



Incremental Encoder B58N



Quality, precision and confiability

The incremental encoder B58N Series is rugged, compact and very flexible sensor.

A completerange of mechanical options are offered in solid shaft, hollow shaft and spread shaft, besides a variety of mounting flanges and electrical connections.

Based on what's latest in optical and electronic technologies, B58N series has as key specifictions:

- Resolution from 1 to 5000 PPR
- Protection against overvoltage, reverse polarity and short circuit between exits
- External diameter of 58mm
- Operating tempeature from 0° C to 100°C
- Storage temperature from -20°C to 100°C
- Compact with approximately 400g
- 1 year warranty
- Reduced production lead time (on request)

Mechanical characteristics

Maximum rotation	6000 RPM
Bearing life	20.000 hrs (100 N charge and maximum rotation)
Starting torque	0,6N.cm (solid shaft) and 1,0N.cm (hollow shaft, spread shaft and hubshaft)
Moment of inertia	35 g.cm ² (solid shaft), 28 g.cm ² (hollow shaft) and 45g.cm ² (spread shaft)
Runout	+/- 0,13 mm
Endplay	+/- 1,27 mm
Diameter size options:	
Solid	6 mm, 8 mm, 10 mm, 12 mm
Hollow	8 mm, 10 mm, 12 mm or 15 mm
Passing	8 mm
Spread	8 mm or 10 mm
Hubshaft	12 mm

Electrical characteristics

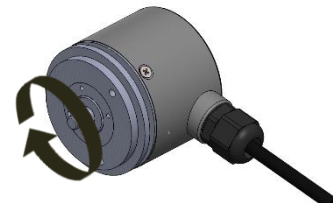
Input Power	5 - 26 Vcc
Outputs	HTL (5-26 VCC) or TTL (5 VCC) maximum 40mA
Consumption	< 60 mA + outputs loads
Frequency response	125 kHz
Resolution	1 to 3600 PPR
Electrical protection	Polarity reversal, short-circuit between outputs and overvoltage
Signal format	Two signals (A and B - quadrature) reference signal (Z) and complementary signals.
Phase sense	Until 625 PPR: 90° ± 15° Above 625 PPR: 90° ± 30°
Symmetry	Until 1024 PPR: 180° ± 18° Above 1024 PPR: 180° ± 25°
Referency signal (Z, Marker, Index)	Format 1 - Non-synchronized reference - "Ungated" (standard) Format 2 - Synchronized with the upstream edge of "Gated" B channel (only for 1024 and 2048 PPR)

Ambiental characteristics

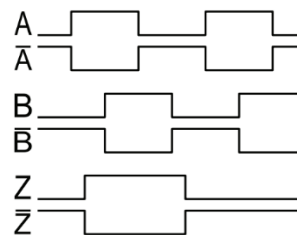
Operating temperature	0°C to 100°C
Storage temperature	-20°C to 100°C
Impact	100 G's per 11 miliseconds
Vibration	5 Hz to 2000 Hz to 20 G's
Umity	Until 98% without condensation
Protection case	IP67
Certifications	RoHS Compliant

Signal format

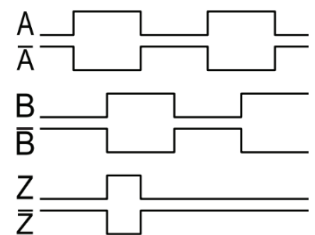
Clockwise rotation direction
 Positive lag (rising edge of channel A before B)



Format 1 (Z "Ungated")



Format 2 (Z "Gated")



Ordering Information

Code 1: Model	Code 2: PPR	Code 3: Mounting	Code 4: Shaft	Code 5: Output	Code 6: Termination	Code 7: Cable length	Code 8: Plug				
B58N	□□□□	□	□	□	□	□	□				
B58N	0001	Solid Shaft		Format 1 "Ungated"		1 1,5 m 2 2 m 3 3 m 4 4 m 5 5 m 6 6 m 7 7 m 8 8 m 9 9 m A 10 m B 15 m C 20 m D 25 m E 30 m F 35 m G 40 m I 50 m P 0,15 m S 0,5 m T 1,0 m	0 Sem plug CONIN (M23) A Female cw / internal thread B Female ccw / internal thread S Male cw / external thread R Male ccw / external thread 8 Pin Connector L Plug Military 10 Pin 2 Male 7 Male + Plug DB9 Connector K Male				
	0024	S Synchro Flange	6 6 mm	A 5 Vdc – TTL							
	0025	K Clamping Flange	8 8 mm	B 5 Vdc / 26 Vdc – HTL							
	0035	Q Square Flange	A 10 mm	Format 2 "Gated" 3							
	0040	A Round Flange	C 12 mm								
	0050	Z Special "BA" Flange									
	0060			C 5 Vdc – TTL	Cable A Radial B Axial						
	0060			D 5 Vdc / 26 Vdc – HTL							
	0100	Hollow Shaft									
	0120	D Frount Mounting	8 8 mm								
	0192	H Rear Mounting	A 10 mm								
	0200	(except for 15 mm model)	C 12 mm								
	0240		F 15 mm								
	0250	Spread Shaft									
	0256	X Spread Shaft	8 8 mm								
	0300		A 10 mm								
	0360	Solid Passing Shaft									
	0500										
	0512	P Solid Passing Shaft	8 1 mm								
	0600	Hubshaft									
	0625										
	0720	D Hubshaft	G 12 mm								
	1000	Note: By choosing hollow shaft, spread shaft or solid passing shaft, the connection (Code 6) must be radial.			CONIN (M23) ¹ C Radial CW D Radial CCW E Axial CW F Axial CCW CONIN (M23) ² G Radial CW H Radial CCW Q Axial CW R Axial CCW 8 pin connector J Axial ¹ L Radial ¹ S Radial ²		0 Without cable	0 Without plug			
	1024										
	1200										
	1250										
	1440										
	2000										
	2048										
	2500										
	2540										
	2600										
	3600										

Contact our
Factory for
options
below

4096, 5000

¹ Mating plug supplied

² Mating plug not supplied

³ Only for 1024 PPR and 2048 PPR

Ordering code example

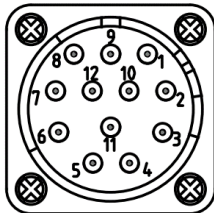
B58N 0512 SA BA 1A

Encoder B58N 512 PPR, solid 10mm shaft, 5Vdc / 26Vdc - HTL output, 1,5m axial cable, M23 cw plug

PINNING

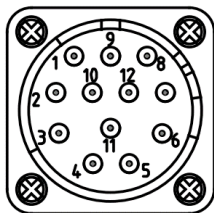
CODE 6 - ELECTRICAL CONNECTION

- C/E/G/Q (CONIN M23)



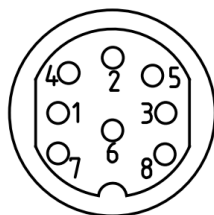
Pin	Function
1	GND
2	Power Source
3	Channel A+
4	Channel B+
5	Channel A-
6	Channel B-
7	Channel Z+
8	Channel Z-
9	Case
10	-
11	-
12	-

- D/F/H/R (CONIN M23)



Pin	Function
1	Channel B-
2	-
3	Channel Z+
4	Channel Z-
5	Channel A+
6	Channel A-
7	-
8	Channel B+
9	Case
10	GND
11	-
12	Power Source

- J/L/S (8 pin)*

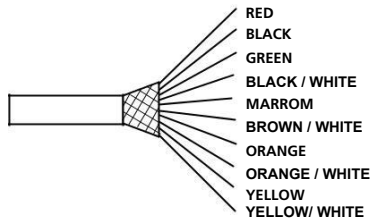


Pin	Function
1	GND
2	Power Source
3	*Channel A+
4	*Channel B+
5	*Channel A-
6	*Channel B-
7	Channel Z+
8	Channel Z-
*negative gap	

CODE 8 - PLUG

10 WIRE CABLE

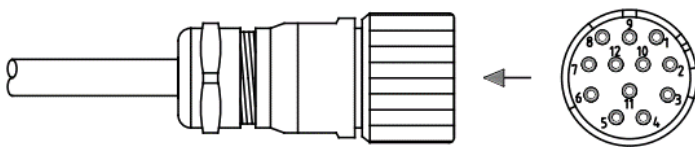
- 0 (Without Plug)



Wire	Function
Red	Power Source
Black	GND
Green	Case
Black / white	-
Brown	Channel A+
Brown / white	Channel A-
Orange	Channel B+
Orange / white	Channel B-
Yellow	Channel Z+
Yellow / white	Channel Z-

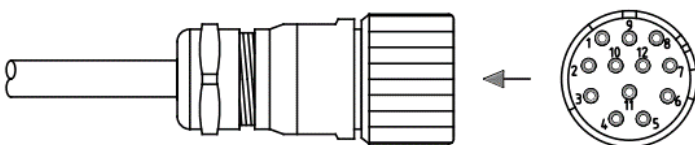
CONIN (M23)

- A



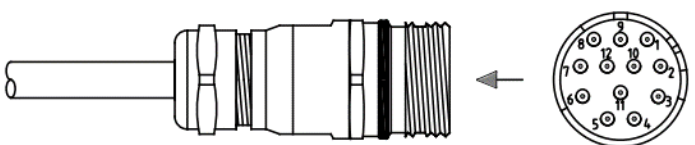
Pin	Function
1	GND
2	Power Source
3	Channel A+
4	Channel B+
5	Channel A-
6	Channel B-
7	Channel Z+
8	Channel Z-
9	Case
10	-
11	-
12	-

- B



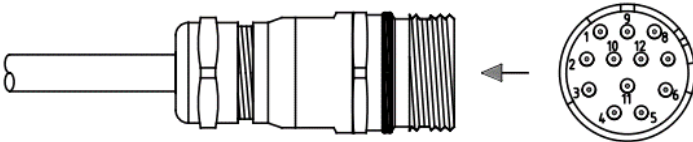
Pin	Function
1	Channel B-
2	-
3	Channel Z+
4	Channel Z-
5	Channel A+
6	Channel A-
7	-
8	Channel B+
9	Case
10	GND
11	-
12	Power Source

- S



Pin	Function
1	GND
2	VCC
3	Channel A+
4	Channel B+
5	Channel A-
6	Channel B-
7	Channel Z+
8	Channel Z-
9	Case
10	-
11	-
12	-

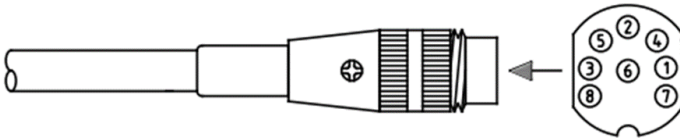
- R



Pin	Function
1	Channel B-
2	-
3	Channel Z+
4	Channel Z-
5	Channel A+
6	Channel A-
7	-
8	Channel B+
9	Case
10	GND
11	-
12	Power Source

8 PIN CONNECTOR

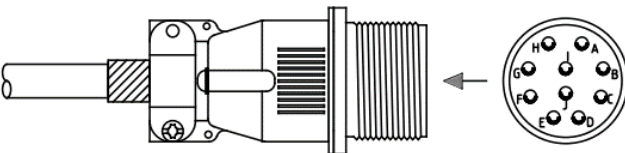
- L



Pin	Function
1	GND
2	Power Source
3	*Channel A+
4	*Channel B+
5	*Channel A-
6	*Channel B-
7	Channel Z+
8	Channel Z-
*negative gap	

MILITARY 10 PIN

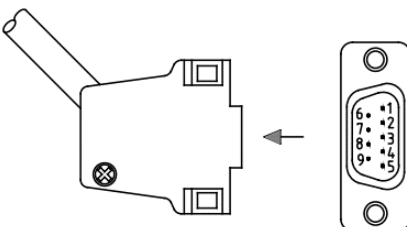
- 2 or 7



Pin	Function
A	Channel A+
B	Channel B+
C	Channel Z+
D	Power Source
E	-
F	GND
G	Case
H	Channel A-
I	Channel B-
J	Channel Z-

DB9 CONNECTOR

- K



Pin	Function
1	GND
2	Channel B+
3	Channel B-
4	Channel A-
5	Channel A+
6	-
7	Channel Z+
8	Channel Z-
9	Power Source