

Model 758 - 58mm Euro-Standard Encoder

**BRITISH
ENCODER**
PRODUCTS COMPANY



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.

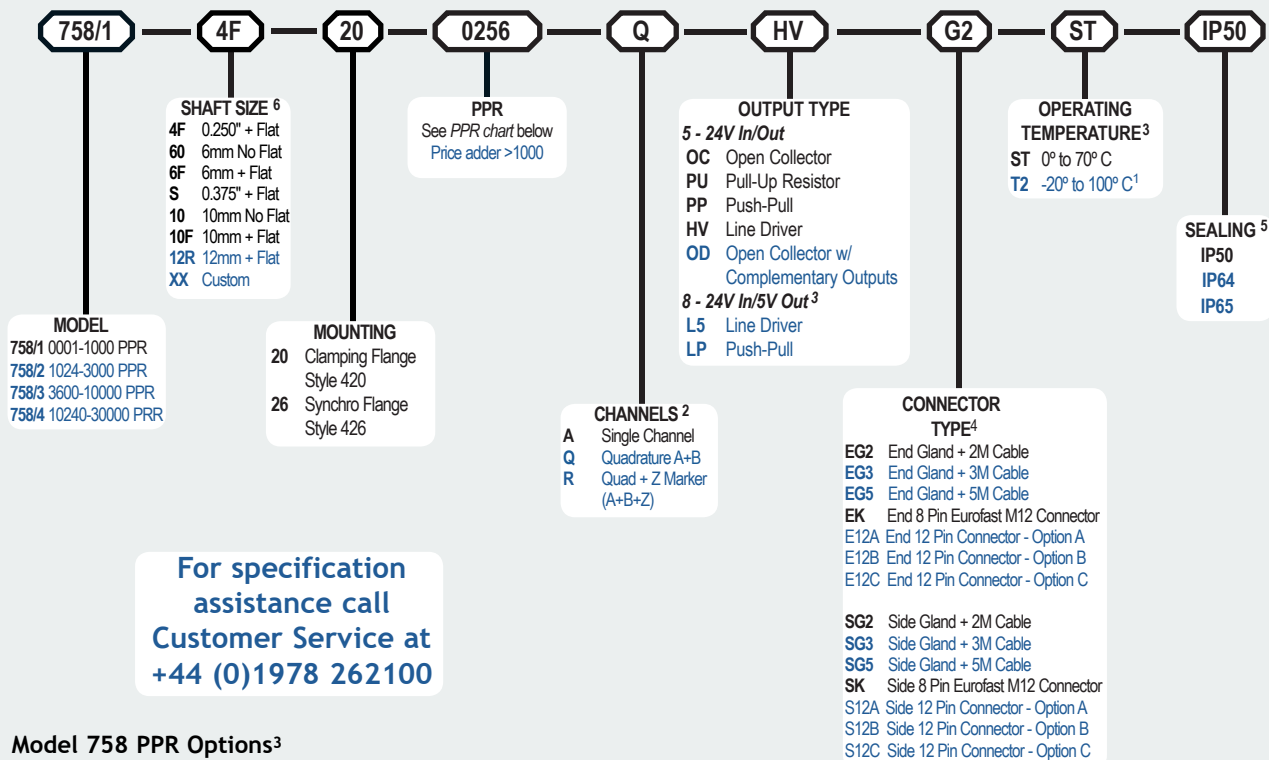
Common Applications

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 Options³

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* ^a	1250 ^a	1270 ^a	1440	1500	1800	2000
2048	2400 ^a	2500	2540 ^a	2880 ^a	3000 ^a	3600 ^a	4000 ^a	4096 ^a
5000 ^a	6000 ^a	7200 ^a	7500 ^a	9000 ^a	10,000 ^a	10,240 ^a	12,000 ^a	12,500 ^a
14,400 ^a	15,000 ^a	18,000 ^a	20,000 ^a	20,480 ^a	25,000 ^a	30,000 ^a		

* Contact Customer Service for High Temperature Option.

^a 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.
- 6 Please be aware that the 0.250" and 6mm Shafts are 10.05mm from Mounting Face of 26 Type and Pilot Face of the 20 Type. And that all other shafts are 20.05mm, Unless Customised.

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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 <i>Waveform Diagrams</i> 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 <i>Waveform Diagrams</i> 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)

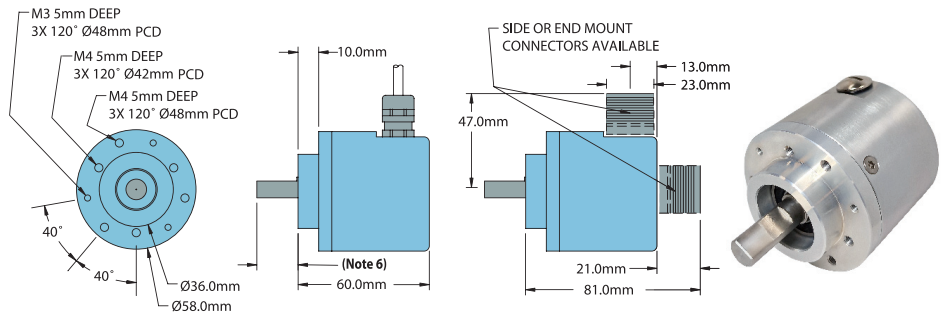
Mechanical

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 1.5×10^9 revolutions
Axial Shaft Load.....	36 Kg max. Rated load of 10 to 20 Kg for bearing life of 1.5×10^9 revolutions
Starting Torque.....	7.061×10^{-3} Nm typical with IP64 seal or no seal 2.118×10^{-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

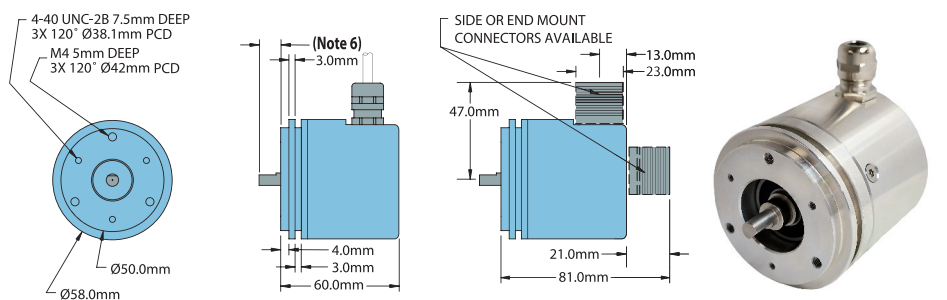
Environmental

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

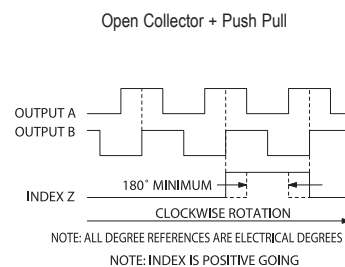
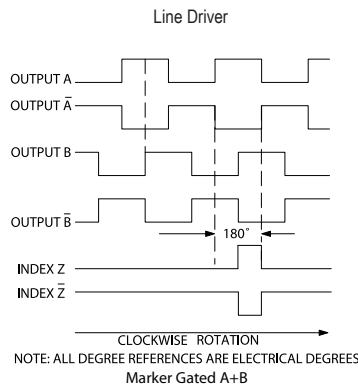
Model 758 Clamping Flange 20 Type



Model 758 Synchro Flange 26 Type



Waveform Diagrams



Wiring Table

Function	Gland Cable [†] Wire Color	8-pin M12** HV	8-pin M12** OC,PP,PU	12 Pin Option A CW**	12 Pin Option B CW**	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