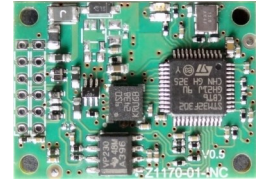


MG3618 Micro Inclinometer

The MG3618 module measures inclination angles. Its main features are:

- ◆ One or two axis operation
- ◆ CAN interface (version with SPI interface is planned)
- ◆ Very small dimensions
- ◆ Robust design
- ◆ Software selectable 6 orthogonal mounting positions
- ◆ Software initial offset compensation
- ◆ Fixed and variable supply voltage versions
- ◆ Available as a bare PCB or in a housing



Measurement																			
Measuring range	Mode 1: X-axis $\pm 180^\circ$ Mode 2: X-axis $\pm 90^\circ$, Y-axis $\pm 45^\circ$, pitch and roll																		
Accuracy	$\pm 0.5^\circ$																		
Resolution	0.01°																		
Min. conversion time	2 ms																		
Power on startup time	2 s																		
Environmental conditions																			
Storage temperature	$-20^\circ\text{C} \dots +85^\circ\text{C}$																		
Operating temperature	$-10^\circ\text{C} \dots +70^\circ\text{C}$																		
Protection class	None for version B, IP65 for version C of the housing																		
Electrical																			
Power supply voltage	Fixed 5V or 4.5V - 28V (VAR) range versions, protected against reverse polarity and overvoltage																		
Average current consumption	30mA for 5V version, 6mA @ 24V for VAR version																		
Interface	CAN, 250kbit/s, ISO 11898-2, with external terminator SPI (under development)																		
Ordering code																			
MG3618-xxx-yyy-z																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2" style="text-align: center;">xxx is a supply option</td> <td colspan="2" style="text-align: center;">yyy is an interface option</td> <td colspan="2" style="text-align: center;">z is a housing option</td> </tr> <tr> <td style="text-align: center;">050</td> <td style="text-align: center;">5V DC supply</td> <td style="text-align: center;">CAN</td> <td style="text-align: center;">CAN interface</td> <td style="text-align: center;">B</td> <td style="text-align: center;">Without housing</td> </tr> <tr> <td style="text-align: center;">VAR</td> <td style="text-align: center;">4.5 to 28 V DC supply</td> <td style="text-align: center;">SPI</td> <td style="text-align: center;">SPI interface</td> <td style="text-align: center;">C</td> <td style="text-align: center;">ABS with M8 connectors</td> </tr> </table>		xxx is a supply option		yyy is an interface option		z is a housing option		050	5V DC supply	CAN	CAN interface	B	Without housing	VAR	4.5 to 28 V DC supply	SPI	SPI interface	C	ABS with M8 connectors
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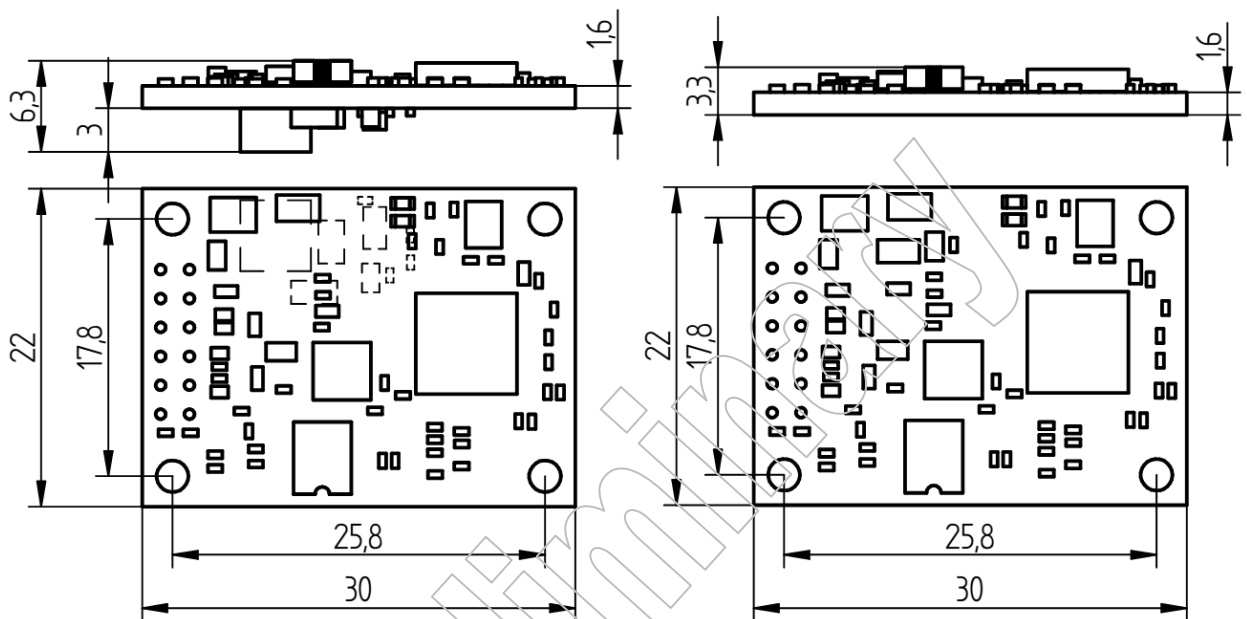
MG3618-xx-yyy-B No housing

Mechanical

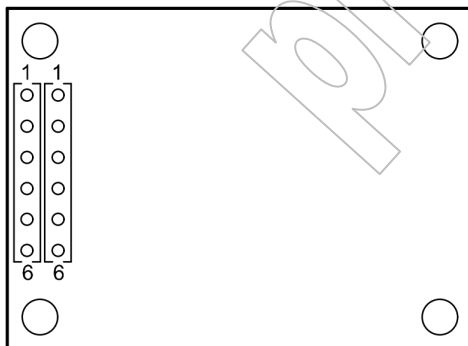
Dimensions (LxWxH)	30 x 22 x 6.3 mm for VAR version, 30 x 22 x 3.3 mm for 5V version
Construction	Populated PCB
Connection	6 x 2, 2mm pitch, custom cable on demand
Weight	3 g (without cable)

VAR version

5V version



Connector pin assignment



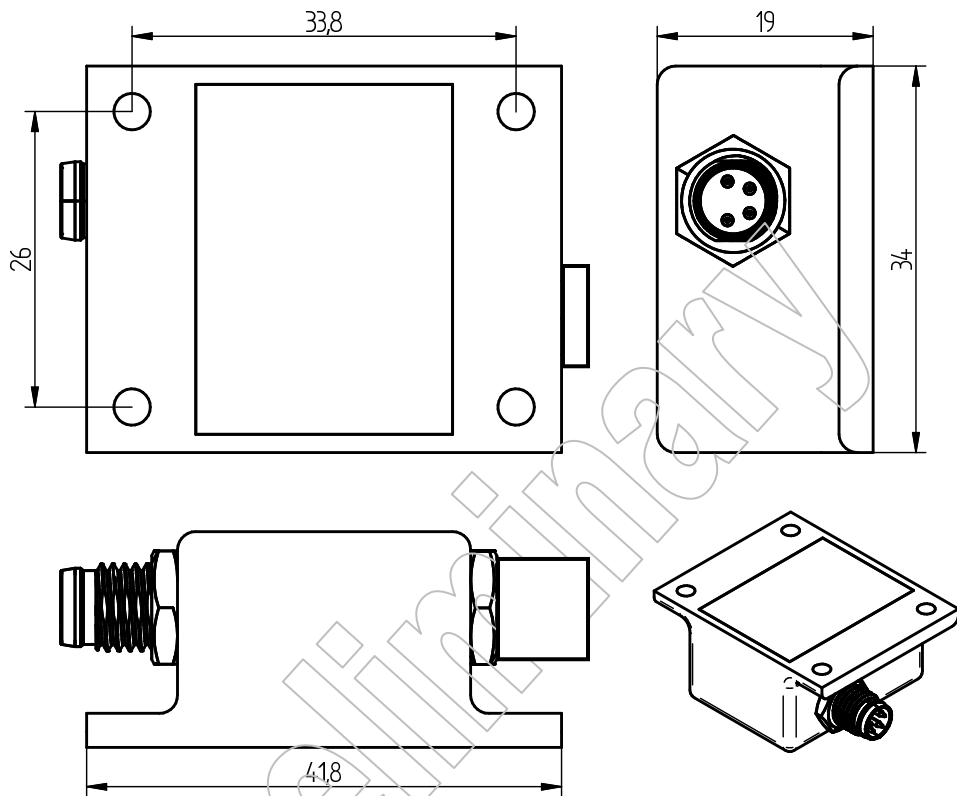
PCB top view

- Pin 1: Supply V+
- Pin 2: Supply GND
- Pin 3: GPIO
- Pin 4: CAN_L
- Pin 5: CAN_H
- Pin 6: Shield

MG3618-xx-yyy-C Housing with two M8 connectors

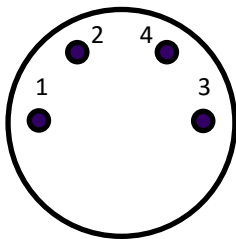
Mechanical

Dimensions (LxWxH)	41.8 x 34 x 19 mm for both 5V and VAR versions
Construction	ABS case
Connection	M8 male input and M8 female output connectors
Weight	approx. 100 g

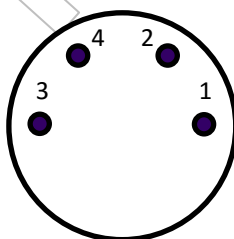


Connector pin assignment

Input
M8 male connector



Output
M8 female connector



Input and output pinout

Front view
Pin 1: Supply V+
Pin 2: Supply GND
Pin 3: CAN_H
Pin 4: CAN_L

Connect host to input, use output for next CAN device or terminator.