

Model 758



Features

- Standard Size 58 Mounting (58 mm Diameter)
- Up to 30,000 CPR
- 80 lb Max. Axial and Radial Shaft Loading
- High Temperature Option (100° C)
- IP67 Sealing Available

The Model 758 Size 58 Accu-Coder™ is a heavy duty, extremely rugged, reliable, yet compact European standard 58 millimeter diameter encoder, designed for harsh factory and plant floor environments. Shaft loading is no problem for the double-shielded ball bearings; their 80 lb load rating ensures a long operating life. With the optional heavy-duty shaft seal, the Model 758 is rated IP67. Two European 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 European mount.

Common Applications

Motion Control 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.

758	A	21	S	1000	R	HV	1	1	E	R	CE
MODEL 758 Model 758	MOUNTING TYPE¹ A Clamping Flange (20 Type) B Synchro Flange (26 Type)	SHAFT SIZE¹ 06 6 mm 21 10 mm 07 0.250", 1/4" 20 0.375", 3/8"	OPERATING TEMPERATURE S 0° to 70° C H 0° to 100° C ²	CYCLES PER REVOLUTION 1-30,000 See CPR Options below for available resolutions. Price adder for CPR >1270	NUMBER OF CHANNELS³ A Channel A Channel A Leads B Q Quadrature A & B R Quadrature A & B with Index Channel B Leads A K Reverse Quadrature A & B D Reverse Quadrature A & B with Index	OUTPUT TYPE 5 - 28V In/Out ⁴ OC Open Collector PU Pull-Up Resistor PP Push-Pull HV Line Driver ¹¹ 8 - 28V In/5V Out ^{5,11} H5 Line Driver ¹⁰ P5 Push-Pull	SEAL N No Seal 1 IP66 2 IP64 5 IP67	MAXIMUM FREQUENCY 1 100 kHz Standard 2 200 kHz 5 250 kHz, >3000 CPR 3 500 kHz, >6000 CPR ⁶ 4 1 MHz, >10,000 CPR ⁶	CONNECTOR LOCATION S Side E End	CONNECTOR TYPE⁹ G Gland, 24" Cable ⁷ R 12-pin Connector J 5-pin M12 (12 mm) K 8-pin M12 (12 mm) X 10-pin MS Style Y 7-pin MS Style	CERTIFICATION N None CE CE Marked ⁸

For specification assistance call Customer Service at 1-800-366-5412

Accessory Mounting Bracket can be ordered separately as part # 140121. More details at www.encoder.com.

Model 758 CPR Options

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	0768*	0800
0889	0900*	1000	1024	1200	1201* ^a	1203* ^a	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 CPR options.
 New CPR values are periodically added to those listed. Contact Customer Service to determine all currently available CPR values. Special disk resolutions are available upon request.
 A one-time NRE fee may apply.

NOTES:

- 1 The shaft on 20 Type mountings includes a 15.58 mm flat. The shaft on 26 Type mountings is provided without a flat.
- 2 0° to 85° C for certain resolutions, see CPR Options.
- 3 Contact Customer Service for index gating options.
- 4 24 VDC max for high temperature option.
- 5 Standard temperature, 60 to 3000 CPR only.
- 6 Standard cable lengths only. For details, please refer to **Technical Bulletin TB116: Noise and Signal Considerations** at www.encoder.com.
- 7 For Non-Standard Cable Lengths add a forward slash (/) plus cable length expressed in feet. Example: SG/6 = 6 feet of cable.
- 8 Please refer to **Technical Bulletin TB100: When to Choose the CE Option**.
- 9 For mating connectors, cables, and cordsets, see Encoder Accessories on the web at www.encoder.com.
- 10 Not available with 5-pin M12 connector. Available with 7-pin MS Type Connector only without Index Z.
- 11 H5 and P5 outputs are not available with CE option, or any End Mount MS Connector

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Model 758 Specifications

Electrical

Input Voltage 4.75 to 28 VDC max for temperatures up to 70° C
 4.75 to 24 VDC 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- 100 mA max per channel
 Pull-Up- 100 mA max per channel
 Push-Pull- 20 mA max per channel
 Line Driver- 20 mA max per channel (Meets RS 422 at 5 VDC supply)

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

Max Frequency 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 CPR: 180° (±18°) electrical at 100 kHz output
 6001 to 20,480 CPR: 180° (±36°) electrical at 100 kHz output

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

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

Rise Time Less than 1 microsecond

Accuracy Instrument and Quadrature Error: For 200 to 1999 CPR, 0.017° mechanical (1.0 arc minutes) from one cycle to any other cycle. For 2000 to 3000 CPR, 0.01° mechanical (0.6 arc minutes) from one cycle to any other cycle. Interpolation error (units > 3000 CPR 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 0.250", or 0.375", 6 mm, 10 mm

Shaft Rotation Bi-directional

Radial Shaft Load 80 lb max. Rated load of 20 to 40 lb for bearing life of 1.5×10^9 revolutions

Axial Shaft Load 80 lb max. Rated load of 20 to 40 lb for bearing life of 1.5×10^9 revolutions

Starting Torque 1.0 oz-in typical with IP64 seal or no seal
 3.0 oz-in typical with IP67 shaft seal
 7.0 oz-in typical with IP67 shaft seal

Moment of Inertia 5.2×10^{-4} oz-in-sec²

Max. Acceleration 1×10^5 rad/sec²

Electrical Conn Gland with 24" cable (foil and braid shield, 24 AWG conductors) 7- or 10-pin MS Style, 12-pin connector, 5- or 8-pin M12 (12 mm)

Housing Black non-corrosive finish

Bearings Precision ABEC ball bearings

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

Weight 11 oz 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 CPR Options)

Storage Temp -25° to +85° C

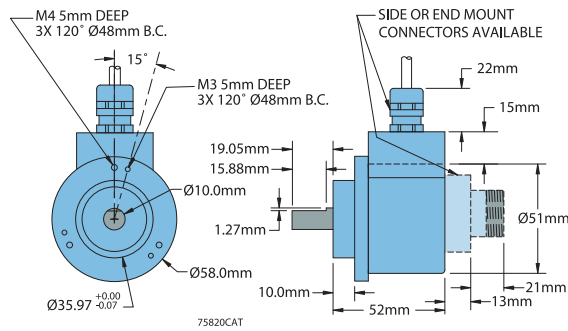
Humidity 98% RH non-condensing

Vibration 20 g @ 58 to 500 Hz

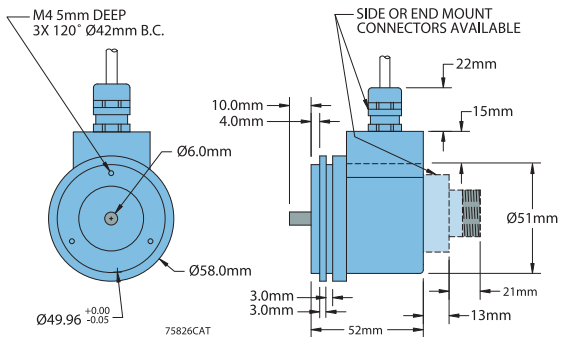
Shock 75 g @ 11 ms duration

Sealing IP50 standard; IP64, IP66 or IP67 optional

Model 758 Clamping Flange 20 Type (A)

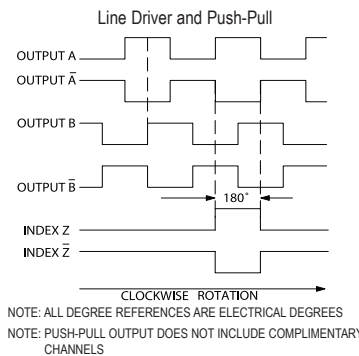


Model 758 Synchro Flange 26 Type (B)

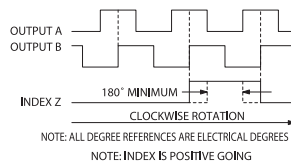


All dimensions are in millimeters with a tolerance of ±0.17 mm unless otherwise specified

Waveform Diagrams



Open Collector and Pull-Up



Wiring Table

Function	Gland Cable Wire Color	5-pin M12 ²	8-pin M12 ²	10-pin MS	7-pin MS HV,HS	7-pin MS PU, PP, PS, OC	12-pin
Com	Black	3	7	F	F	F	10
+VDC	Red	1	2	D	D	D	12
A	White	4	1	A	A	A	5
A'	Brown	---	3	H	C	---	6
B	Blue	2	4	B	B	B	8
B'	Violet	---	5	I	E	---	1
Z	Orange	5	6	C	---	C	3
Z'	Yellow	---	8	J	---	---	4
Shield	Bare ¹	---	---	---	---	---	---
+VDC Sense	---	---	---	---	---	---	2
Com Sense	---	---	---	---	---	---	11
Case	Green	---	---	G	G	G	9

¹CE Option: Cable shield (bare wire) is connected to internal case
²CE Option: Read Technical Bulletin TB111