



Optical incremental shaft encoder
 Available with Sine/Cosine signals
 Every shaft diameter from 6 mm to 12,7 mm
 Available with slot and spring



Standard Encoder EE 110

Optical incremental shaft encoder available with **Sine/Cosine** signals. Every shaft diameter from 6 mm to 12,7 mm, available with slot and spring.

Resolution

Resolution (Pulses/Revolution):			
1	4	10	12
50	100	128	157
180	200	250	256
350	360	376	400
500	512	600	720
1000	1024	1250	1500
1800	2000	2048	2160
2500	3600	4000	4096
4500	5000	5400	6000
7200	9000	10000	18000

Every other resolution up to 900 000 on request

Type explanation

EE 110-6-6000-05-D-RC12	
Encoder type	Incremental
Flange diameter	ø 110 mm
Case diameter	ø 90 mm
Number of channels	3 = A + B + M 6 = AA + BB + MM
Resolutions	xxxx = Impulse pro Umdrehung
Supply voltage	05 = 5 VDC ± 5% 30 = 10..30 VDC
Output driver	D-RS422 P S
Position of connection	R S
Shaft diameter	ø 10 mm

Technical data

Mechanical data

Rotational speed	$\leq 10000 \text{ min}^{-1}$
shaft loading	$\leq 10 \text{ N radial}$ $\leq 10 \text{ N axial}$
Angular acceleration	$\leq 10^4 \text{ rad/sec}^2$
Weight	$\leq 0,6 \text{ kg}$

Environmental conditions

Vibration	100 ms^{-2} (20 ... 2000 Hz)
Shock	1000 ms^{-2} (11 ms)
Operating temperature	0 .. +80°C standard -20 .. +110°C optional -42 .. +110°C optional
Atmospheric humidity	$\leq 95\% \text{ r.h.}$
Protection class	IP 65 (DIN 40050/IEC 801) IP 68 (optional)

Electrical data

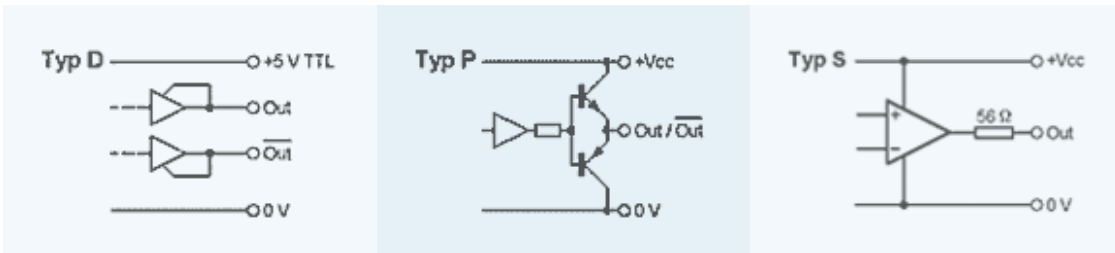
Scanning type	Optical, without contact
Transmitter, infrared	LED
Receiver	Photo-Transistor
Measurement accuracy	$\pm 1'$ standard $\pm 5''$ optional
Supply voltage	$V_{cc} = 5 \text{ VDC} \pm 5\%$ $V_{cc} = 10...30 \text{ VDC}$
Power consumption	200 mA max.
Output frequency	$\leq 300 \text{ kHz}$ (Output D) $\leq 160 \text{ kHz}$ (Output P, S)
Signal level	High $> V_{cc} - 2 \text{ V}$ (Output D, P) Low $< 0,5 \text{ V}$ (Output D, P) Analog 1 V_{ss} (Output S)
Load capacity of the outputs	20 mA

Cable	Signal
Wire colour	
Brown/Green	+Vcc
Blue	+Vcc Sense ¹⁾
White/Green	0 V GND
White	0 V Sense
Brown	Signal A+
Green	Signal A- ²⁾
Grey	Signal B+
Pink	Signal B- ²⁾
Red	Signal M+
Black	Signal M- ²⁾
Shield	N.C.

1) nur bei Vcc = 5 VDC TTL

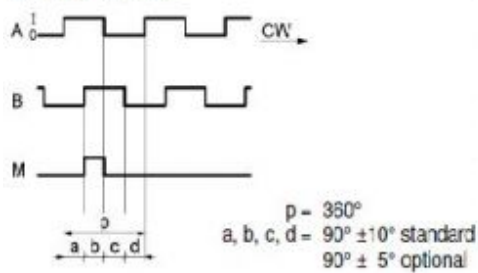
2) nur bei 6 Ausgangskanälen

Output driver

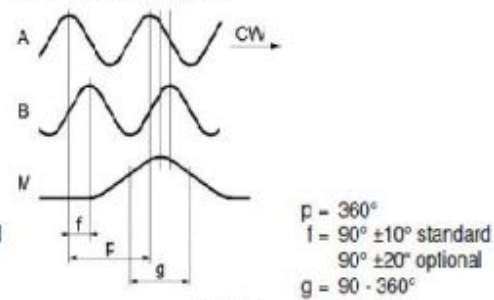


Output channels / Output signals

Rechteck-Signale



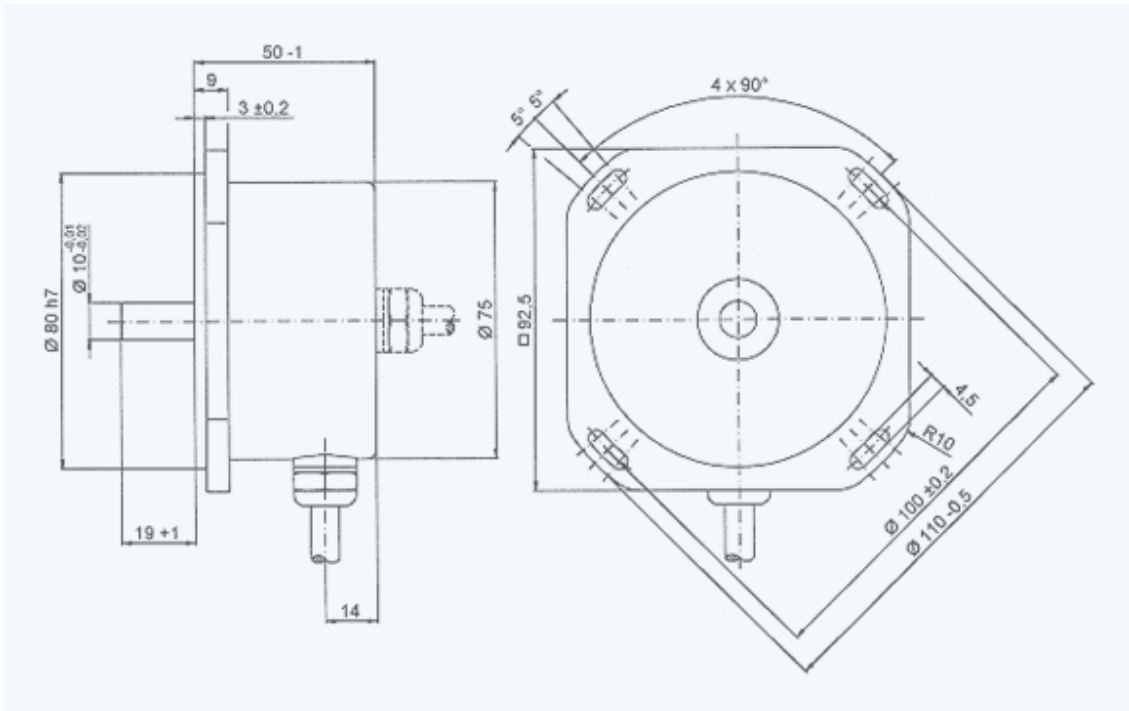
Sinus-/Cosinus-Signale



E523 -111

Änderungen vorbehalten / Soumis aux changements / Subject to change

Outline drawing



Version E 523-111 · Subject to change

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