

PHOTOELECTRIC ROTARY ENCODER

AP58



High Resolutions



Programmable



High Level of Protection

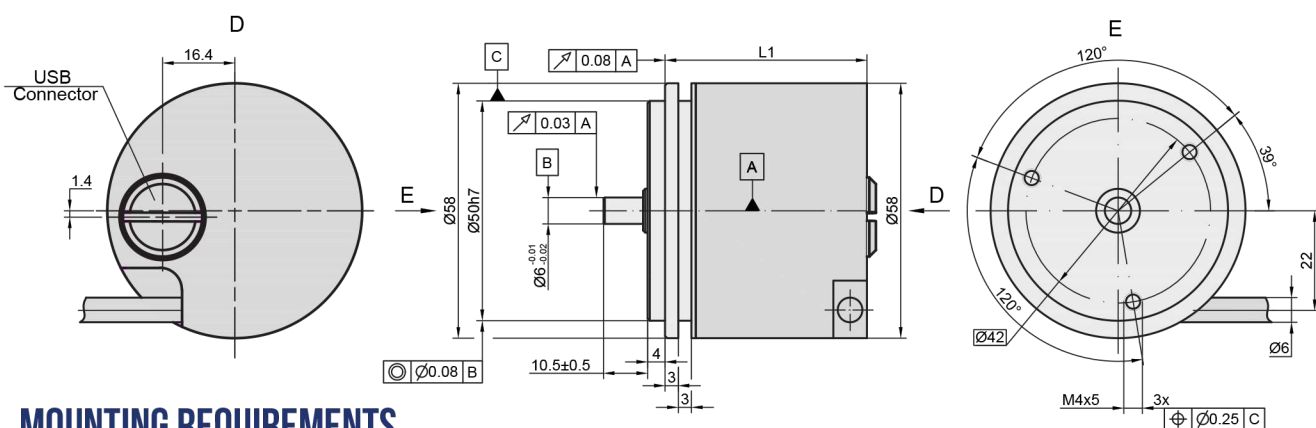


Hollow Shaft



The AP58 series is a set of programmable photoelectric rotary encoders that consists of AP58M, AP58B, AP58C, AP58C2, AP58C3, AP58D, AP58HE1 depending on required mounting parameters. Through the programming tool that constitutes of a USB cable and Windows compatible software, the user can set a desired pulse

number per revolution from 1 to 65.536. Software is supplied free of charge and can be found on the official website of Precizika Metrology. It can be installed on any PC running a Windows operating system (Windows XP or later).



MOUNTING REQUIREMENTS

ENCODER MODIFICATION	L1	OTHER MODIFICATIONS
AP58M	41 mm	See A58 series data sheet
AP58B	45,5 mm	See A58 series data sheet
AP58C	47 mm	See A58 series data sheet
AP58C2	45,5 mm	See A58 series data sheet
AP58C3	45,5 mm	See A58 series data sheet
AP58D	37,5 mm	See A58 series data sheet

MECHANICAL DATA

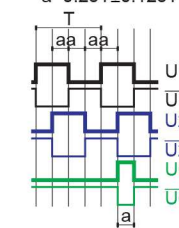
Pulse number per shaft revolution	from 1 to 65536	Protection (IEC 529)	IP64
Maximum shaft speed:	12000 rpm	Maximum weight without cable	0.25 kg
Maximum shaft load:	10 N (40 N for AP58C2, AP58C3, AP58D)	Operating temperature	-10...+70 °C
- axial		Storage temperature	-30...+80 °C
- radial (at shaft end)	20 N (60 N for AP58C2, AP58C3, AP58D)	Maximum humidity (non-condensing)	98 %
Accuracy	± 60 arc. sec	Permissible vibration (55 to 2000 Hz)	≤ 100 m/s ²
Starting torque at 20°C	≤ 0.01 Nm	Permissible shock (11 ms)	≤ 1000 m/s ²
Rotor moment of inertia	< 15 gcm ²		

ACCESSORIES

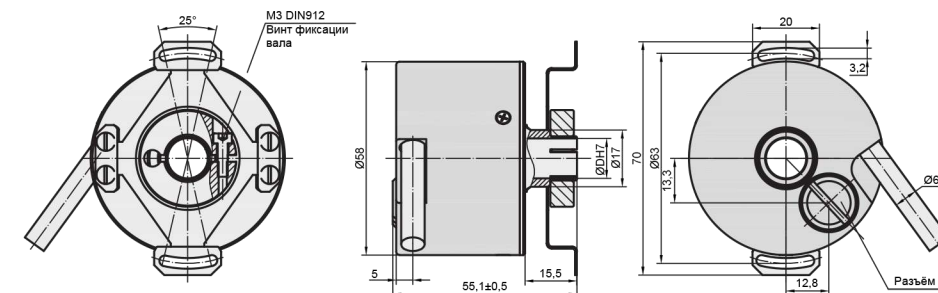
CONNECTORS FOR CABLE	B12	C12	D9	D15	RS10	ONC
	12-pin round connector	12-pin round connector	9-pin flat connector	15-pin flat connector	10-pin round connector	10-pin round connector
COUPLING	SC30					

ELECTRICAL DATA

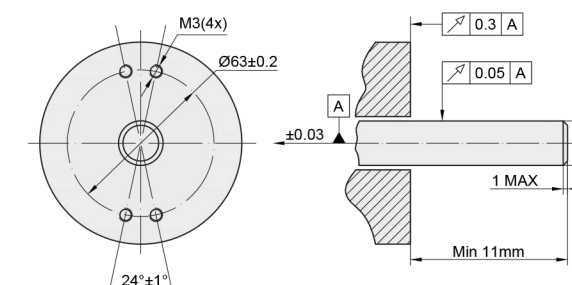
VERSION	AP58-F TTL; HTL
Power supply	+5 V ± 5 %; +(10 to 30) V
- Max. supply current (without load)	120 mA
Light source	LED
Incremental signals	Differential square-wave U1/U1 and U2/U2. Signal levels at 20 mA load current: - low (logic "0") < 0.5 V at U _p =+5 V - low (logic "0") < 1.5 V at U _p =10 to 30 V - high (logic "1") > 2.4 V at U _p =+5 V - high (logic "1") > (U _p -2) V at U _p =10 to 30 V
Reference signal	One differential square-wave U0/U0 per revolution.
- width	T/4 or T/2
- position	any
Maximum operating frequency	< 2 MHz
Direction of signals	U2 lags U1 for clockwise rotation (viewed from shaft side)
Maximum rise and fall time	< 0.5 μs
Standard cable length	1m, without connector
Maximum cable length	25m
Output signals	a=0.25T±0.125T



MODIFICATION AP58HE1



D, mm Ø6 Ø8 Ø10 Ø12 Ø14 Ø15



ORDER FORM

AP58X1 - X2 - X3 - X4/X5

Modification (X1):	Shaft hole diameter* (X2):	Supply voltage (X3):	Cable length (X4):	Connector type (X5):
M - AP58M B - AP58B C - AP58C C2 - AP58C2 C3 - AP58C3 D - AP58D HE1 - AP58HE1	6, 8, 10, 12, 14, 15 - diameter mm* *only for AP58HE1 version	05V - +5V 30V - +(10 to 30) V* *only for AP58 with HTL output	AR01 - 1m AR02 - 2m AR03 - 3m ...	W - without connector D9 - flat, 9 pin C12 - round, 12 pin D15 - flat, 15 pins ONC - round, 10 pins RS10 - round, 10 pins B12 - round, 12 pins

ORDER EXAMPLES: 1) AP58M-05V-AR01/B12;
2) AP58E1-6-30V-AR03/W
Default manufacturer parameter set: pulse number per revolution - 1000; reference signal width - 1/4T