

A28-F PHOTOELECTRIC ROTARY ENCODER



The encoder **A28-F** is similar to the MOZ30 (Megatron), OES (Sansey) type encoders in electrical parameters, mounting and overall dimensions.

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The photoelectric rotary encoder A28-F is used to establish an informational link between the key components of machines, industrial robots, comparators and DCC, NC or Digital Readout units. It gives information about the value and direction of the motion components. The encoder is used in automatic control, on-line gauging, in process monitoring systems, etc.

The encoder consists of three parts: mechanical, optical and electronic.

The mechanical part supports the rotation of the grating disc, fixes optical and electronic parts.

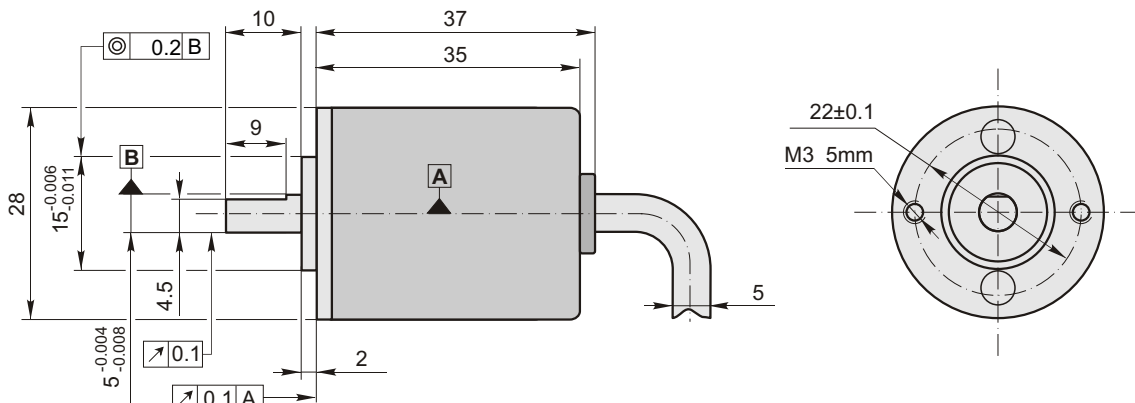
The optical part includes the light source, photosensitive diodes and grating elements.

The electronic part is made on the base of a specialized microchip.

The case of the encoder is fixed to an object by means of screws. The shaft of the encoder is connected with an object shaft by virtue of a compensating coupling.

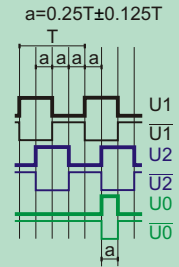
Mechanical Data

Line number:		Starting torque at 20°C	≤ 0.1 Ncm
- preferable	60 100 200	Moment of inertia of rotor	< 2 gcm ²
	250 360 500	Protection (IEC 529)	IP54
	1000 1024 1500	Maximum weight without cable	0.045 kg
- possible	2000 2500	Operating temperature	-10...+70 °C
	150 300 720	Storage temperature	-30...+80 °C
	800 1800	Maximum humidity	
Maximum shaft speed	6000 rpm	(without condensation of moisture)	98 %
Maximum shaft load:		Permissible vibration (55 to 2000 Hz)	≤ 100 m/s ²
- axial	5 N	Permissible shock (11 ms)	≤ 300 m/s ²
- radial (at shaft end)	10 N		
Accuracy (T-period of signal)	±0.1T arc. sec		



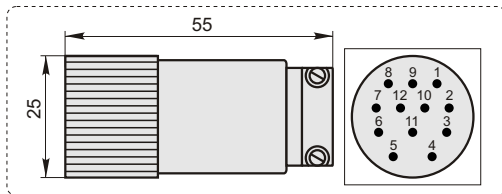
Electrical Data

Power supply	+5 V ±5%	Direction of signals	U2 lags U1 with clockwise rotation (viewed from shaft side)
Maximum consumed current (without load)	120 mA	Maximum rising and falling time	< 0.5 μs
Light source	LED	Standard cable length	0.5 m; without connector
Incremental signals	Square-wave $\overline{U1}$, $\overline{U2}$ and their inverted $\overline{U1}$, $\overline{U2}$ Signal levels at 20 mA load current: - low ("0" logic) ≤ 0.5 V - high ("1" logic) ≥ 2.4 V	Cable diameter	5 mm
Reference signal	One square-wave $\overline{U0}$ and its inverted $\overline{U0}$ per revolution. Signal levels at 20 mA load current : - low ("0" logic) ≤ 0.5 V - high ("1" logic) ≥ 2.4 V	Maximum cable length	30 m
Maximum operating frequency	160 kHz		

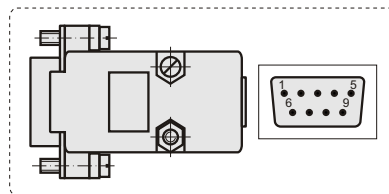


Accessories

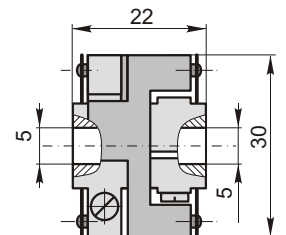
C12
12-pin round connector



D9
9-pin flat connector



SC30
Coupling



Order form

