



## PROFIBUS ABSOLUTE MULTI-TURN ENCODER, MHM510-PROFS RANGE



### ELECTRICAL DATA

Interface	ISO 11898	Power consumption	max 2,5W
Transmission rate	Max 12 MBauds	Step Frequency LSB	800 kHz
Device addressing	by rotary switches	Accuracy	+ 1/2 LSB
Power supply	10 – 30Vdc	EMC	EN 61000-6-4 EN 61000-6-2
Current consumption	max 100mA (24Vdc)	Electrical lifetime	> 10 <sup>5</sup> h

### PROGRAMMABLE PARAMETERS

The Profibus-DP interface supports CLASS 1 and CLASS 2 functionality according to the encoder profile. In addition to these functions the GSD-file supports further features, for example software limit switches. Further more, the following encoder parameters can be programmed directly via the Profibus-DP network without any extra device.

Counting Direction	This parameter counting direction defines whether the output code increases or decreases when the shaft rotates clockwise.
Resolution (positions per turns)	The parameter 'resolution per revolution' is used to program the desired number of steps per revolution. Each value between 1 and the physical resolution per revolution can be programmed
Total Resolution "Max-RANGE"	This parameter is used to program the desired number of measuring units over the total measuring range. This value may not exceed the total physical resolution of the absolute rotary encoder
Reset (RAX)	The preset value is the desired position value, which should be reached at a certain physical position of the axis. The position value is set to the desired process value by the parameter preset
Velocity	The implemented software can additionally deliver the current velocity. This value is transmitted in binary code, 16 Bit, in addition to the process value It is possible to choose between four different units: steps per 10 ms, per 100 ms, per 1000 ms and revolutions per minute
Software limit switches function	Two software limit switches can be set. If the position value falls below the lower or exceeds the higher limit switch, a status bit in the process value is set
Teach-in (Online parameterization)	A special mode is available for commissioning phase of the device. This makes it possible to change parameters while the encoder is in data exchange mode

### INTERFACE

The Profibus-DP device address is set by user-friendly rotary switches in the connection cap. Allowed addresses are between 1 and 99, each can only be used once. The connection cap can easily be opened for installation by removing the two cap screws.

Termination resistors are integrated in the connection cap. These must be switched on if the encoder is connected at the end or the beginning of the bus.

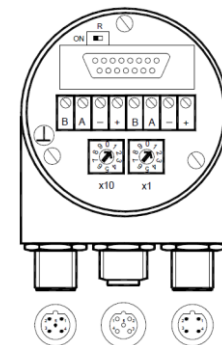
### CONNECTION

#### Connector 5 pins (left)

Pin	Description
1	Not connected
2	Line Bus A (Bus in)
3	Not connected
4	Line Bus B (Bus in)
5	Not connected

#### Connector female 5 pins (center)

Pin	Description
1	Not connected
2	Line Bus A (Bus out)
3	Not connected
4	Line Bus B (Bus out)
5	Not connected



#### Connector 4 pins (right)

Pin	Description
1	10 – 30 V DC
2	Not connected
3	0 V
4	Not connected

### ORDERING REFERENCE

MHM5	DP	C1	B	12	13	C	10C	H72	001
Absolute multiturn encoder	Profibus	Profibus version	Code : Binary	Number of turns 2 <sup>12</sup> (4 096)	Resolution (pos./turn) 2 <sup>13</sup> (8 192)	Clamp Flange	Shaft diameter : 10mm	Connection Cap 3 x M12	Encoder version