



2R-3L

CE

Introduction

Standard shaft encoder
Std. IP 65 (option IP 67)
Thermal shut down at 155°C
Strong compact electronics
Based on 3 precision ball bearings,
for harsh industrial environments

MECHANICAL SPECIFICATIONS

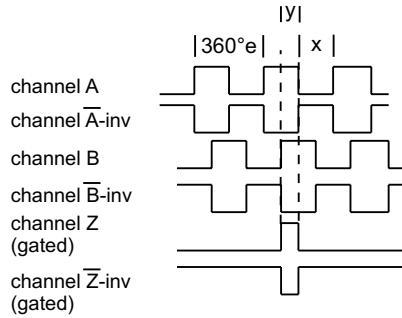
Weight	About 140g + cable 60g/meter
Material	Housing - Aluminum Shaft - Stainless Steel Bearings - Lifetime lubricated ball bearings
Shaft Loads	axial maximum = 50 N radial maximum = 50 N
Max. rev.	12,000 rev./min.
IP-rating	Standard IP 65 , Option IP 67
Start Torque	< 0,01 Nm at 25° C
Mass Moment of Inertia	2 gcm ²
Shock	maximum 100G / 11 ms
Bump	10G - 16 ms (1000 × 3 axis)
Vibration	(10-2000Hz)/ 10G

ELECTRICAL SPECIFICATIONS

Output Waveform	Incremental (A, B)
Output Signals	Standard, Inverted, Differential (RS-422A compatible @ 5V)
Current No Load	Max.45 mA
Max. load pr. output	30 mA - (Short circuit protected)*
Supply-Voltage(Vin)	Min 4,5V to Max. 30V* , Reverse polarity protection
V _{out} low	maximum 500 mV @ I = 10 mA
V _{out} high	minimum (Vin -0.6) @ I = -10 mA minimum (Vin -1.3) @ I = -25 mA
Operating Temp.	- 40°C to +85°C
Storage Temp.	- 40°C to +85°C

OUTPUT WAVEFORM

Rotation: Clockwise (cw) from shaftside



$X = 180^\circ e \pm 36^\circ e$ and $Y = 90^\circ e \pm 18^\circ e$
Z puls: Gated with A and B (standard)

Options: TTL or HTL compatible. Open Collector NPN or PNP
Gated Z-puls or none-gated Z-puls.
View more Output options in section 15 - page 1 to 2

CONNECTIONS

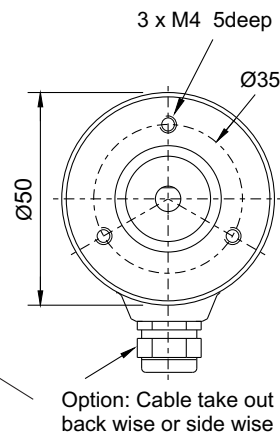
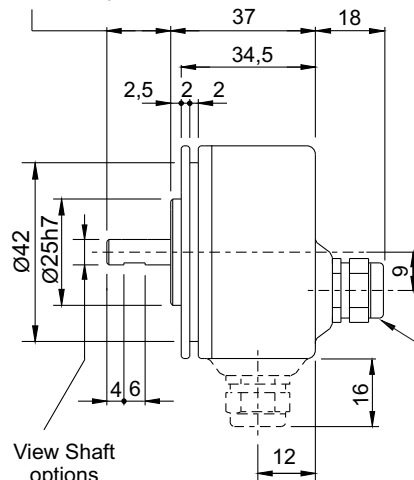
Color code	Standard
Pink	Ch. A
Grey*	Ch. A Gnd
Green	Ch. B
Yellow*	Ch. B Gnd
White	Ch. Z
Brown*	Ch. Z Gnd
Red	Vcc
Blue*	Gnd

*Blue, grey, yellow and brown are internal connected

Color code	Differential
Pink	Ch. A
Grey	Ch. A inv
Green	Ch. B
Yellow	Ch. B inv
White	Ch. Z
Brown	Ch. Z inv
Red	Vcc
Blue	Gnd

MECHANICAL DIMENSIONS

View Shaft options



ORDERING CODES
**Ordering Codes System
Incremental Shaft Encoder — 2R-3L**

Ordering Codes: 2R-3L XXXXX — XX — XXXXX — XX — XX — X

Pulses pr. rev:	No. of pulses	XXXXX					
	1 30 100 455 1250 5000						
	2 32 125 500 1500 8192						
	5 36 150 512 2000 9000						
	6 40 180 600 2048 10000						
	8 50 200 635 2400 12500						
	10 60 250 720 2500						
	15 64 256 800 3000						
	16 75 300 1000 3600						
	20 80 360 1024 4000						
	25 90 400 1131 4096						
Output signal:	Normal (TP-Standard) 3 channel = A, B, Z		N				
	TP-Differential, 6 channel A, B, Z and A-inv, B-inv, Z-inv		D				
	Line driver OL 7272 for extra long cable, up to 100 meters (Differential)		M				
	Line driver chip 26C31 (V out low < 0,4 V) (RS-422A compatible @ 5V) Only 5 Volt (Differential)		L				
	Line Driver RS-422, Chip 26C31 Volt out 5 volt Volt in 5 to 30 (Differential)		5L				
Shaft dimensions: (flat on shaft)	Ø6 mm × 15 mm			06 × 15			
	Ø8 mm × 15 mm			08 × 15			
	Ø10 mm × 15 mm			10 × 15			
IP-rating:	IP 65				65		
	IP 67				67		
Cable Length:	Standard 1 meter No. of meters					01 XX	
Cable take out: (or connector)	Back (Axial) Side (Radial)						B S
Connector:	Coninvers Connector or MIL-connector View Section 14 page 3 to 6						
More accessories							
Measuring wheel and couplings:	View Section 14 page 1 to 2						
Anti rotation spring and adaptors:	View Section 10 page 1 to 6						

WARRANTY

Scancon A/S warrants against manufacturing defects for a period of 12 months from the date of manufacture. Product dimensions, weights and all product illustrations are approximate and may be modified without prior notice.

This warranty does not cover problems or consequences due to common usage (wear and tear) for which the product was designed. Nor does it cover product failures caused by improper installation or use, overloading, incorrect maintenance, or operation outside the product's specifications.

Detailed warranty information can be found in Scancon's Terms & Conditions