



Euro Encoder ES 38

Optical incremental encoder, small and efficient

Resolution

Resolution (Pulses/Revolution):

30	100	200	250
256	300	360	400
500	512	600	646
800	900	1000	1024
1200	1500	1800	2000
2048	2500		

Type explanation

ES 38-6-2500-05-D-S

Encoder type	Incremental
Flange diameter	ø 38 mm
Case diameter	ø 38 mm
Number of channels	3 = A + B + M 6 = AA + BB + MM
Resolutions	xxxx = Impulse pro Umdrehung
Supply voltage	05 = 5 VDC ± 5% 12 = 4,5 ... 13 VDC 24 = 10,8 ... 26 VDC
Output driver	D-RS422 C R P
Position of connection	S
Shaft diameter	ø 6 mm

Technical data

Mechanical data

Rotational speed	$\leq 6000 \text{ min}^{-1}$
Torque	$\leq 0,1 \text{ Ncm}$
Moment of inertia	8 g cm^2
shaft loading	$\leq 20 \text{ N radial}$ $\leq 10 \text{ N axial}$
Angular acceleration	$\leq 105 \text{ rad/sec}^2$
Weight	$\leq 0,15 \text{ kg}$

Environmental conditions

Vibration	$150 \text{ ms}^{-2} (50 \text{ Hz} / 1\text{h})$
Shock	$300 \text{ ms}^{-2} (11 \text{ ms})$
Operating temperature	$-10 \dots +70^\circ\text{C}$
Storage temperature	$-30 \dots +80^\circ\text{C}$
Atmospheric humidity	$\leq 85\% \text{ r.h.}$
Protection class	IP 50 (DIN 40050/IEC 144)

Electrical data

Scanning type	Optical, without contact
Transmitter, infrared	LED
Receiver	Photo-Transistor
Supply voltage	$V_{cc} = 5 \text{ VDC} \pm 5\%$, output D $V_{cc} = 4,5 \dots 13 \text{ VDC}$, output R, C $V_{cc} = 10,8 \dots 26 \text{ VDC}$, output C, P
Power consumption	$\leq 80 \text{ mA}$, output C, R, P $\leq 150 \text{ mA}$, Output D
Output frequency	$\leq 200 \text{ kHz}$
Signal level	High $> V_{cc} - 1 \text{ V}$ Low $< 0,5 \text{ V} (20 \text{ mA})$
Load capacity of the outputs	20 mA
Dielectric strength of outputs	+50 V

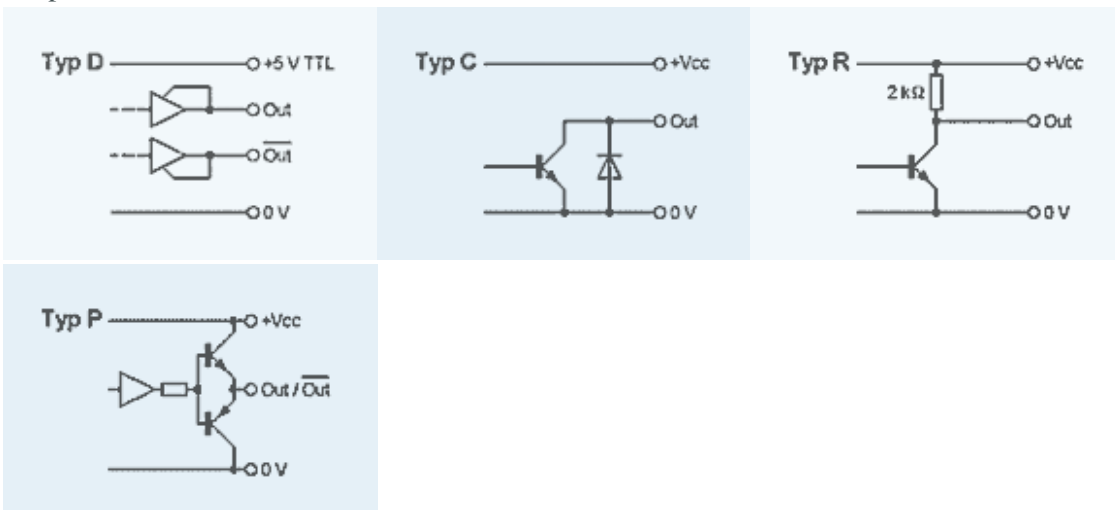
Cable 3 channels

Wire colour	Signal
Red	+Vcc
Black	0 V GND
Green	Signal A
White	Signal B
Yellow	Signal M
Shield	N.C.

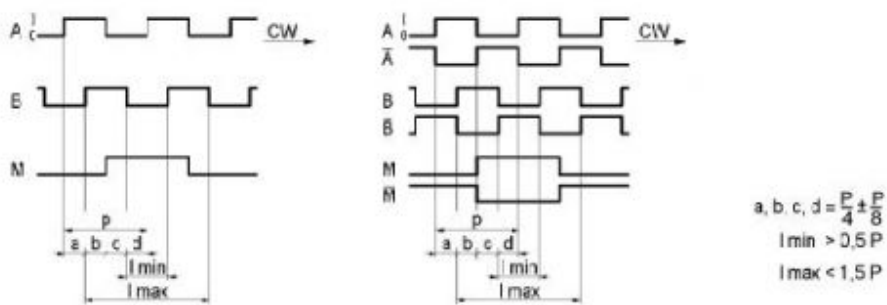
Cable 6 channels

Wire colour	Signal
Red	+Vcc
Black	0 V GND
Green	Signal A+
Blue	Signal A-
White	Signal B+
Grey	Signal B-
Yellow	Signal M+
Orange	Signal M-
Shield	N.C.

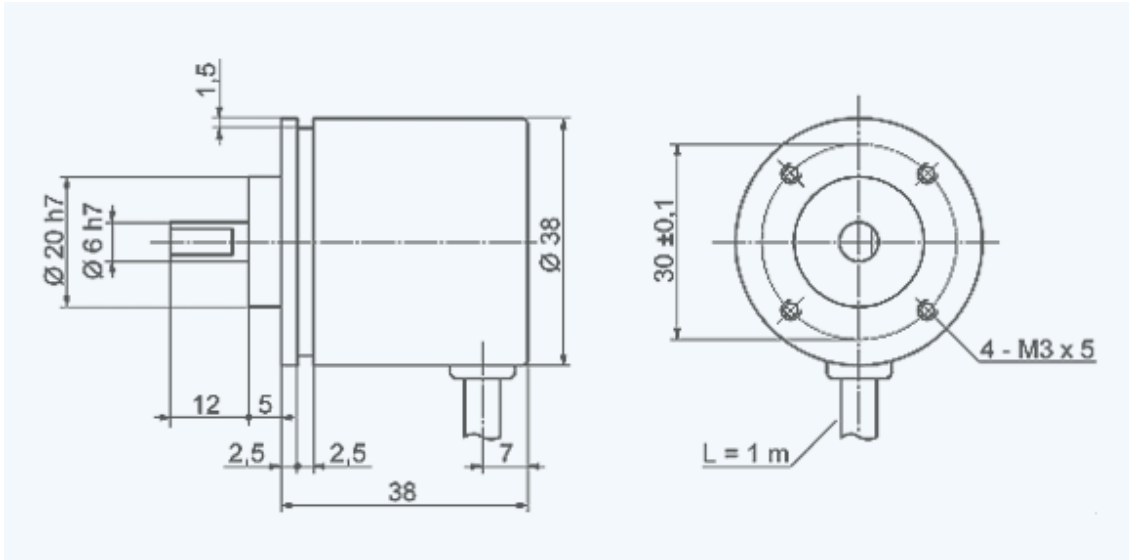
Output driver



Output channels / Output signals



Outline drawing



Version E505 · Subject to change

INDUcoder® · INDUcoder Messtechnik GmbH, Kaiserstraße 316, 47178 Duisburg, Deutschland
Tel: (0203) 57047-0, Fax: (0203) 57047-20, E-Mail: info@inducoder.de, Internet: www.inducoder.de