



Type SCH58F

- Hollow Shaft Encoder - \varnothing 58 mm
- Through Hollow Bore: \varnothing 3/8 in to \varnothing 5/8 in
- Resolution up to 9.000 ppr
- IP 65 (IP 66 optional)
- With 6, 7 or 10 Pin Mil Connector

Electrical Specifications

Code:	Incremental
Resolution:	1 to 9000 ppr (pulses per revolution)
Supply Voltage:	4,5 Vdc min. to 30 Vdc max. ** (45 mA max. - no load)
Output Voltage:	Low: 500 mV max. at 10 mA High: ($V_{in} - 0,6$) at -10 mA ($V_{in} - 1,3$) at -25 mA
Output Current:	30 mA max. load per output channel **
Frequency Response:	300 kHz max. **
Output Format:	Two channel (A, B) quadrature with Index (Z) and optional complementary (A-, B-, Z-) outputs
Phase Sense:	A leads B clockwise (CW) from the mounting end of the encoder
Index:	Gated with Channels A and B high
Accuracy:	+/- 0,8 arc-min.
Outputs:	ASIC Push pull and Differential OL7272 Push-pull and Differential Line Driver 26C31 Differential Line Driver 5V output (with 5V input)
Electrical Protection:	Reverse polarity and output short circuit protected
Noise Immunity:	Tested to EN61000-6-2 : 2005 (industrial environments) Electromagnetic compatibility (EMC) and EN 61000-6-3 : 2007 (residential, commercial, and light- industrial environments) for Electromagnetic compatibility (EMC)

**= It is recommended user not to combine max. value for all 3 parameters

Mechanical Specifications

Material:	Housing: Aluminum Cap: Aluminum Hollow Shaft: Brass
Weight:	Encoder: ~ 320 gr (11,29 oz)
Bearing Life:	> 1,9 x 10 ¹⁰ revolutions at rated load
Shaft Speed:	4.500 rpm (max. sustained) IP 65 3.000 rpm (max. sustained) IP 66
Starting Torque:	< 0,02 Nm (2,83 oz-in) at 25° C
Mass Moment of Inertia:	107 gcm ² (1,5 x 10 ⁻³ oz-in-sec ²)
Hollow Shaft Loads:	Axial: 50 N (11,24 lbs) max. Radial: 50 N (11,24 lbs) max.

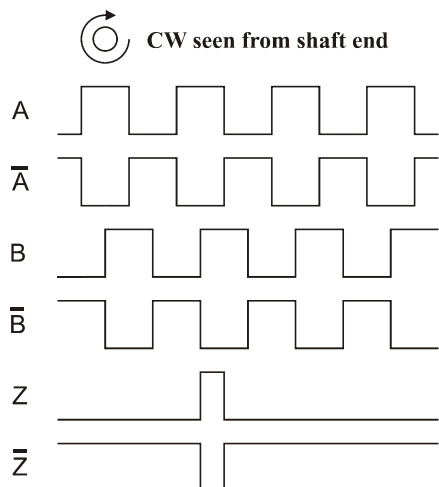
Environmental Specifications

Operating Temp.:	-40° to +85° C
Storage Temp.:	-40° to +85° C
Shock:	100 G / 11 ms
Vibration:	10-2000 Hz / 10 G
Bump:	10 G / 16 ms (1000 x 3 axis)
Humidity:	98 % RH without condensation
IP Rating:	IP 65 / Nema 5 (approx.) IP 66 / Nema 6 (approx.) option

Connection Options

Connectors	6-pin Mil radial 7-pin Mil radial 10-pin Mil radial
-------------------	---

Output waveform



Channel tolerance $180^\circ \pm 36^\circ$
 Phase difference tolerance $90^\circ \pm 18^\circ$
 Z channel tolerance $90^\circ \pm 18^\circ$

Disk Resolutions (pulses per revolution)

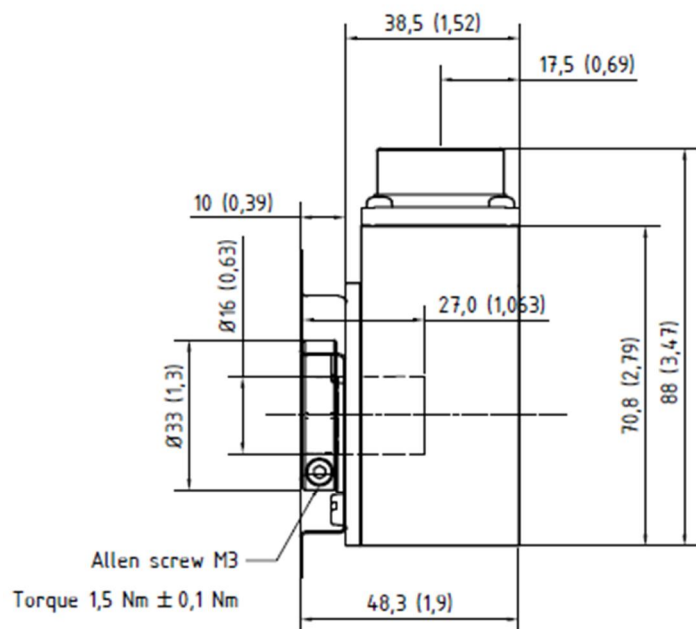
1	32	125	720	3000
2	36	150	800	3072
5	40	180	1000	3600
6	45	200	1000	4000
7	47	250	1024	4096
8	50	256	1131	5000
10	60	300	1200	8192
12	64	360	1250	9000*
15	70	400	1270	
16	75	455	1500	
18	80	500	2000	
20	90	512	2048	
25	100	600	2400	
30	120	635	2500	

Other options on request

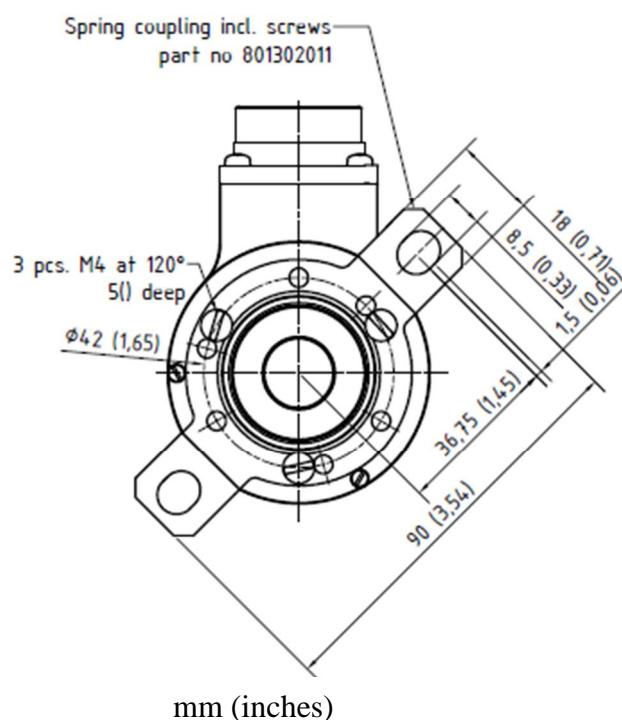
Pulses per revolution,
 min. 1 – max. 9000

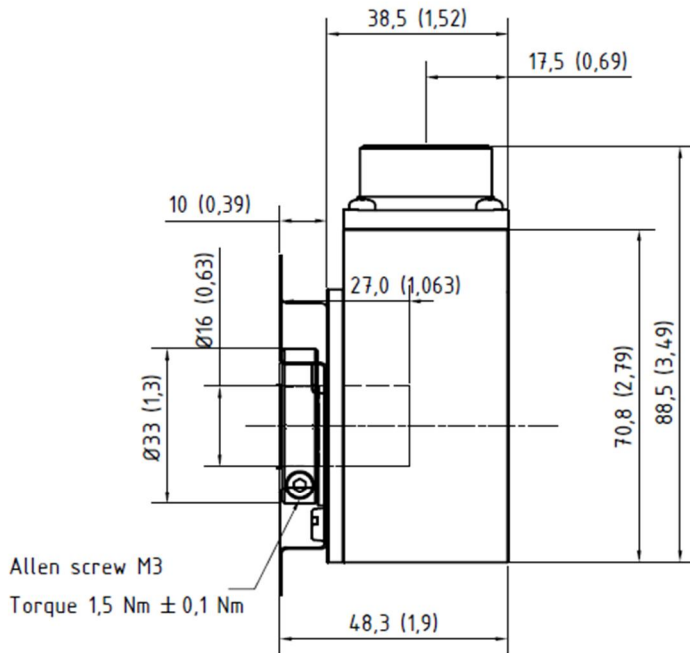
* Operating temperature: -20°C to 50°C

Mechanical Dimensions

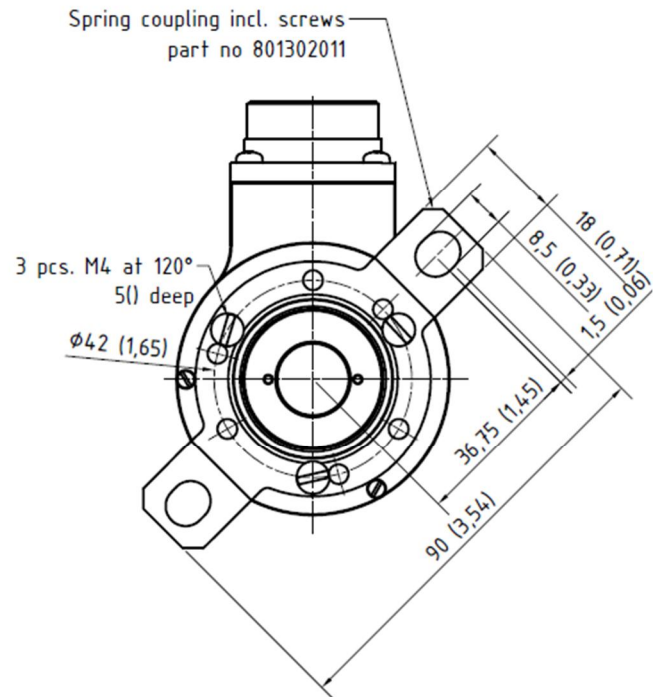


SCH58F with 6 pin Mil

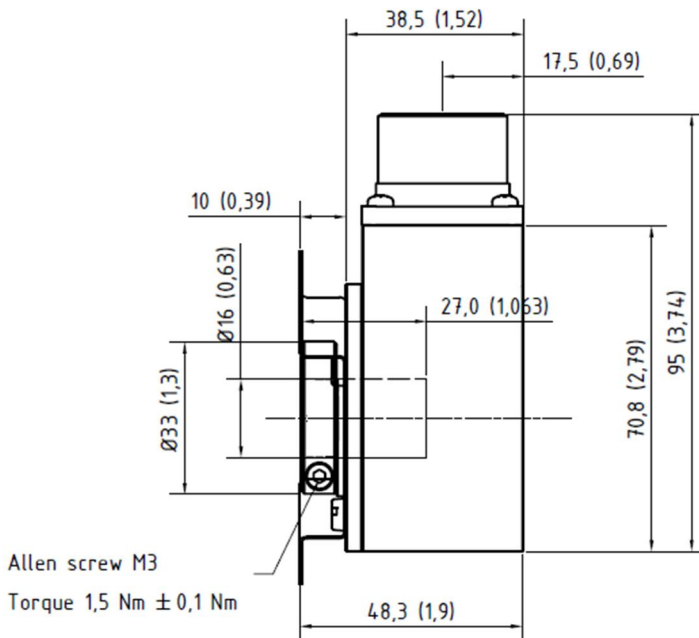




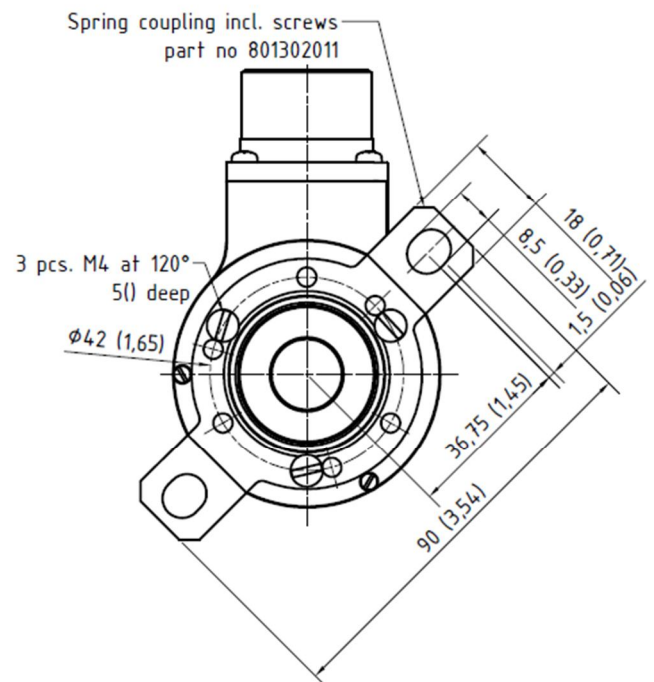
SCH58F with 7 pin Mil



mm (inches)

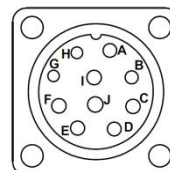
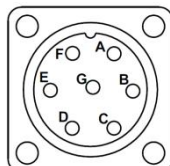
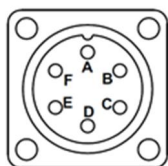


SCH58F with 10 pin Mil



mm (inches)

Output Terminations



Pin	6-pin Mil Connector		7-pin Mil Connector			10-pin Mil Connector	
	Standard Output	Differential Output	Standard Output	Optional Standard Output *	Differential Output	Differential Output	Optional Differential Output *
	Channel	Channel	Channel	Channel	Channel	Channel	Channel
A	GND	GND	Ch. A	Ch. A	Ch. A	Ch. A	Ch. A
B	Vsup	Vsup	Ch. B	Ch. B	Ch. B	Ch. B	Ch. B
C	Z	A -	Ch. Z	NC	Ch. A -	Ch. Z	Ch. A -
D	B	B	Vsup	Vsup	Vsup	Vsup	Vsup
E	A	A	NC	NC	Ch. B -	NC	Ch. B -
F	NC	B -	0 volt	0 volt	0 volt	0 volt	0 volt
G			Shield	Shield	Shield	Shield	Shield
H						Ch. A -	NC
I						Ch. B -	NC
J						Ch. Z -	NC

* ID number required

GND = Circuit Ground

** Internally connected as GND*

GND = Circuit Ground

Shield = Case Ground

Ordering Code

Example: SCH58F – 1024 – D – 3/8 – 27 – 65 – 00 – S – C6 – S1

SCH58F - - - - - - - - -

Pulses per Revolution

See table

Output

Standard	N
Standard – Open Collector NPN	NON
Standard – Open Collector PNP	NOP
Differential	D
26C31 Line Driver 5V / 5V only	L
OL 7272 Line Driver	M

Hollow Shaft Dia.

Hollow Shaft Length

3/8 in x 27 mm	3/8 - 27
1/2 in x 27 mm	1/2 - 27
5/8 in x 27 mm	5/8 - 27

IP Rating

IP 65	65
IP 66	66

Cable Length

No Cable **00**

Cable Takeout

Connector
Side radial **S**

Connector

MIL 6-pin	C6
MIL 7-pin	C7
MIL 10-pin	C10

Spring Coupling

1 hole <i>p/n 80130658</i>	S1
1 hole <i>p/n 80130630</i>	S2
2 holes <i>p/n 80132423</i>	S3
2 holes <i>p/n 80132011</i>	S4
4 holes <i>p/n 80131333</i>	S5
No spring coupling	00

See Accessories for drawings

Other options on request:
Please contact Scancon A/S