

SM



Optical absolute mechanic multiturn shaft encoder 28bit (ø58MM)
Parallel output – Analog output 4-20mA / 0-10V – Programmable analog
output with push button

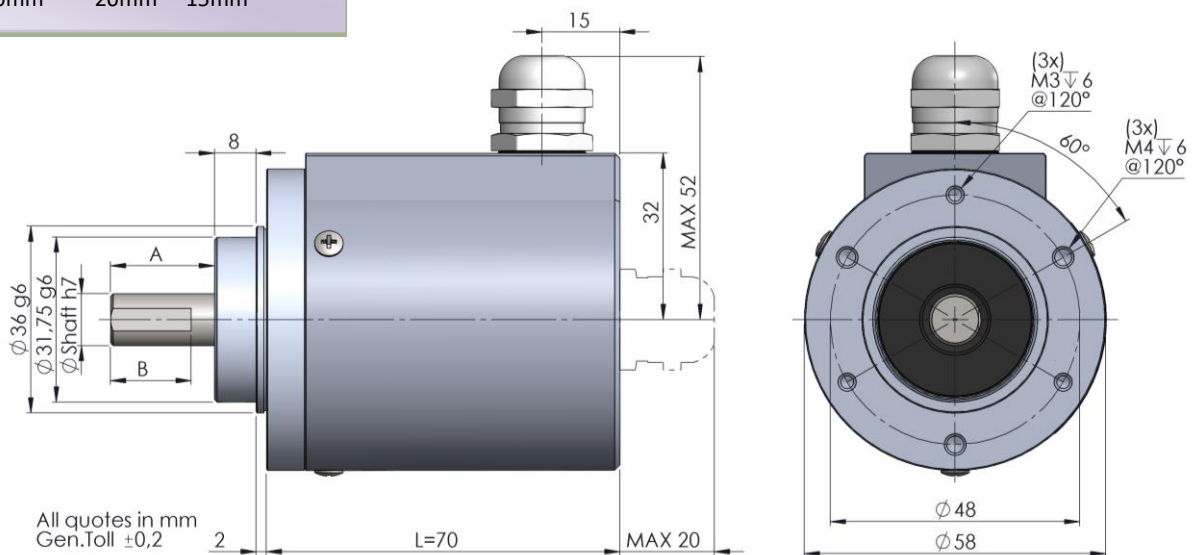
Mechanics Data

Cover:	Aluminium
Body:	Aluminium
Shaft:	Stainless steel
Bearings:	Ballraces
Weight:	400gr
IP Protection:	IP65
RPM:	6000 Max
Torque:	5Ncm
Inertia :	100gcm ²
Shaft Loading:	Axial. 50N - Radial 50N

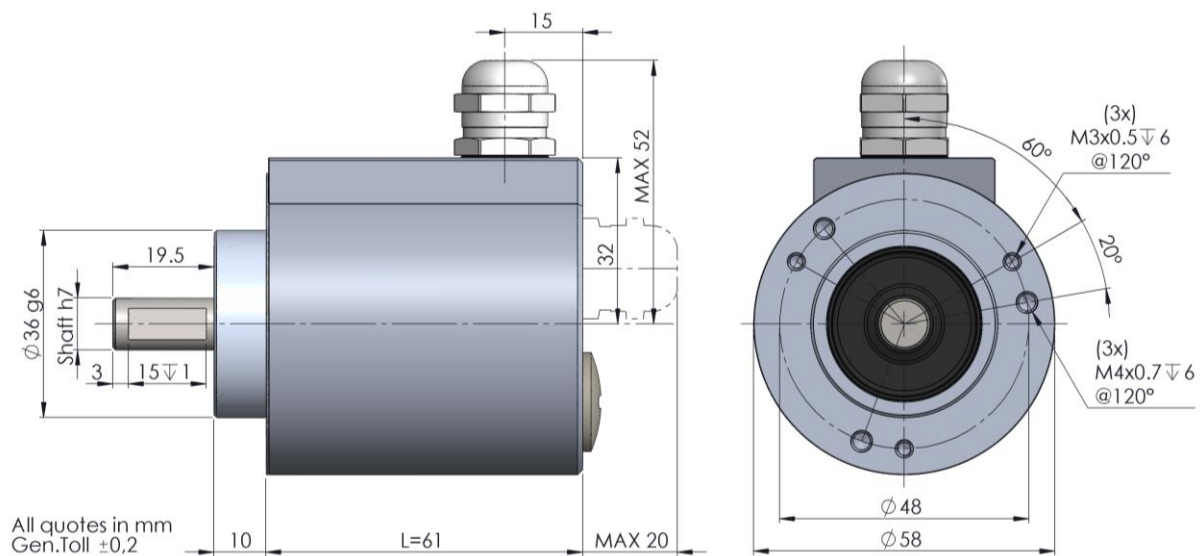


1 : Clamping

Ø	Shaft	
	A	B
6mm	10mm	9mm
10mm	20mm	15mm



	Shaft	
Ø	A	B
6mm	10mm	9mm
10mm	20mm	15mm



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Electronics Data

Power supply:	10-30V (5 V on request)
Current consumption:	max 300mA
Output:	Parallell Gray/Binary max 28 Bit (ST max 17 bit; MT max 16 bit) Analogue : 4-20mA / 0-10V (14 bit)
Permissible load:	40mA
Frequency:	50KHz (LSB)
Protections:	Against short circuit, reversal polarity
Operating Temp	-20/+70°C

Ordering code

SM	*	*	*	*	****	/	*/*
	Shaft	Flange	Output	Connections	Option		Resolution
11 = Clamping flange Type 1 with shaft ø10mm 33 = Synchro flangeType 3 with shaft ø6mm 1H = Clamping flange Type H with Shaft ø10mm	Parallel Digital Output						
			1 = GRAY/BIN PP 11/28V G = GRAY PP 11/28V B = BINARY PP 11/28V	Cable 3 = Cable Rad * 9 = Cable Axi * SUB-D 44p 1 = 9444 Ass 2 = 9444 Rad	0 = None Z = Preset (push button) Latch · Tristate W = Preset (on cable or connector) Latch · Tristate		STbit/MTbit Ex : 12/12 (ST max 17 bit) (MT max 16 bit) ST+MT max 28 bit
	Analog Output						
			C = 4-20mA (14 bit) D = 0-10 Volt (14 bit) Power supply 24V	M23 12p 5 = 9416Rad 2 = 9416Ass M12 5p J = M12 Axi K = M12 Rad	0 = None		STbit/MTbit (MAX14 bit)
	Programmable Analog Output						
			C = 4-20mA (14 bit) D = 0-10 Volt (14 bit)	M23 12p 5 = 9416Rad 2 = 9416Ass M12 5p J = M12 Axi K = M12 Rad	P = Programmable **		PR01 (max 4096 turns) PR03 (max 65536 turns)

* = Output cable version
Max number of wires = 27

** Programmable Analog Output

Programmable version : Set analog position 4mA and 20mA (or 0 and 10Volt) with push button

Connections

Parallel Digital Output

Connettore 9444 (SUB-D 44p)	0 Volt	+ Volt	0 2	1 2	2 2	3 2	4 2	5 2	6 2	7 2	8 2	9 2	10 2
	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13
	11 2	12 2	13 2	14 2	15 2	16 2	17 2	18 2	19 2	20 2	21 2	22 2	23 2
	P14	P15	P16	P17	P18	P19	P20	P21	P22	P23	P24	P25	P26
	GRAY BINARIO		UP DOWN						LATCH		TRI-STATE		PRESET
	P38		P39						P42		P43		P44

Parallel Digital Output:

Encoder inputs are internally connected to level logical "ONE"

Standard Input

	Open or Vcc	GND
UP/DOWN	UP (CW)	DOWN (CCW)
Optional Input		
	Open or Vcc	GND
GRAY/BINARY	GRAY	BINARY
LATCH	Standard data	Data stored and constant at output
TRISTATE	High Impedance	Outputs active
PRESET	To Preset encoder in position 0 connect to GND min 2sec	

Analog Output

** Programmable Analog Output

Programmable version : Set analog position 4mA and 20mA (or 0 and 10Volt) with push button

	Connections 9416 (M23 12p)	Connections M12 5p	Cable
0V	1	1	White
+24VDC	2	2	Brown
Iout+ (4-20mA)	3	3	Green
Vout + (0-10V)	5	3	Green
Preset (on request)	8	4	Yellow
Ud/Down	7	5	Gray

	Open or Vcc	GND
UP/DOWN	UP (CW)	DOWN (CCW)
	Open or Vcc	GND (50msec)
PRESET	To Preset encoder in position 0 connect to GND min 2sec	