Инкрементные энкодеры ICURO RI58, RI59

Технические характеристики

TECHNICAL DATASHEET

Incremental Encoder RI 58-H

- Through hollow shaft
- High accuracy by means of integrated flexible coupling
- Safe shaft mounting
- Applications: 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

Housing diameter	58 mm
Shaft diameter	10 mm / 12 mm (Hubshaft)
Flange (Mounting of housing)	Synchro flange
Protection class shaft input (EN 60529)	IP64
Protection class housing (EN 60529)	IP64
Shaft tolerance	Ø 10 mm, tolerance g8 (-0.005 ... -0.027 mm), Ø 12 mm, tolerance g8 (-0.006 ... -0.033 mm)
Axial endplay of mounting shaft (hubshaft)	± 0.4 mm
Parallel endplay of mounting shaft	0.4 mm
Angular endplay of mounting shaft	1 °
Max. speed	max. 3000 rpm
Starting torque typ.	≤ 2 Ncm
Moment of inertia	approx. 65 gcm² (10 mm shaft) approx. 95 gcm² (12 mm shaft)
Vibration resistance (DIN EN 60068-2-6)	10 g = 100 m/s² (10 ... 2000 Hz)
Shock resistance (DIN EN 60068-2-27)	100 g = 1000 m/s² (6 ms)
Operating temperature	-10 °C ... +70 °C
Storage temperature	-25 °C ... +85 °C
Material housing	Aluminum
Weight	approx. 210 g
Connection	Cable, radial

TECHNICAL DATA
electrical

General design	as per DIN VDE 0160, 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 antivalent (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)

TECHNICAL DATASHEET

Incremental Encoder RI 58-H

TECHNICAL DATA
electrical (continued)

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	1 ... 5000
Pulse shape	Square wave
Pulse duty factor	1:1

[1] Pole protection with supply voltage DC 10 - 30 V

ELECTRICAL CONNECTIONS
Cable PVC

Connecting cable Colour	**Lead □**	**Output RS422 T and R**	**push-pull K and I**
red	0.5 mm [2]	DC 5/10 - 30 V	DC 10 - 30 V
red/yellow	0.14 mm [2]	Sense VCC	Sense VCC
white	0.14 mm [2]	Channel A	Channel A
white	0.14 mm [2]	Channel $\overline{A}$	Channel $\overline{A}$ [1]
green/brown	0.14 mm [2]	Channel B	Channel B
green/brown	0.14 mm [2]	Channel $\overline{B}$	Channel $\overline{B}$ [1]
yellow	0.14 mm [2]	Channel N	Channel N
yellow/brown	0.14 mm [2]	Channel $\overline{N}$	Channel $\overline{N}$ [1]
black	0.5mm [2]	GND	GND
black/yellow	0.14 mm [2]	$\overline{Alarm}$/Sense GND [2]	$\overline{Alarm}$
screen [3]		screen [3]	screen [3]

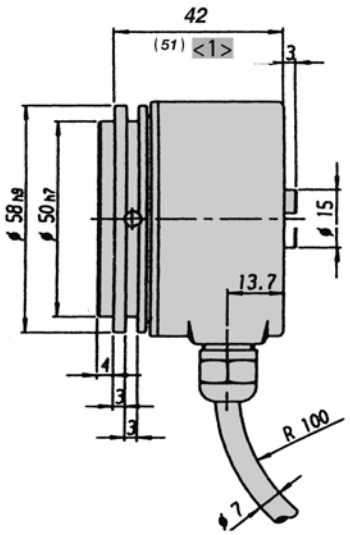
[1] only push-pull complementary (I)
[2] depending on ordering code
[3] connected with encoder housing

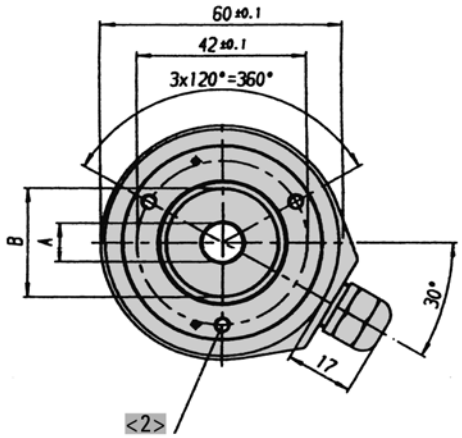
TECHNICAL DATASHEET

Incremental Encoder RI 58-H

DIMENSIONED DRAWINGS

Synchro flange





Required dimension of mounting shaft (g8)	Hollow shaft Ø (A)	B	Unit
-0.005 ... -0.027	10 *	28	mm
-0.006 ... -0.033	12 *	33	mm
* Tolerance H7 = 0 ... +0.018 mm			

<1> value in brackets with version DC 10 - 30 V, RS422
<2> mounting thread M4x5
Cable bending radius R for flexible installation ≥ 100 mm
Cable bending radius R for fixed installation ≥ 40 mm

Dimensions in mm

ORDERING INFORMATION

Type	Number of pulses	Supply voltage [1,2]	Flange, Protection, Shaft	Output	Connection
☐	☐	☐	☐	☐	☐
RI58-H	**1 ... 5000**	**A** DC 5 V **E** DC 10 - 30 V	**S.32** Synchro, IP64, 10 mm **S.37** Synchro, IP64, 12 mm	**R** RS422 +Alarm **T** RS422 +Sense **K** Push-pull **I** Push-pull complementary	**B** PVC cable, radial

[1] DC 5 V: only with output "T", "R" available
[2] DC 10 - 30 V: only with output "K", "I", "R" available

TECHNICAL DATASHEET

Incremental Encoder RI 58-H

ORDERING INFORMATION

Selection of cable length

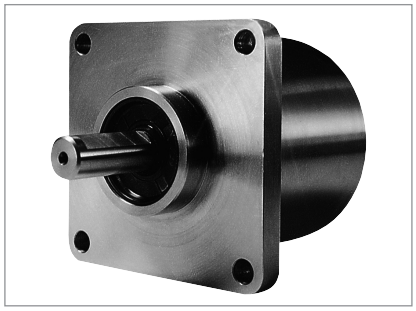
Versions with cable outlet (connection A, B, E or F) are available with various lengths of cable. To order your desired cable length, please add the respective code to the end of your ordering code. For variants with connector on cable end please add cable length code in between. Further cable lengths 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

Example:
Cable 3 m length: ... B - D0
Cable mit 3 m length and M23 connectorr, cw: ... B - D0 - I

TECHNICAL DATASHEET

Incremental Stainless Steel Encoders RI 59



- Stainless steel encoder with high protection class
- High corrosion resistance
- Use in the area of food production
- Applications: packing machines, bottling machines, washing plants, mixers, cranes, hoists, marine outfitters

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 / 230 / **250** / 256 / 300 / 314 / 350 / 360 / 375 / 400 / 460 / 480 / **500** / 512 / 600 / 625 / 635 /720 / 900 / **1000** / **1024** / 1200 / **1250** / 1500 / 1600 / 1800 / 2000 / 2048 / **2500** / 3000 / 3480 / **3600** / 3750 / 3968 / 4000 / **4096** / 4800 / **5000** / 5400 / 6000 / 7200 / 7680 / 8000 / 8192 / 9000 / 10000
Other number of pulses on request
Preferably available versions are printed in bold type.

TECHNICAL DATA
mechanical

Housing diameter	58 mm
Shaft diameter	9.52 mm / 10 mm (Solid shaft)
Flange (Mounting of housing)	Square flange 63.5 mm
Protection class shaft input (EN 60529)	IP67
Protection class housing (EN 60529)	IP67
Shaft load axial / radial	40 N / 60 N
Max. speed	max. 10 000 rpm
Torque	≤ 1 Ncm
Moment of inertia	approx. 20 gcm²
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 ... +70 °C
Storage temperature	-25 °C ... +85 °C
Material housing	Stainless Steel
Weight	approx. 620 g
Connection	Cable, axial or radial

TECHNICAL DATA
electrical

General design	as per DIN VDE 0160, 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 antivalent (I): DC 10-30 V
Max. current w/o load	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

TECHNICAL DATASHEET

Incremental Stainless Steel Encoders RI 59

TECHNICAL DATA
electrical (continued)

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	1 ... 10 000
Alarm output	NPN-O.C., max. 5 mA
Pulse shape	Square wave
Pulse duty factor	1:1

[1] Pole protection with supply voltage DC 10 - 30 V

ELECTRICAL CONNECTIONS
Cable PVC

Connecting cable Colour	**Lead ∅**	**Output RS422 T and R**	**push-pull K and I**
red	0.5 mm [2]	DC 5/10 - 30 V	DC 10 - 30 V
red/yellow	0.14 mm [2]	Sense V_{CC}	Sense V_{CC}
white	0.14 mm [2]	Channel A	Channel A
white/brown	0.14 mm [2]	Channel $\overline{A}$	Channel $\overline{A}$ [1]
green	0.14 mm [2]	Channel B	Channel B
green/brown	0.14 mm [2]	Channel $\overline{B}$	Channel $\overline{B}$ [1]
yellow	0.14 mm [2]	Channel N	Channel N
yellow/brown	0.14 mm [2]	Channel $\overline{N}$	Channel $\overline{N}$ [1]
black	0.5 mm [2]	GND	GND
black/yellow	0.14 mm [2]	$\overline{Alarm}$/Sense GND [2]	$\overline{Alarm}$
screen [3]		screen [3]	screen [3]

[1] only push-pull complementary (I)

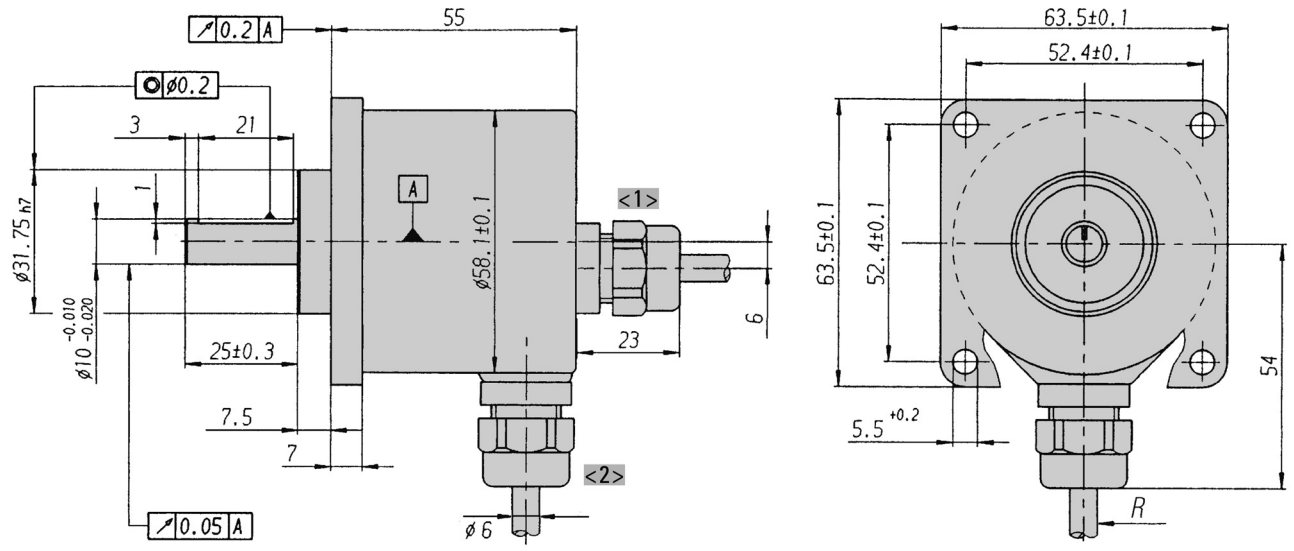
[2] depending on ordering code

[3] connected with encoder housing

TECHNICAL DATASHEET

Incremental Stainless Steel Encoders RI 59

DIMENSIONED DRAWINGS



<1> axial
<2> radial

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

ORDERING INFORMATION

Type	Number of pulses	Supply voltage	Flange, Protection, Shaft	Output [1]	Connection
☐	☐	☐	☐	☐	☐
RI59-O	**1 ... 10000**	**A** DC 5 V **E** DC 10 - 30 V	**Q.76** Square, IP67, 9.52 mm **Q.72** Square, IP67, 10 mm **Q.7B** Square 63.5x63.5, IP67, 9.52 x 25 mm **Q.7A** Square 63.5x63.5, IP67, 10 x 25 mm	**R** RS422 +Alarm **T** RS422 +Sense **K** Push-pull **I** Push-pull complementary	**A** PVC cable, axial **B** PVC cable, radial

[1] Output code "K" and "I": short-circuit-proof

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. 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

По вопросам продаж и поддержки обращайтесь:

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Архангельск (8182)63-90-72
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