

## Type SCA58-G



- Shaft Encoder -  $\varnothing$  58 mm
- Shaft:  $\varnothing$  1/4 inch to  $\varnothing$  10 mm
- Resolution up to 10.000 ppr
- Standard IP 65 (IP 66 & 67 options)

### Electrical Specifications

<b>Code:</b>	Incremental
<b>Resolution:</b>	1 to 10.000 ppr (pulses per revolution)
<b>Supply Voltage:</b>	4,5 Vdc min. to 30 Vdc max. ** (35 mA max. - no load)
<b>Output Voltage:</b>	Low: 500 mV max. at 10 mA High: ( $V_{in} - 0,6$ ) at -10 mA ( $V_{in} - 1,3$ ) at -25 mA
<b>Output Current:</b>	30 mA max. load per output channel **
<b>Frequency Response:</b>	300 kHz max. **
<b>Output Format:</b>	Two channel (A, B) quadrature with Index (Z) and optional complementary (A-, B-, Z-) outputs
<b>Phase Sense:</b>	A leads B clockwise (CW) from the mounting end of the encoder
<b>Index:</b>	Gated with Channels A and B high
<b>Accuracy:</b>	+/- 0,8 arc-min.
<b>Outputs:</b>	ASIC Push pull and Differential OL7272 Push-pull and Differential Line Driver 26C31 Differential Line Driver 5V output (with 5V input)
<b>Electrical Protection:</b>	Reverse polarity and output short circuit protected
<b>Noise Immunity:</b>	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)

### Mechanical Specifications

<b>Material:</b>	Housing: Aluminum Cap: Aluminum Shaft: Stainless Steel
<b>Weight:</b>	Encoder: ~ 190 gr (6,7 oz) Cable: 60 gr / meter (2,12 oz / meter)
<b>Bearing Life:</b>	> $1,9 \times 10^{10}$ revolutions at rated load
<b>Shaft Speed:</b>	4.500 rpm (max. sustained) IP 65 3.000 rpm (max. sustained) IP 66 / IP 67
<b>Starting Torque:</b>	< 0,02 Nm (2,83 oz-in) at 25° C
<b>Mass Moment of Inertia:</b>	6,0 gcm <sup>2</sup> ( $8,5 \times 10^{-5}$ oz-in-sec <sup>2</sup> )
<b>Shaft Loads:</b>	Axial: 50 N (11,24 lbs) max. Radial: 50 N (11,24 lbs) max.

### Environmental Specifications

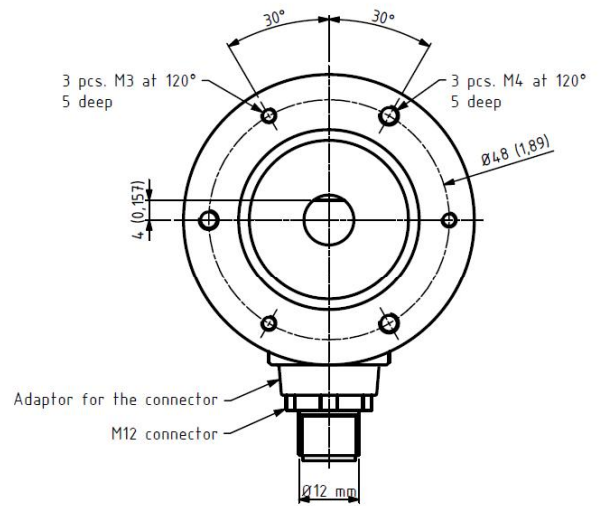
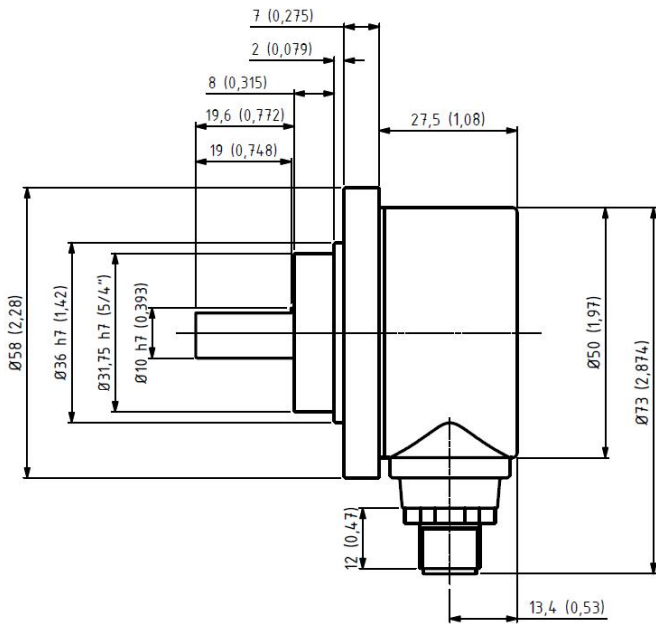
<b>Operating Temp.:</b>	-40° to +85° C
<b>Storage Temp.:</b>	-40° to +85° C
<b>Shock:</b>	100 G / 11 ms
<b>Vibration:</b>	10-2000 Hz / 10 G
<b>Bump:</b>	10 G / 16 ms (1000 x 3 axis)
<b>Humidity:</b>	98 % RH without condensation
<b>IP Rating:</b>	IP 65 / Nema 5 (approx.) IP 66 / Nema 6 (approx.) option IP 67 / Nema 6 (approx.) option

### Connection Options

<b>Cable:</b>	8 leads (0,14 mm <sup>2</sup> , 26 AWG) twisted pairs; shielded
<b>Connector:</b>	5-pin M12 8-pin M12 9-pin M23 12-pin M23

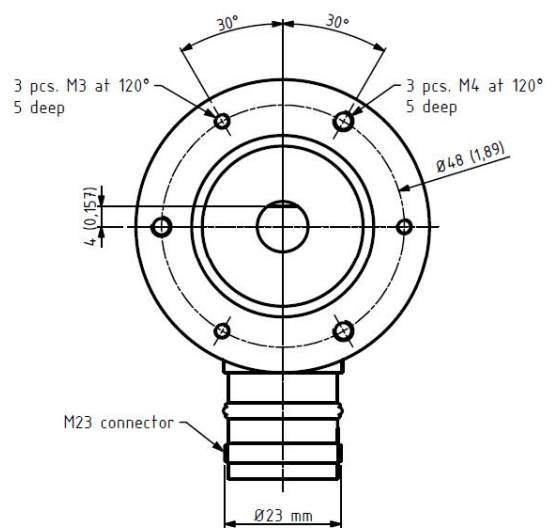
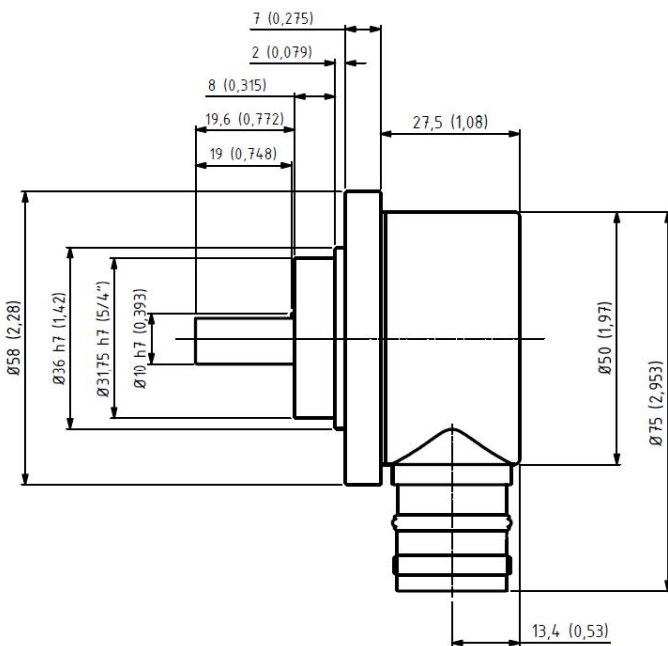
\*\* = It is recommended user not to combine max. values for all 3 parameter





M12 Connector

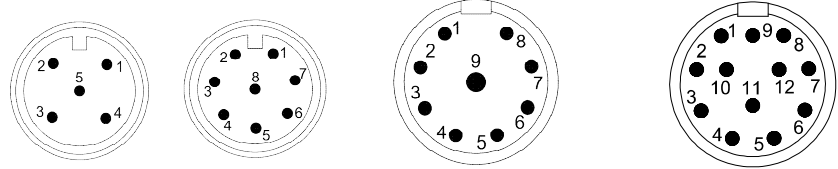
mm (inches)



M23 Connector

mm (inches)

## Output Terminations



Channel	Standard Cable	
	Standard Output	Differential Output
Channel	Wire Color	
A	Pink	Pink
A -	Gray*	Gray
B	Green	Green
B -	Yellow*	Yellow
Z	White	White
Z -	Brown*	Brown
Vsup	Red	Red
GND	Blue	Blue

*GND = Circuit Ground*

*\* Internally connected as GND*

Pin	M12 5 - pin	M12 8 - pin	M23 9 - pin	M23 9 - pin	M23 12 - pin	M23 12 - pin
	Standard Output	Differential Output	Standard Output	Differential Output	Standard Output	Differential Output
Pin	Channel	Channel	Channel	Channel	Channel	Channel
1	Vsup	A	A	A	GND	B -
2	B	Vsup	B	B	NC	NC
3	GND	A -	Z	Z	Z	Z
4	A	B	GND	A -	GND	Z -
5	Z	B -	GND	B -	A	A
6		Z	GND	Z -	GND	A -
7		GND	Vsup	Vsup	NC	NC
8		Z -	GND	GND	B	B
9			Shield	Shield	Shield	Shield
10					GND	GND
11					NC	NC
12					Vsup	Vsup

*GND = Circuit Ground*

*Shield = Case Ground*

## Ordering Code

Example: SCA58-G – 1024 – D – 8 – 20 – 65 – 01 – S – 00

SCA58-G - [ ] - [ ] - [ ] - 20 - [ ] - [ ] - [ ] - [ ]

Pulses per Revolution    Output    Shaft Dia.    Shaft Length    IP Rating    Cable Length    Takeout    Connector

See table

Standard	<b>N</b>
Standard – Open Collector NPN	<b>NON</b>
Standard – Open Collector PNP	<b>NOP</b>
Differential	<b>D</b>
26C31 Line Driver 5V / 5V only	<b>L</b>
26C31 Line Driver 9 to 30V input / 5V output	<b>5L</b>
OL 7272 Line Driver	<b>M</b>

IP 65	<b>65</b>
IP 66	<b>66</b>
IP 67	<b>67</b>

Standard is 1 meter	<b>01</b>
Specify length	<b>XX</b>
No Cable	<b>00</b>

<b>Cable</b>	
Side radial	<b>S</b>
Back axial	<b>B</b>
<b>Connector</b>	
Side radial	<b>S</b>
Back axial	<b>B</b>

1/4" inch x 20 mm	<b>1/4</b>	-	<b>20</b>
8 mm x 20 mm	<b>8</b>	-	<b>20</b>
3/8" inch x 20 mm	<b>3/8</b>	-	<b>20</b>
10 mm x 20 mm	<b>10</b>	-	<b>20</b>

M12 5-pin	<b>P5</b>
M12 8-pin	<b>P8</b>
M23 9-pin	<b>C9</b>
M23 12-pin	<b>C12</b>
No Connector	<b>00</b>

**Other options on request:**  
Please contact Scancon A/S

See Accessories for drawings