



MHM5 SERIES

SSI ABSOLUTE MULTI-TURN ENCODER, MHM510-SSIR RANGE



Features

MHM510, standard encoder Ø58mm with SSI interface:

- Robust and compact design
- Solid shaft version Ø 10 mm (06 mm available upon request)
- Precision ball bearings with sealing flange
- High temperatures performances $-40^{\circ}\text{C} \dots +85^{\circ}\text{C}$
- Code disc made of unbreakable and durable plastic
- Mechanical memorisation of the number of turns by gears
- 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

SPECIFICATIONS

Mechanical

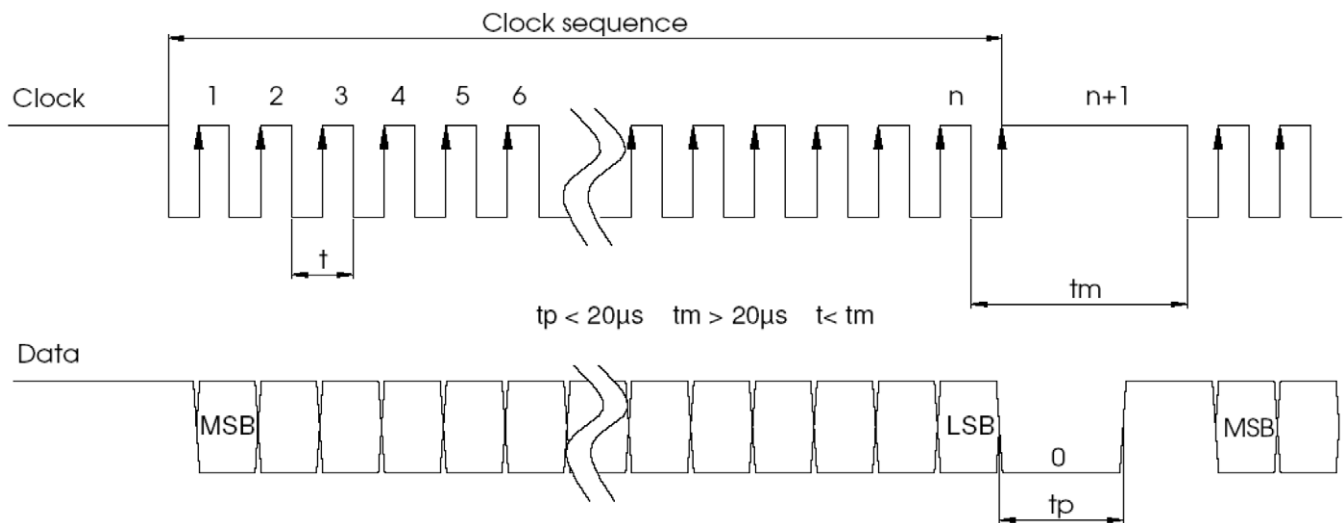
Material	Cover: Aluminum
	Body: Aluminum
	Shaft: Stainless Steel
Max. Shaft Loading	Axial: 40 N
	Radial: 110 N
Shaft Inertia	$\leq 30 \text{ g.cm}^2$
Torque	$\leq 3 \text{ N.cm}$
RPM (Continuous Operation)	6 000 tr/min
Shock (EN 60068-2-27)	$\leq 100 \text{ g}$ (half-sinus, 6 ms)
Shock (EN 60028-2-29)	$\leq 10 \text{ g}$ (half-sinus, 16ms)
Vibrations (EN 60068-2-6)	$\leq 10 \text{ g}$ (10Hz... 1 000Hz)
Weight	600 g
Operating Temperature	$-40 \dots +85^{\circ}\text{C}$
Storage Temperature	$-40 \dots +85^{\circ}\text{C}$
Humidity	98 % without Condensation
Protection Class (EN 60529)	IP65: cover

Lifetime in 10⁸ Revolutions with F_a / F_r (Axial / Radial)		
40 N / 60 N	40 N / 80 N	40 N / 110 N
25	10	4

Electrical

Clock input	via opto-coupleur
Data output	line - driver according RS422
Clock frequency	100kHz – 2MHz
Accuracy	+ ½ LSB
Supply voltage	4,75 – 30Vdc
Cycle time (Reset)	< 150 µs
Turn on time	< 1 s
Power consumption	max 1W
Electrical life-time	> 10 ⁶ h
EMC	EN 61000-6-4 EN 61000-6-2

SSI TRANSMISSION

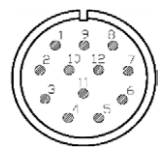


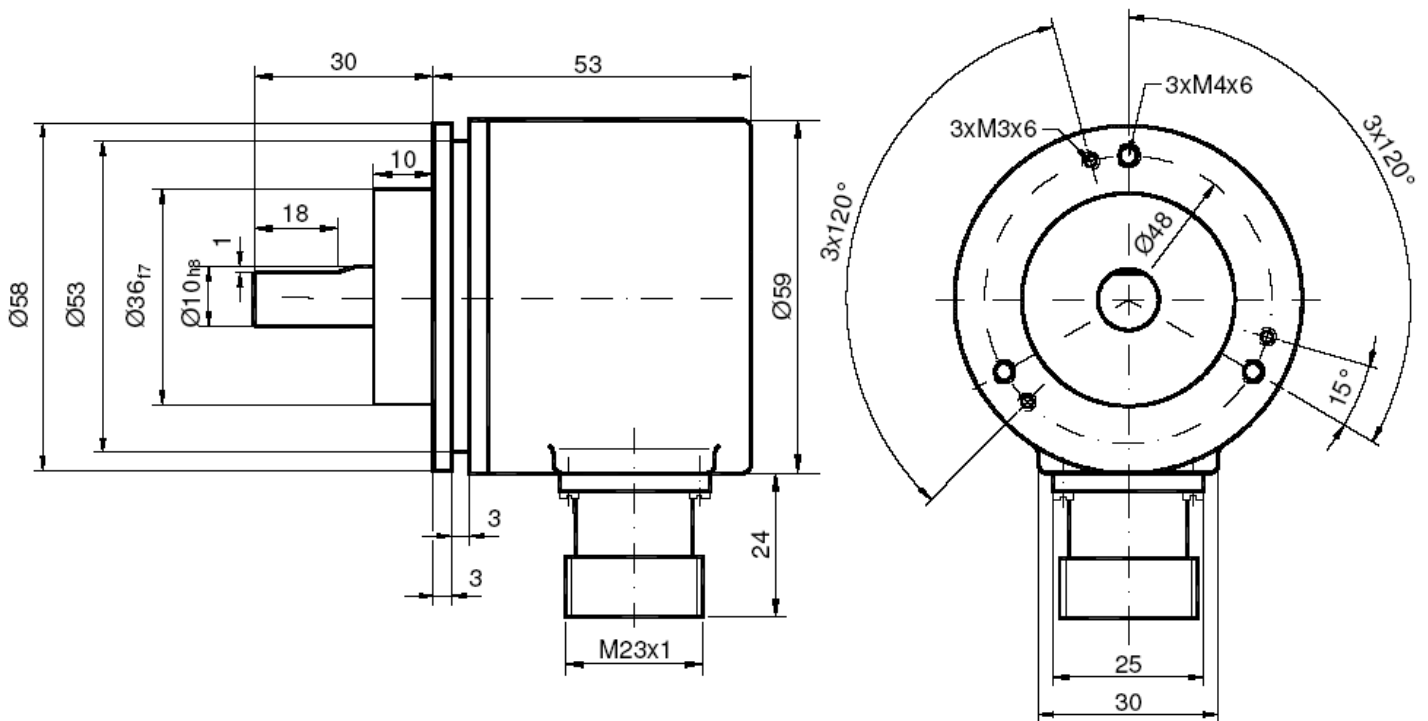
Driver	Driver meets EIA standard RS422 ; transmission rates up to 10 Mbits/s
Transfer	Transfert distance up to 1200m
Transmission	Balanced transmission provides high noise immunity
Pair Lines	Shielded and twisted pair lines are essential to attain extremely high noise immunity

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

Pinning Encoder
(Male)





Encoder counting direction for clockwise rotation (looking onto the shaft)	
0 (input = NC or GND)	Up counting
1 (input = +Ub or ≥ 4,5V)	Down counting

RESET of the position (Preset value = 0)	
0 (input = NC or GND)	Position
1 (input = +Ub or ≥ 4,5V)	Reset on down level (100ms)