

# Model 758 - 58mm Euro-Standard Encoder



Ø58.0 mm

## Features

- Standard Size 58mm Mounting (58mm Diameter)
- Up to 30,000 PPR
- 36Kg Max. Axial and Radial Shaft Loading
- High Temperature Option (100°C)
- IP65 Sealing Available

The Model 758 is a heavy duty, extremely rugged, reliable, yet compact European standard 58mm diameter encoder, Designed for harsh factory and plant floor environments. Shaft loading is no problem for the double-shielded ball bearings; their 36Kg load rating ensures a long operating life. If fitted with the optional heavy-duty shaft seal; the model 758 is rated IP65. Two standard mounting options are available: Clamping Flange (20 Type) or Synchro Flange (26 Type). The Model 758 is the perfect replacement encoder for units requiring the popular European mount.

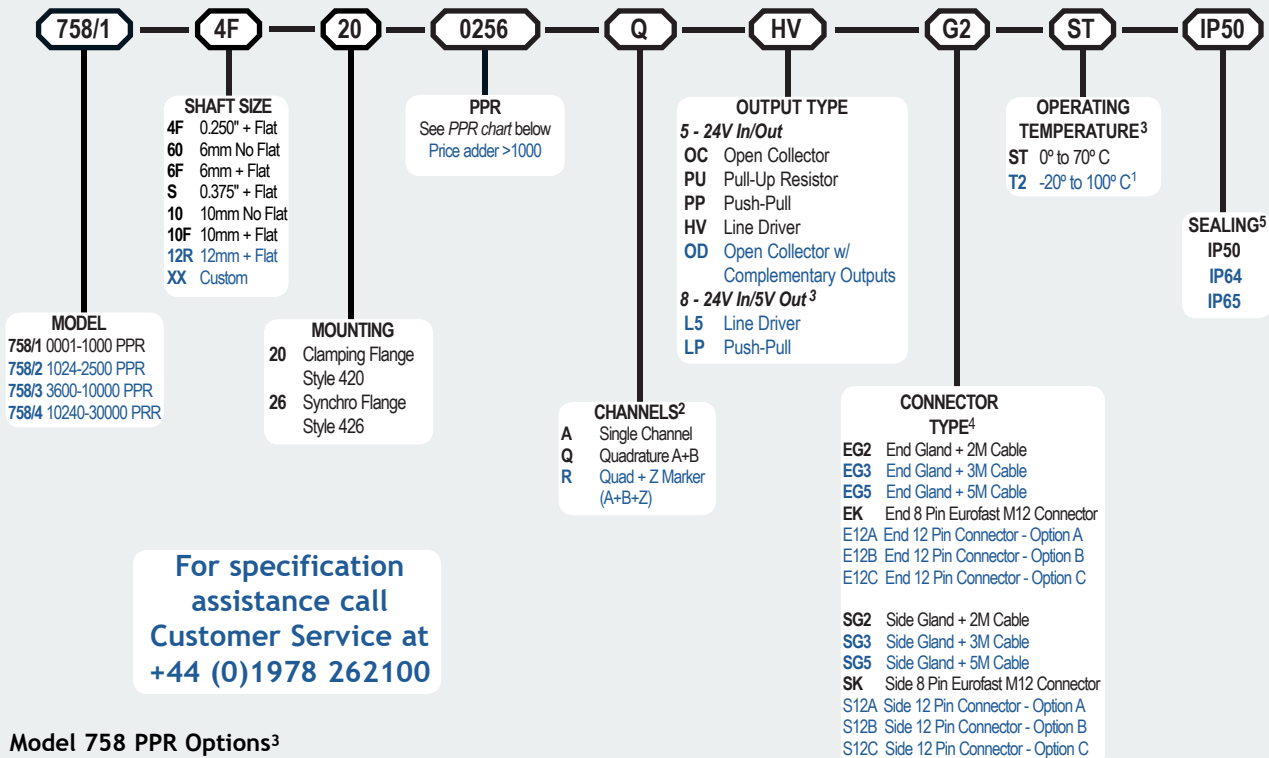
## Common Applications

Motor-Mounted Feedback, Machine & Elevator Controls, Food Processing, Robotics, Material Handling, Conveyors, Textile Machines.

## Model 758 Ordering Guide

Blue type indicates price adder options. Not all configuration combinations may be available.

Contact Customer Service for details.



### Model 758 PPR Options<sup>3</sup>

0001*	0002*	0004*	0005*	0006*	0007*	0008*	0010*	0011*
0012*	0014*	0020	0021*	0024*	0025*	0028*	0030*	0032*
0033*	0034*	0035*	0038*	0040*	0042*	0045*	0050*	0060
0064*	0100	0120	0125	0128*	0144*	0150*	0160*	0192*
0200	0240*	0250	0254*	0256*	0300	0333*	0360	0400
0500	0512	0600	0625*	0635	0665*	0720	0889	1000
1024	1200	1204* <sup>a</sup>	1250 <sup>a</sup>	1270 <sup>a</sup>	1440	1500	1800	2000
2048	2400 <sup>a</sup>	2500	2540 <sup>a</sup>	2880 <sup>a</sup>	3000 <sup>a</sup>	3600 <sup>a</sup>	4000 <sup>a</sup>	4096 <sup>a</sup>
5000 <sup>a</sup>	6000 <sup>a</sup>	7200 <sup>a</sup>	7500 <sup>a</sup>	9000 <sup>a</sup>	10,000 <sup>a</sup>	10,240 <sup>a</sup>	12,000 <sup>a</sup>	12,500 <sup>a</sup>
14,400 <sup>a</sup>	15,000 <sup>a</sup>	18,000 <sup>a</sup>	20,000 <sup>a</sup>	20,480 <sup>a</sup>	25,000 <sup>a</sup>	30,000 <sup>a</sup>		

\* Contact Customer Service for High Temperature Option.

<sup>a</sup> High Temperature Option (H) limited to 85° C maximum for these PPR options.

Contact Customer Service to determine all currently available PPR values. Special disk resolutions are available upon request. A one-time NRE fee may apply.

### NOTES:

- 1 0° to 85° for certain resolutions, See PPR options.
- 2 Contact customer service for marker gating options.
- 3 Standard temperature, 60 to 3000 PPR only.
- 4 For non-standard cable lengths - call sales office.
- 5 IP66 & IP67 available in certain configurations - Please call sales office for information and availability.

# Model 758 - 58mm Euro-Standard Encoder

## Model 758 Specifications

### Electrical

Input Voltage.....4.75 to 28 Vcc max for temperatures up to 70° C  
4.75 to 24 Vcc for temperatures between 70° C to 100° C

Input Current.....100 mA max with no output load

Input Ripple.....100 mV peak-to-peak at 0 to 100 kHz

Output Format.....Incremental- Two square waves in quadrature with channel A leading B for clockwise shaft rotation, as viewed from the encoder mounting face. See *Waveform Diagrams* below.

Output Types.....Open Collector- 50 mA max per channel  
Push-Pull- 20 mA max per channel  
Line Driver- 20 mA max per channel (Meets RS 422 at 5 Vcc supply)

Index.....Occurs once per revolution. The index for units >3000 PPR is 90° gated to Outputs A and B. See *Waveform Diagrams* below.

Freq Response.....Up to 1 MHz

Noise Immunity.....Tested to BS EN61000-4-2; IEC801-3; BS EN61000-4-4; DENV 50141; DENV 50204; BS EN55022 (with European compliance option); BS EN61000-6-2; BS EN50081-2

Symmetry.....1 to 6000 PPR: 180° (±18°) electrical at 100 kHz output  
6001 to 20,480 PPR: 180° (±36°) electrical

Quad Phasing.....1 to 6000 PPR: 90° (±22.5°) electrical at 100 kHz output  
6001 to 20,480 PPR: 90° (±36°)

Min Edge Sep.....1 to 6000 PPR: 67.5° electrical at 100 kHz output  
6001 to 20,480 PPR: 54° electrical  
>20,480 PPR: 50° electrical

Rise Time.....Less than 1 microsecond

Accuracy.....Instrument and Quadrature Error: For 200 to 1999 PPR, 0.017° mechanical (1.0 arc minutes) from one cycle to any other cycle. For 2000 to 3000 PPR, 0.01° mechanical (0.6 arc minutes) from one cycle to any other cycle. Interpolation error (units > 3000 PPR only) within 0.005° mechanical. (Total Optical Encoder Error = Instrument + Quadrature + Interpolation)

### Mechanical

Max Shaft Speed.....8000 RPM. Higher shaft speeds may be achievable, contact Customer Service.

Shaft Size.....6 mm, 10 mm

Shaft Rotation.....Bi-directional

Radial Shaft Load.....36 Kg max. Rated load of 10 to 20 Kg for bearing life of  $1.5 \times 10^9$  revolutions

Axial Shaft Load.....36 Kg max. Rated load of 10 to 20 Kg for bearing life of  $1.5 \times 10^9$  revolutions

Starting Torque..... $7.061 \times 10^{-3}$  Nm typical with IP64 seal or no seal  
 $2.118 \times 10^{-2}$  Nm typical with IP66 shaft seal

Electrical Conn.....Gland with 2M cable (foil and braid shield, 24 AWG conductors) 12-pin connector, or 8-pin M12 (12 mm)

Housing.....Anodised Aluminium

Bearings.....Precision ABEC ball bearings

Mounting.....European Standard Clamping Flange (20 Type) and Synchro Flange (26 Type)

Weight.....320 grams typical

### Environmental

Operating Temp.....0° to 70° C for standard models  
0° to 100° C for high temperature option (0° to 85° C for certain resolutions, see PPR Options.)

Storage Temp.....-25° to +85° C

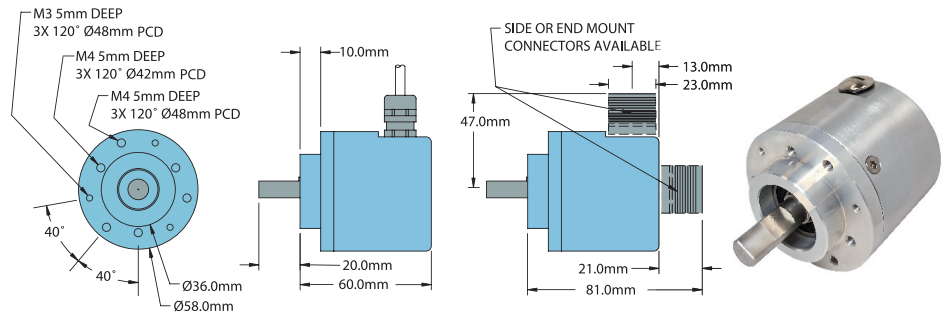
Humidity.....98% RH non-condensing

Vibration.....20 g @ 58 to 500 Hz

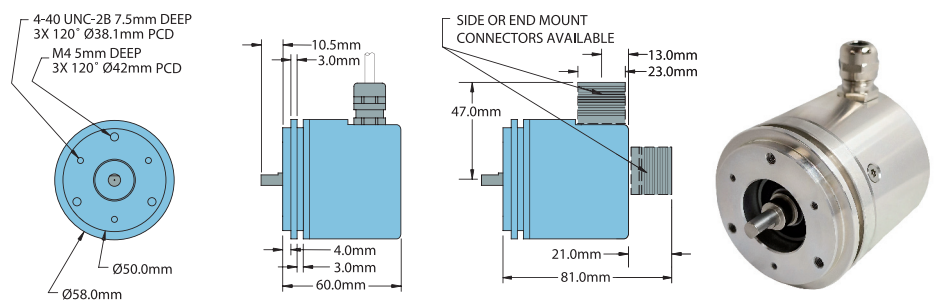
Shock.....75 g @ 11 ms duration

Sealing.....IP64 shaft seal or IP65 shaft seal

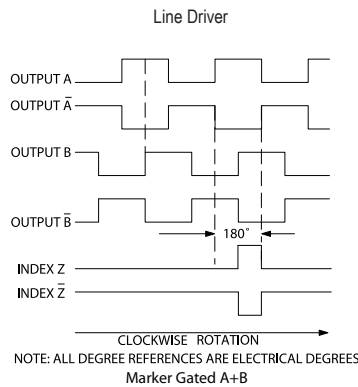
## Model 758 Clamping Flange 20 Type



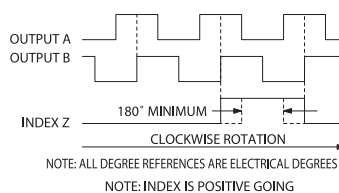
## Model 758 Synchro Flange 26 Type



## Waveform Diagrams



### Open Collector + Push Pull



## Wiring Table

Function	Gland Cable <sup>†</sup> Wire Color	8-pin M12** HV	8-pin M12** OC,PP,PU	12 Pin Option A CW**	12 Pin Option B CCW**	12 Pin Option C CCW**
0 Volts	Black	7	7	1	11	10
+VCC	White	2	2	2	7	12
A	Brown	1	1	3	4	5
A'	Yellow	3	--	6	3	6
B	Red	4	4	4	1	8
B'	Green	5	--	7	8	1
Z	Orange	6	6	5	6	3
Z'	Blue	8	--	8	5	4
Shield	Bare*	Case	8	Case/12	Case	Case/9
+VDC Sense	--	--	--	--	10	2
Com Sense	--	--	--	--	12	11

\*CE: Cable shield (bare wire) is connected to internal case.

†Standard cable is 24 AWG conductors with foil and braid shield.

\*\*CE: Shield is connected to connector case unless otherwise specified.

**CAUTION - Always check wiring colour code against Encoder Label due to changes in specification since September 2006**