

MODEL

M58

Metric Incremental Encoder



The **M58** is a rugged industrial grade metric version incremental encoder providing a unique combination of performance and flexibility. The **M58** features a wide range of resolutions, up to 80,000 cycles per turn. The robust design of the **M58** provides it with excellent resistance to shock and vibration. IP65 environmental protection level is standard or IP67 is available with sealing flange. The **M58** is an ideal replacement encoder for metric equipment used in many industries in the US.

Specifications

Mechanical

Shaft Diameter: 10mm, (0.39") Standard, 6mm (0.24") Option
Shaft Material: Stainless Steel
Bearings: Series 6000
Cover: Zinc Alloy
Shaft Loading: up to 50 Nm (11.24 lbs.) axial and 100Nm, (22.48 lbs.) radial.
Starting Torque at 25 C: to .004 Nm (0.566 in-oz)
Enclosure: Aluminum
Maximum RPM: 9000
Weight: Approximately .285 Kg (10 oz.)

Electrical

Supply Voltage: 5-28 VDC (See Table 1)
Output Voltage: 5-28 VDC (See Table 1)
Current Requirements: (See Table 1)
Protection Level: Reverse over voltage and output short circuit
Code: Incremental
Output Format: 2 Channels in quadrature, with gated index and complementary outputs.
Cycles per Shaft Turn: (See Table 2)
Frequency Response: to 300kHz (See Table 1)
Output Terminations: (See Table 3)

Environmental

Temperature: Operating, -0° to 70°C; storage (non-operating), -40° to 80°C. Consult factory for extended temperature ratings.
Shock: 50 g's for 6 msec duration
Vibration: 55 to 2000 Hz @ 10 g's
Humidity: 98% RH without condensation
Enclosure Rating: IP65, NEMA 4X & 13 (IP67 available only with pilot flange)
Specifications are subject to change without notice

M58 Metric Incremental Encoder Ordering Options *For assistance, call 800-350-2727*

Use this diagram, working from left to right, to construct your model number.

Example: **M58-1024-ABZC-28V/V-SM23** (-S: special shaft, diameter/ length, output level or termination)

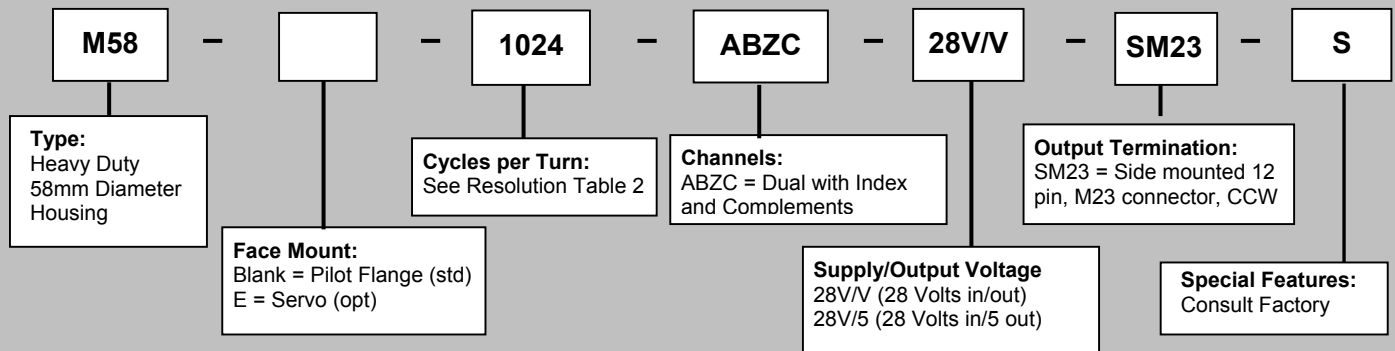
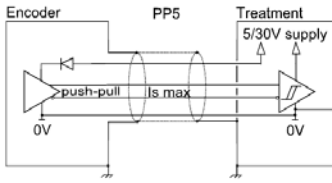


Table 1: Electrical



PP5 electronic (300kHz)

Supply: 5 to 30Vdc
 Cons. without load : 75mA max
 Current per channel: 40mA max
 0 max (Is=20mA) : $V_{ol} = 0,5Vdc$
 1 min (Is=20mA) : $V_{oh} = V_{cc}-2,5Vdc$

Note: TTL and RS422 compatible if the voltage power supply at the level of the encoder is 5 VDC. See page 50 of the BEI Encoder Design & Specifying Guide for information on output devices.

Table 2: Resolutions

256 360 500 512 720 768 1000 1024 1080 1280 1440 1500 1800 2000 2048 2500 2560 2880 3072 3600
 4000 4096 4320 5000 5120 5760 6000 8000 8192 10000 10240 12288 15000 16384 20000 25000 40000
 50000 60000 80000

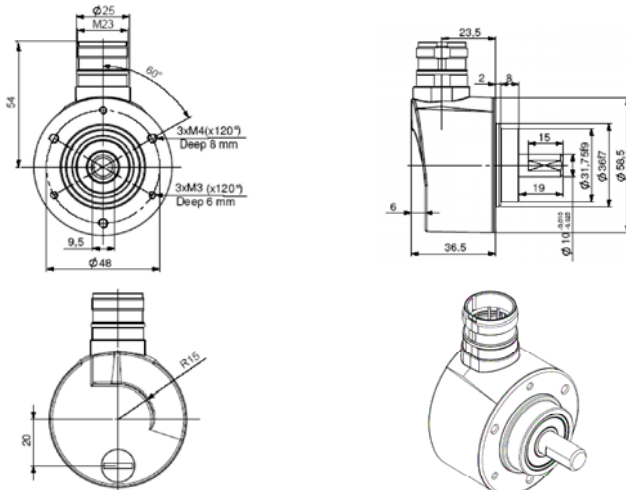
Resolutions in blue are interpolated and will be noted by (example T2 or other value). Additional resolutions are available, please consult factory.

Table 3: Output Terminations

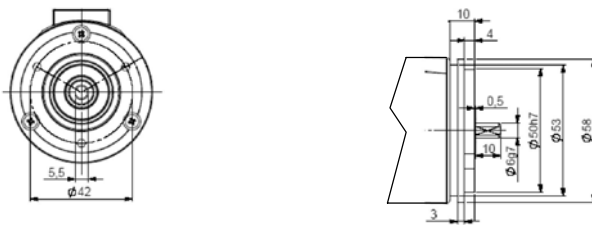
SM23 12 Pin Connector, CCW									
PIN (9 N/C)	10 + 11	2 + 12	8	5	3	1	6	4	Connector Body
Channels	0V (Circuit Ground)	+V (Supply)	A	B	Z	\bar{A}	\bar{B}	\bar{Z}	Case Ground

M58 Dimensions

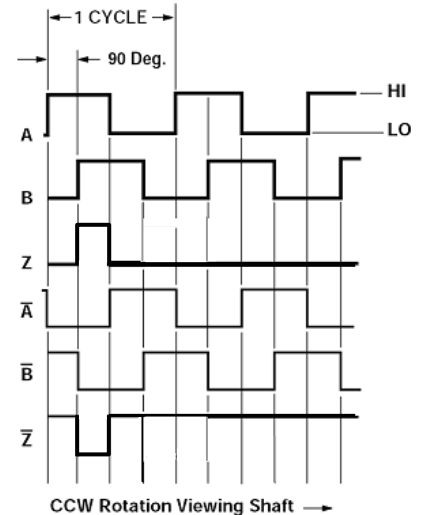
Pilot Flange, 10mm Shaft Diameter



Servo, 6mm Shaft Diameter



Output Waveform



Manufactured by BEI Ideacod, France, an operation of Custom Sensors & Technologies (CST).