Duty alarm panel (FTI06031)

Hardware Installation Manual

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Not applicable.

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References

Beijer Electronics (website):
http://www.beijerelectronics.com/web/beijer_electronics.nsf

Introduction

The Installation manual provides instructions for installing the duty alarm panel as used within FT NavVision®. The chapters and sections are organized in chronological order in which the specific components must be installed.

About the installation manual

The installation manual contains the following chapters:

- Chapter “Safety instructions” presents warning, caution and note information, which the user should pay attention to.
- Chapter “Receiving, unpacking and checking” contains instructions on how to receive, unpack or check the panel.
- Chapter “Installation and mounting” contains instructions on how to install and/or mount the panel.
- Chapter “Technical specifications” contains an overview of the product details and technical specifications.

Abbreviations list

CCFL	Cold Cathode Fluorescent Lamps
CE	Conformance Mark
CTS	Clear To Send
DCD	Data Carrier Detect
DNV	Det Norske Veritas
DSR	Data Set Ready
DTR	Data Terminal Ready
FT	Free Technics
GND	Ground
IEC	International Electrotechnical Commission
IP	Ingress Protection
LCD	Liquid Crystal Display
NEMA	National Electrical Manufacturers Association
RD	Receive Data
RI	Ring Indicator
RTS	Request To Send
Rx	Receive
SG	Signal Ground
TD	Transmit Data
TFT	Thin Film Transistor
Tx	Transmit
UL	Underwriters Laboratory
UNC	Unified National Coarse
USB	Universal Serial Bus

Revision history

Revisions issued since publication.

Issue	Date	Revision	Reason
1.0	August 24, 2010		First release

Safety instructions

NOTE:
This section provides only a summary of the most important safety requirements and notes, which will be mentioned in the individual sections. To protect your health and prevent damage to the devices, it is essential to read and carefully follow the safety instructions.

The indications NOTE, CAUTION and WARNING have the following significance:

NOTE:
An operating procedure, practice or condition etc., which it is essential to emphasize.

CAUTION

An operating procedure, practise or condition etc., which, if not strictly observed, may damage or destroy equipment.

WARNING

An operating procedure, practise or condition etc., which, if not carefully observed may result in personal injury or loss of life.

1. Receiving, unpacking and checking

1.1 Procedure

NOTE:
Notify your sales representative if any of the items mentioned below are missing or damaged.

1. Remove the transport casing

2. Visually inspect the respective parts

3. Check that all items are included in accordance with the delivery documents.

4. Check for transport damages.
   In case of transport damage appropriate action must be taken against the latest carrier and the nearest certified dealer or representative should be informed.

5. Store the part in the original transport package in a dry and dust free place, if the unit is not to be installed immediately. Observe the environmental requirements stated in the specifications

2. Installation and mounting

2.1 General

- Read the safety precautions carefully
- Check the delivery for transportation damage. If damage is found, notify the supplier as soon as possible
- Do not use the operator panel in an environment with high explosive hazards
- The supplier is not responsible for modified, altered or reconstructed equipment
- Use only parts and accessories manufactured according to specifications of the supplier
- Read the installation and operating instructions carefully before installing, using or repairing the operator panel
- Never allow fluids, metal filings or wiring debris to enter any openings in the operator panel. This may cause fire or electrical shock
- Only qualified personnel may operate the operator panel
- Storing the operator panel where the temperature is lower/higher than recommended in this manual can cause the LCD display liquid to congeal/become isotopic
- The LCD display liquid contains a powerful irritant. In case of skin contact, wash immediately with plenty of water. In case of eye contact, hold the eye open, flush with plenty of water and get medical attention
- The figures in this manual serve an illustrative purpose. Because of the many variables associated with any particular installation, the supplier cannot assume responsibility for actual use based on the figures
- The supplier neither guarantees that the operator panel is suitable for your particular application, nor assumes responsibility for your product design, installation or operation.

2.2 During installation

- The operator panel is designed for stationary installation on a plane surface, where the following conditions are fulfilled:
    - no high explosive risks
    - no strong magnetic fields
    - no direct sunlight
    - no large, sudden temperature changes
- Install the product according to the accompanying installation instructions
- Ground the product according to the accompanying installation instructions
- Only qualified personnel may install the operator panel
- Separate the high voltage, signal and supply cables
- Make sure that the voltage and polarity of the power source is correct before connecting the product to the power outlet
- Peripheral equipment must be appropriate for the application and location.

2.3 Space requirements

CAUTION

The openings on the enclosure are for air convection. Do not cover these openings.

- Installation plate thickness: 1,5 – 9,0 mm
- Space requirements when installing the operator panel:

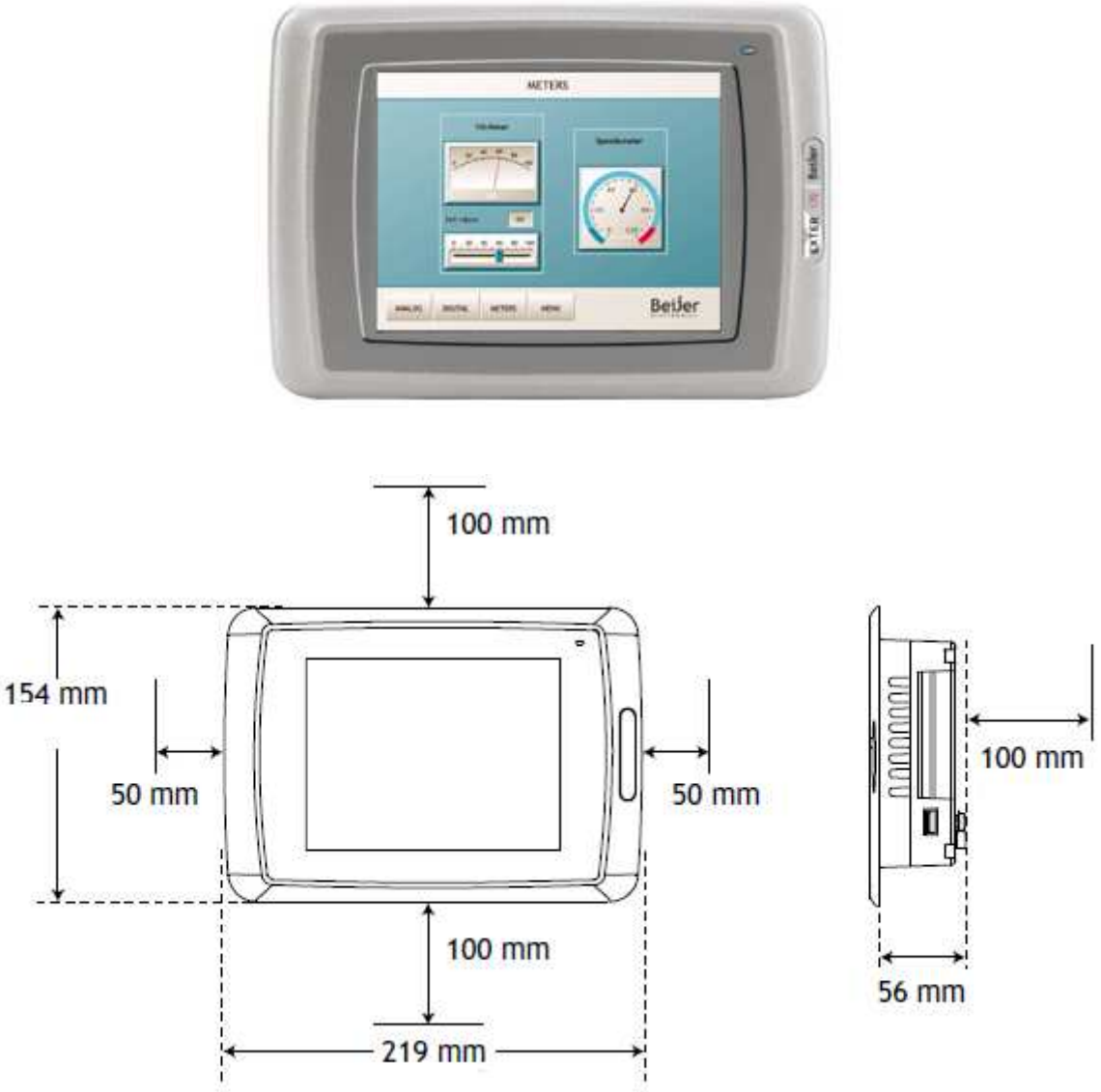


Figure 2-1: Dimensions (operator panel)

2.4 Installation procedure

1. Unpack and check the delivery (see Figure 2-2). If damage is found, notify the supplier.

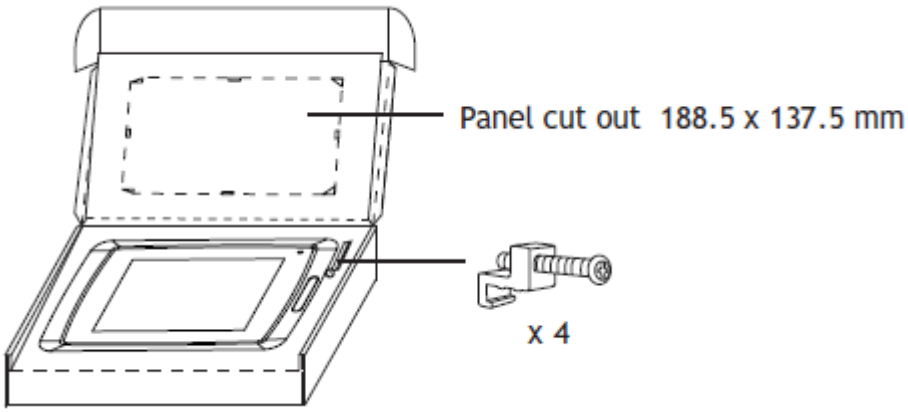


Figure 2-2: Delivery and contents

NOTE

Place the operator panel on a stable surface during installation. Dropping it or letting it fall may cause damage.

2. Place the panel cut-out where the operator panel is to be situated, draw along the outer sides of the holes and cut according to the markings (see Figure 2-3).

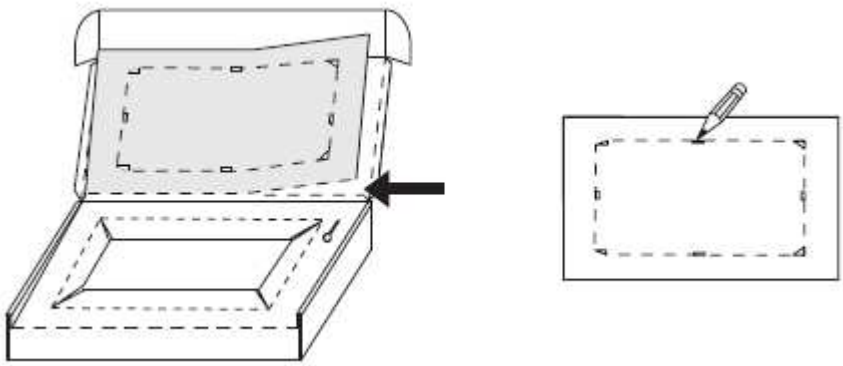


Figure 2-3: Panel cut-out

3. Secure the operator panel in position, using all the fastening holes and the provided brackets and screws (see Figure 2-4).

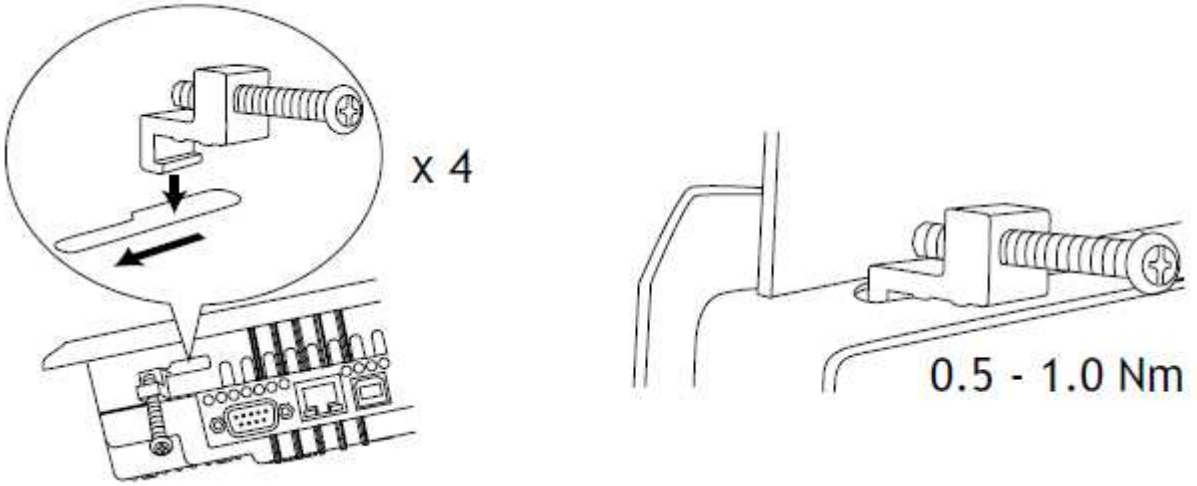


Figure 2-4: Fastening holes and brackets

4. Connect the cables in the specified order.

CAUTION

Ensure that the operator panel (ref. A, Figure 2-5) and the controller system have the same electrical grounding (reference voltage level), otherwise errors in communication may occur.

5. Use an M5 screw and a grounding conductor (as short as possible) with a cross-section of minimum 2.5 mm^2 (ref. B).

CAUTION

- **Use only shielded communication cables**
- **Separate high voltage cables from signal and supply cables (ref. C)**
- **The operator panel must be brought to ambient temperature before it is started up. If condensation forms, ensure that the operator panel is dry before connecting it to the power outlet (ref. D).**
- **Ensure that the voltage and polarity of the power source is correct.**

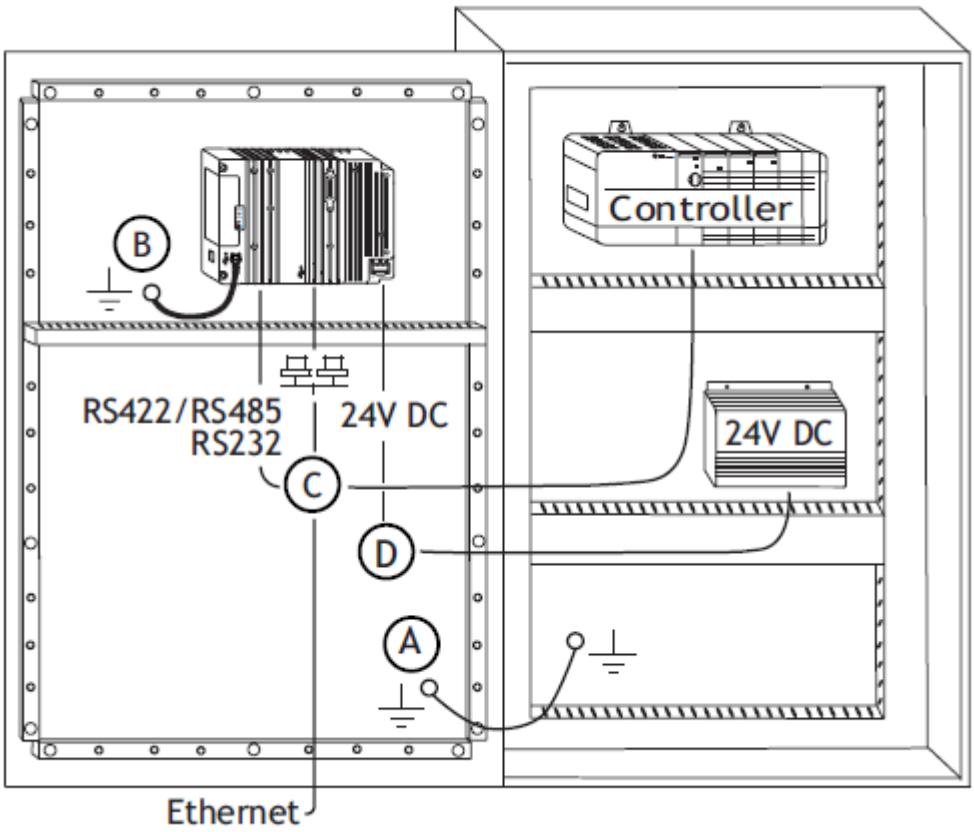


Figure 2-5: Cable connections

6. Carefully remove the laminated film over the operator panel display, to avoid static electricity that could damage the panel.

2.4.1 Mode switches

CAUTION

- **All mode switches (see Figure 2-6) must be in OFF position during operator panel use.**
- **The mode switches should not be touched unless by qualified personnel.**

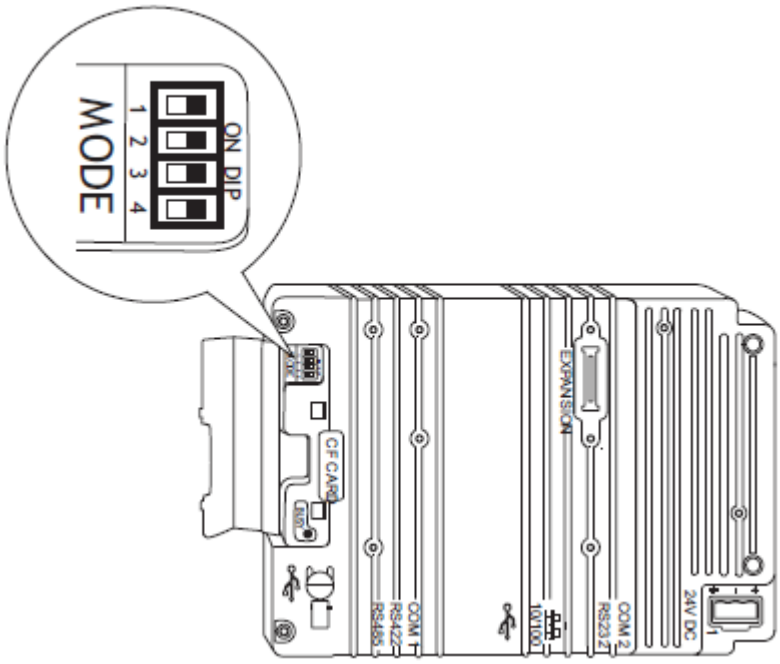


Figure 2-6: Mode switches

2.4.2 Connections to the controller

For information about the cables to be used when connecting the operator panel to the controller, please refer to the help file for the driver in question.

2.4.3 Other connections and peripherals

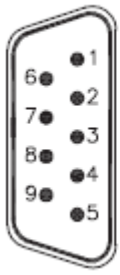
CAUTION

When using a compact flash card, do not remove the card when the busy indicator is illuminated.

Cables, peripheral equipment and accessories must be suitable for the application and its environment. For further details or recommendations, please refer to the supplier (see references).

2.4.4 Communication ports

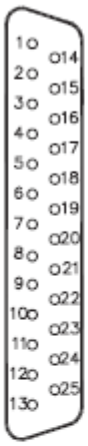
RS-232:



D–sub
9–pin Male

Pin no	Signal	Signal Name	Signal direction
1	DCD	Data Carrier Detect	Input
2	RD	Receive Data	Input
3	TD	Transmit Data	Output
4	DTR	Data Terminal Ready	Output
5	SG	Signal Ground	–
6	DSR	Data Set Ready	Input
7	RTS	Request To Send	Output
8	CTS	Clear To Send	Input
9	RI	Ring Indicator	Input

RS-422/485:

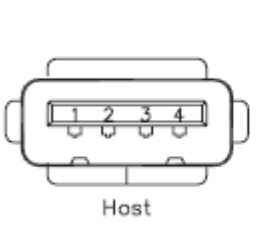


D–sub
25–pin Female

	RS-422		RS-485	
Pin no	Signal	Signal direction	Signal	Signal direction
2	TxD+	Output	Tx/Rx+	In/Output
15	TxD–	Output	Tx/Rx–	In/Outpul
3	RxD+	Input		
16	RxD–	Input		
4	RTS+	Output		
17	RTS–	Output		
5	CTS+	Input		
18	CTS–	Input		
20	[1]			
21	[1]			
6	Do not use		[2] Bus termination	[4] Connect to pin no.19 for bus–termination.
19	Do not use		[3] Bus termination	See above
7,8	0V		0V	
14	+5V <100mA	Output	+5V <100mA	Output

[1] Pin no 20 connected to pin no 21 internal in the terminal
[2] Directly connected internaly to pin no. 2 (Tx/Rx+).
[3] Connected to pin no. 15 (Tx/Rx–) internaly via a 120ohm 1/4W resistor.
[4] NOTE! Only the first and the last unit on the bus should be terminated.

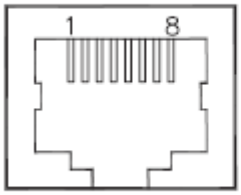
USB:



Pin no	Signal	Signal direction
1	VBUS	–
2	D–	In/Output
3	D+	In/Output
4	GND	–

Frame connected to chassis.

Ethernet:



Pin no	Signal	Signal direction
1	Tx+	Output
2	Tx–	Output
3	Rx+	Input
6	Rx–	Input
4,5,7,8	GND	

3. Technical specifications

Parameter	Description (model EXTER T70)
Front panel (W x H x D)	219 x 154 x 6 mm
Mounting depth	56 mm (156 mm including clearance)
Front panel seal	IP 66
Rear panel seal	IP 20
Keyboard material/ Front panel	Touch screen: Polyester on glass, 1 million finger touch operations. Overlay: Autotex F157 or F207.
Reverse side material	Powder-coated aluminium
Weight	1.2 kg
Serial port RS422/RS485	25-pin D-sub contact, chassis-mounted female with standard locking screws 4-40 UNC.
Serial port RS232C	9-pin D-sub contact, male with standard locking screws 4-40 UNC.
Ethernet	Shielded RJ 45
USB	Host type A (USB 1.1), max output current 500mA Device type B (USB 1.1)
CF-slot	Compact flash, type I and II
Flash memory for application	12 MB (incl. fonts)
Real time clock	±20 PPM + error because of ambient temperature and supply voltage. Total maximum error: 1 min/month at 25°C Temperature coefficient: 0.004 ppm/°C
Real time clock battery	CR2450 (UL and cUL: Sanyo or Panasonic) Minimum lifetime: 3 years
Power consumption at rated voltage	Normal: 0.4 A Maximum: 0.9 A
Display	TFT-LCD. 640 x 480 pixels, 64 K color. CCFL backlight lifetime at the ambient temperature of +25°C: > 50,000 h.
Active area of display (W x H)	131.5 x 98.6 mm
Fuse	Internal DC fuse, 3.15 AT, 5 x 20 mm
Power supply	+24 VDC (20 – 30 VDC). Power supply connector. CE: The power supply must conform with the requirements according to IEC 60950 and IEC 61558-2-4. UL and cUL: The power supply must conform with the requirements for class II power supplies.
Ambient temperature	Vertical installation: 0° to +50°C Horizontal installation: 0° to +40°C
Storage temperature	-20° to +70°C
Relative humidity	5 - 85 % non-condensed

CE approvals	Noise tested according to EN61000-6-4 emission and EN61000-6-2 immunity.
UL, cUL approvals (when product or packing is marked)	UL 1604 Class I, Div 2 / UL 508 / UL 50 4x indoor use only
DNV	Yes
NEMA	4 x indoor use only

4. Outline drawing

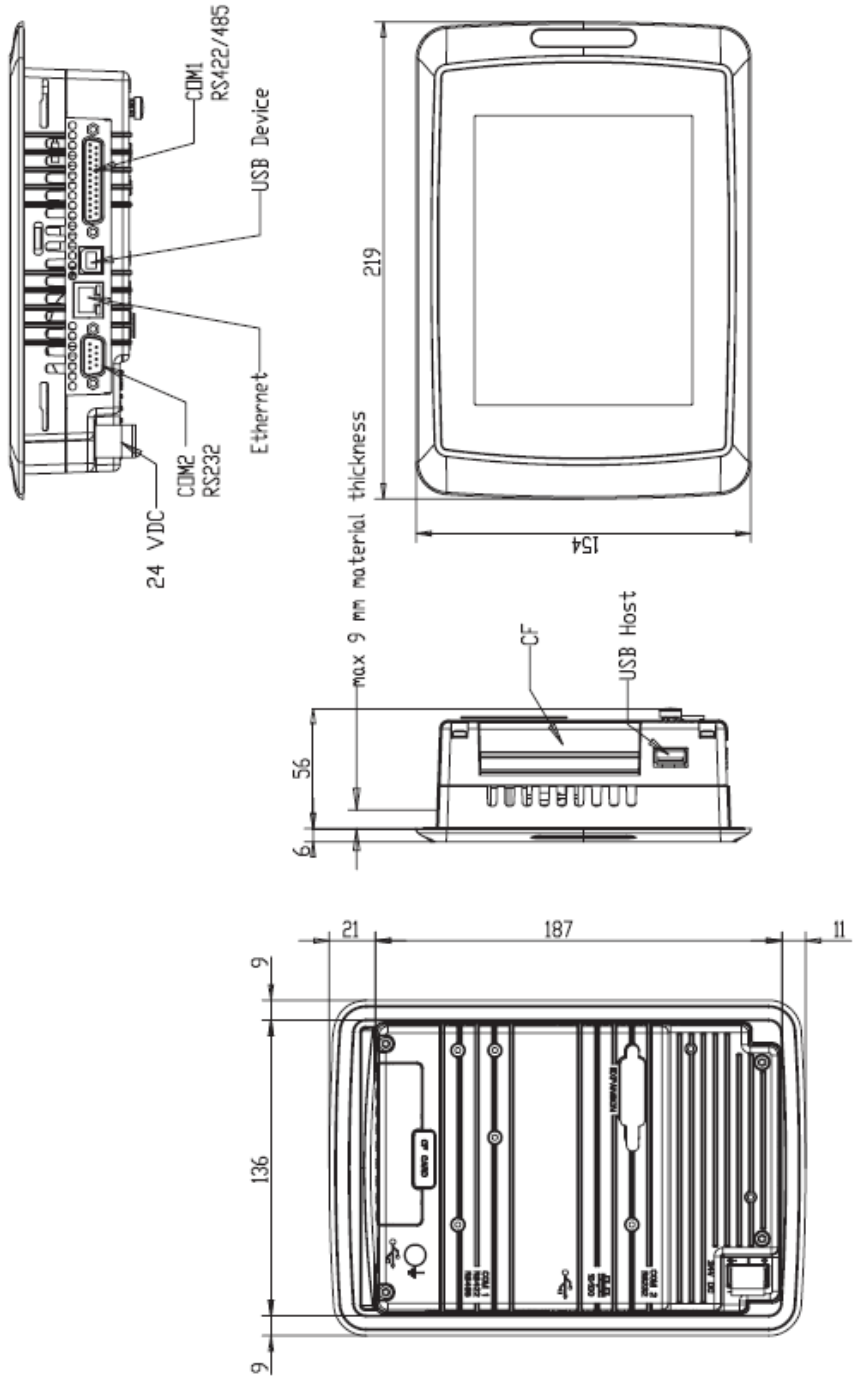


Figure 4-1: Outline drawing

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