

Quality - made in Germany



## RSMH 59 - SSI

**Absolute multi-turn encoder, non persistent hollow shaft 12 mm**

- shockproof up to 200 g
- electronical adjustment
- high code change frequency
- 36 bit resolution

### Technical data

Resolution	36 Bit
Steps/turn	262.144
Turns	262.144
Code	Gray, Binary
Interface	SSI

### Electrical data

Operating voltage	UB = 10...30 VDC
Current consumption	Max. 80 mA (w/o load), at 24 VDC
Code change frequency	26 MHz
SSI pulse frequency	62,5 kHz to 1,5 MHz
Monoflop time	20µs
Pulse break	Min. 25 µs
Accuracy	± 0,01°

### Inputs

Level High	> 0,7 UB
Level Low	< 0,3 UB

### Connections:

zeroing input with  
 10 kohms against GND.  
 The change of rotation is  
 only in the factory  
 possible.  
 Delivery status CW

### Outputs

SSI data	RS 422
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### Mechanical data

Speed (mechanical)	≤ 10.000 min <sup>-1</sup>
Speed (electrical)	≤ 6.000 min <sup>-1</sup>
Start-up torque	< 0,015 Nm
Shaft loading	< 40 N radial < 20 N axial
Moment of inertia	18,4 x 10 <sup>-7</sup> kgm <sup>2</sup>

### Material

Housing	Aluminium
Flange	Aluminium
Weight	approx. 600 g

### Ambient conditions

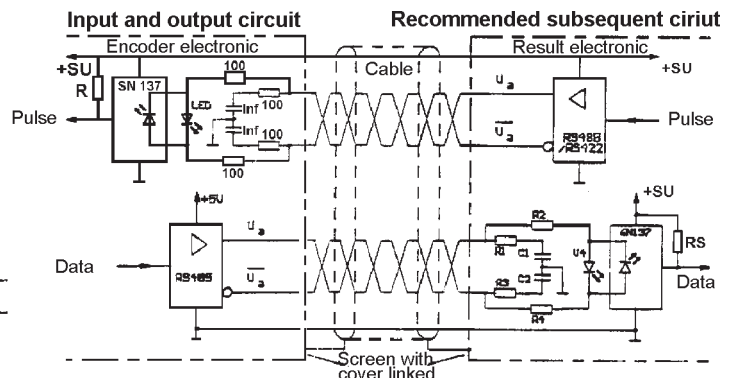
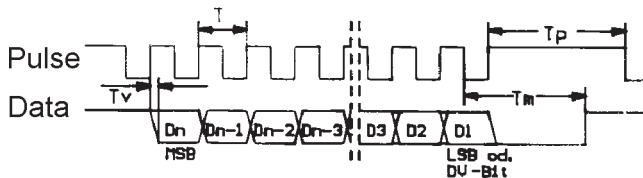
Vibration	DIN EN 60068-2-6 ≤ 100 m/s <sup>2</sup> , 10...2000 Hz)
Shock	DIN EN 60068-2-27 ≤ 500 m/s <sup>2</sup> , (11 ms)
Operating temperature	- 20... + 85° C
Storage temperature	- 20... + 85° C
Humidity	Max. relative humidity 95%, no-condensing
Protection type	IP 64
Interference resistance	DIN EN 61000-6-2
Emitted interference	DIN EN 61000-6-4

**Contact description**

1 UB	Encoder power supply connection
2 GND	Encoder ground connection. The voltage drawn to GND is UB.
3 Pulse +	Positive SSI pulse input. Pulse - forms a current loop with pulse +. A current of approx. 7 mA in direction of Pulse + input generates a logical 1 in positive logic.
4 Data +	Positive, serial data output of the differential line driver. A High level at the output corresponds to logical 1 in positive logic.
5 Zero adjustment	Zero setting input for setting a zero point at any desired point within the entire resolution. The zeroing process is triggered by a High pulse (pulse duration $\geq 100$ ms) For maximum interference immunity, the input must be connected to GND after zeroing.

6 Data -	Negative, serial data output of the differential line driver. A High level at the output corresponds to logical 0 in positive logic.
7 Pulse -	Negative SSI pulse input. Pulse - forms a current loop with pulse +. A current of approx. 7mA in direction of Pulse - input generates a logical 0 in positive logic.
8	not in use
9	not in use
10	not in use
11	not in use
12	not in use

**SSI (Synchron serielles Interface)**



# PIN - assignment RSMH 59 - SSI

Signal	PIN	Cable colour
UB	1	brown
GND	2	white
Pulse +	3	green
Data +	4	pink
Zero adjustment	5	black
Data -	6	gray
Pulse -	7	yellow
not in use	8	-
not in use	9	-
not in use	10	-
not in use	11	-
not in use	12	-

**Instructions:**

Zero adjustment for setting a zero point at any desired point within the entire resolution. The zeroing process is triggered by a High pulse (pulse duration  $\geq 100$  ms) For maximum interference immunity, the input must be connected to GND after zeroing.

Please refer to the rating plate for the correct **power supply**.

Please don't occupied not used signals.

## Type key of encoder

Encoder type	Bit/Turn	Turns	Code	Voltage	Flange	Output
RSMH 59	18 = 262.144 S/T	18 = 262.144 T	G = Gray	3 = 10 - 30 VDC	12 = blind hole 12 mm	KS = Cable radial
RSMH 59			B = Binary			SS = 12pol. plug radial
RSMH 59						
RSMH 59						
RSMH 59	18	18	_____	3	12	_____

# Dimension and cutout RSMH 59 - SSI

