



S35 Color Display

Installation Manual

In order to consistently bring you the highest quality, full-featured products, we reserve the right to change our specifications and designs at any time. The latest version of this manual can be found at novationcontrols.com.

Warranty - A limited warranty on materials and workmanship is given with this Enovation Controls product.
A copy of the warranty may be viewed or printed by going to www.enovationcontrols.com/warranty



**BEFORE BEGINNING INSTALLATION OF THIS
ENOVATION CONTROLS PRODUCT:**

Read and follow all installation instructions.
Please contact Enovation Controls immediately if you have any questions.

	• Make sure to follow all necessary safety requirements during installation and use of this display
	• Refer to the instruction manual or documentation for further information before using or handling the product.

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Hardware Installation

The following instructions will guide you through installing the S35 color display. The S35 Operations Manual and this installation manual can be found by scanning the QR code on the product package or online at: Support.enovationcontrols.com, then search for S35.

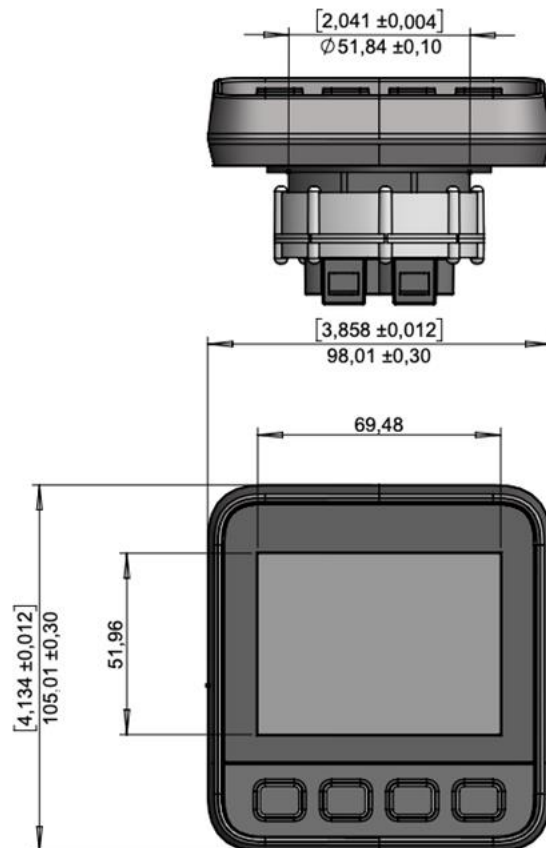
Inspecting Package Contents

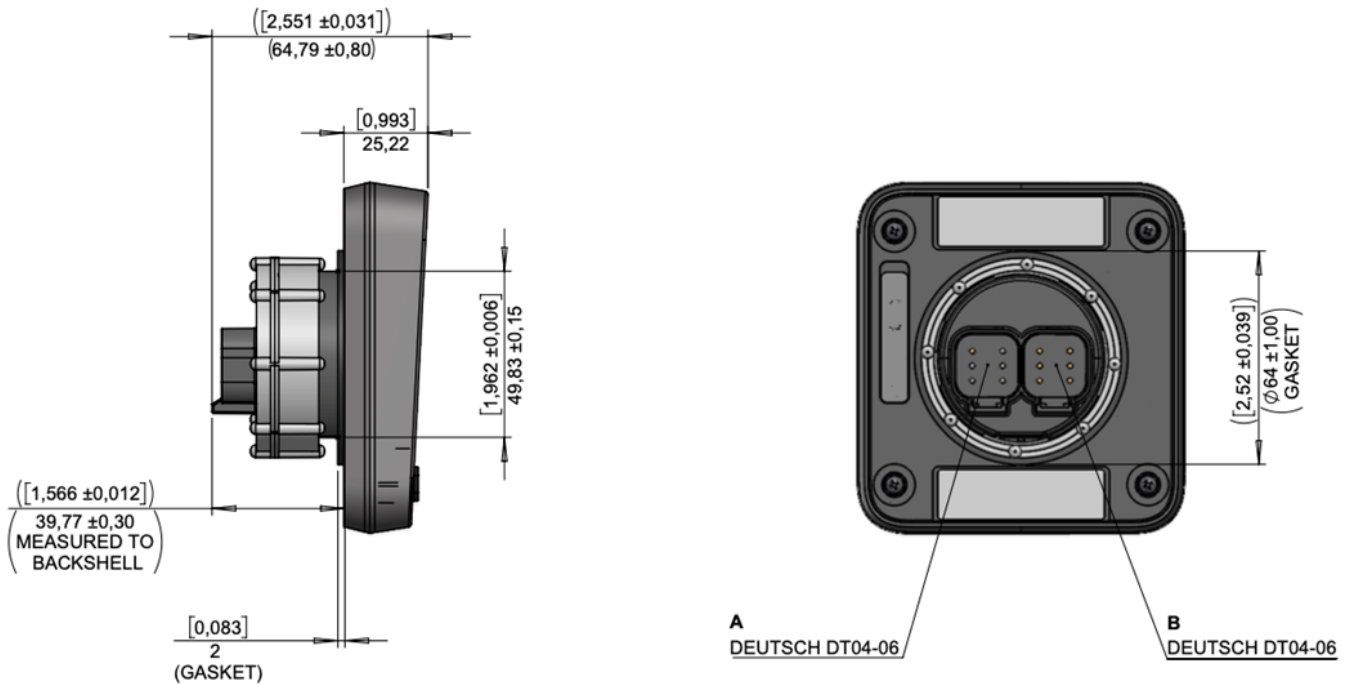
It is recommended that you ensure all parts are accounted for and inspect each item for damage (which may occur during shipping) before attempting to install the product. The items included in the box are:

- 1 – S35 Color display with attached screw-on ring clamp

Product Dimensions

Measurements shown in inches [mm]





Dash-Mounted Installation

Tools needed.

- Jig saw or
- 2" Hole saw or
- 2" knockout (chassis) punch

Preparing the Dash

1. Determine the location where the S35 will be placed into the dash. Refer to the Mounting Hole Options section next for appropriate hole opening size.
2. Measure twice, cut once! Cut the hole into the dash where the S35 will reside.

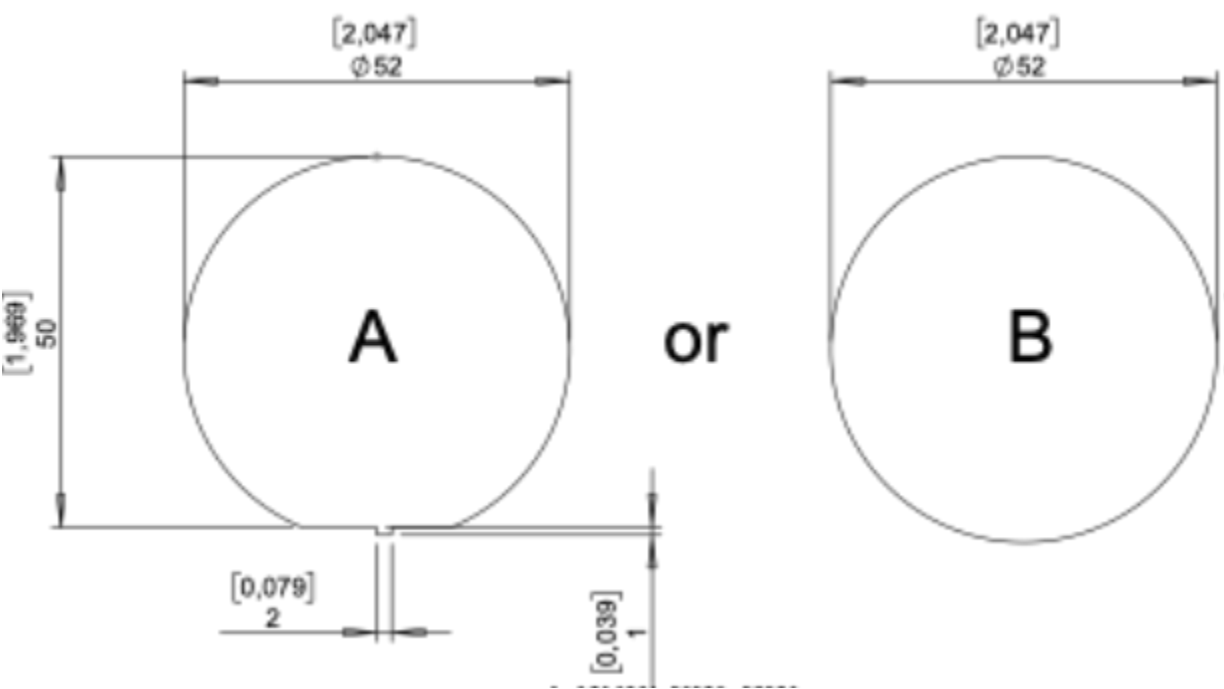
Mounting the Unit

1. Remove the screw-on mounting clamp ring from the back of the display.
2. Place the backside of the display through the opening in the dash.
3. Push the unit through the opening until the back of the case is flush with the panel.
4. Place the screw-on mounting clamp ring behind the panel and screw onto unit until hand-tight.

Notes:

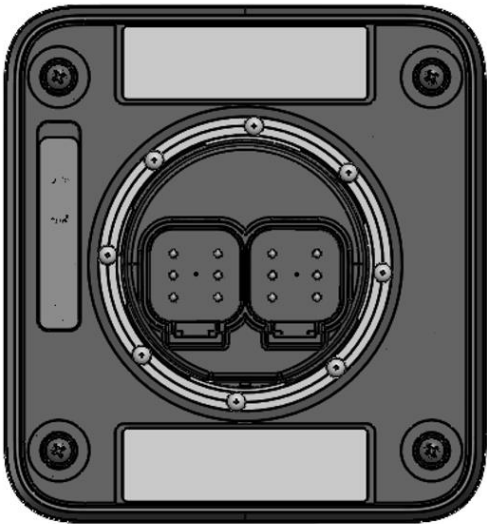
- The unit must be mounted at a height below 6.6ft (2m).
- It is recommended that the unit be installed at an altitude of less than 6561ft (2000m).

Mounting Hole Options



Wiring Information

Pin Out Specifications

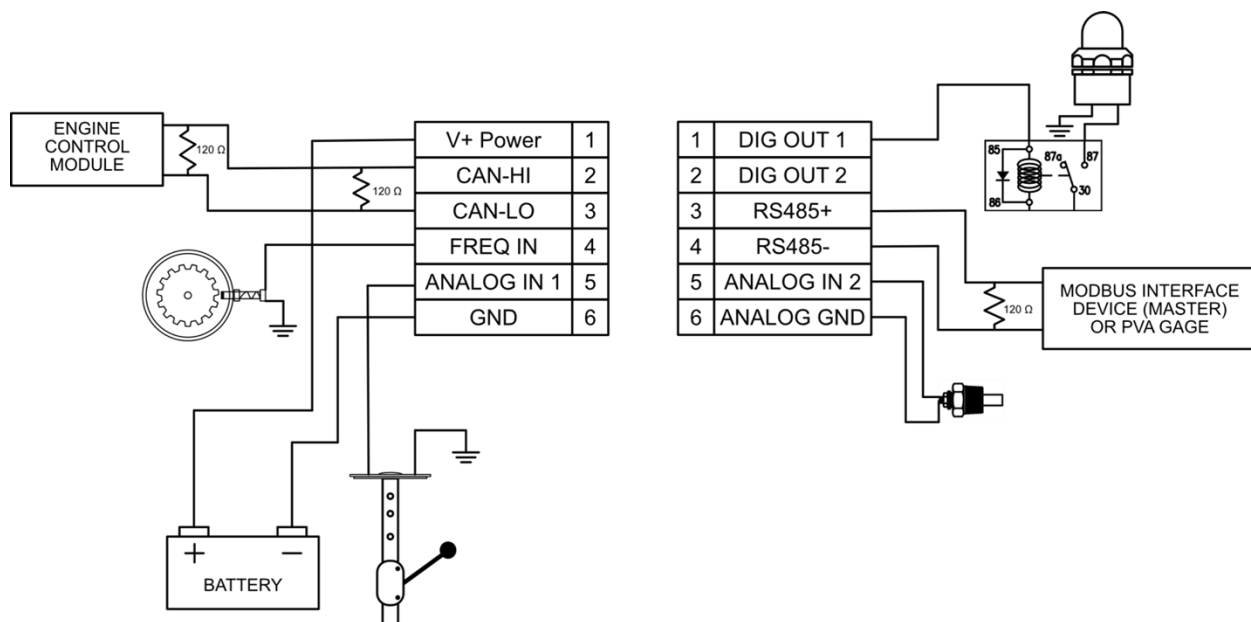


A CONNECTOR PINOUT		A		B		B CONNECTOR PINOUT	
PIN	FUNCTION	30	04	30	04	PIN	FUNCTION
1	V+ Power	20	05	20	05	1	DIGITAL OUT 1
2	CAN-HI	10	06	10	06	2	DIGITAL OUT 2
3	CAN-LO					3	RS485+
4	FREQ IN					4	RS485-
5	ANALOG IN 1					5	ANALOG IN 2
6	GND					6	ANALOG GND

S35 Mating Connector Part Numbers

- Deutsch DT06-6S plug housing
- W6S Wedge locks
- Deutsch 0462-201-16141 contact (socket)

S35 Wiring Diagram



Configuration and Programming Information

Application Update Procedure

This section demonstrates the process of updating a new application on the S35 Color Display.

Installation from a USB Flash Drive

Prior to installation from a USB flash drive, ensure that your USB flash drive is formatted using the default size allocation. For best results, place just a single application install file on the US flash drive.

Step	Action
1	Ensure the S35 Color Display is OFF.
2	Place a single application install file on the USB stick and insert that USB stick in the USB-C port under the rubber grommet on the back of the S35 Color Display.
3	Turn the S35 Color Display ON while pressing and holding the leftmost button. 
4	Release the leftmost button when the bootloader splash screen appears: 

Continued

Step	Action
5	The display will now show Searching for Update files. (If a USB flash drive is detected, it will search that location in addition to the internal flash for an update file). 
6	If a USB file exists, Install Software Update will be displayed. Use corresponding buttons to accept or cancel. 
7	If no USB file exists, or if you pressed “No” on the previous screen, “Do you want to switch to application?” will be displayed. 

Continued

Step	Action
8	If “Install Software Update” is accepted in Step 6, “Erasing Flash” will be displayed. 
9	After the internal flash is erased, the new application will get written into flash memory. 
10	Once the installation is complete, the bootloader will switch to the main application. 
NOTE:	Do not turn off the power after accepting a software installation update.

Specifications

Computing	
Main Processor:	Arm 32-bit Cortex-M4 CPU 120 MHz +FPU
Internal Storage	2048 kB
RAM	640 kB
Storage:	4096 kB
Display/HMI	
Screen:	3.5-inch, 18-bit Color LCD TFT
Resolution:	320 x 240
Brightness:	800 cd/m ²
Interfaces	
CAN:	1x CAN 2.0B (Selectable 250k/500k/1Mb baud rate)
Serial:	1x RS485 – Half duplex
USB:	1x USB-C 2.0b
Electrical	
Operating Volts:	6-36 VDC, reverse polarity protected
Digital Outputs:	2x low-side open drain 500 mA
Analog Inputs:	2x user configurable (0-5 V, 4-20mA, Resistive) 1x internal battery voltage sensing (0-36V)
Real Time Clock:	Yes, (with 7-day backup)
Environmental	
Operating Temp:	-40°C to +85°C (-40°F to +185°F)
Storage Temp:	-40°C to +85°C (-40°F to +185°F)
Protection:	IP67 IEC 60529
Vibration:	ISO 16750
Shock:	ISO 16750
EMC/EMI:	ISO 13766, ISO 14982

How to Order

The following S35 Color Display and accessories are available through Enovation Controls:

Part Number	Description	Order Details
78700727	S35 Color Display	Display
78900727	S35 Color Display (24 Pack)	Bulk Pack Display

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