A58H







The encoder A58H is used to measure angular position of the key machine components, industrial robots, comparators, rotary tables, servo drives and to establish an informational link with DCC, NC or Digital Readout Units.

The encoder has integrated stator coupling so it can be fixed directly onto shaft. Mounting adapter is available on request.

The encoder is used in automatic control, on-line gauging, process monitoring systems, etc.

The case of encoder is mounted via four screws M3 or through adapter.

Encoder is coupled via sleeve coupling, backing screws are provided on both sides of the coupling.

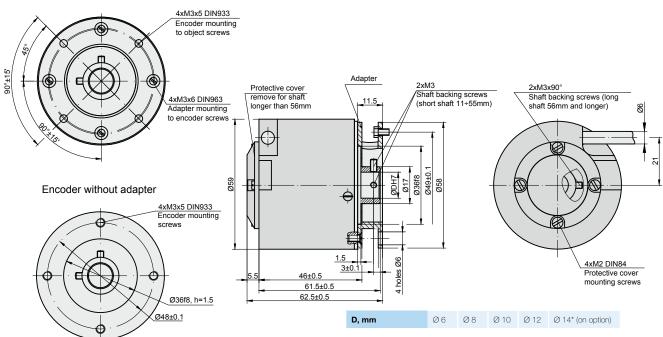
Three versions of output signals are available:

- A58H-A sinusoidal signals, with amplitude approx.
 11 μApp;
- A58H-AV sinusoidal signals, with amplitude approx. 1 Vpp;
- A58H-F square-wave signals (TTL) with integrated subdividing electronics for interpolation x1, x2, x3, x4, x5, x8, x10.

MECHANICAL DATA

Line number on disc (z)	100 ;250; 500; 600; 800; 1000; 1024; 1125; 1250; 1500; 2000; 2048; 2500; 3000; 3600; 4000; 5000; 9000; 10800		
Pulse number per shaft revolution for A58M-F	Z x k, where k=1,2,3,4,5,8,10		
Maximum shaft speed	10000 rpm		
Permissible motion of shaft: - axial - radial (at shaft end)	±0.03 mm 0.05 mm		
Accuracy (T_1 -period of lines on disc in arc. sec) - on option for z < 5000 - on option for z > 5000	±0.1T ₁ arc. sec ±0.05T ₁ arc. sec ±12.0 arc. sec		

Starting torque at 20°C	≤ 0.025 Nm		
Rotor moment of inertia	$< 1.5 x 10^{-4} \text{ kgm}^2$		
Protection (housing) (IEC 529)	IP64		
Protection (shaft side) (IEC 529)	IP64		
Maximum weight without cable	0.35 kg		
Operating temperature	-10+70 °C		
Storage temperature	-30+80 °C		
Maximum humidity (non-condensing)	98 %		
Permissible vibration (55 to 2000 Hz)	$\leq 100 \text{ m/s}^2$		
Permissible shock (11 ms)	\leq 300 m/s 2		







ELECTRICAL DATA

VERSION	A58H-A ~ 11 μApp	A58H-AV	A58H-F □□ TTL; □□ HTL		
Supply voltage (U _P)	+5 V ± 5%	+5 V ± 5%	+5 V ± 5%; +(10 to 30) V		
Max. supply current (without load)	80 mA	120 mA	120 mA		
Light source	LED	LED	LED		
Incremental signals	Two sinusoidal I, and I, Amplitude at 1 k Ω load: - I1 = 7-16 μ A - I2 = 7-16 μ A	Differential sine +A/-A and +B/-B Amplitude at 120 Ω load: - A = 0.6-1.2 V - B = 0.6-1.2 V	Differential square-wave U1/ $\overline{\text{U1}}$ and U2/ $\overline{\text{U2}}$. Signal levels at 20 mA load current: - low (logic "0") \leq 0.5 V at U_p =+5 V - low (logic "0") \leq 1.5 V at U_p =10 to 30 V - high (logic "1") \geq 2.4 V at U_p =+5 V - high (logic "1") \geq (U_p -2) V at U_p =10 to 30 V		
Reference signal	One quasi-triangular I, peak per revolution. Signal magnitude at 1 k Ω load: - I $_0$ = 2-8 μ A (usable component)	One quasi-triangular +R and its complementary -R per revolution. Signals magnitude at 1200 load - R = 0.2-0.8 V (usable component)	One differential square-wave U0/U0 per revolution. Signal levels at 20 mA load current: - low (logic "0") < 0.5 V at U_p =+5 V - low (logic "0") < 1.5 V at U_p =10 to 30 V - high (logic "1") > 2.4 V at U_p =45 V - high (logic "1") > (U_p -2) V at U_p =10 to 30 V		
Maximum operating frequency	$(-3 \text{ dB}) \ge 160 \text{ kHz}$	$(-3 \text{ dB}) \ge 180 \text{ kHz}$	(160 x k) kHz, k-interpolation factor		
Direction of signals	l, lags I, for clockwise rotation (viewed from shaft side)	+B lags +A for clockwise rotation (viewed from shaft side)	U2 lags U1 with clockwise rotation (viewed from shaft side)		
Maximum rise and fall time	-	-	< 0.5 µs		
Standard cable length	1 m, without connector	1 m, without connector	1 m, without connector		
Maximum cable length	5 m	25 m	25 m		
Output signals Note:	I ₁ I ₂ I ₀ 90° el. 135° el. 360° el.	+A +B +R 90° el. 135° el. 360° el.	a=0.25T±0.125T a a a a a a a a a a a a a a a a a a a		

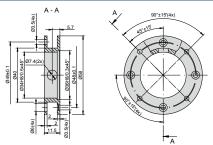
Note:

- 1. Maximum working rotation speed (with proper encoder counting) is limited by maximum operating frequency and maximum mechanical rotation speed.
- If cable extension is used, power supply conductor cross-section should not be smaller than 0.5 mm².

MOUNTING REQUIREMENTS

√ 0.3 A Ø 0.05 A ØDg7 11 min for one side fixation Α 56 min for both side fixation _±0.03 56 max for version with L. mm protective cover 1 MAX 11 min for version without protective cover

ADAPTER



ACCESSORIES

CONNECTORS FOR CABLE	B12 12-pin round connector	C9 9-pin round connector	C12 12-pin round connector	D9 9-pin flat con- nector	D15 15-pin flat connector	RS10 10-pin round connector	ONC 10-pin round connector
DIGITAL READOUT DEVICES	CS3000			CS5000			
EXTERNAL INTERPOLATOR				NK			

ORDER FORM

