Vicky Teknik AB

Manual MidiSign Light 12V

Version 2, 2018-11-26

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Information

In this folder there is information about the sign according to the index on previous page. Read all documentation before installation and use of the equipment. If you have any questions, do not hesitate to contact us, we will gladly help you.

Contact

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Product Description

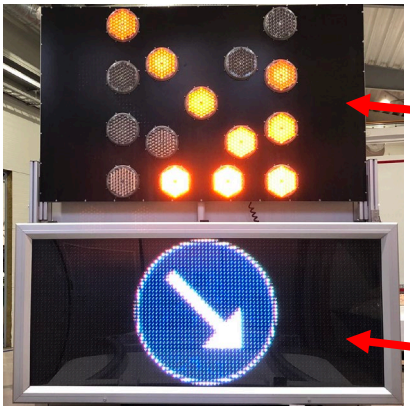
MidiSign Light 12 V is a mobile information sign that follows all the regulations about traffic signs according to Swedish Transport Administration (Trafikverket). The MidiSign Light is made for light trucks with the purpose to inform other road users that there is a road work in progress. The construction makes it possible, by simple commands on a tablet, to switch messages from the driver seat without leaving the driver seat. The tablet is mounted next to the driver seat and the driver can easily check which message is shown at the moment. The messages are created by LEDs in three colors (red, green and blue) and these LEDs can be combined to almost any color and message. Behind this part of the sign is another part called arrow board (X5) with one colored LEDs that fulfills the EU-demands (EN-12352) and creates flashing arrows and other symbols. That part can be elevated above the MidiSign Light 12 V, using a 12 V linear motor.

The MidiSign Light 12 V is very dependable and creates all light through LEDs, it does not have any moving parts except the linear motor to the arrow board and some cooling fans.

This is the tablet showing some of the messages you can choose. Using the green arrows to the right, you can see more messages.

Arrow board symbols

Pictures/messages



Elevatable arrow board

Message sign

Examples of messages that is preprogrammed upon delivery.

We can also display your logotype if you want to.

Mechanical installation

NOTE! Read all instructions before the mechanical installation begins. Those who perform the assembly work must have the necessary skills.

The sign should be screwed into a stable construction that will handle its weight.
If the vehicle has a cabinet character, the distance between the sign and vehicle should be at least 20 mm. This is to prevent snow and ice from causing frostbite.

The construction must be flat so as not to distort the sign when pulling the screws.

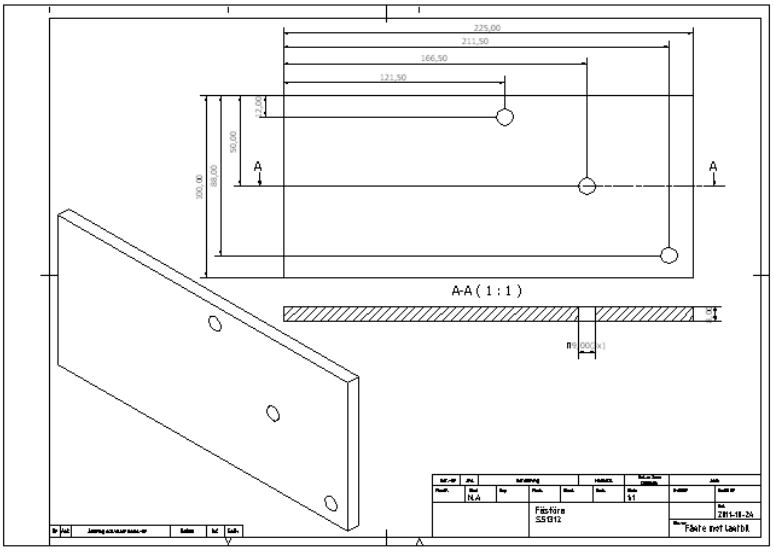
In addition, the design and / or use of any cargo space in front of the sign must be designed / used so that there is no risk of objects being squeezed or damaged when the arrow board with flash symbols is lowered.

We can also do the entire assembly on your vehicle.

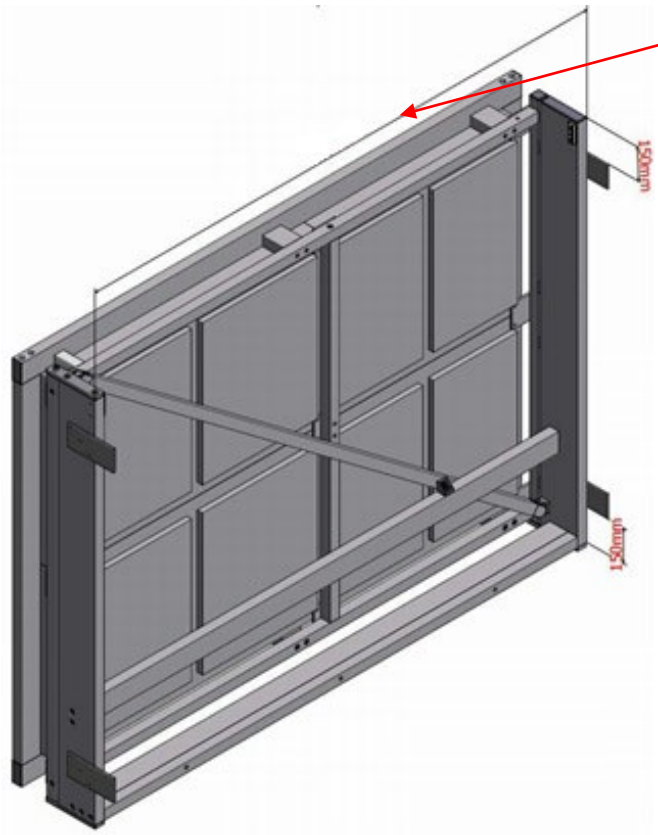
Make sure that the construction that the sign is to hang in is sufficient to handle the weight of the plate by a good margin by making a strength calculation.

Example of construction, at least two screws should be continuous.

NOTE! Keep in mind that the torque stressing the fastening becomes even higher when the sign is opened. The sign should hang in the sides behind the flak, do not rest on its bottom.



Suggestion on mounting plate. You can also buy ready-made fastening plates from us.



Mounting

MidiSign Light is 2100 mm wide and the four mounting plates are optimally positioned 150 mm from the top and bottom of the frame.

Make sure that the sign has the same serial number as stated on the manufacturer's certificate.

1. Also check that the sign is free from transport damage. If damage is detected, the carrier must be informed immediately. Also check that the following objects are delivered:
   - Tablet with attachment.
   - Power cabling.
   - Control cable.
   - 4 pieces T-slot nut with spacer and M8-screws.
   - 8 pieces long M8-screws with spacers and Nylock-nuts.
2. Remove the package.
3. Hang the sign in lifting straps in the intended lifting eyes on the top of the sign.
4. Lift the sign in place.
5. At least two screws should be continuous.
6. Place the screws (with spacers) that have T-nuts, thread them in the grooves and thread them loosely.
7. Adjust the height of the sign so that the drill holes in the mounting plates and the sign frame is centered against each other and tighten the screws.
8. Screw connections with screws.

NOTE! The frame must not be forced in / out from the attachment as this may affect the movement of the arrow board with the flash symbols.

Mechanical disassembly

The sign is disassembled in reverse order compared to the previous description.

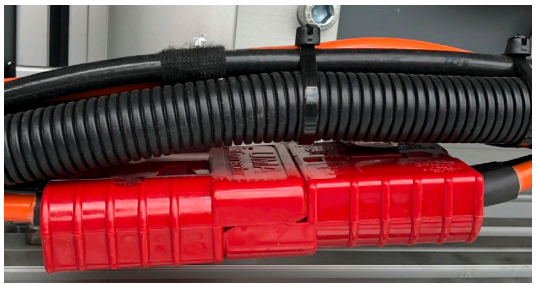
NOTE! Make sure the sign is hanging in suitable lifting gear before unscrewing.

Electrical installation

The electrical installation consists of (see also the electrical diagram):

1. 1. Mounting the power supply of the sign consisting of a two-pole cable from the battery.

NOTE! The cable for power supply of the sign may only be used for power supply to the plate. No other equipment such as TMA may be plugged into this cable. This may cause the function of the sign to malfunction and there may also be a risk of cable fire. The power supply cable must be secured with 80A fuse as close to the battery as possible. Fuse holders and two 80A fuses included.



Contact points for the power supply of the sign.

2. Mount the tablet at the appropriate place, easily accessible from the driver's seat.

Mounting example Renault Master.

3. Start the engine and check that all functions are working properly (see daily use).

NOTE! Do not mount the tablet to obscure the sight or important instrumentation.

Electrical disassembly

The sign is disassembled in reverse order compared to the previous description.

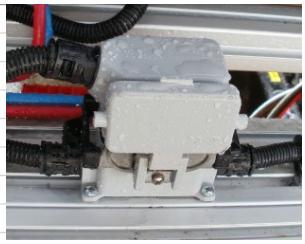
Scrapping

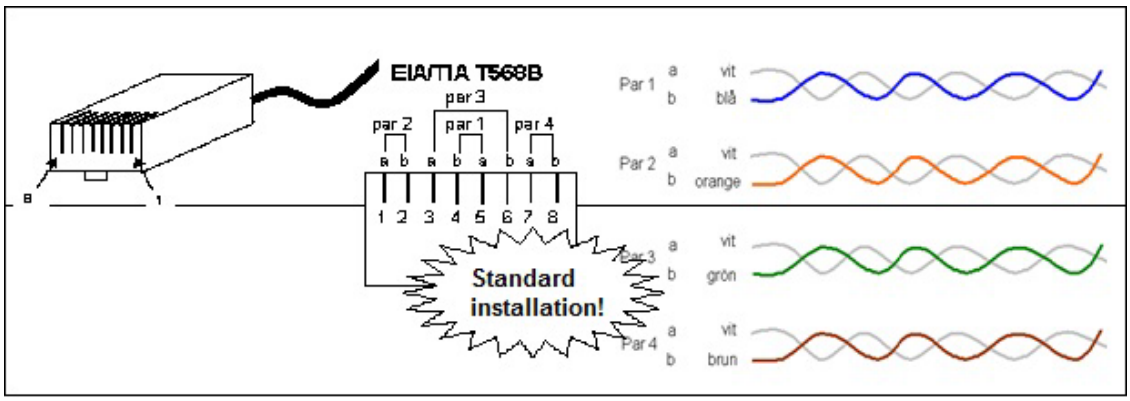
When the sign no longer will be in use, the components are separated and sorted in the usual manner in the metal scrap, cables, electronic scrap and glass fractions.

Pinch connector

All connectors are ready to be used immediately after delivery. In the event of troubleshooting, see below.

Harting to MidiSign Light			
1,5 mm² Red+12V 7A generator controlled (+61)	1	6	6. 1,5 mm² Black to ground
2. Yellow 5 conductor cable	2	7	7. White 5 conductor cable
3. Green 5 conductor cable	3	8	8. Grey 5 conductor cable
4. Orange (Grey CAT6)	4	9	9. Green (Green CAT6)
5. Orange/White (Pink CAT6)	5	10	10. Green/White (Yellow CAT6)
11. Screen from 5-conductor cable	11		





On the sign there is a connector for connection of TMA which also controls this from the tablet.

Connection TMA

The connector that is mounted at the lower end of the linear motor

1. -	Brown 12V to sensor	1	6	6. Blue/black	
2. -	Ground	2	7	7. Yellow	Plinth 7 in TMA sensor up
3. -		3	8	8. Brown/black	Plinth 8 in TMA engine down solenoid
4. -		4	9	9. Grey	Plinth 9 in TMA sensor down
5.	Yellow/Red ECE65 LED flash	5	10	10. Yellow/blue	Plinth 10 in TMA engine up solenoid
		11			

CONNECTION TMA OUTPUT CONTACT VERDEGRO

This contact is placed on the control cabinet.

Plinth no. in control cabinet

Fused + Red +12V to sensor	1	6	Blue ground, not connected
Plinth 16 IF White sensor down	2	7	Brown sensor up Plinth 15 IG
Black extra	3	8	
Plinth 13 Yellow TMA up	4	9	
Plinth 14 Green TMA down	5	10	
	11		

Daily use

NOTE! Keep in mind that it is the driver's responsibility that the correct message is displayed to other road users. Do not forget to change to neutral image / information or quenched sign for transport or the like that does not require signage. Keep in mind that operation of the sign during travel may have fatal consequences. When the sign with the flash symbols has been raised, the vehicle's highest point is significantly higher than usual. The engine must always be switched off when the power cable is disconnected or assembled. This to eliminate the risk of sparking. In case of a booster startup, the sign and control panel must be disconnected by disconnecting the connectors to the sign and the power supply connector for the control panel.

1. Start the engine. When the engine has started, it will take about 40 seconds before the signage control program is running. During that time, the controller performs various boot routines.

Example of Main menu.

When the control computer is complete with the boot routines, this image appears on the screen. Here you choose which of the messages and flashing symbols you want to show. In order for the power supply of the sign to not be accidentally closed or that the driver forgets to light the sign illumination, the power supply is always on when the engine is running. Shutdown is done by switching off the vehicle engine.

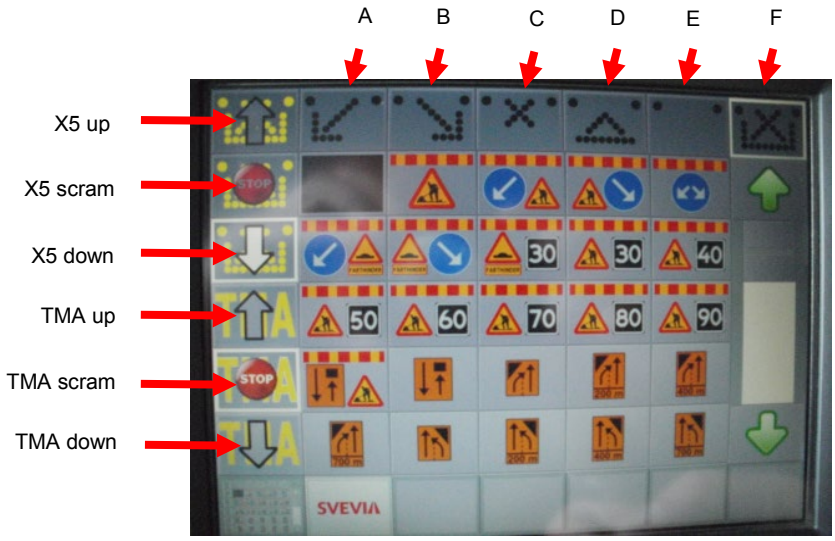
1. Select message by touching its icon on the screen, then a green and a red box will appear at the bottom of the screen.

Touch the message you want to use. When the message is selected, the two boxes appear at the bottom of the screen, green or red. When the selected message appears on the sign, this is confirmed by the same symbol being lit on the screen (Svevias logo is selected on the example image).

If you scroll up or down by dragging the gray box between the arrow symbols, you will find more pictures.

2. Confirm the selected message by pressing the green box or undo the selection by pressing the red box. You only have a moment to confirm or undo your selection, and then the program returns to the main menu and nothing happens. This is to reduce the risk of someone accidentally changing messages.
   When the election is confirmed, it appears on the sign. The image selection routine is complete.

3. If you also want to use the flash symbol (X5), touch the box marked  until the symbol has passed from flashing to solid shine.
4. Select the symbol (see picture 23) for X5 in the same way you chose the image on the LED-sign.

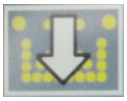


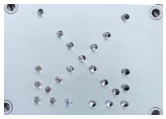
In the top row and in the first column of symbols there are boxes with which the chart with the flash symbols is controlled. With the boxes in the top row, the flash symbol is selected and with the boxes in the first column the height of the arrow board is operated. Selected box must be pressed until the flashing shine has shifted to solid shine.

Picture 23.

A. Left lanes are offered to other road users.
B. Right lanes are offered to other road users.
C. No lane is offered to other road users.
D. Warning symbol (not approved for use in the national road network in Sweden).
E. Only Ø 300 mm flashlights are active.
F. No symbol on the arrow board is lit.

NOTE! Maximum speed with X5 in elevated position is 30 km/h. Be sure to load any cargo space in front of the sign so that there is no danger of pinching or damaging when the arrow board with flash symbols is lowered.

5. When the X5 is lowered, do it by touching  until the arrow stops flashing and instead shines solidly.



In addition to displaying the message selected for X5 in the control panel, this also appears with LEDs mounted on the control panel located on the rear of the sign.

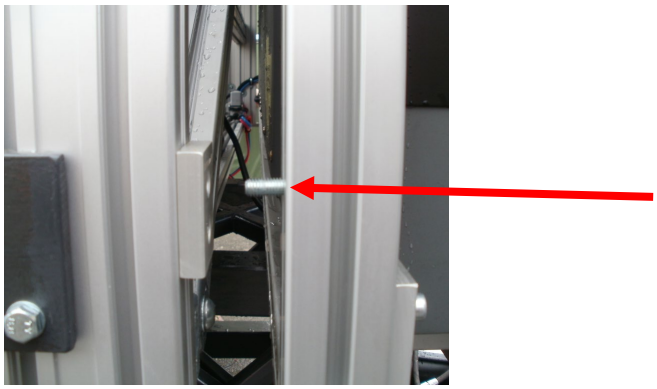
Emergency

With the buttons under the LEDs, the sign X5 can be operated, for example, in the event that the tablet has broken.

Cleaning

1. The sign is cleaned, swept from snow in the same way as the other surfaces of the vehicle.
2. Frame, control cabinet and cabling can be sprayed with degreasing and then flushed with clean water.

NOTE! Keep in mind that degreasing products may cause health hazards, read and follow the safety precautions for each product. Be careful that water does not penetrate the back of the sign as it may damage the electronics. Do not use hight pressure wash! Do not forget to tighten the four screws that lock the sign to the stand, see picture below.



One of the four screws that locks the sign at the stand.

Service

Service is performed at six months intervals as follows:

1. Check that all the accessible screw connections of the sign are tightened.
2. Make sure that all cables are in good condition. If not, contact service at Vicky Teknik.
3. Make sure that all LEDs are working. If not, contact service at Vicky Teknik.

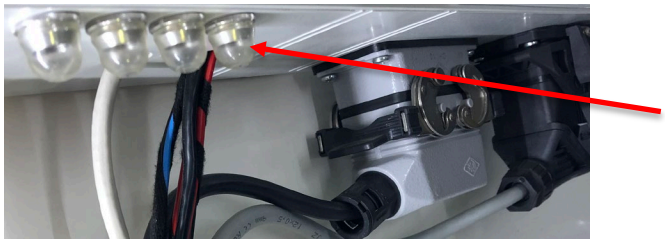
NOTE! In case of welding work on the vehicle, the sign and tablet must be disconnected. The guide rails are self lubricating and they are not to be lubricated. Lubricants may instead impair the function. If the sign has been turned out, do not forget to tighten the four screws locking the sign at the stand after it has been rewound.

Contact Vicky Teknik for all other service requests.

Troubleshooting

In case of malfunction, the following points can be checked:

The first action is to always reset the sign (turn off and restart the engine of the vehicle) in the event of a malfunction, this usually solves the problem.
Problem: The sign does not change messages.
Check: Is the engine running? If so, check power connection to the sign.
Sollution: Check the circuit breakers. The circuit breakers to the control system are located on the bottom of the cabinet.



Problem: The circuit breakers are intact but the sign does not change message.
Sollution: Try to maneuver the arrow board with flash symbols from the control cabinet. If it does´nt work check for cable failure.

Problem: The arrow board is not flashing even though the tablet has the correct message.
Solution 1: Check if the X5 symbol is lit solid. If it´s flashing X5 is not in right mode and that is why no messages are shown.
Solution 2: Check the circuit breakers on the control cabinet.

Problem: Despite troubleshooting the problems remains or other problems has occurred.
Solution: Contact Vicky Teknik.

Advice: In most cases, malfunctions are caused by poor power supply (bad batteries etc.). Good and charged batteries are necessary for the sign to work without disturbance.

Declaration of Conformity according to Swedish Work Environment Authority; AFS 2008:3, with changes to 20091103.

Manufacturer
Vicky Teknik AB
Lövtorpsvägen 149
147 91 GRÖDINGE
Sweden

Machine
Type: MidiSign Light
Weight excluding cabling and tablet: 230 kg
Noise: < 70 dB(A) at normal use

In addition, this equipment meets the requirements of the following relevant regulations from the Swedish Transport Administration:
VVFS 2007:305 Signs etc.
VVFS 2008:272 Sizes.
TSFS 2009:83 Lights.
EN-12352.

Manufacturer Certification

Variable Message Sign MidiSign Light with serial number _____

follows these relevant regulations:

The Swedish Transport Administrations decision with case number: TRV 2013/61009, decision on the marking of vehicles in road maintenance work.
Approved colors according to NEN-EN 12966-1+A1:2009 / NEN-EN 12966-1:2013: Orange, White, Red, Blue and Green.
Lights according to EN 12352.
CE-marking according to maskindirektivet.

This document is only valid if the signature stamp and date is filled in the box above.