

Standard Type series 5802



- Many types in stock
- Sturdy model to industry standard, Ø58 mm housing
- Preferred model features limited, version at economic pricing
- Temperature and ageing compensation
- Short-circuit proof outputs
- Resolution up to 5000 ppr
- High scanning rate
- 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 ... +70 °C
Operating temperature:	-20 °C ... +75 °C
Shaft:	stainless steel
Shock resistance acc. to DIN-IEC 68-2-27	1000 m/s ² , 6 ms
Vibration resistance acc. to DIN-IEC 68-2-6:	100 m/s ² , 10...2000 Hz

*View also diagrams on page 25

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	Push-pull
Supply voltage:	5 V (±5 %) or 10 .. 30 V DC	10 ... 30 V DC	5 ... 30 V DC
Power consumption (no load) without inverted signal:	–	typ. 55 mA / max. 125 mA	typ. 55 mA / max. 125 mA
Power consumption (no load) with inverted signals:	typ. 40 mA / max. 90 mA	typ. 80 mA/ max. 150 mA	Typ. 80 mA max. 150 mA
Permissible load/channel:	max. ±20 mA	max. ±30 mA	max. ±30 mA
Pulse frequency:	max. 300 kHz	max. 300 kHz	max. 300 kHz
Signal level high:	min. 2,5 V	min. U _B -2,5 V	min. U _B -1,5 V
Signal level low:	max. 0,5 V	max. 2,0 V	max. 2,0 V
Rise time t _r	max. 200 ns	max. 1 µs	max. 1 µs
Fall time t _f	max. 200 ns	max. 1 µs	max. 1 µs
Short circuit proof outputs: ¹⁾	yes ²⁾	yes	yes
Reverse connection protection at U _B :	no	yes	no
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.)

Rotary Measuring Technology

Incremental shaft encoder

Standard Type series 5802

Terminal assignment

Signal:	0V	0V Sensor ²⁾	+U _B	+U _B Sensor ²⁾	A	\bar{A}	B	\bar{B}	0	$\bar{0}$	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	GY PK	BN	RD BU	GN	YE	GY	PK	BU	RD	

¹⁾PH = Shield is attached to connector housing

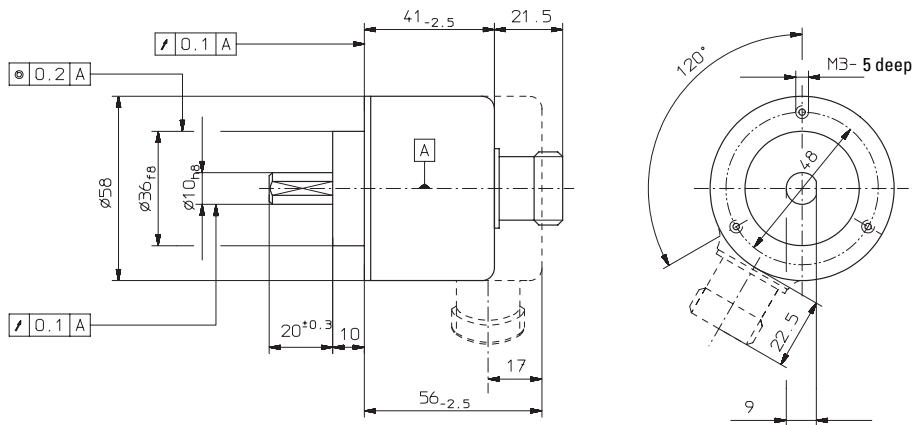
²⁾The sensor cables are connected to the supply voltage internally. If long feeder cables are involved they can be used to adjust or control the voltage at the encoder

- If the sensor cables are not in use, they have to be insulated or 0V Sensor has to be connected to 0V and U_B Sensor has to be connected to U_B

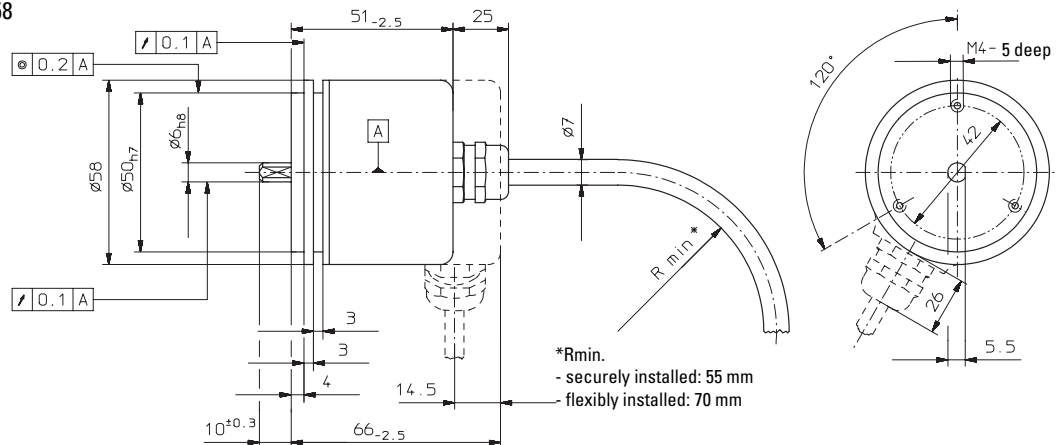
- Using RS 422 outputs and long cable distances, a wave impedance has to be applied at each cable end.
Insulate unused outputs before initial startup.

Dimensions

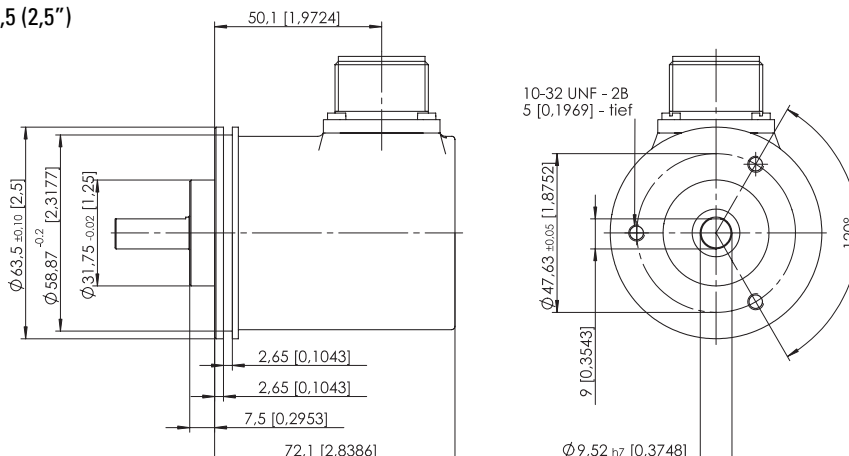
Clamping flange $\varnothing 58$



Synchronous flange $\varnothing 58$



Synchronous flange $\varnothing 63,5$ (2,5")

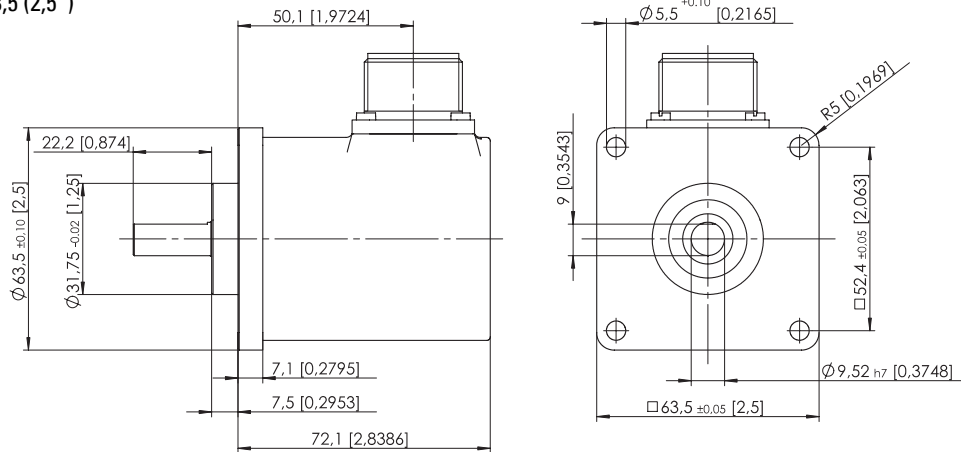


Mounting advice:

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

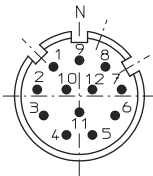
Standard Type series 5802

Rectangular flange □63,5 (2,5")

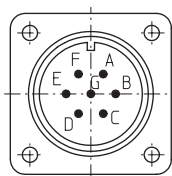


Top view of mating side, male contact base:

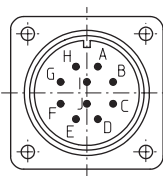
12 pin plug



7 pin plug



10 pin plug



Order code:

8.5802.XXXX.XXXX

Range

Flange and Shaft

- 12 = Clamping flange**
with Shaft \varnothing 10x20 mm
- 21 = Synchronous flange**
with Shaft \varnothing 6x10 mm
- MP = Rectangular flange with
Shaft \varnothing 9,52 x 22,2 (3/8" x 7/8")
- M2 = Rectangular flange with
Shaft \varnothing 10 x 20
- PP = Synchronous flange \varnothing 63,5 with
Shaft \varnothing 9,52 x 22,2 (3/8" x 7/8")
- P2 = Synchronous flange \varnothing 63,5
with Shaft \varnothing 10 x 20

Output circuit and supply voltage

- 4 = RS 422 (with inverted signal)**
5 V supply voltage
- 7 = Push-pull (without inverted signal)**
10 ... 30 V supply voltage
- 8 = Push-pull (without inverted signal)**
5 ... 30 V Supply voltage

*Preferred types are
fat marked*

Stock types

8.5802.1275.0200	8.5802.2175.2500
8.5802.1275.0500	8.5802.2175.3600
8.5802.1275.1000	8.5802.2175.5000
8.5802.2143.1000	
8.5802.2143.1024	
8.5802.2143.2500	
8.5802.2143.3600	
8.5802.2143.5000	
8.5802.2175.1000	
8.5802.2175.1024	

Pulse rate

(e.g. 250 pulses=> 0250)

Type of connection

- 1 = Cable axial (1 m PVC-Cable)
 - 2 = Cable radial (1 m PVC-Cable)**
 - 3 = axial 12 pin plug without
mating connector
 - 5 = radial 12pin connector
without mating connector**
 - W¹⁾ = 7-pin plug, "MIL"-specified
without mating connector, radial
 - Y = 10pin plug, "MIL"-specified
without mating connector, radial
- ¹⁾only with output 7+8

Accessories:

Corresponding mating connector to
connection type 3 or 5
Art.-no. 8.0000.5012.0000

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

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

Further accessories see
accessories chapter

Express types

- 8.5802.12XX.XXXX¹⁾
- 8.5802.21XX.XXXX¹⁾
- 8.5802.MPXX.XXXX¹⁾

¹⁾ except connection W and Y