

TK25 series



Main features



Extremely rugged mechanical part despite miniature dimensions



Housing sealed against oil, moisture and dust



Standard pulse rate up to 1250 pulses per revolution (without count multiplication logic)



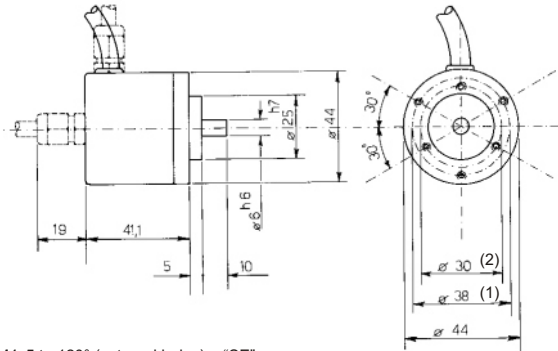
Output capacity over 50 kHz

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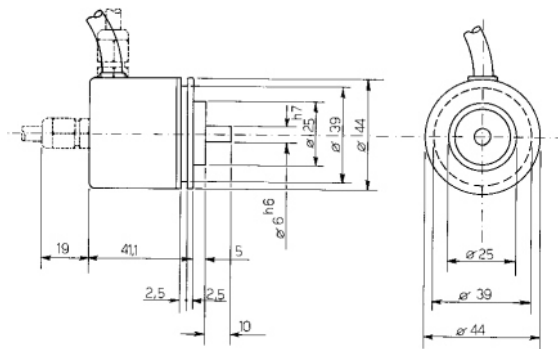


TK25 series



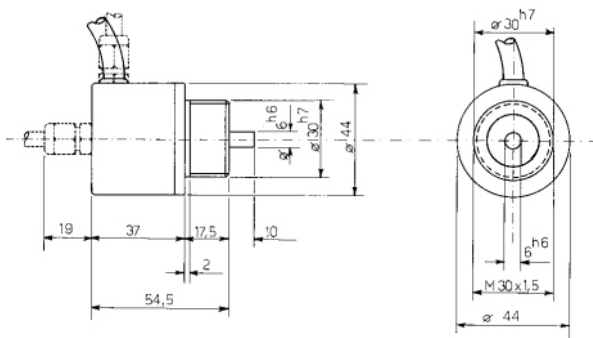
SE or SI = Servo flange

- (1) 3 holes M4x5 to 120° (external holes) = "SE"
- (2) 3 holes M3x5 to 120° (internal holes) = "SI"



SG = Servo brackets flange

3 Clips (BSF 38) on diameter 56 ± 0,2mm - fix with screws M2x10



P = Proxy flange

TECHNICAL CHARACTERISTICS

Models	TK251 unidirectional TK252 unidirectional+ zero index TK262 bi-directional TK263 bi-directional+ zero index
Standard no. of increments per revolution	2 - 3 - 5 - 10 - 15 - 20 - 25 - 32 - 36 - 40 - 50 - 60 - 64 - 72 - 78 - 100 - 125 - 128 - 150 - 180 - 200 - 250 - 254 - 256 - 300 - 314 - 360 - 400 - 500 - 512 - 600 - 625 - 720 - 800 - 900 - 1000 - 1024 - 1250

MECHANICAL CHARACTERISTICS

Assembly	SG Servo brackets P Proxy Flange SE Servo (3 holes M4x5 Ø38) SI Servo (3 holes M3x5 Ø30)
Dimension	See drawings
Mass	0,23 kg
Slewing speed	10.000 rpm for short period; 6.000 rpm for normal operation; 2.000 rpm for normal operation with shaft seal
Shaft Diameter	6 mm
Hollow shaft	Not available
Shaft seal	Available optional (only with "P" assembly)
Starting torque at 25°C	0,005 Nm without shaft seal; 0,006 Nm with shaft seal
Starting inertia	6 g /cm ²
Acceleration	150.000 rad/s ² (glass disc); 200.000 rad/s ² (flexible disk - "DP")
Ball bearing working life	10 ⁹ revolution min.
Low torque	Not available
Shaft loading	Axial 40 N; radial 40 N

MATERIALS

Mainframe	"Al" anticorrosion thermally stabilised
Housing	ABS anti-shock reinforced with fibre glass
Shaft	Stainless steel
Light source	GaAsAl infrared light emitting diode- MTBF 10 ⁵ hours min.
Receivers	Two opto-receivers in push-pull for each channel

ENVIRONMENTAL CHARACTERISTICS

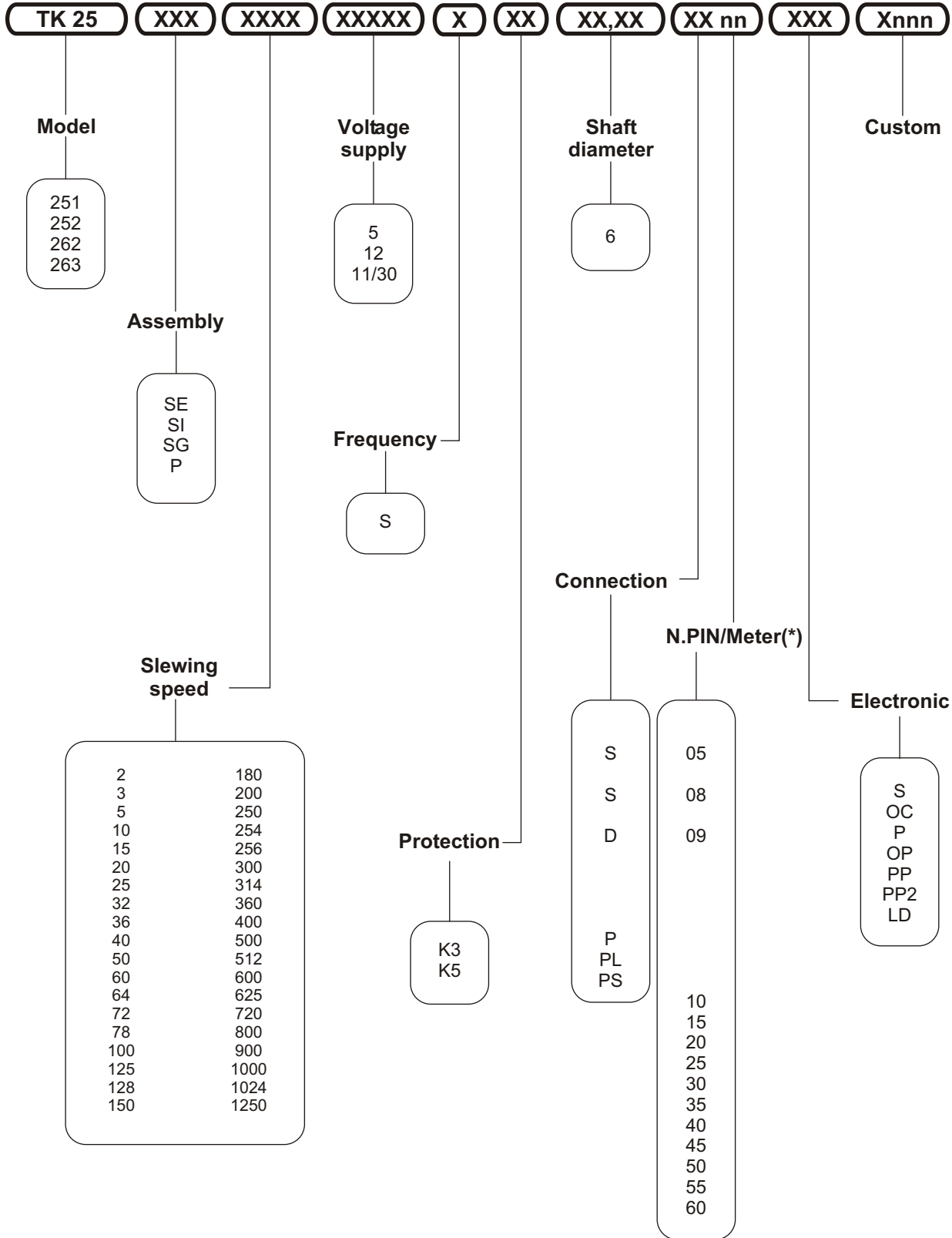
Operating temperature	-10 ÷ +70 °C
Storage temperature	-30 ÷ +80 °C
Humidity	Up to 98 % RH without condensation
Protection	K3 IP 63 on DIN 40050, K5 IP 65 on DIN 40050
Vibrations	10 g (10 ÷ 2000 Hz)
Shock	20 g for 11 ms

ELECTRICAL CHARACTERISTICS

Zero index	Gated on channel A, B, A+B (depending on the model)
Voltage supply (c.c.)	5 V ±5 % 11/30 V
Power consumption	100 mA max
Protection	Against polarity reverse (not 5 Vcc)
Frequency range (T = -10 °C ÷ +70 °C)	S 0 ÷ 50 kHz
Output	S NPN standard (pull-up resistor included) OC NPN open collector P PNP pull-down resistor included OP PNP open collector PP push-pull (NPN + PNP) PP2 push-pull with short circuit protection LD line driver RS422 a 5 V (26LS31) only with 5 V supply

CONNECTION CONFIGURATIONS

Output configurations S, OC, P, OP, PP, PP2	P on axial cable gland with cable 1 ÷ 6 m long; PL radial cable gland with cable 1 ÷ 6 m long; PS cap radial cable gland only with cable 1 ÷ 6 m; S on 5 pins axial radial connector "Lumberg"; D9 on 9 pins basin axial connector only; S on 8 pins axial connector
Output configurations LD	P on axial cable gland with cable 1 ÷ 6 m; PL radial cable gland with cable 1 ÷ 6 m; PS cap radial cable gland only with cable 1 ÷ 6 m



(*) 10 = 1,0 m ... 60 = 6,0 m