

Multiturn Type 5861



- Ø 58 mm
- IP 66
- SSI or parallel interface
- Short-circuit proof outputs
- 4096 (12 bits) divisions,
4096 (12 bits) revolutions
- Gray or binary
- durably industry version
- mechanical multiturn gear

Mechanical characteristics:

Speed:	max. 10000 min ⁻¹
Rotor moment of inertia:	appr. 14 x 10 ⁻⁶ kgm ²
Starting torque:	< 0,01 Nm
Radial load capacity of shaft:	60 N
Axial load capacity of shaft::	40 N
Weight:	appr. 0,35 kg
Protection acc. to EN 60 529:	IP 65
Working temperature:	-20° C ... +60 °C
Operating temperature:	-20° C ... +65 °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...500 Hz

Divisions and code types available at short notice

12 / 12 bits Gray
12 / 12 bits Binary

Other divisions and code types on request

Electrical characteristics:

Interface type:	Synchronous-Serial (SSI)	Parallel
Supply voltage (U _B):	10 ... 30 V DC	10 ... 30 V DC
Output driver:	RS 422	Push-pull
Power consumption (no load) max.:	66 mA	167 mA
Permissible load/channel:	max. +/-20 mA	max. +/-30 mA
Word change frequency	max. 10.000/s	10.000/s
SSI pulse rate min./max.:	100 kHz/400 kHz	–
Signal level high:	min. 2,5 V	min. U _B – 3 V
Signal level low (I _{Load} = 20 mA):	max. 0,5 V	max. 2 V
Rise time t _r (without cable):	max. 100 ns	max. 250 ns
Fall time t _f (without cable):	max. 100 ns	max. 250 ns
Short circuit proof outputs: ¹⁾	yes ²⁾	yes
Reverse connection protection at U _B :	yes	yes
Conforms to CE requirements acc. to EN 50082-2, EN 50081-2 and EN 55011 Class B		

¹⁾ When supply voltage correctly applied U_B

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

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Terminal assignment (SSI-interface 24 bits with 12 pin plug or cable output):

Signal:	0V	+D	+T		Dir			+UB		-D	-T	S ₀ ¹⁾	⊥
Pin:	1	2	3	4	5	6	7	8	9	10	11	12	PH
Col.:	BN	PK	YE		BU			WH		GY	GN	BK	

Terminal assignment (Parallel interface 24 bits with 37 pin Sub-D-plug or cable output):

Signal	Pin	LoI.	Signal	Pin	LoI.	Signal	Pin	LoI.
0 V	1	BU	10 ... 30 V DC	13	RD	S9 ²⁾	25	BN GN
S0 ²⁾	2	BR	M4 ³⁾	14	WH BU	S11 ²⁾	26	YE BN
S2 ²⁾	3	YE	M6 ³⁾	15	WH RD	M13 ³⁾	27	GY BN
S4 ²⁾	4	PK	M8 ³⁾	16	WH BK	M3 ³⁾	28	PK BN
S6 ²⁾	5	GY PK	M10 ³⁾	17	GY GN	---	29	---
S8 ²⁾	6	WH GN	Alarm ⁶⁾	18	PK GN	Latch ⁷⁾	30	GN BU
S10 ²⁾	7	WH YE	---	19	---	10 ... 30 V DC	31	WH
M0 ³⁾	8	WH GY	0 V	20	BK	---	32	---
M2 ³⁾	9	WH PK	S1 ²⁾	21	GN	M5 ³⁾	33	BN BU
Dir ⁴⁾	10	YE PK	S3 ²⁾	22	GY	M7 ³⁾	34	BN RD
---	11	---	S5 ²⁾	23	VT	M9 ³⁾	35	BN BK
Tristate ⁵⁾	12	YE BU	S7 ²⁾	24	RD BU	M11 ³⁾	36	YE GY
						---	37	---

¹⁾S₀: 0 V Signal output

²⁾S₀ ... S₁₁: Data bits indicating the position within one revolution (S₀ = LSB; S₁₁ = MSB)

³⁾M₀ ... M₁₁: Data bits indicating the number of turns (M₀ = LSB; M₁₁ = MSB)

⁴⁾Dir: Programming input for count direction:
+U_B or not connected = rising code values when shaft turning clockwise (cw)
0 V = falling code values when shaft turning clockwise (cw)

⁵⁾Tristate: Input to inactivate data outputs:
+U_B or not connected = HIZ (high impedance) data outputs
0 V = data outputs activated

⁶⁾Alarm: Alarm output. Active if error occurs (NPN O.C. 10 mA)

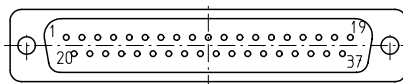
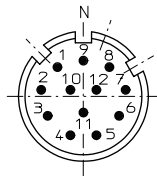
⁷⁾Latch: Input for storing of position:
+ U_B or not connected = position data permanently updated at output
0 V = position data are stored, stored value can be read out at output

- PH: Plug housing

Top view of mating side, male contact base:

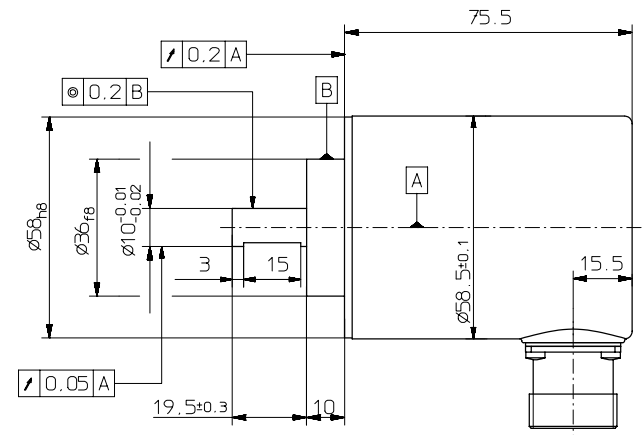
12 pin plug

37pin sub-D-plug

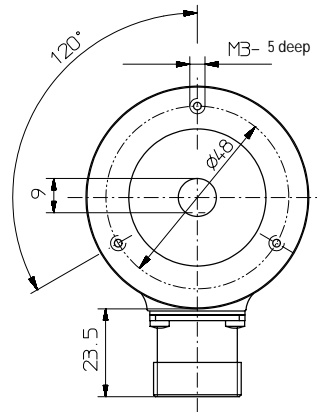


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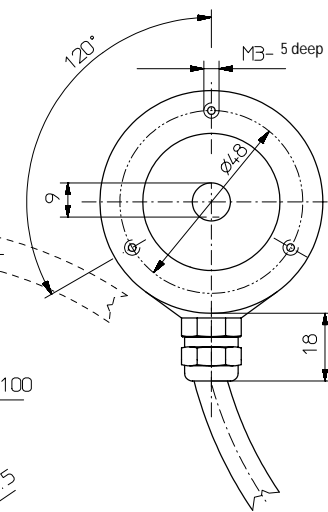
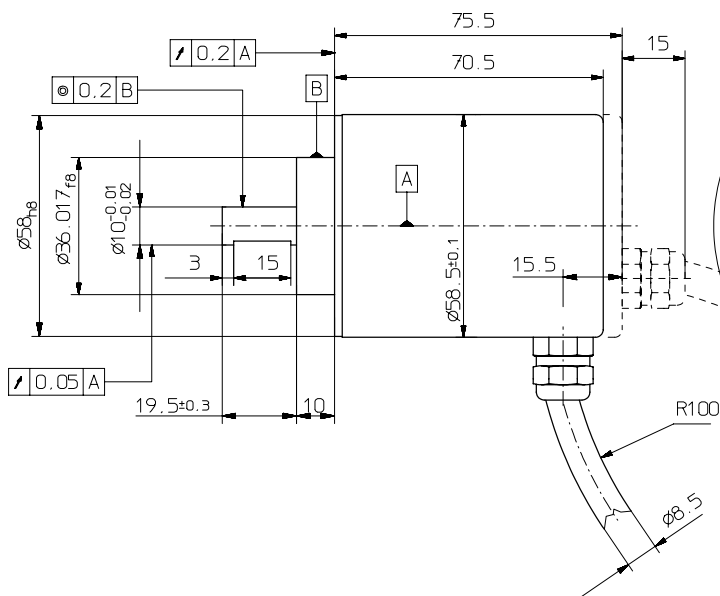
Dimensions



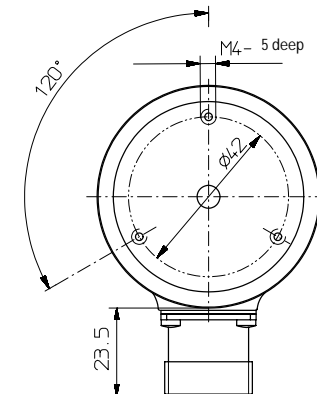
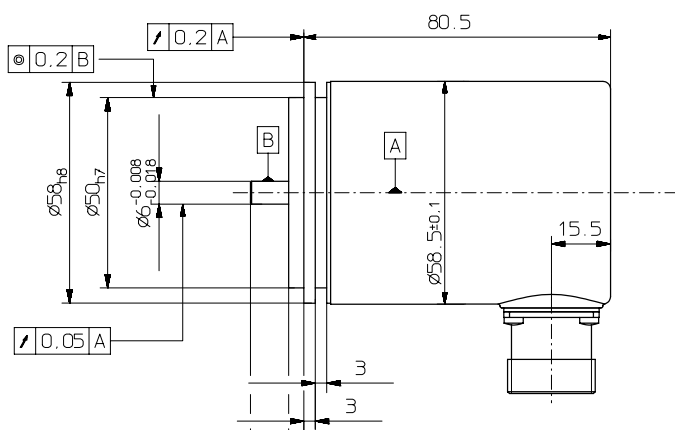
Clamping flange with shaft $\varnothing 10$ mm and 12pin plug (SSI)



Clamping flange with shaft $\varnothing 10$ mm and cable output (parallel)

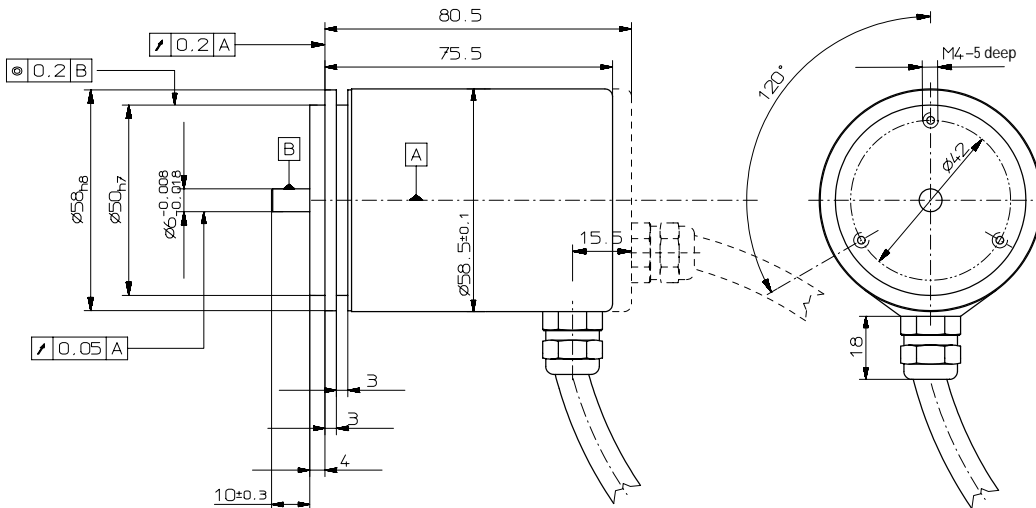


Clamping flange with shaft $\varnothing 6$ mm and 12pin plug (SSI)



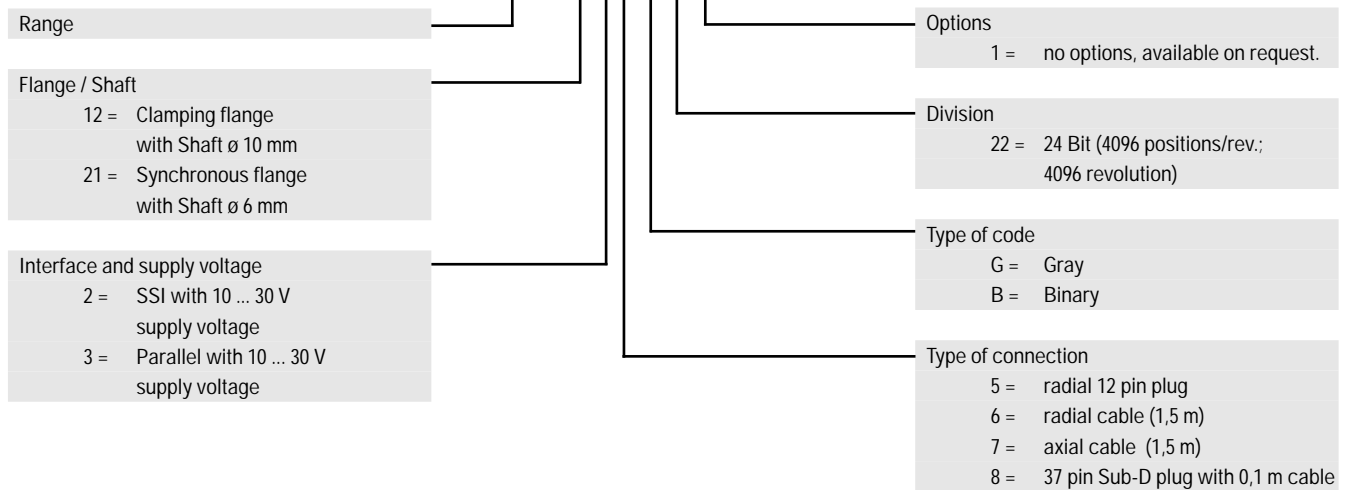
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Synchronous flange with shaft \varnothing 6 mm



Order code:

05.5861.XXXX.XXXX



Absolute Multiturn shaft-/hollow shaft encoders