

Short guide

ME301-2

Version 1.0, May 2013

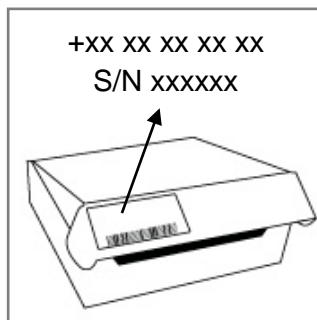


Practical advice

1. Save important numbers

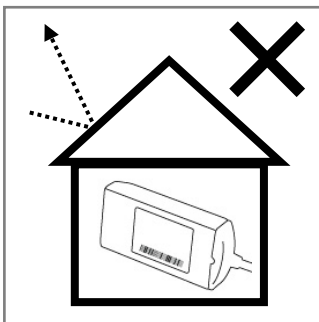


Serial number located on the unit.

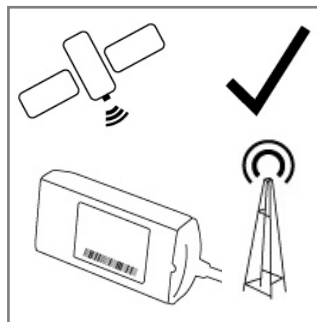


GSM number and unit serial number is located on the box. Label can be peeled off and saved for later use.

2. Installation is best done outside

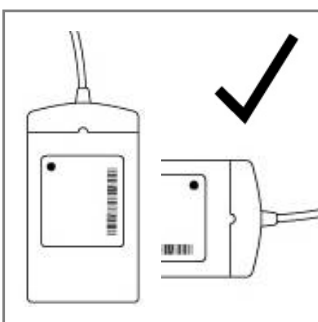


Do not perform installation inside a building

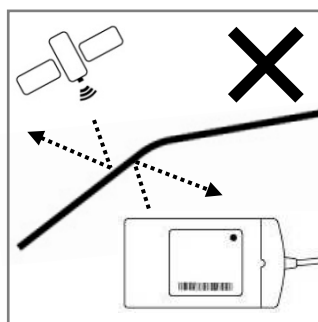


Install the unit outside for better GPS and GSM signal

3. Correct location of the unit



Locate the unit as shown for optimal signal conditions



Avoid installing the unit directly under a layer of metal or next to wires.

Installation of the ME301-2 in machinery and vehicles

Guidelines for correct wiring:

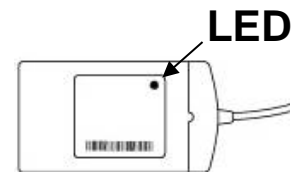
No.	Wire color		Connection	Description
1	Red		Power	Connect to permanent 12/24V supply through a 1A fuse
2	White		Digital input 1	Connect to the operating hours counter ¹ Mandatory for machines!
3	Brown		Digital input 2	Connect to the ignition signal ¹ Mandatory for vehicles and machines!
4	Pink		Digital input 4	Can be connected to an external sensor ^{1 4}
5	Yellow		Digital output 1	Can be used to control external equipment through a relay. ^{2 3}
6	Blue		Ground	-

¹ Min. 8V DC voltage at input

² Max. Load 200 mA

³ Do NOT use this output to switch off vehicles and machines during operation or driving

⁴ If Main Switch disconnect negative wire (chassis/GND) from battery, it might cause false input activity. To avoid that, Pink wire should be connected to the chassis/GND, Blue Wire should be connected to battery minus pole and input filtering must be activated (see page 4)



Functionality check: LED on the unit

Status	LED mode	LED color	Status indication
✓	Red flashing light and constant green light in LED		GSM network is OK and GPS has valid satellite position
!	No light in LED		No power supply
!	Constant red light and no green light in LED		Power supply is OK but NO GSM network GPS has NO satellite position
!	Red flashing light and no green light in LED		GSM network is OK GPS has NO satellite position
!	Constant red and green light in LED		Power supply is OK but NO GSM network GPS has valid satellite position

Verification of installation status with SMS Commands:

Verification	Send SMS	Return SMS from unit
<p>GPS and GSM signal</p>	<p><i>MT SIGNAL</i></p>	<p><i>MTC ACK (SERIAL No.) SIGNAL: GSM=22, SAT=8, SN=44</i></p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="background-color: #e67e22; padding: 2px 5px;">Poor</div> <div style="background-color: #f1c40f; padding: 2px 5px;">Good</div> <div style="background-color: #27ae60; padding: 2px 5px;">Excellent</div> </div> <p>GSM: Signal strength:</p> <div style="display: flex; align-items: center; gap: 10px;"> <div style="background-color: #e67e22; padding: 2px 5px;">0-10</div> <div style="font-size: 12px;">➔</div> <div style="background-color: #f1c40f; padding: 2px 5px;">11-20</div> <div style="font-size: 12px;">➔</div> <div style="background-color: #27ae60; padding: 2px 5px;">21-31</div> </div> <p>SAT: Number of satellites:</p> <div style="display: flex; align-items: center; gap: 10px;"> <div style="background-color: #e67e22; padding: 2px 5px;">0-3</div> <div style="font-size: 12px;">➔</div> <div style="background-color: #f1c40f; padding: 2px 5px;">4-5</div> <div style="font-size: 12px;">➔</div> <div style="background-color: #27ae60; padding: 2px 5px;">6-</div> </div> <p>SN: GPS signal quality:</p> <div style="display: flex; align-items: center; gap: 10px;"> <div style="background-color: #e67e22; padding: 2px 5px;">0-27</div> <div style="font-size: 12px;">➔</div> <div style="background-color: #f1c40f; padding: 2px 5px;">28-34</div> <div style="font-size: 12px;">➔</div> <div style="background-color: #27ae60; padding: 2px 5px;">35-</div> </div>
<p>Inputs</p> <p><i>NOTE: This command can be sent to the unit under various operational conditions like: Machine running, ignition only or off.</i></p>	<p><i>MT STAT</i></p>	<p><i>MTC ACK (SERIAL No.) INPUT STATUS: INPUT1 LOW, INPUT2 HIGH, INPUT4 LOW, CHARGE VOLTAGE ON, SERIAL No.</i></p> <p>NOTE: Input LOW < 8V < input HIGH</p>

Activation of input filtering:

Function	Send SMS	Return-SMS from the unit
<p>Activate filter function on inputs</p>	<p><i>MT INFILT ON</i></p>	<p><i>MTC ACK (SERIAL No.) INFILT ON</i></p>

NOTE:

Enabling the filtering function will disable the use of the alarm function on digital input 4.

Troubleshooting

Error description	Possible solutions
No reply on SMS command	<ul style="list-style-type: none"> • Verify correct GSM number • Check LED status – see page 3
No light in LED	<ul style="list-style-type: none"> • Check if red wire and blue wire are installed correctly or if fuse is blown
Constant red light in LED	<ul style="list-style-type: none"> • Verify location of the unit – see page 2 • Move machine or vehicle for better GSM signal
No green light in LED	<ul style="list-style-type: none"> • Verify location of the unit – see page 2 • Move machine or vehicle for better GPS reception
Inputs counting operating hours when machine is off	<ul style="list-style-type: none"> • In case the main switch on the machine will disconnect the negative wire (Ground wire), the inputs may register a voltage level and start counting operating hours • To avoid this situation the digital input 4 (Pink wire) should be connected to the chassis/ground on the machine • Send MT INFILT ON to the unit (SMS to phone number) to activate the filtering

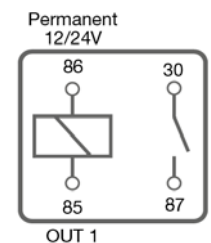
**Please contact your Trackunit dealer if problems continue.
Please have the unit serial number ready.**

Relay

OUT1 must be connected to the relay. Verify relay voltage specifications complies with the machine or vehicle voltage (12V or 24V).

Relay	Function	Signal
86	Relay Coil +	12/24V permanent power
85	Relay Coil -	Yellow wire from ME301 (OUT1)
87	Control Signal	
30	Control Signal	

Relay connections:



Product specifications

The ME301 unit is a GSM/GPRS quad-band-unit with GPS, integrated antennas and backup battery.

Connections	
Operational voltage (supply voltage):	12 - 24 V DC
Absolute maximum voltage range:	9 - 65 V DC

Temperature range	
Operating	-30°C to +60°C
Storage	-40°C to +70°C

Mechanical specifications	
Environmental class	IP67

Technical Assistance

If you have a problem and cannot find the information you need in the product documentation, please contact Trackunit A/S

Trackunit A/S
Industrivej 10
DK-9490 Pandrup
Tel: +45 96 73 74 00
Fax: +45 96 73 74 07

E-mail: support@trackunit.com

Web: www.trackunit.com

NOTE: When contacting technical support, please have the unit serial number ready.