AP58

PHOTOELECTRIC ROTARY ENCODER

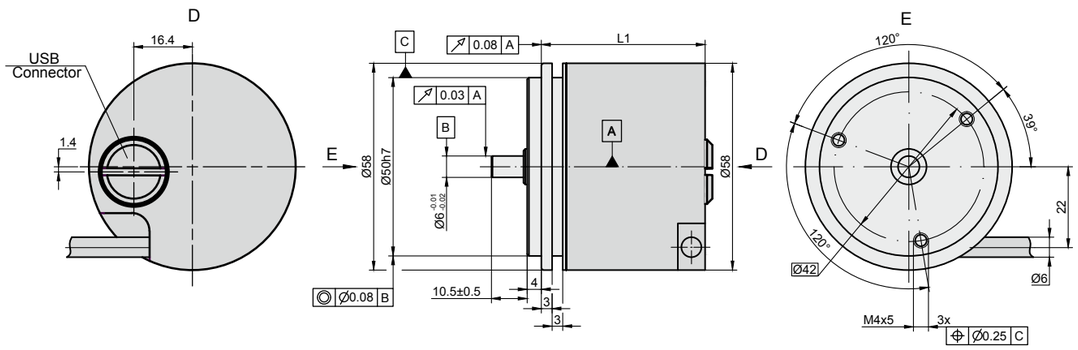
HD High Resolutions

Programmable

IP CLASS 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).



MECHANICAL DATA

Pulse number per shaft revolution	from 1 to 65536
Maximum shaft speed: Maximum shaft load: - axial - radial (at shaft end)	12000 rpm 10 N (40 N for AP58C2, AP58C3, AP58D) 20 N (60 N for AP58C2, AP58C3, AP58D)
Accuracy (T1-period of lines on disc in arc. sec.)	±0.1T_1 arc. sec
Starting torque at 20°C	≤ 0.01 Nm
Rotor moment of inertia	< 15 gcm²

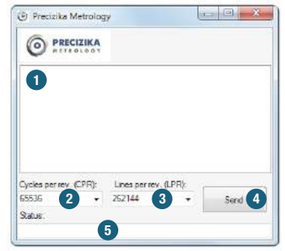
Protection (IEC 529)	IP64
Maximum weight without cable	0.25 kg
Operating temperature	-10...+70 °C
Storage temperature	-30...+80 °C
Maximum humidity (non-condensing)	98 %
Permissible vibration (55 to 2000 Hz)	≤ 100 m/s²
Permissible shock (11 ms)	≤ 1000 m/s²

ACCESSORIES

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

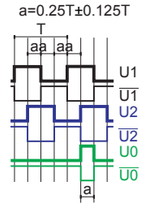
SOFTWARE

1. List of encoders connected for multi-programming
2. Number of Cycles Per Revolution (CPR) in the drop-down menu
3. Number of lines Per Revolution (LPR) in the drop-down menu
4. Program the encoder according to desired parameters
5. Current operation status indication field

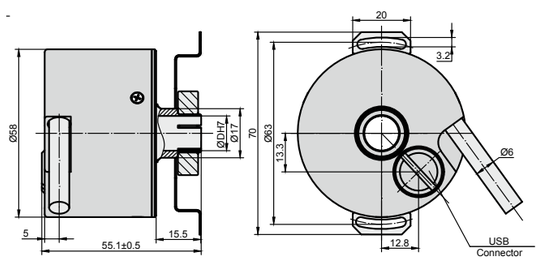


ELECTRICAL DATA

VERSION	AP58-F ⊓⊔ TTL; ⊓⊔ HTL
Power supply - Max. supply current (without load)	+5 V ± 5 %; +(10 to 30) V 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") > (UP-2) V at U_p=10 to 30 V
Reference signal	One differential square-wave U0/U0 per revolution.
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

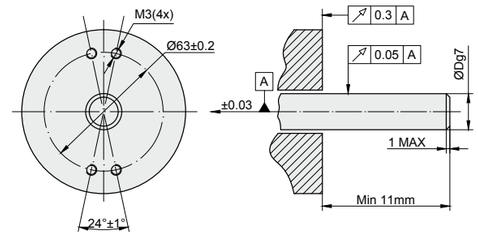


MODIFICATION AP58HE1



D, mm	Ø 6	Ø 8	Ø 10	Ø 12	Ø 14	Ø 15

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

ORDER FORM

AP58X - XXXX - XXX - XXX/X - X

MODIFICATION:	PULSE NUMBER PER REVOLUTION:	SUPPLY VOLTAGE:	CABLE LENGTH:	CONNECTOR TYPE:	COUPLING:
M - AP58M B - AP58B C - AP58C C2 - AP58C2 C3 - AP58C3 D - AP58D HE1 - AP58HE1	1 ... 65536	05V - +5V 30V - +(10 to 30) V* *only for AP58M with HTL output	AR 01 - 1m AR 02 - 2m AR 03 - 3m ...	W - without connector D9 - flat, 9 pin C12 - round,12 pin D15 - flat,15 pins ONC - round, 10 pins RS 10 - round, 10 pins B12 -round, 12 pins	0 - without coupling 1 - with coupling

ORDER EXAMPLES:
1) AP58M-05V-AR01/B12-0;
2) AP58B-30V-AR03/W-1
Default manufacturer parameter set: pulse number per revolution - 1000; reference signal width - 1/4T