SCANCON Industrial Encoders

Heavy Duty

Type 2RCI

- **Shaft Encoder – ø 115 mm**
- **Shaft – ø 11 mm**
- **Resolution up to 12,500 ppr**
- **IP 66 Environmental Protection**
- **"Seawater-proof" 22 micron Anodization**

CE

Electrical Specifications

Code:	Incremental
Resolution:	1 to 12,500 ppr (pulses per revolution)
Supply Voltage:	4.5V - 30V **
Current Consumption:	45 mA max. (no load)
Output Voltage:	Low: 500 mV max. at 10 mA High: (Vin – 0.6) at -10 mA (Vin – 1.3) at -25 mA
Output Current:	30 mA max. load per output channel **
Frequency Response:	300 kHz max. **
Output Format:	Two channel (A, B) quadrature with Index (Z) and complementary (A-, B-, Z-) outputs
Phase Sense:	A leads B clockwise (CW) from the shaft end of the encoder
Index:	Gated with Channels A and B high
Accuracy:	+/- 0.8 arc-min.
Output:	ASIC Push-pull and Differential OL7272 Push-pull and Differential Line Driver 26C31 Differential Line Driver 5V output (with 5V input)
Electrical Protection:	Reverse polarity and output short circuit protected
Noise Immunity:	Tested to EN61000-6-2 : 2005 (industrial environments) and EN 61000-6-3 : 2007 (residential, commercial, and light-industrial environments) for Electromagnetic compatibility (EMC)

Mechanical Specifications

Material:	Housing: Aluminum Cap: Aluminum Shaft: Stainless Steel (AISI 303)
Weight:	Encoder: Approx. 575 gr (20,28 oz)
Bearing Life:	> 1.9 x 10^{10} revolutions at rated load
Shaft Speed:	5,000 rpm max.
Starting Torque:	< 0,1 Nm (14,16 oz-in) at 25° C
Mass Moment of Inertia:	8 gcm² (1,13 x 10^{-4} oz-in-sec²)
Shaft Loads:	Axial 100 N (22.5 lbs) max. Radial 100 N (22.5 lbs) max.

Environmental Specifications

Operating Temperature:	-40° to +85° C
Storage Temperature:	-40° to +85° C
Shock:	100 G / 11 ms
Vibration:	(10-2000 Hz) / 10 G
Bump:	10 G - 16 ms (1000 x 3 axis)
Humidity:	98 % RH without condensation
Enclosure Rating:	IP 66 / Nema 6 (approx.) 22 micron anodization

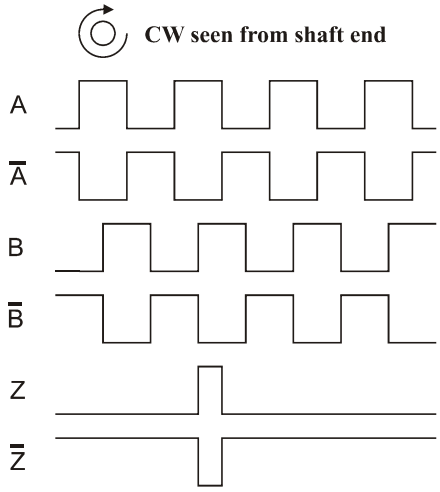
Connection Options

Cable:	8 leads (0,14 mm², 26 AWG) twisted pairs, shielded
Connector:	12-pin M23

** = It is recommended, not to combine max. Value for all 3 parameters

Type 2RCI

Output waveform



Channel tolerance	**180 e°**	**+/- 36 e°**
Phase difference tolerance	**90 e°**	**+/- 18 e°**
Z channel tolerance	**90 e°**	**+/- 18 e°**

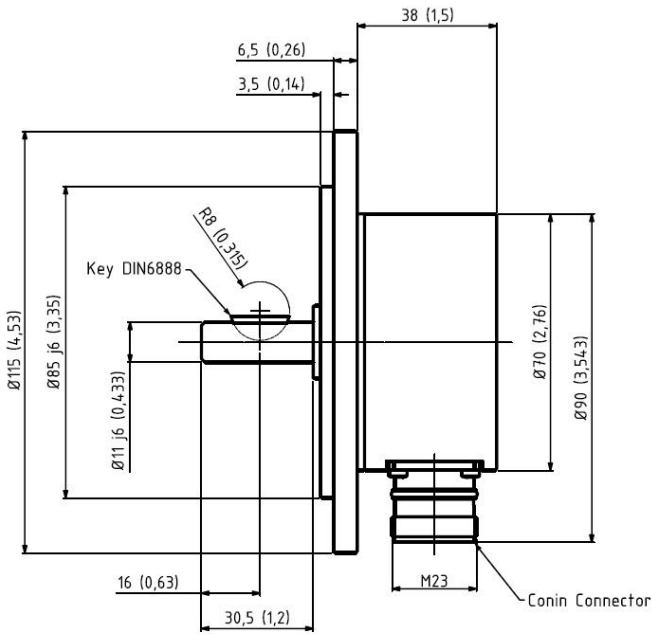
Disk Resolutions (Pulses per revolution)

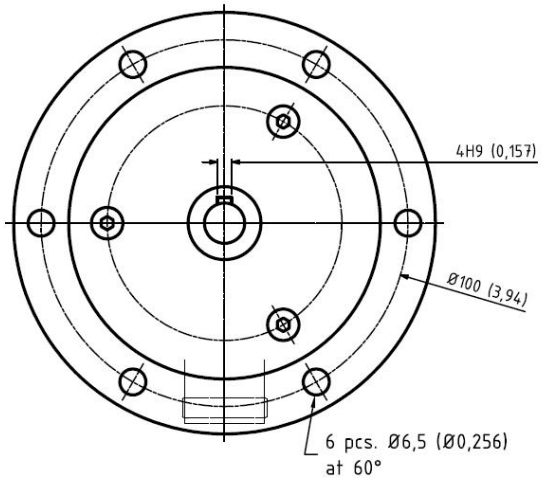
1	32	125	720	3000
2	36	150	800	3072
5	40	180	1000	3600
6	45	200	1000	4000
7	47	250	1024	4096
8	50	256	1131	5000
10	60	300	1200	8192
12	64	360	1250	9000*
15	70	400	1270	10000*
16	75	455	1500	12500*
18	80	500	2000	
20	90	512	2048	
25	100	600	2400	
30	120	635	2500	

Other options on request
Pulses per revolution,
min. 1 – max. 12.500

***** *Operating temperature: -20° C to 50° C***

Mechanical Dimensions

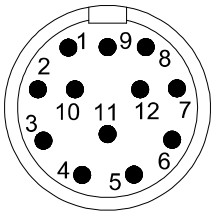




Standard M23 Connector

mm (inches)

Output Terminations



	12-pin M23	
	Standard Output	Differential Output
Pin	**Channel**	**Channel**
1	GND	B -
2	NC	NC
3	Z	Z
4	GND	Z -
5	A	A
6	GND	A -
7	Shield	Shield
8	B	B
9	NC	NC
10	GND	GND
11	GND	GND
12	Vsup	Vsup

GND = Circuit Ground Shield = Case Ground

	Cable	
	Standard Output	Differential Output
Ch.	**Wire Color**	**Wire Color**
A	Pink	Pink
B	Green	Green
Z	White	White
Vsup	Red	Red
GND	Blue	Blue
A -	*Gray**	Gray
B -	*Yellow**	Yellow
Z -	*Brown**	Brown

** Internally connected as GND*

Ordering Code

Example: 2RCI – 4096 – D – 11 – 30 – 66 – C12 – S

2RCI	-		-		-	11	-	30	-	66	-	C12	-	S
		Pulses per Revolution		**Output**		**Shaft Dia.**		**Shaft Length**		**IP Rating**		**Connector**		**Takeout**

Pulses per Revolution

See table	

Output

Standard	**N**
Differential	**D**
26C31 Line Driver 5V only	**L**
OL 7272 Line Driver	**M**
Standard - *Open Collector NPN*	**NON**
Standard - *Open Collector PNP*	**NOP**

Shaft Dia. / Shaft Length

11 mm x 30 mm	**11 - 30**

IP Rating

IP 66	**66**

Connector

M23 12-pin	**C12**

Takeout

Side (radial)	**S**

Other options on request:
Please contact Scancon A/S