

AIR Glide Display S

Installation Manual

Document name: 18.T275.1-1.5-EN
Document version: 1.5
Release date: 21/02/2014

Notes

General Information

IMPORTANT!

- || *Please read this manual carefully before installing or operating the device!*
- || *Pay attention to the restrictions on use!*
- || *This manual is an essential part of the device and must be kept in a safe place!*

Document identification / revision status

This manual supports the following product types:

- P/N T275 "Display S"

Actual version: **AIR Glide Display S Installation Manual • 18.T275.1-1.5-EN, Version 1.5(192)**

Version history

Revision	Date	Status	Author	Changes, comments	Approved
1.4	02/26/2013	released	M. Foerderer	Added Content	-
1.5	05/30/2013	released	M. Foerderer	Added ISU Mounting	-
1.7	21/10/2013	released	M. Frderer	Details added	-
1.8	07/11/2013	released	M. Frderer	Inst. Checklist Added	-
1.9	07/11/2013	released	M. Frderer	Add Info on FLARM In- terface	-
1.9	07/11/2013	released	M. Frderer	Added AIR Glide Branding	-

Contents

1	General	1
1.1	System Description	1
1.2	Design Goals	2
1.3	Third party devices	2
1.4	Included Parts and Accessories	2
1.4.1	Delivery Part List	2
1.4.2	Available Accessories	2
2	Safety, Liability and Support	4
2.1	Safety instructions and restrictions on use	4
2.2	Intellectual Property and Liability	4
2.3	Support	4
2.3.1	World	4
2.3.2	Europe	4
2.4	General Installation Information	4
2.4.1	Recommended procedure	4
3	Electrical Systems	6
3.1	General Information	6
3.1.1	Electrical Installation	6
3.1.2	Display Wiring Harness	6
3.1.3	M12 CANaerospace Cables	6
3.2	Power Supply and Circuit Protection	6
3.2.1	Power Supply	6
3.2.2	Power Requirements	6
3.2.3	Circuit Protection	7
3.2.4	Power and CANaerospace Bus	7
3.3	Audio System	8
3.3.1	Audio Channels	8
3.3.2	Speakers	8
4	Interfaces and Options	9
4.1	CANaerospace Bus System	9
4.1.1	Description	9
4.1.2	Cables	9
4.1.3	Termination	9
4.2	Display Wiring Harness	10
4.2.1	Display Wiring Harness Pinout	10
4.2.2	Wiring Harness Standard Configuration	11
4.3	Optional Functionality with Additional Wires in Wiring Harness	11
4.3.1	Additional Wires	11
4.3.2	Audio Mute Switch	11
4.3.3	Simple Airframe State Switches	12

4.3.4	FLAPS State	12
4.4	RS232 Interface to FLARM [®] Devices	14
4.4.1	FLARM [®] -Device Power Supply	14
4.4.2	FLARM [®] -RJ45 Cable Pinout	15
4.4.3	RJ12-FLARM [®] -Devices	15
4.5	USB-Interface	15
4.5.1	USB-Interface	15
4.5.2	USB-functionality and restrictions	16
4.6	Third Party NMEA Devices and iGlide	16
4.6.1	Third Party NMEA-Devices	16
4.6.2	Interface to iGlide	16
5	Installation	17
5.1	Mechanical Installation	17
5.2	Mounting	17
5.3	Position	17
5.4	Connectors	17
6	Electrical Installation	19
6.1	Basic Recommended Procedures	19
6.1.1	Setup and Testing	19
6.2	Recommended Procedures for Installation of Additional Wires into Wiring Harness	19
6.2.1	Recommended Tools	19
6.2.2	Wire Installation	20
7	Required Settings	21
7.1	Before first flight	21
7.1.1	Special settings when installing multiple displays	21
7.2	During first flight	21
8	Reviewing Installation	22
8.1	Mechanical	22
8.2	Electrical	22
8.3	Magnetic Interference	22
8.4	Operation	22

1 General

1.1 System Description

AIR Glide Display S is a small 57mm display unit and acoustic system.

A typical AIR Glide installation consists of at least one display unit (like Display S) and one AIR Glide Sensor Unit (ISU). The ISU collects and processes sensor data, the display displays the current flight situation derived from sensor data in an easy to understand fashion and accepts user input.

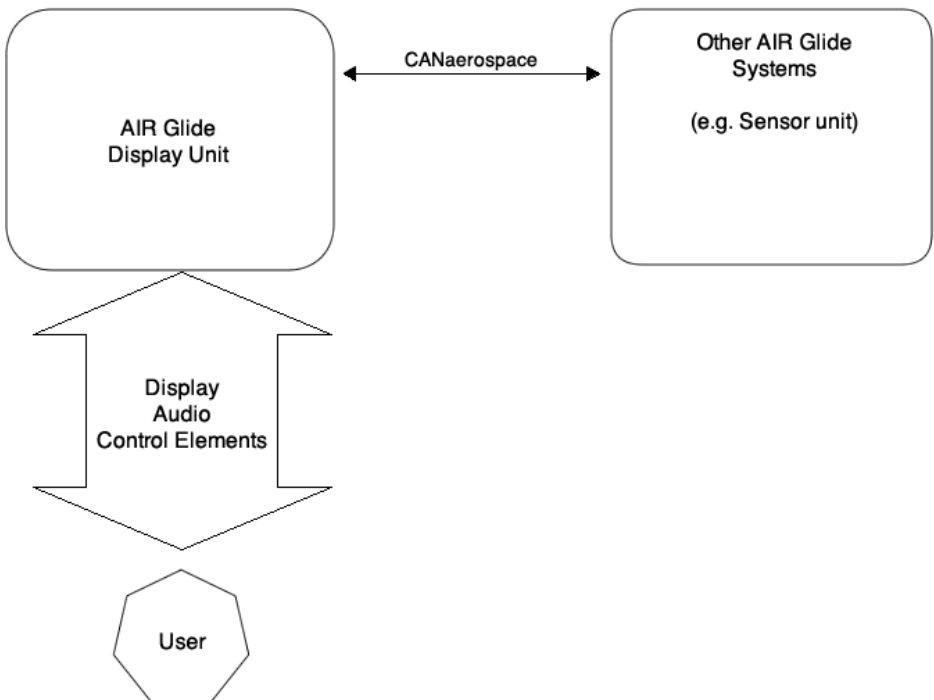


Figure 1: System Diagram

1.2 Design Goals

AIR Glide is designed for use in gliders as an aid to better and more efficient flying. Display S is small, robust and can be mounted inside glider cockpits with relative ease.

AIR Glide is intended to assist the pilot fly the glider efficiently and safely. The design employs state of the art technology, with an interface that is simple to use. The on-board audio processing system generates high quality sound, the integrated display delivers superior readability with nearly no reflections.

In many gliding accidents, pilot overload is known to be a contributing factor. Cross-country flying, competitions, busy airspace and flying in unfamiliar terrain can all cause a high pilot workload for long durations. A design goal of AIR Glide is to help relieve this situation by giving advisory messages and alarms when the aircraft is not being flown safely or efficiently.

1.3 Third party devices

AIR Glide systems can be interfaced with third party navigational devices such as PDAs or other EFIS systems as well as FLARM[®] compatible collision warning units. Certain installations require optional accessories.

1.4 Included Parts and Accessories

1.4.1 Delivery Part List

The following parts are contained in each Display S delivery.

Item	Partnumber	Description
Display Unit	T275	Display S display unit
CANaerospace Ca- ble 1m	-	M12 PUR industrial grade CAN ca- ble
CANaerospace Ter- minator	-	M12 female termination resistor plug
USB extension cable	-	USB cable with panel mount USB- jack
Display Cable	-	D-SUB wiring harness for display S

1.4.2 Available Accessories

The following parts may be ordered directly from AIR Avionics or from authorized dealers.

Item	Ordernumber	Description
Display	27.110.002	Additional Display S
Sensor Unit	-	AIR Glide Sensor Unit
NMEA Interface Unit	27.120.001	Interface unit for NMEA client devices to CANaerospace bus- systems
iGlide Interface Stick	27.000.001	Interface USB-Stick for iGlide on mobile devices

CANaerospace Cable 0.3m	27.000.002	M12 PUR industrial grade CAN cable, length 0.3m
CANaerospace Cable 1m	27.000.002-1	M12 PUR industrial grade CAN cable, length 1m
CANaerospace Cable 3m	27.000.002-2	M12 PUR industrial grade CAN cable, length 3m
D-SUB contact wires	30.000.007	Contact wires incl. precrimped contacts ready for insertion into wiring harness (5 pcs.)
RJ45/12 cable	1.000.029	Adapter RJ12/RJ45 to connect LX-FLARM [®] devices
Insertor/Extractor Tool	27.0.0.0005	Insertor/Extractor Tool for crimped contacts

To order accessories, visit www.air-store.eu

2 Safety, Liability and Support

2.1 Safety instructions and restrictions on use

Installation and operation must be on the basis of non-interference with and no hazard to the existing suite of other equipment necessary for safe flying operation, or installed to comply with official requirements. Installation and operation must comply with official regulations and requirements.

The pilot is ultimately responsible for all flight decisions and for operating the aircraft safely at all times. For situational awareness only!

Never make safety critical decisions based displayed information.

Display S does not have a ETSO or FAA-TSO airworthiness certification. Make sure that it is legal to install it in your aircraft.

Do not use Display S if pilot-workload is increased by failure of Display S or attached subsystems.

2.2 Intellectual Property and Liability

Butterfly Avionics GmbH, will not be liable for errors/changes/omissions in this document - specifications are subject to change without notice. Butterfly Avionics its associates, development team, suppliers, manufacturers and data suppliers accept no responsibility for any damage or claims that may arise from use of Display S.

Trademarks referred to in this document are the property of their respective holders. Any decomposing, disassembly, reverse engineering, or modification of the instrument or firmware are strictly prohibited without specific written permission from Butterfly Avionics GmbH.

2.3 Support

2.3.1 World

To get support, please contact your local authorized AIR Avionics dealer.

2.3.2 Europe

Please contact us via eMail or Phone. Find more information on www.air-avionics.com or +49 (0) 6224 82 83 87 0.

2.4 General Installation Information

2.4.1 Recommended procedure

- Recommended Installation procedure
 - Read all manuals and the aircraft type pilots manual and maintenance manual thoroughly.
 - Examine the aircraft to determine its particular requirements.

- Decide on an installation position, ensuring it complies with the legal and airworthiness requirements of the aircraft type and installation requirements defined in this manual.
- Mechanically install Display S, checking first for sufficient space for connectors
- Perform the electrical installation.
- Perform firstuse setup, including device configuration and latest software updates.
- After installation and configuration, check all switches operate correctly.
- Make notes on the work performed and configuration settings, and store the notes with the aircraft maintenance manual.
- Have a professional engineer check the installation, and perform any weight and balance calculations and compass adjustment.
- Perform a flighttest to ensure the device is functioning correctly.

Ensure that the mechanical installation does not interfere with full control movements, canopy jettison and other safety features of the aircraft.

If in doubt as to how to perform any of these steps, seek professional help from a licensed aircraft maintenance facility.

3 Electrical Systems

3.1 General Information

3.1.1 Electrical Installation

The electrical installation has to be undertaken according to the guidelines and regulations applicable to the specific aircraft type. When uncertain as to how to perform any aspect of the installation, you should consult with an aeronautical engineer or an aircraft maintenance facility.

In all cases the installation is to be performed only with expert advice in accordance with this guidance.

3.1.2 Display Wiring Harness

The wiring harness is connected with a D-SUB-25 connector with machined crimp-contacts.

For wiring, only aviation-certified cables and leads or cables and leads of similar quality are to be used.

For cable connections of Display S to FLARM a patch cable with halogen-free insulation is provided. Halogen-free insulation fulfills strict requirements concerning temperature resistance and in the case of fire do not develop smoke or noxious gasses.

3.1.3 M12 CANaerospace Cables

For connection of all CANaerospace nodes (Sensor unit, Display etc.) M12 DeviceNet[®]-cables are used. The supplied cables are extremely rugged and have a polyurethane-based jacket. They fulfill highest level requirements regarding flammability, robustness and isolation.

3.2 Power Supply and Circuit Protection

3.2.1 Power Supply

The Unit is supplied through the D-Sub 25 wiring harness. Display S is rated for input voltages from 9V to 31V DC.

Ensure all power wires and circuit breakers have low resistance otherwise the higher current drains of Display S will result in wasted battery power.

Display S features two independent power supply channels. In delivery configuration of the wiring harness only one channel is configured. The second channel may be configured by the user using methods described in this manual.

Connected FLARM[®] compatible devices are supplied through the connection cable (RJ45) in the provided wiring harness. Please note that attached FLARM[®] compatible devices may have other input voltage ratings.

3.2.2 Power Requirements

Input Voltage	9V to 31V DC
Power Requirements	below 2.5W at 12V
Recommended Protection	2.5A to 5.0A CB

3.2.3 Circuit Protection

A voltage supply with a current limiting safety device must be secured, to cut the power in the event of an overload in the voltage supply. The safety device must be marked clearly, e.g. Display S.

The best option is to use a resettable safety device such as a circuit breaker, however also a slow-blow fuse is acceptable. Depending on cable cross section, we recommend a 2.5-5A CB.

3.2.4 Power and CANaerospace Bus

The Display supplies power to subsystems connected to the CANaerospace bus. Power supplied into the CANaerospace bus by the Display is sufficient to supply AIR Glide Sensor Units (ISU) and NMEA Interface Units attached to the same CANaerospace bus.

Additional Display Units, e.g. in two seater installations must be separately powered.

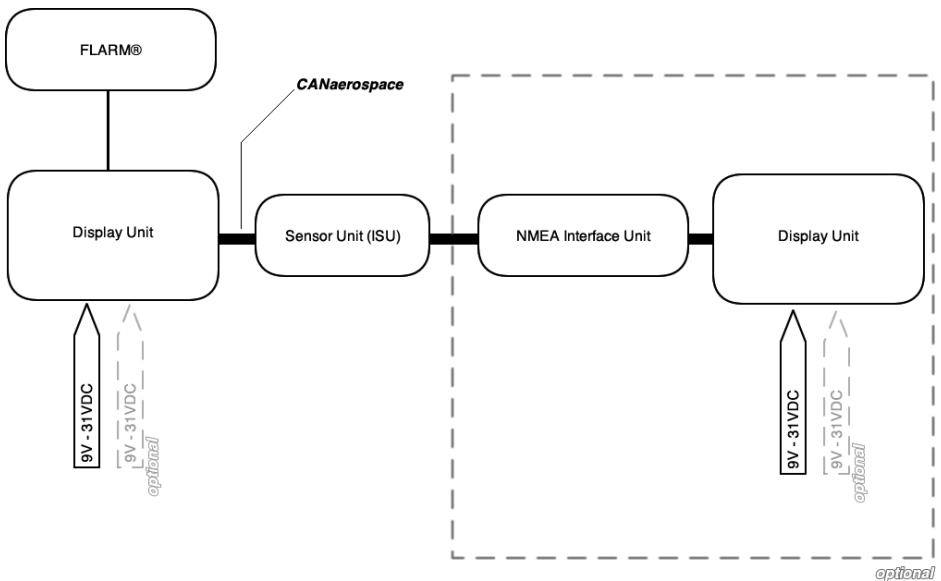


Figure 2: Recommended Power Supply Configuration

3.3 Audio System

3.3.1 Audio Channels

Display S has two independent audio-channels (Left and Right) with one output amplifier each. Two speakers may be connected.

3.3.2 Speakers

For voice output a good speaker with 8 Ohms impedance is recommended. A speaker that gives a good compromise between size and quality is included with each Display S.

4 Interfaces and Options

4.1 CANaerospace Bus System

4.1.1 Description

CANaerospace is a higher layer protocol based on Controller Area Network (CAN) which has been developed for aeronautical applications.

CANaerospace supports airborne systems employing the Line-replaceable unit (LRU) concept to share data across CAN and ensures interoperability between CAN LRUs by defining CAN physical layer characteristics, network layers, communication mechanisms, data types and aeronautical axis systems.

CANaerospace is frequently used in latest avionics systems in commercial and military aircraft such as the Airbus A380, Boeing 787 or F-35 Joint Strike Fighter.

4.1.2 Cables

For connection of all CANaerospace nodes (Sensor unit, Display etc.) M12 DeviceNet[®]-cables are used. M12 Cables have an integrated locking mechanism. When connecting cables, take care to properly lock all connectors.

4.1.3 Termination

CANaerospace requires termination resistors to be placed on each end of an installation. Whereas the sensor unit (ISU) already features an internal termination resistor the other end of the installation has to be terminated by an (included in delivery) termination resistor.

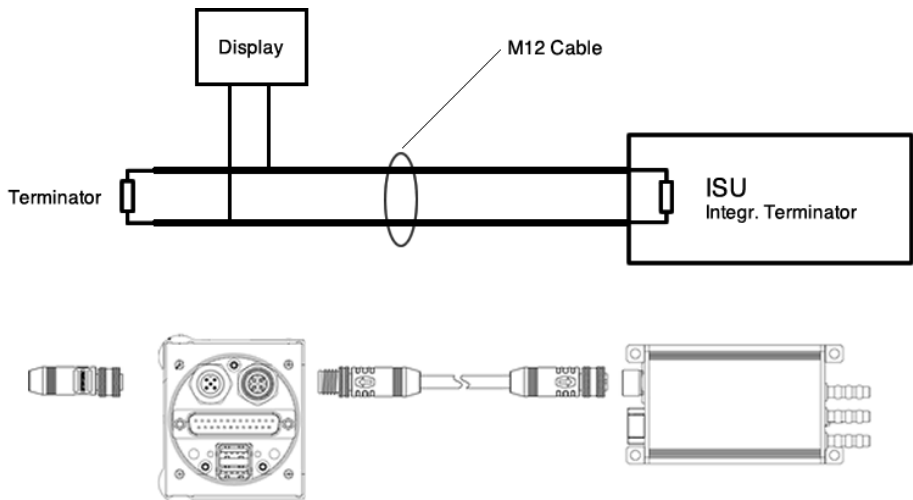


Figure 3: CANaerospace Termination in Display S

4.2 Display Wiring Harness

Display S comes with a preconfigured wiring harness for the D-SUB25 connector of the display. Additional cables can be plugged into the connector for enhanced functionality.

4.2.1 Display Wiring Harness Pinout

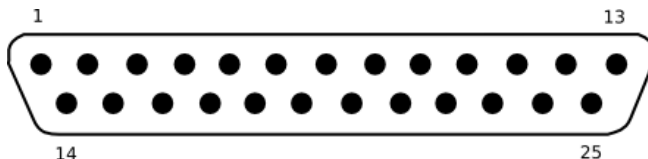


Figure 4: D-SUB 25 Connector Pinout

Pin	Designator	Signal/Purpose
1	PWR IN 1	Main Power In (9V to 31V DC)
2	PWR IN 2	Main Power In (9V to 31V DC)
3	GEAR	Gear state switch (invertible, GND-switching)
4	AUDIO MUTE	Audio mute switch (connect via diode)
5	MODE	Mode switch sc/var (invertible, GND-switching)
6	BRAKE	Speedbrakes (invertible, GND-switching)
7	TEMP SENS VOUT	Supply for temp. probe (5V)
8	1WIRE	1-Wire Interface for temperature probe
9	GND	Ground
10	PWR OUT	Power output (Main Power)
11	GND	Ground
12	AUDIO L A	Audio Out Left Channel A
13	AUDIO L B	Audio Out Left Channel B
14	GND	Ground
15	GND	Ground
16	Reference VOUT 1	Reference external sensors (5.0V)
17	FLAPS	Flaps state voltage (0-5VDC analog signal)
18	Reference VOUT 2	Reference external sensors (5.0V)
19	N/C	Do Not Connect!
20	GND	Ground
21	COM TX	RS232 TX (send data) for FLARM Interface
22	COM RX	RS232 RX (receive data) for FLARM Interface
23	AUDIO R A	Audio Out Right Channel A
24	AUDIO R B	Audio Out Right Channel B
25	GND	Ground

4.2.2 Wiring Harness Standard Configuration

In standard condition of the cable assembly (as supplied in standard delivery) the following pins are used.

Pin	Designator	Signal/Purpose
1	PWR IN 1	Main Power In (9V to 31V DC)
5	MODE	Mode switch sc/var (invertible, GND-switching)
7	TEMP SENS VOUT	Supply for temp. probe (5V)
8	1WIRE	1-Wire Interface for temperature probe
10	PWR OUT	Power output (Main Power)
12	AUDIO R A	Audio Out Right Channel A
13	AUDIO R B	Audio Out Right Channel B
14	GND	Ground
20	GND	Ground
21	COM TX	RS232 TX (send data) for FLARM Interface
22	COM RX	RS232 RX (receive data) for FLARM Interface
25	GND	Ground

4.3 Optional Functionality with Additional Wires in Wiring Harness

4.3.1 Additional Wires

Additional wires connected to Pins of the D-SUB 25 connector can be plugged into the connector on the Display. Pre-crimped wires are available from AIR Avionics. All of the following functions are optional and also configurable after first installation and use.

Pin	Designator	Signal/Purpose
2	PWR IN 2	Aux Main Power In (9V to 31V DC)
3	GEAR	Gear state switch (invertible, GND-switching)
4	AUDIO MUTE	Audio mute switch (connect via diode)
6	BRAKE	Speedbrakes state switch
16,17,18	FLAPS Position	Determines Flaps position via potentiometer
23	AUDIO R A	Audio Out Right Channel A
24	AUDIO R B	Audio Out Right Channel B

4.3.2 Audio Mute Switch

It is possible to mute (or reduce the volume) of Display S audio signals when transmitting a radio message. To accomplish this, PIN 4 on the D-SUB 25 connector has to be connected to your aircraft-radio PTT button via a diode.

The audio mute pin (PIN 4) has to be connected reactionlessly to the radio PTT button through a diode. The PTT-button is connected to the cathode of the diode, the audio mute pin (PIN 4) to the

anode of the diode.

The owner and/or the business performing the installation is responsible for ensuring that the installation conforms to the requirements of the aircraft type and the installation is done professionally. In particular it is necessary to seek clarification as to whether it is legal to connect to the radio PTT button. If this point cannot be clarified, do not install Display S integrated with the radio PTT button.

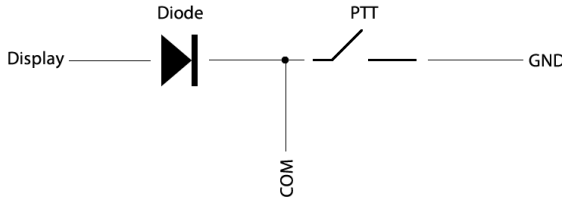


Figure 5: Schematic of Integration with PTT Button

4.3.3 Simple Airframe State Switches

Additional switches can be connected to the digital input pins 3, 6 to sense the state of certain parts of the airframe. All inputs are ground-switching, this means they are triggered if connected to ground (switch closed). All switch-states are invertible.

Pin	Designator	Signal/Purpose
3	GEAR	Gear state switch (invertible, GND-switching)
6	BRAKE	Speedbrakes state switch

Switch direction is software configurable. Switches may be inverted through software settings.

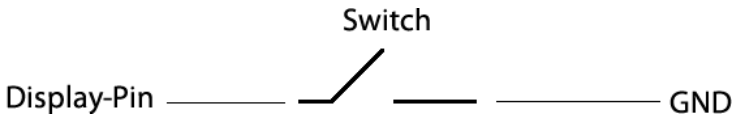


Figure 6: Pins are GND-switching this means connected to aircraft ground.

4.3.4 FLAPS State

The aircraft flap position can be determined through the FLAPS pin. The FLAPS pin leads to an analog input that is capable of detecting voltages from 0V to 5V. Installation together with a potentiometer to a reference voltage source is required. All required signals and voltages are available

on the D-SUB-25 connector.

To determine exact Flaps position, the potentiometer is mechanically connected to the flaps lever of the aircraft.

The owner and/or the business performing the installation is responsible for ensuring that the installation conforms to the requirements of the aircraft type and the installation is done professionally. In particular it is necessary to seek clarification as to whether it is legal to connect the potentiometer to a flaps lever. If this point cannot be clarified, do not install the potentiometer

failsafe installation is required. If control movement is compromised in case of mechanical failure of any of the installed components, do not install the components.

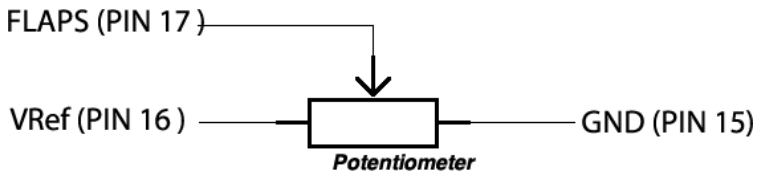


Figure 7: Schematic with Potentiometer

4.4 RS232 Interface to FLARM® Devices

Display S features a common RS232 Interface for connection of FLARM®-compatible collision avoidance devices. Included in the wiring harness is an RJ45 connector that allows for easy connection. Display S behaves like a normal FLARM Display and can be used together with other FLARM Displays if appropriate cable splitters are used.

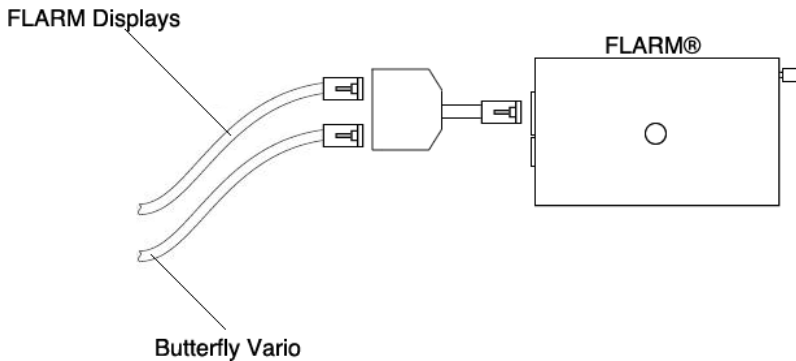


Figure 8: Connection of Display S and other Displays to classiv FLARM device

4.4.1 FLARM®-Device Power Supply

Display S supplies connected FLARM®-compatible devices with power. If you use an already powered FLARM® device (by a different power source) or a FLARM® module inside a glide computer, you must disconnect PIN 10 of the display wiring harness (PWR Out).

Please take care of the maximum input voltage of connected FLARM®-compatible devices. Maximum input voltage may be lower than supply voltage of the Display S, e.g. when using multicell LiPo batteries.

Externally powered FLARM® devices can be permanently destroyed when connected without disconnecting PIN 10 out of the cable assembly. Display S can also be damaged beyond repair.

4.4.2 FLARM®-RJ45 Cable Pinout

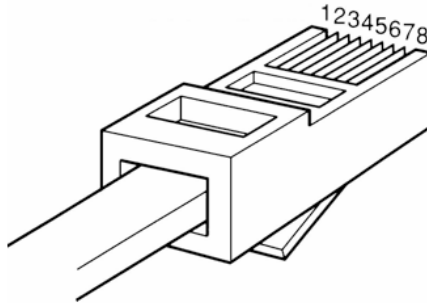


Figure 9: RJ45 Connector

Pin Number RJ45	Signal/Purpose
1	GND
2	N/C
3	RS232 TX - Display sends data
4	RS232 RX - Display receives data
5	N/C
6	N/C
7	N/C
8	DC IN - main power supply (plus)

The AIR Glide sensor unit also features an RJ45 Jack. Please do never connect the FLARM® interface cable to the sensor unit as this will permanently damage the sensor unit.

Additional adapter cables, Y-splitters are available at AIR Store: www.air-store.eu

4.4.3 RJ12-FLARM®-Devices

For connecting RJ12 FLARM®-compatible devices to Display S, special adapters are available. AIR Avionics SKU 1.000.029. If using the special adapter (e.g. with LX FLARM® devices), PIN 10 does not have to be disconnected.

4.5 USB-Interface

4.5.1 USB-Interface

Display S has two USB ports. Included is a 0.5m USB extension cable that can be mounted inside the instrument panel.

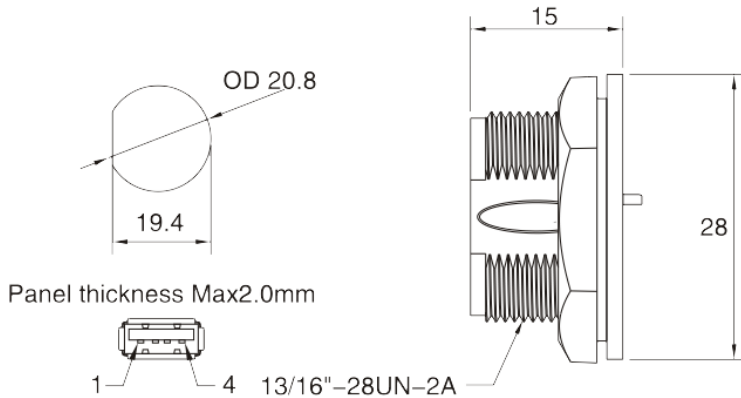


Figure 10: Dimensions of USB Extension Cable

4.5.2 USB-functionality and restrictions

The USB Interface can only be used as a USB Host for USB Sticks e.g. for file syncing and software updates. It does not deliver data to USB slave devices such as navigation systems.

4.6 Third Party NMEA Devices and iGlide

4.6.1 Third Party NMEA-Devices

Third party devices that are compatible with NMEA data via RS232 (e.g. PDAs, PNAs, Oudie etc.) can be interfaced via optional equipment. The AIR Glide NMEA Interface Unit (AIR Avionics SKU 27.120.001) converts Display S CANaerospace signals into common RS232 NMEA signals bidirectionally.

4.6.2 Interface to iGlide

The AIR Glide Connect Stick (SKU 27.000.001) transfers Display S data bidirectionally to iGlide with the use of a WiFi[®] wireless network.

Please refer to the AIR Glide Connect Stick manual for further details on installation and use.

5 Installation

5.1 Mechanical Installation

5.2 Mounting

The display fits into a normal 2.25Inch (57mm) standard instrument panel cutout. It is installed from the front of the panel and fastened with four M4 stop nuts. We recommend to use an M4 socket wrench with a minimum length of 100mm.

Be careful with the M4 stop nuts. Especially when unscrewing the M4 stop-nuts it is possible to unscrew the thread bolts out of the housing.

5.3 Position

Select an adequate position in respect of viewing angles and interference with other instruments. Make sure the control knobs of the unit are easily operated.

5.4 Connectors

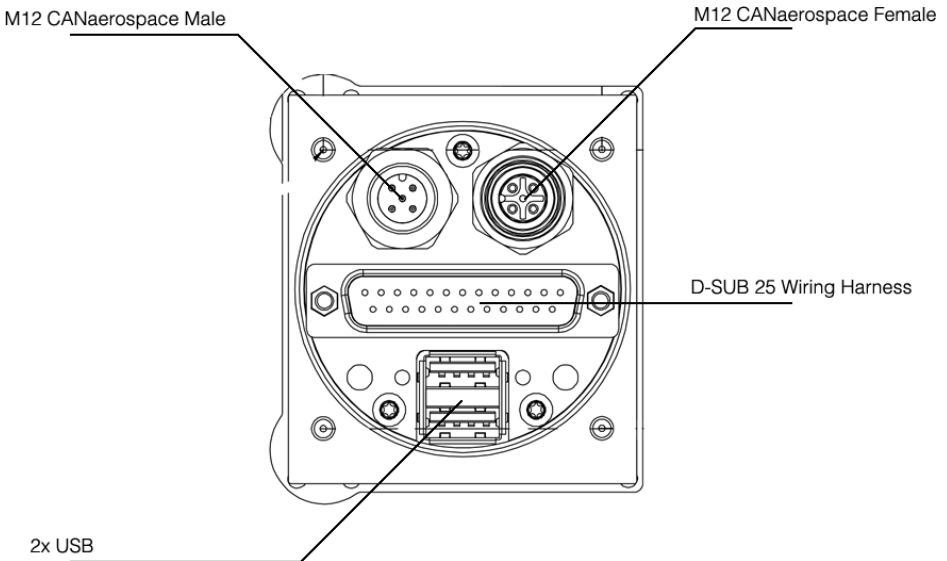


Figure 11: Display S Connectors

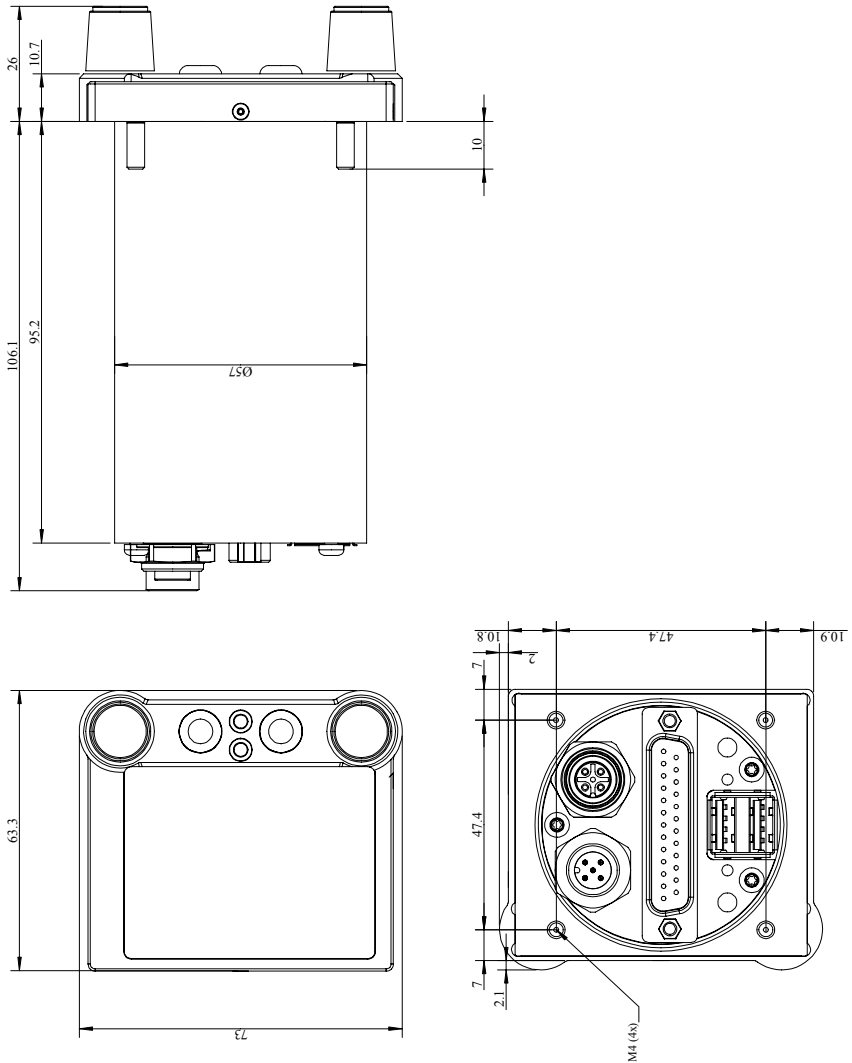


Figure 12: Display S Dimensions

6 Electrical Installation

6.1 Basic Recommended Procedures

- Connect the following cables:
 - CANaerospace Termination Resistor into Male Connector
 - M12 CANaerospace Cable into Female Connector
 - USB Extension in USB-Port
 - D-SUB 25 cable assembly to D-SUB 25 Connector
- Connect wires from wiring harness:
 - Red wire to main aircraft power supply
 - Black wire to main aircraft GND
 - white wire to sc/var switch of aircraft
 - RJ45 Cable from wiring harness to FLARM-compatible device (optional)
- Mechanically install:
 - the speaker system
 - The MODE switch (SC/VAR)
 - The temperature probe (outside/in the vent)

6.1.1 Setup and Testing

- Basic test: - Conduct first basic test
- Basic first use setup: - Conduct first use setup

6.2 Recommended Procedures for Installation of Additional Wires into Wiring Harness

6.2.1 Recommended Tools

Tool	Make
Crimping Tool	DMC M-22520/2-01, Locator: K13-1
Contact	FPC FK20SL-02V
Wire	Huber und Suhner RADOX 125 0.5mm2
Extractor/Insertor tool	SKU.: 27.0.0.0005

Using pre crimped wires (SKU 30.000.007) is the most convenient way and recommended. || **Own wires m**

6.2.2 Wire Installation

- Connecting pins with crimped wires:
 - solder the pre-crimped wire to the corresponding airframe switch
 - open the wiring harness D-SUB 25 connector housing
 - Insert the crimp-contact and ensure proper fitting using an adequate insertion tool.
 - close the wiring harness D-SUB 25 connector housing

7 Required Settings

7.1 Before first flight

Before the first flight the following settings are mandatory.

- Select an aircraft type from the list in *Menu, Setup, Compensation*
- Adjust all time filters in the same menu.
- Set the audio volume to a desired value.
- Select system language according to your requirements (Details about language setup in the chapter *Setup* of this manual).
- Go to *Menu, Setup, Device, Peripherals* and set all your connected peripherals. Set all not connected items to *N/A* and all others to appropriate values.

|| ***without a proper setup in the peripherals settings, some function will not work***

7.1.1 Special settings when installing multiple displays

- Make sure all peripheral settings are setup correctly in each display corresponding to connected peripherals
- Go to *Menu, Setup, Device* and set the *CANas Node ID* of the secondary unit to the value "2".

|| ***without a proper setup a two-seater installation will not work***

7.2 During first flight

- Perform a magnetometer compensation according to the chapter *Magnetometer-Compensation* in the Pilot's Manual of this device (optional)

8 Reviewing Installation

Please perform the installation review checklist below and document the results.

Do not fly if installation review has not been completed!

8.1 Mechanical

Item	Checked/Failed/Remark
All units installed and fixated	
All cables connected, connectors closed, cables fixated	
GPS-Antenna at appropriate position with clear skyview	
All tubings connected	
Installation does not interfere with aircraft systems or emergency procedures	

8.2 Electrical

Item	Checked/Failed/Remark
All cables checked for damage, no damage visible	
Appropriate fuse / circuit breaker installed	

8.3 Magnetic Interference

Item	Checked/Failed/Remark
Complies to all minimum recommended distances to magnetic disturbance sources	
No magnetic screws used	

8.4 Operation

Item	Checked/Failed/Remark
Unit boots correctly shows no error messages	
Latest software updates installed	
Required settings / initial configuration performed	

Notes