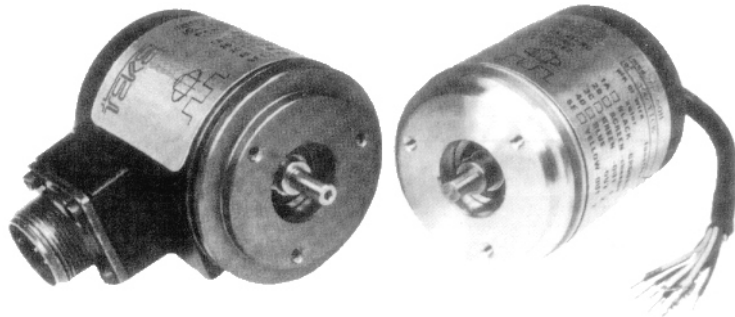


TK70 series



Main features



Housing sealed against oil, moisture and dust



Standard pulse rate up to 9.000 pulses per revolution (without count multiplication logic)



Output capacity over 300 kHz

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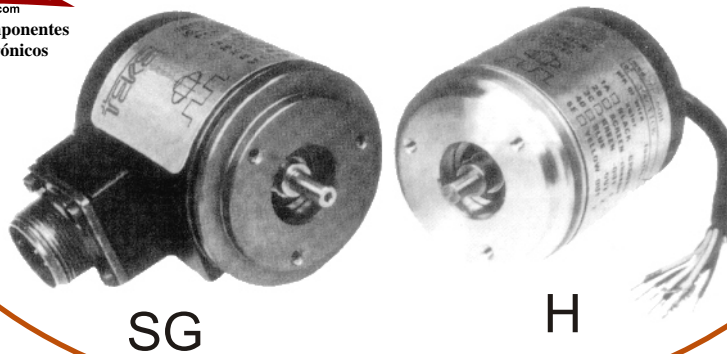
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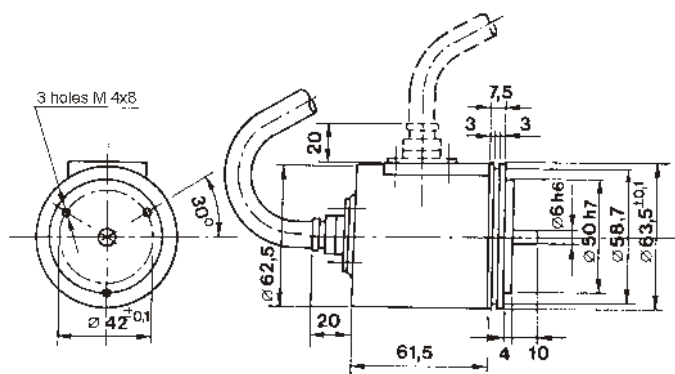


TK70 series



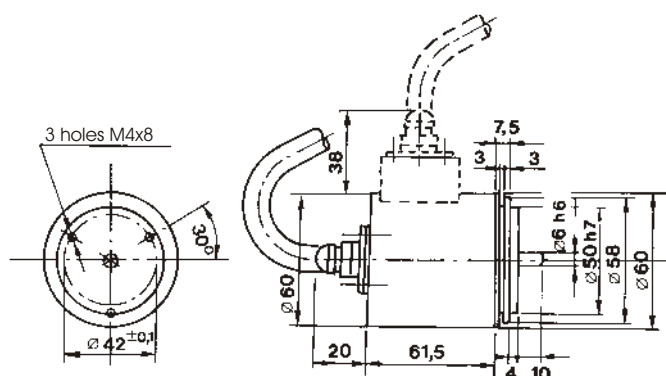
SG

H



SG = Servo bracket

Mainframe Ø 63 mm



H = Servo

Mainframe Ø 58/60 mm

TECHNICAL CHARACTERISTICS

Models	TK710 unidirectional TK711 unidirectional+ zero index TK760 bi-directional TK761 bi-directional+ zero index
Standard no. of increments per revolution	2 - 5 - 10 - 20 - 25 - 30 - 32 - 36 - 40 - 50 - 60 - 64 - 72 - 80 - 88 - 90 - 100 - 120 - 125 - 127 - 128 - 150 - 180 - 200 - 240 - 250 - 254 - 256 - 300 - 314 - 360 - 375 - 400 - 500 - 512 - 576 - 600 - 625 - 635 - 720 - 750 - 800 - 900 - 1000 - 1024 - 1200 - 1250 - 1270 - 1440 - 1500 - 1800 - 2000 - 2048 - 2500 - 2540 - 2700 - 3600 - 4096 - 5000 - 9000

MECHANICAL CHARACTERISTICS

Assembly	SG Servo-bracket H Servo (58/60 mm)
Dimension	See drawings
Mass	0,45 kg
Slewing speed	12.000 rpm for short period; 6.000 rpm for normal operation; 2000 rpm for normal operation with shaft seal
Shaft diameter	6 mm
Hollow shaft	Not available
Shaft seal	Available
Starting torque at 25°C	0,025 Nm without shaft seal; 0,040 Nm with shaft seal
Starting inertia	40 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 revolutions min.
Low torque	Not available
Shaft loading	Axial 200 N; radial 200 N

MATERIALS

Mainframe	"All" anticorodal thermally stabilised and anodised
Housing	"Cast "Al" painted with oven treating at 180°C ("SG"); "Al" anodised ("H")
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	K4 IP 64 per DIN 40050; K5 IP 65 per DIN 40050; K6 IP 66 per DIN 40050
Vibrations	10 g (from 10 to 2000 Hz)
Shock	20 g for 11 ms

ELECTRICAL CHARACTERISTICS

Zero index	Gated on channel A, B, A+B (depending on models)
Voltage supply	12 V ±5 %, 15 V ±5 % (only LINE DRIVER) 11/30 V ±5 150 mA max
Power consumption	Against polarity reverse (not for 5 Vcc)
Protection	S 0 ÷ 100 kHz
Frequency range (T=-10°C 70°C)	V 0 ÷ 300 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 PP
	PP3 push-pull complementary output
	LD line driver RS422 a 12 V (MM88C30) with voltage 12 o 24/12 V line driver RS422 a 15 V (MM88C30) with voltage 15

CONNECTION CONFIGURATIONS

Output configurations S, P, OP, OC, PP, PP2	P on axial cable gland with cable 1 + 6 m long; PL radial cable gland with cable 1 + 6 m ; S on 7 pins axial MIL connector; L on 7 pins radial MIL connector;
Output configurations LD and PP3	P on axial cable gland with cable 1 + 6 m long; PL radial cable gland with cable 1 + 6 m long ; S axial 10 pins MIL connector; L radial 10 pins MIL connector; S1 on 12 pins axial connector "Contact"; R1 on 12 pins radial connector "Contact".

