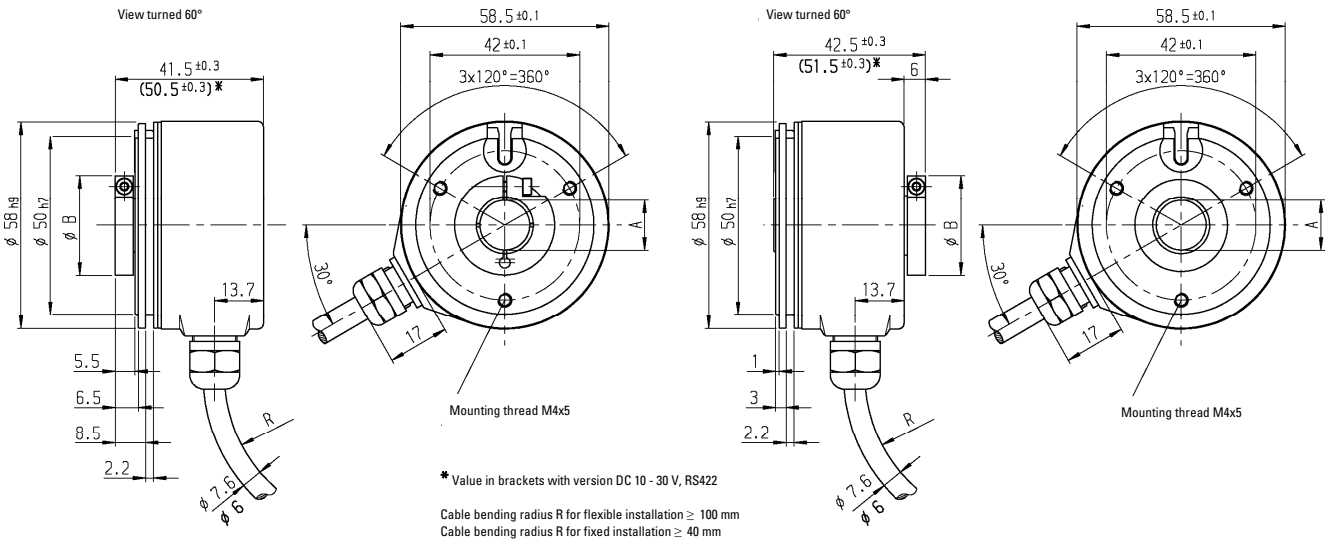
TECHNICAL DATASHEET

Incremental Encoder RI58-G / RI58TG / RI58CG

DIMENSIONED DRAWINGS

Mounting D: Through hollow shaft with clamping ring front

Mounting H: Through hollow shaft with clamping ring rear



Dim.	Hollow shaft-Ø	Unit
A	14 ^{H7} 15 ^{H7}	mm
A*	14 _{g8} 14 _{g8}	mm
B	30 30	mm
A* = Diameter of connection shaft		

Dimensions in mm

Irrtümer und Änderungen vorbehalten

TECHNICAL DATASHEET

Incremental Encoder RI58-G / RI58TG / RI58CG

ORDERING INFORMATION

Type	Number of pulses	Supply Voltage ^{1,2}	Flange, Protection, Shaft	Output	Connection
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
RI58-G RI58TG* RI58CG*	RI58-G: 50...5000 RI58TG: 50 ...2500 RI58CG: >2500 ... 5000	A DC 5 V E DC 10 - 30 V	D.39 Through hollow shaft with clamping ring front, IP64, 14 mm D.3D Through hollow shaft with clamping ring front, IP64, 15 mm H.39 Through hollow shaft with clamping ring rear, IP64, 14 mm H.3D Through hollow shaft with clamping ring rear, IP64, 15 mm ³	R RS422 + Alarm T RS422 + Sense K Push-pull I Push-pull complementary	B PVC cable, radial F TPE cable, radial

¹ DC 5 V: only with output "T", "R" available

² DC 10 - 30 V: only with output "K", "I", "R" available

³ Version on request

*RI58TG and RI58CG not available with connection code "B"

ORDERING INFORMATION

Selection of cable length

Versions with cable outlet (connection A, B, E or F) 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. For variants with connector on cable end please add cable length code in between. Further cable lengths on request.

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

Examples:

Cable 3 m length: ... B - D0

Cable mit 3 m length and M23 connector, cw: ... F - D0 - I

Irrtümer und Änderungen vorbehalten

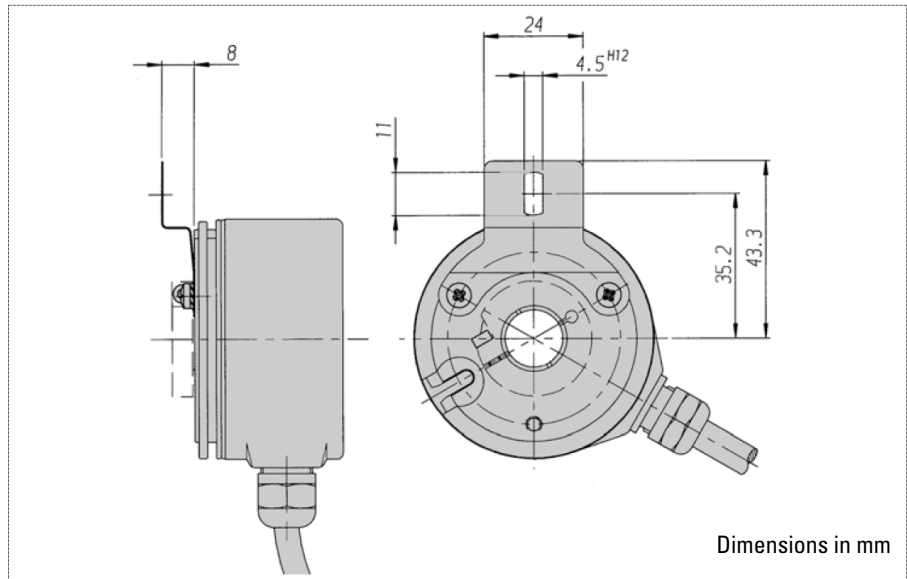
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TECHNICAL DATASHEET

Incremental Encoder RI58-G / RI58TG / RI58CG

Accessories

ACCESSORIES Hubshaft with tether as stator coupling, ordering code 1 531 162



COUNTERS

Counters	Art.-Nr.
Multifunctional counter tico 732	www.hengstler.com
Multifunctional counter tico 772	www.hengstler.com

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