

## | 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

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

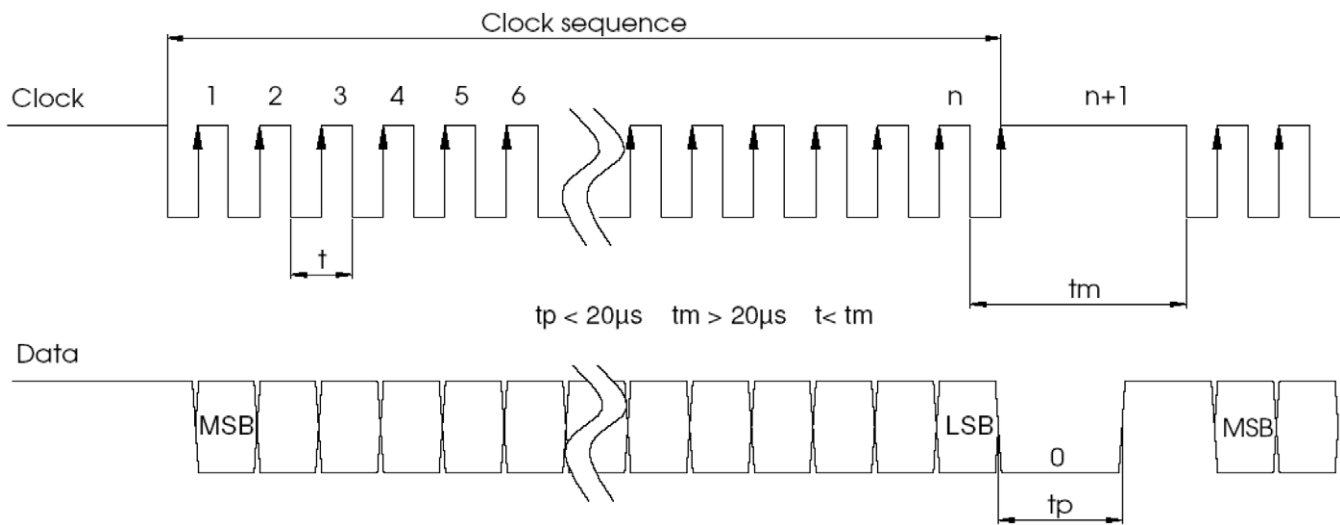
Lifetime in $10^8$ Revolutions with $F_a / F_r$ (Axial / Radial)		
40 N / 60 N	40 N / 80 N	40 N / 110 N
25	10	4



Electrical

Clock input	via opto-coupleur
Data output	line - driver according RS422
Clock frequency	100kH – 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 <sup>5</sup> h
EMC	EN 61000-6-4 EN 61000-6-2

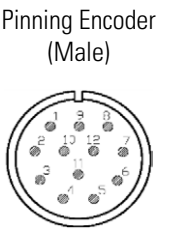
SSI TRANSMISSION



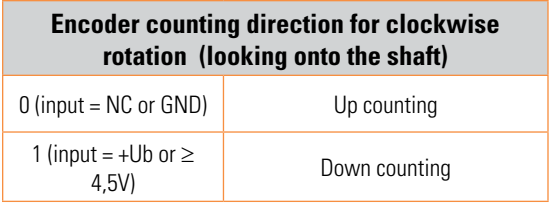
Driver	Driver meets EIA standard RS422 ; transmission rates up to 10 Mbits/s
Transfer	Transfert distance up to 1200m
Transmission	Balanced transmission provides high noise immunity
Pair Lines	Shielded and twisted pair lines are essential to attain extremely high noise immunity

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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







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## ORDERING REFERENCE

Example : MHM510-SSIR-001

	MHM5	S1	01	G	12	13	B	15	0	PRL
<b>Family</b>	MHM5									
	Absolute multi turn encoder									
<b>Reset Function</b>		S1								
<b>Version</b>			01							
<b>Code</b>				G						
	G: Gray									
<b>Number of Turns</b>					12					
	12: 2 <sup>12</sup> (4096)									
<b>Resolution (pos./turn)</b>						13				
	13: 2 <sup>13</sup> (8192)									
<b>Clamp Flange</b>							B			
	C									
<b>Shaft Diameter</b>								15		
	10: 10mm									
<b>Mechanical Options</b>									0	
	0: Without mechanical options									
<b>Connector</b>										PRL
	PRL: Radial M23 connector									

## AGENCY APPROVALS & CERTIFICATIONS



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