

## SSI ABSOLUTE MULTI-TURN ENCODER, MHM510-SSIR RANGE

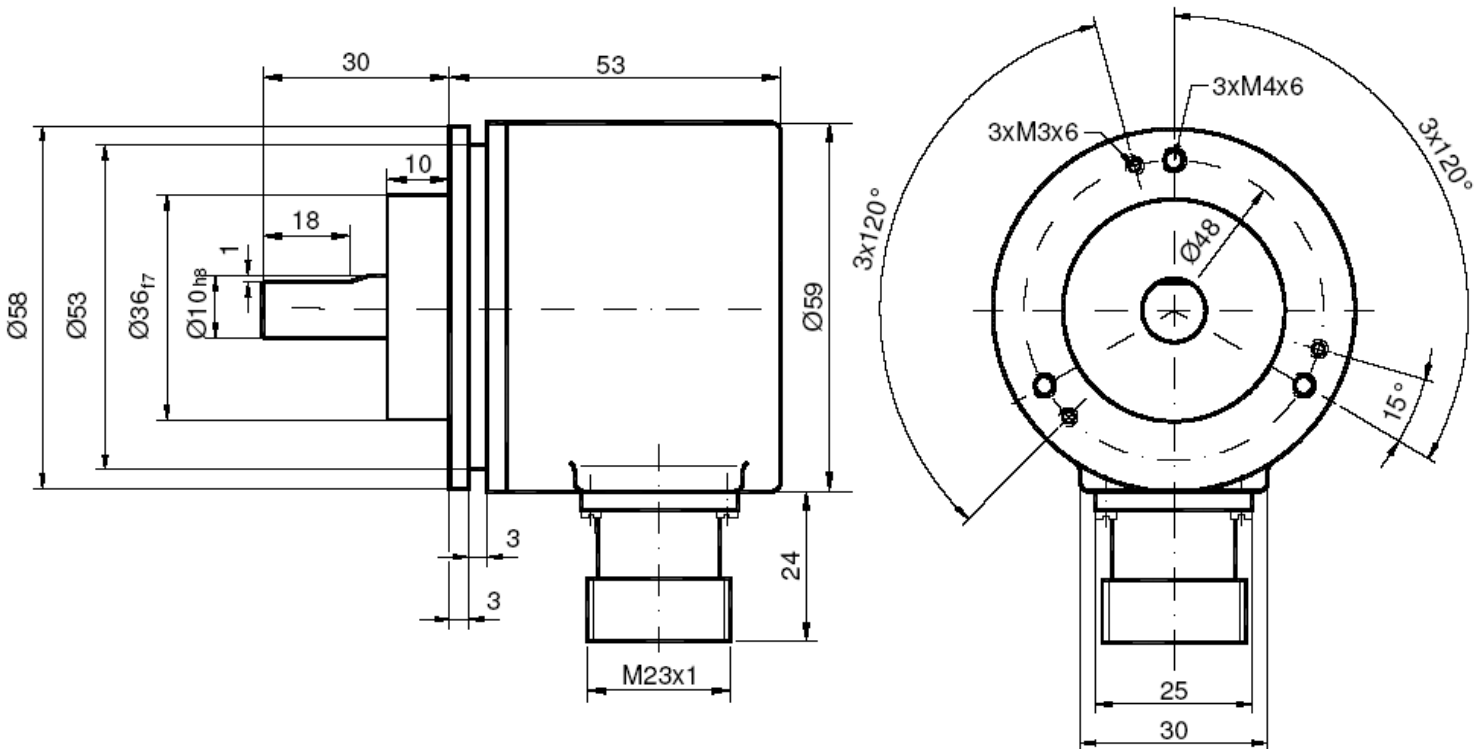


MHM510-SSIR, standard encoder Ø58mm with SSI interface:

- Robust and compact conception
- Solid shaft version Ø 10 mm
- Precision ball bearings with sealing flange
- High temperatures performances -40°C ... +85°C
- Code disc made of unbreakable and durable plastic
- Mechanical memorisation of the number of turns by gears
- SSI transmission, GRAY code
- Resolution : 13 bits = 8192 steps/turn (max 16 bits)
- Number of turns : 12 bits = 4096 turns (max 14 bits)
- Polarity inversion and short circuit protection
- Highly integrated circuit in SMD-technology



MHM510-SSIR (radial 12 pinouts M23 connector)



### MECHANICAL DATA

Material	Cover : aluminum	Vibrations (EN 60068-2-6)		≤ 10 g (10Hz... 1 000Hz)
	Body : aluminum	Weight		300 g
	Shaft: stainless steel	Operating temperature		- 40 ... + 85°C
Max. shaft loading	Axial : 40 N	Storage temperature		- 40 ... + 85°C
	Radial : 110 N	Humidity		98 % without condensation
Shaft Inertia	≤ 30 g.cm <sup>2</sup>	Protection class (EN 60529)		IP65: cover IP64: shaft
Torque	≤ 3 N.cm	Lifetime in 10 <sup>8</sup> revolutions with F <sub>a</sub> / F <sub>r</sub> (axial/radial)		
RPM (continuous operation))	6 000 rpm	40 N / 60 N	40 N / 80 N	40 N / 110 N
Shock (EN 60068-2-27))	≤ 100 g (halfsinus, 6 ms)	25	10	4
Shock (EN 60028-2-29)	≤ 10 g (half-sinus, 16ms)			

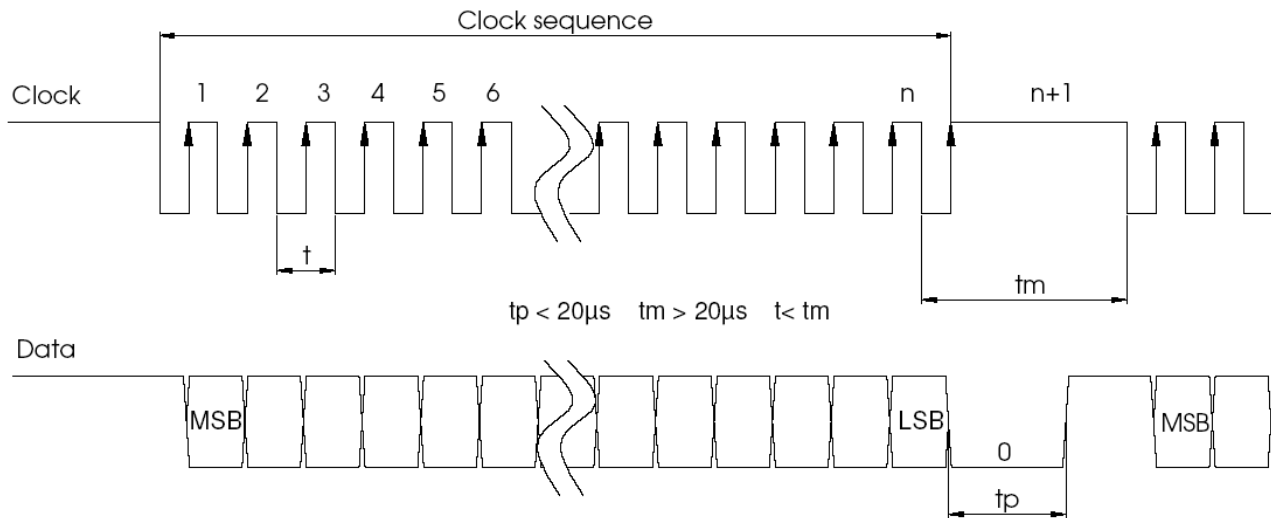
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### ELECTRICAL DATA

Clock input	via opto-coupleur
Data output	line - driver according RS422
Clock frequency	100kHz - 2MHz
Accuracy	+ 1/2 LSB
Supply voltage	4,75 - 30Vdc

Cycle time (Reset)	< 150 μs
Turn on time	< 1 s
Power consumption	max 1W
Electrical life-time	> 10 <sup>5</sup> h
EMC	EN 61000-6-4 EN 61000-6-2

### SSI TRANSMISSION

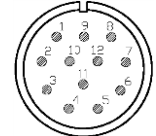


Driver	Driver meets EIA standard RS422 ; transmission rates up to 10 Mbits/s
Transfer	Transfer distance up to 1200m
Transmission	Balanced transmission provides high noise immunity
Pair lines	Shielded and twisted pair lines are essential to attain extremely high noise immunity

### ELECTRICAL CONNECTION ON M23 CONNECTOR, 12 PINOUTS

Type	CLK -	CLK +	DATA +	DATA -	DIRECTION	Reset	+ Ub 4,75-30Vdc	GND
S1	1	2	3	4	8	9	11	12

Pinning encoder (male)



### INPUTS

Encoder counting direction for clockwise rotation (looking onto the shaft)	RESET of the position (Preset value = 0)
0 (input = NC or GND)	Up counting
1 (input = +Ub or ≥ 4,5V)	Down counting
0 (input = NC or GND)	Position
1 (input = +Ub or ≥ 4,5V)	Reset on down level (100ms)

### ORDERING REFERENCE Contact the factory for special versions, ex: electronics, special flanges, connections...)

MHM5	S1	01	G	12	13	C	10	0	PRL
Absolute multi turn encoder	RESET Fonction	Version	Code : Gray	Number of turns 2 <sup>12</sup> (4 096)	Resolution (pos./turn) 2 <sup>13</sup> (8 192)	Clamp Flange	Shaft diameter : 10mm	Without mechanical option	Radial M23 connector

Ordering code : **MHM510-SSIR-001** = MHM5 S1 01 G 12 13 C 10 0 PRL (old reference : NEG001542)