

## SINGLETURN SHAFT ENCODER Model CA 105 absolute/electro-optical

- Resolution up to 720 counts per 360°
- Output codes: BCD or Binary
- Zero point adjustment device
- Heavy duty configuration
- Environmental protection IP 65

**TWK**

### Constructional features

Anodized aluminium housing - Stainless steel shaft (10 mm dia) - Sealed ball bearings - Plastic code disc - Gallium-Arsenide diodes - Phototransistors followed by trigger - Mounting face to DIN 42948, size C 105, with four M6 threaded holes.

### Standard types

- CA 105-360B:** 360 counts per revolution, BCD output code, resolution 1°
- CA 105-720R:** 720 counts per revolution, Binary output code, resolution 0,5°

### Electrical specification

- Angular accuracy:  $\leq \pm 15'$
- Light sources: GaAs-diodes
- Output circuitry: Open collector, positive logic  
5 to 15 V  $I_{max.} = 35$  mA  
15 to 24 V  $I_{max.} = 15$  mA  
(external pull-up resistance to be fitted by user)
- Supply voltage: 12 to 30 VDC (internal constant current source)
- Current requirement: 320 mA approx.
- Code direction: Upward count when turning CCW, can be inverted by external strap
- Read-out frequency: 3000 rpm max.
- Parity bit: Electronically generated

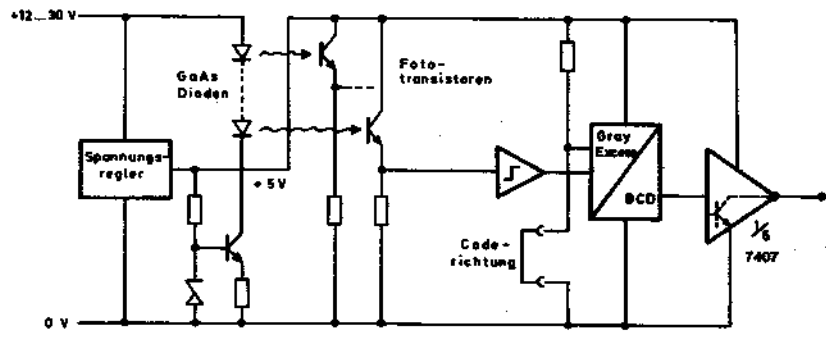
### Zero-point adjustment

In order to adjust the zero-point when the encoder is fixed and coupled to its driving shaft the hex head screw at the rear cover is to be retracted. A special key which is supplied with each encoder can now be inserted to adjust the code disc with respect to the position of the input shaft of the encoder.

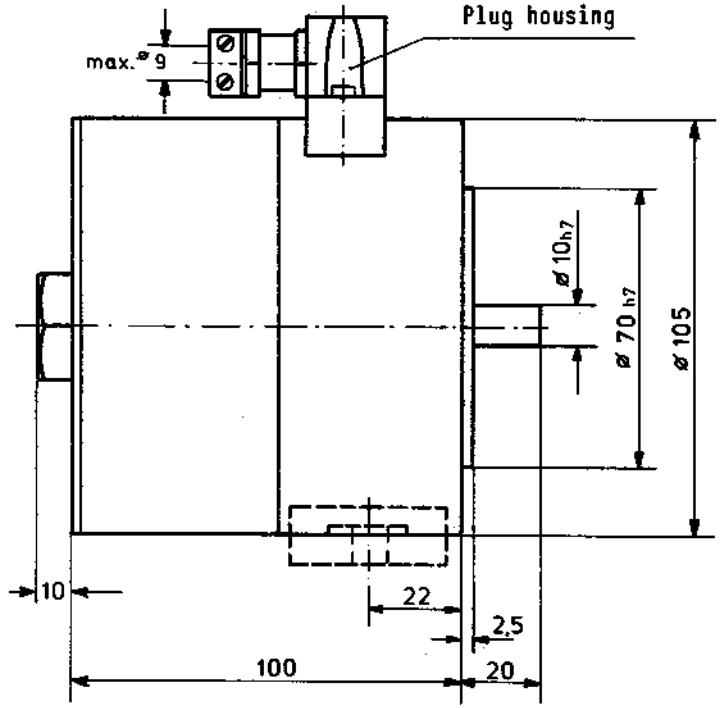
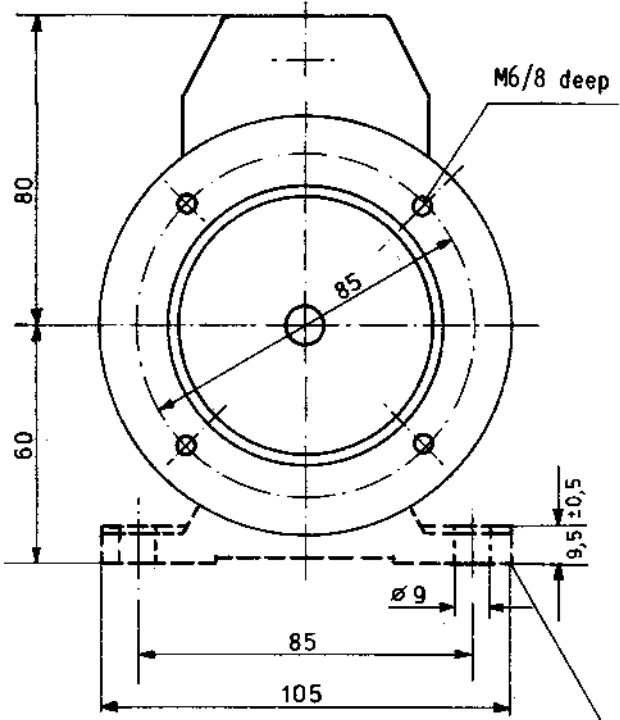
### Mechanical specification

- Slewing speed: 3000 rpm max.
- Starting torque:  $\leq 5$  Ncm
- Shaft load max: 250N radial, 200N axial
- Useful life of bearings:  $10^9$  rev. at max. load and max. speed
- Operating temperature: - 5°C to + 50°C
- Storage temperature: - 25° to + 70°C
- Vibration: 5 Hz to 1000 Hz/10 g
- Shock: 20 g/11 ms
- Weight: 1.8 kg
- Environmental protection: IP 65 (dust and water to DIN 40050)
- Connector type: DA 15 with special sealed case (IP 65)

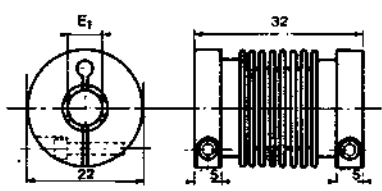
**Basic circuitry**



**Dimensions in mm**



Mounting bracket



Stainless steel bellow coupling 491/...  
Dia "E1": 8,10 or 12 mm both sides

**Accessories**

Mating plug with DA 15 S sockets and sealed housing is supplied with each encoder. Coupling and mounting bracket must be ordered separately.

Encoders with BCD-output can be used with TWK-indicators WA 100 and WV 104 (Data Sheet 2833EA).