High temperature Type 5803

- High temperature version, up to 110 °C (higher temperatures on request). Application e.g. drive technology.
- Many variations, also customized versions
- Temperature and ageing compensation
- Short-circuit proof outputs
- Reverse connection protection (at U_B= 10 ... 30 V DC)
- Resolution up to 5000 ppr
- High shaft load
- available as explosion proof zone 2 and 22

Mechanical characteristics:

Speed:	max. 12000 min^{-1}
Rotor moment of inertia:	appr. 1,8 x 10^{-6} kgm^2
Starting torque:	< 0,01 Nm
Radial load capacity of shaft*:	80 N
Axial load capacity of shaft:*:	40 N
Weight:	appr. 0,4 kg
Protection acc. to EN 60 529:	IP 65
Working temperature:	–20 °C ... +105 °C[1)]
Operating temperature:	-20 °C ... +110 °C[1)]
Shaft:	stainless steel
Shock resistance acc. to DIN-IEC 68-2-27	1000 m/s^2, 6 ms
Vibration resistance acc. to IEC 68-2-6:	100 m/s^2, 10 ... 2000 Hz

*View also diagrams on page 25

1)Constant trailing: -20 ... +70 °C

Pulse rates available at short notice:

10, 20, 25, 30, 50, 60, 100, 120, 125, 127, 150, 180, 200, 216, 240, 250, 254, 256, 300, 314, 360, 375, 400, 500, 512, 600, 625, 720, 745, 750, 762, 800, 900, 927, 1000, 1024, 1250, 1270, 1400, 1500, 1800, 2000, 2048, 2250, 2400, 2500, 3000, 3600, 4000, 4096, 5000

Other pulse rates on request

Electrical characteristics:

Output circuit:	RS 422 (TTL-compatible)	Push-pull
Supply voltage:	5 V (±5%) or 10 ... 30 V DC	10 ... 30 V DC
Power consumption (no load) without inverted signal:	–	typ. 55 mA / max. 125 mA
Power consumption (no load) with inverted signals:	typ. 40 mA / max. 100 mA	typ. 80 mA/ max.150
Permissible load/channel:	max. ±20 mA	max. ±30 mA
Pulse frequency:	max. 300 kHz	max. 300 kHz
Signal level high:	min. 2,5 V	min. U_B-2,5 V
Signal level low:	max. 0,5 V	max. 2,0 V
Rise time t_r	max. 200 ns	max. 1 µs
Fall time t_f	max. 200 ns	max. 1 µs
Short circuit proof outputs:[1)]	yes[2)]	yes
Reverse connection protection at UB:	5 V: no 10 ... 30 V: yes	yes
Conforms to CE requirements acc. to EN 61000-6-1, EN 61000-6-4 and EN 61000-6-3		

1)When supply voltage correctly applied

2)Only one channel at a time: (when U_B= 5 V, short-circuit to channel, 0 V, or +U_B is permitted.)
(when U_B= 10 ...30 V short-circuit to channel or 0 V is permitted.)

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Terminal assignment

Signal:	0V	0V Sensor[2)]	+U_B	+U_B Sensor[2)]	A	$\overline{A}$	B	$\overline{B}$	0	$\overline{0}$	Shield
12 pin plug Pin:	10	11	12	2	5	6	8	1	3	4	PH[1)]
7 pin plug Pin:	F	–	D	E	A	–	B	–	C	–	G
10 pin plug, Pin:	F	–	D	E	A	G	B	H	C	I	J
Cable colour:	WH 0,5 mm²	WH	BN 0,5 mm²	BN	GN	YE	GY	PK	BU	RD	

[1)] PH = Shield is attached to connector housing

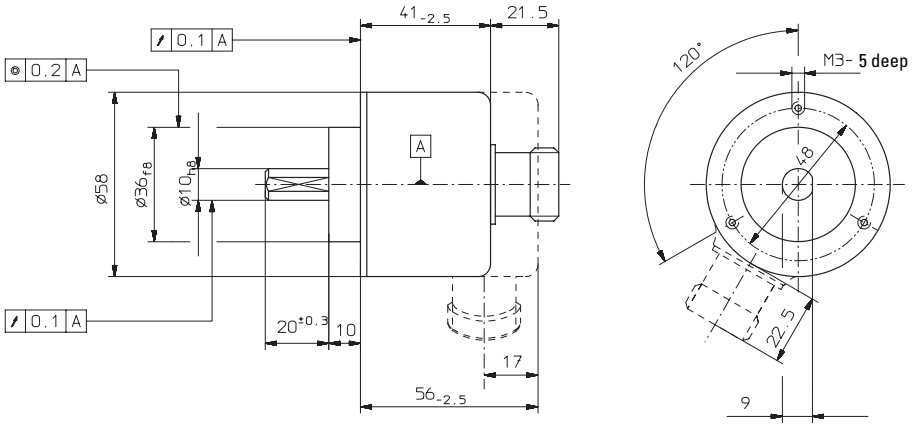
[2)] The sensor cables are connected to the supply voltage internally if long feeder cables are involved they can be used to adjust or controll the voltage at the encoder

- If the sensor cables are not in use, they have to be insulated or 0 V_{Sensor} has to be connected to 0 V and $U_{BSensor}$ has to be connected to U_B
- Using RS 422 outputs and long cable distances, a wave impedance has to be applied at each cable end.

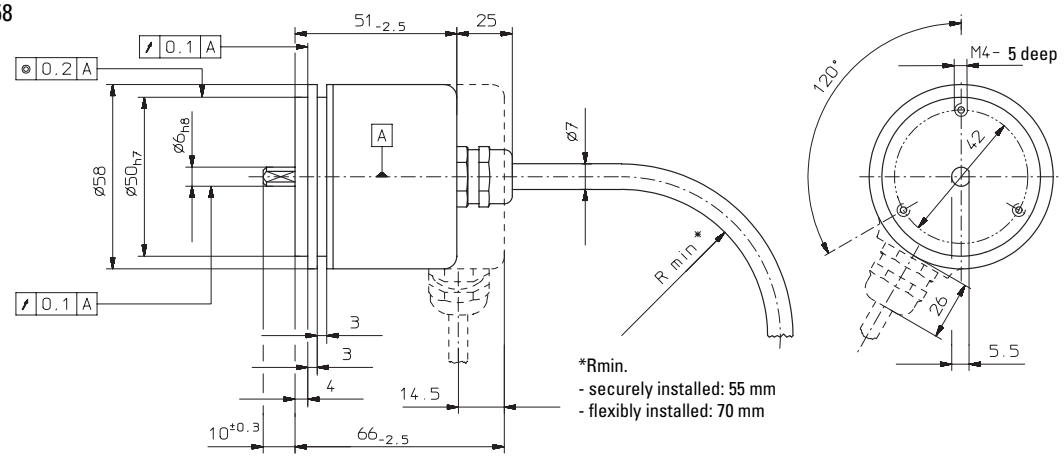
Insulate unused outputs before initial startup.

Dimensions

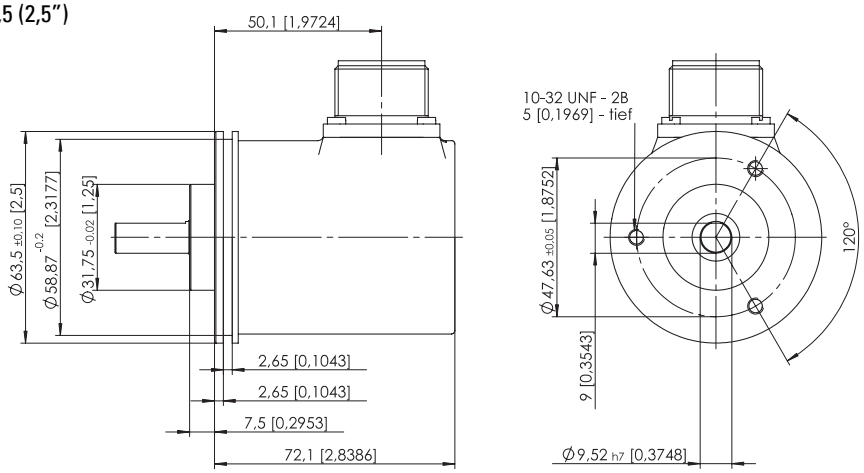
Clamping flange ø 58



Synchronous flange ø 58



Synchronous flange ø 63,5 (2,5")



Mounting advice:

Do not connect encoder and drive rigidly to one another at shafts and flanges! Always use couplings to prevent shaft overload (see accessories chapter).

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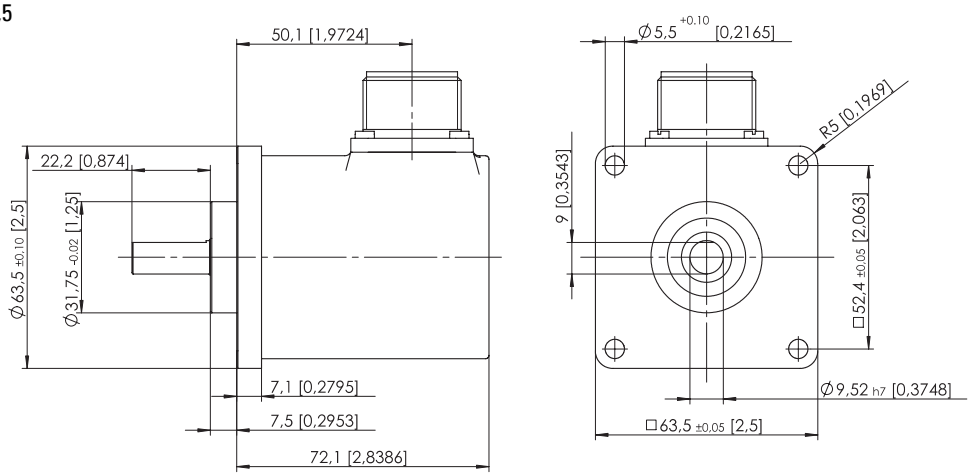
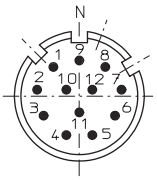
Rectangular flange □63,5

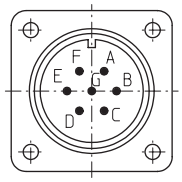


Top view of mating side, male contact base:

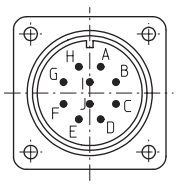
12 pin plug



7 pin plug



10 pin plug



Order code: 8.5803.XXXX.XXXX

Range

Flange
- **1 = Clamping flange ø 58**
- **2 = Synchronous flange ø 58**
- M = Rectangular flange □63,5 (2,5")
- P = Synchronous flange ø 63,5 (2,5")

Shaft
- **1 = ø 6 mm x 10 mm**
- **2 = ø 10 mm x 20 mm**
- P* = ø 9,52 mm x 22,2 mm (3/8" x 7/8")
- *only with flange M or P

Type of connection and supply voltage
- **4 = RS 422 (with inverted signal) 5 V supply voltage**
- 5 = RS 422 (with inverted signal) 10 ... 30 V supply voltage
- **6 = Push-pull (with inverted signal) 10 ... 30 V supply voltage**
- 7 = Push-pull (without inverted signal) 10 ... 30 V Supply voltage

Prefered types are ***fat*** *marked*

Pulse rate
(e.g. 250 pulses=> 0250)

Type of connection
- 1 = Cable axial (1 m TPE-Cable)
- **2 = Cable radial (1 m TPE-Cable)**
- 3 = axial 12 pin plug without mating connector
- **5 = radial 12 pim plug without mating connector**
- W[1)] = 7-pin plug, "MIL"-specified without mating connector, radial
- Y = 10 pin plug, "MIL"-specified without mating connector, radial

[1)]only with output 7

Accessories:
Corresponding mating connector to Type of connection 3 or 5
Art.-no. 8.0000.5012.0000

Corresponding mating connector to Type of connection W:
Art.-no. 8.0000.5052.0000

Corresponding mating connector to Type of connection Y:
Art.-no. 8.0000.5062.0000

Further accessories see accessories chapter