

VeeConnect

DIGITAL SWITCHING

A 12 CHANNEL DC SWITCHING MODULE WITH A REMOTE TOUCH SCREEN CONSOLE FOR STREAMLINED CONTROL.

The VeeConnect has a robust solid state design based on an aerospace pedigree. It has an efficient builder configuration, giving reduced system and installation costs.

Each of the modules 12 channels are configurable including options such as fuse rating, analogue or digital inputs, switch type (slider, on/off, momentary). With a library of predefined icons and switch descriptions available. Physical switches and additional analogue sensors supported via a GPIO connector.

The module is both programmable and operable via our 5" or 7" slimline sunlight readable PCAP touch screen displays. Delivering modern tablet like aesthetics in an IP67 rated housing.

The optional H1 interface facilitates switching using on onboard multi function display (MFD) lowering overall system costs when dedicated switching displays are not required.

VeeConnect Features:

- > All 12 channels capable of 20 Amps each
- > 2 pairs capable of motor reversing
- > 3 channels supporting bilge pumps with automatic float switches
- > Control over NMEA 2000® network

Display Features:

- > IP67 all around protection
- > Touch and swipe functions
- > Easy to configure interface (PC not required)

H1 Features:

- > Connects to approved MFD's via Ethernet
- > NMEA 2000® certified
- > Wake Input





Kit contents

71870E Electronic Circuit Breaker Unit (ECBU) KIT		
Part #	Kit Contents	Quantity
71569	Electronic Circuit Breaker Unit (ECBU)	1
71687	Ampseal 35 pin connector with ign. jumper	1
71868K	ECBU Mounting Hardware kit	1
71869K	ECBU Terminal Connection hardware Kit	1
71675K	Deutsch DTP 4 pin Connector Kit	3
71866	VeeConnect Quick Start Guide	1
71865	ECBU Mounting Template	1

Optional Installation Components

Part #	Description
71685	Ampseal 770520-1 connector socket
71686	Ampseal 770678-1 Sealing Plug
71796	Device-Net Cable Assy, M/F, 1M
71797	Device-Net Cable Assy, M/F, 2M
71798	Device-Net Terminator Male
71799	Device-Net Terminator Female
71800	Buttsplice Connector 16-14 AWG
71801	Wire with Ampseal Contact 12in
71802	Harness DTP 4 Way w/Wires 12in
69356	NMEA / DeviceNet Tee connector

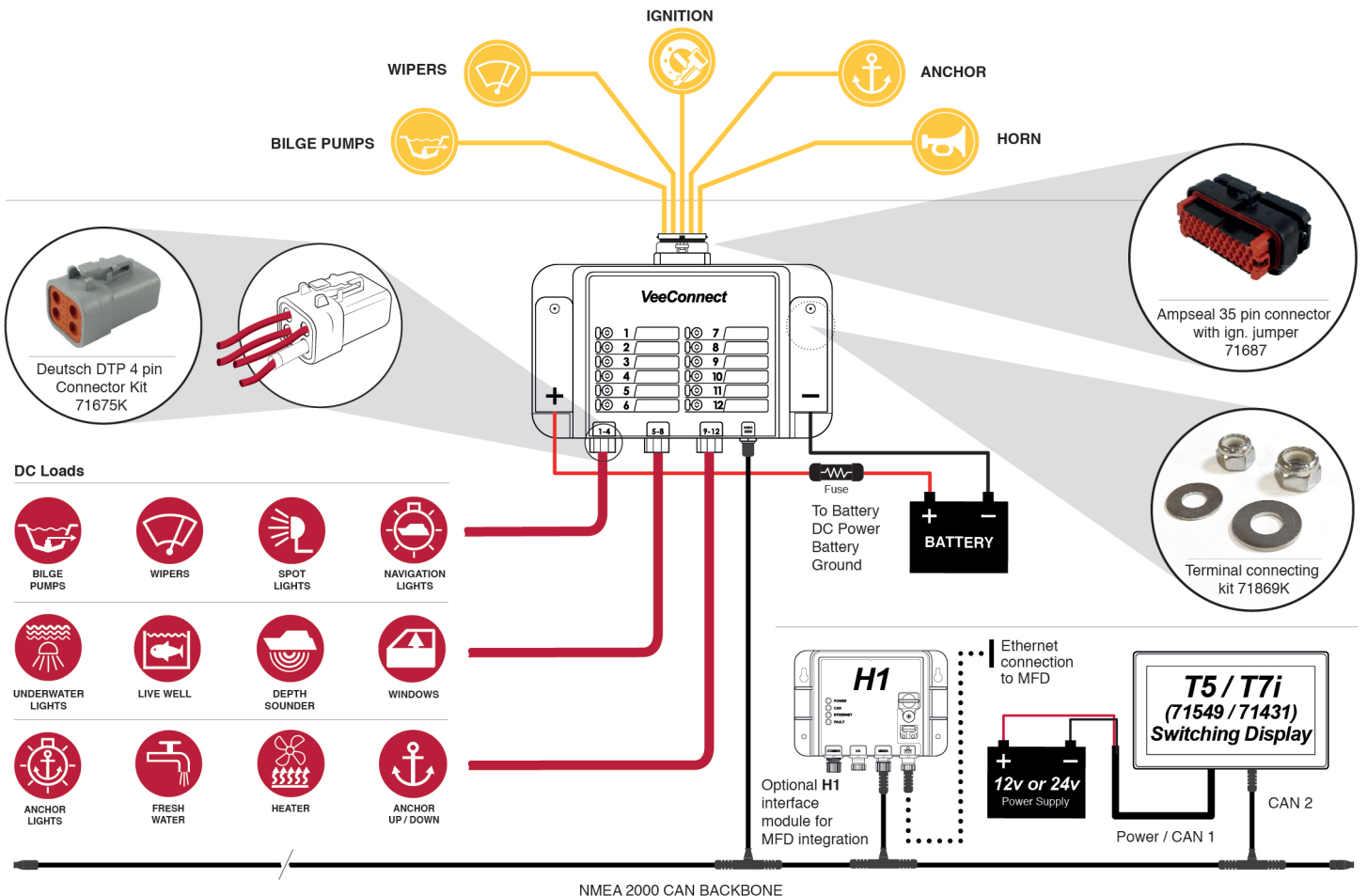
71871E 5" Switch Display KIT		
Part #	Kit Contents	Quantity
71549	T5 Switching Display	1
71805	Power Harness	1
71866	VeeConnect Quick Start Guide	1
71833	T5/T7 Switching Display Mounting Template	1

71872E 7" Switch Display KIT		
Part #	Kit Contents	Quantity
71431	T7i Switching Display	1
71805	Power Harness	1
71866	VeeConnect Quick Start Guide	1
71833	T5/T7 Switching Display Mounting Template	1

71818 H1 Interface Module

VeeConnect – system example

Ignition / Manual switches and sensors

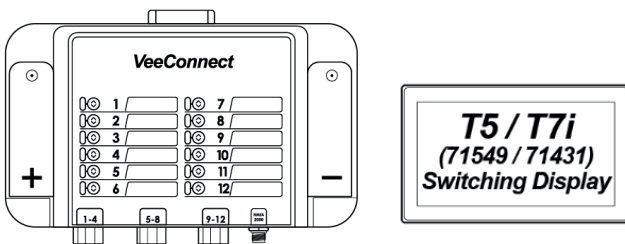


Example Screens

Standard VeeConnect Switching Screens



Installation Scenarios



Standard VeeConnect With Display

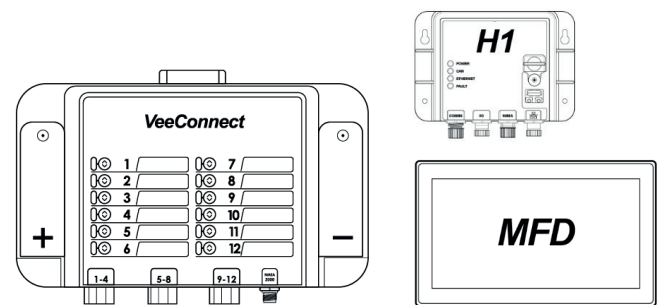
- > T5/T7i used for initial programming and operation
- > Multiple displays and VeeConnect units can be used as required in a single system
- > GPIO (top connector) typically used for connecting manual switches or analogue sensors, for example:



Horn – if required a physical button can be connected via GPIO & system configured accordingly. As the physical horn button is pressed the display would show the horn press activity.



Bilge Pump (with sensor activator) – connected via GPIO & system configured to activate on the sensor trigger. Pump activation would be shown on the switching display.



VeeConnect With H1 to MFD

- > H1 enables the VeeConnect switches to be displayed on approved MFDs.
- > Full switch functionality mirrored to MFD
- > T5/T7i required for initial system programming only (can be used to provide additional switching stations if required)

Specifications

VeeConnect Module

Electrical		Mechanical	
Power Requirements	10 V to 32V DC	Case material	PPS
Connection	1x NMEA 2000 M12 3x 4 PIN Deutsch 1x 35 PIN GPIO	Case colour	Black
		Dimensions	315mm (W) x 53mm (H) x 210mm (L)
Input / Output		Environmental	
Analogue Input	12 x Analogue input support 0 - 28V input (< 100 Hz)	Operating temperature	-30°C to +70°C
Digital Input	12 x Digital inputs (open collector)	Storage Temperature	-40°C to +85°C
Outputs	12 x Circuit breaker outputs (20 Amp max) - 3 capable of reverse current blocking - all channels capable of PWM - 2 pairs polarity reversible	Degree of Protection	IP67

H1 Module

Electrical		Mechanical	
Power Requirements	10 V to 32V DC	Case material	ABS/PC
Connection	4 x M12 Connectors A - Primary CANbus / Power M12 Male 12 pin A coded B - Sensory I/O / Relay Power M12 Female 12 pin A coded C - Isolated CAN Bus / Power M12 Male 5 pin A coded D - Ethernet M12 Female 4 pin D coded	Case colour	Black
		Dimensions	113mm (L) x 164mm (W) x 39mm (H)
		Input / Output	
		3 Analogue Inputs	Software selectable as 0 - 2.5 VDC, 0 - 10 VDC or 0 - 1000 OHMS.
		4 Switch Inputs	Activate on contact to ground (active low) and unit wake up on activation.
		4 Relay Outputs	High side output for 0.50A continuous load TBC
		1 Wake Output	High side output to wake up ECU (active high) sourced from system supply with max load 0.25A
Environmental			
Operating temperature	-40°C to +70°C		
Storage Temperature	-40°C to +80°C		
Degree of Protection	IP67		



Specifications

T5 5" Touch Display

Hardware

CPU	Freescale iMX 6 800Mhz and additional Graphics Processor
FLASH Memory	512MB SLC NAND
SDRAM	256MB DDR3

Electrical

Display	PCAP LCD 5.0"
Resolution	800 (H) x 480 (V) WVGA
Active Area	108.0mm (H) x 64.8mm (V)
Viewing Angle	70 degrees left/right/down/up
Contrast Ratio	700:1
Brightness	1000 NIT (cd/m ²) Full sunlight readable
Power Requirements	8V to 32V DC
Sounder	Internal Buzzer
Connection	5 x M12 Connectors

Environmental

Operating temperature	-20°C to +70°C
Storage Temperature	-40°C to +80°C
Degree of Protection	IP67

Mechanical

Case material	ABS
Case colour	Anthracite Grey
Dimensions	133mm (W) x 94mm (H) x 11mm forward and 48mm rear (D)

T7i 7" Touch Display

Hardware

CPU	Freescale iMX 6 800Mhz and additional Graphics Processor
FLASH Memory	512MB SLC NAND
SDRAM	256MB DDR3

Electrical

Display	PCAP LCD 7.0"
Resolution	800 (H) x 480 (V) WVGA
Active Area	152.4mm (H) x 91.44mm (V)
Viewing Angle	70 degrees left/right/down/up
Contrast Ratio	600:1
Brightness	800 NIT (cd/m ²) Full sunlight readable
Power Requirements	8V to 32V DC
Sounder	Internal Buzzer
Connection	5 x M12 Connectors

Environmental

Operating temperature	-30°C to +60°C
Storage Temperature	-30°C to +70°C
Degree of Protection	IP67

Mechanical

Case material	ABS
Case colour	Anthracite Grey
Dimensions	181.1mm (W) x 124mm (H) x 11mm forward and 56.4mm rear (D)

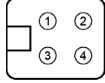


Specifications

VeeConnect Module Connectors

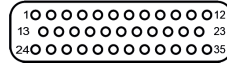
BREAKER OUTPUTS Mating Connector Part No. TE CONNECTIVITY PN DTP06-45-E004

Pinout (Front View)



GPIO INTERFACE Mating Connector Part No. TE CONNECTIVITY PN 776164-1

Pinout (Front View)



NMEA 2000 Mating Connector Part No. NMEA 2000 COMPLIANT

Pinout (Front View)



J2 - CHANNELS 1-4	
PIN	FUNCTION
1	BREAKER CHANNEL 1
2	BREAKER CHANNEL 2
3	BREAKER CHANNEL 3
4	BREAKER CHANNEL 4
J3 - CHANNELS 5-8	
5	BREAKER CHANNEL 5
6	BREAKER CHANNEL 6
7	BREAKER CHANNEL 7
8	BREAKER CHANNEL 8
J4 - CHANNELS 9-12	
9	BREAKER CHANNEL 9
10	BREAKER CHANNEL 10
11	BREAKER CHANNEL 11
12	BREAKER CHANNEL 12

PIN	FUNCTION
1	GP DISCRETE INPUT #1
2	GP DISCRETE INPUT #4
3	POWER GROUND
4	GP DISCRETE INPUT #8
5	GP DISCRETE INPUT #11
6	28V OUTPUT FOR IGNITION SWITCH
7	NOT CONNECTED
8	GP ANALOG INPUT #2
9	NOT CONNECTED
10	GP ANALOG INPUT #5
11	GP ANALOG INPUT #8
12	GP ANALOG INPUT #11
13	GP DISCRETE INPUT #2
14	GP DISCRETE INPUT #5
15	GP DISCRETE INPUT #7
16	GP DISCRETE INPUT #10
17	NOT CONNECTED
18	NOT CONNECTED
19	GP ANALOG INPUT #1
20	SIGNAL GROUND
21	GP ANALOG INPUT #4
22	GP ANALOG INPUT #7
23	GP ANALOG INPUT #10
24	GP DISCRETE INPUT #3
25	GP DISCRETE INPUT #6
26	POWER GROUND
27	GP DISCRETE INPUT #9
28	GP DISCRETE INPUT #12
29	IGNITION SWITCH INPUT
30	SIGNAL GROUND
31	GP ANALOG INPUT #3
32	GP ANALOG INPUT #6
33	SIGNAL GROUND
34	GP ANALOG INPUT #9
35	GP ANALOG INPUT #12

Connector J6 - NMEA2000® (ECBU Module) Male Connector Connector (CAN2) - NMEA2000® (VeeConnect display) Male Connector

PIN	FUNCTION
1	CABLE SHIELD (SHIELD)
2	POWER (NET-S)
3	GROUND (NET-C)
4	CAN HIGH (NET-H)

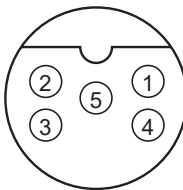
Connector (CAN1) - Power Cable (VeeConnect display) Male Connector

PIN	FUNCTION
1	NOT USED
2	POWER (+)
3	GROUND (-)
4	NOT USED
5	NOT USED

H1 Module Connectors

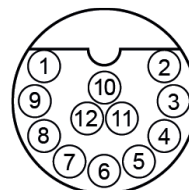
Primary CAN Bus and Power

1	Not Used
2	+ DC Supply
3	Ground
4	CAN1 - High
5	CAN1- Low



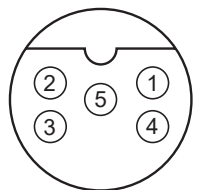
Sensor I/O and Relay Power

1	Analog Ground
2	Analog Input 1*
3	Analog Input 2*
4	Analog Input 3*
5	Relay Output 1 (High Side)*
6	Relay Output 2 (High Side)*
7	Relay Output 3 (High Side)*
8	Relay Output 4 (High Side)*
9	Positive DC Relay Supply*
10	Wake Output (Active High)*
11	Digital Input 1 (Active Low)*
12	Digital Input 2 (Active Low)*



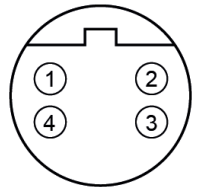
Isolated NMEA2000/CAN2 Bus and Power

1	No Connection
2	CAN2 - V+
3	CAN2 - V-
4	CAN2 - High
5	CAN2 - Low



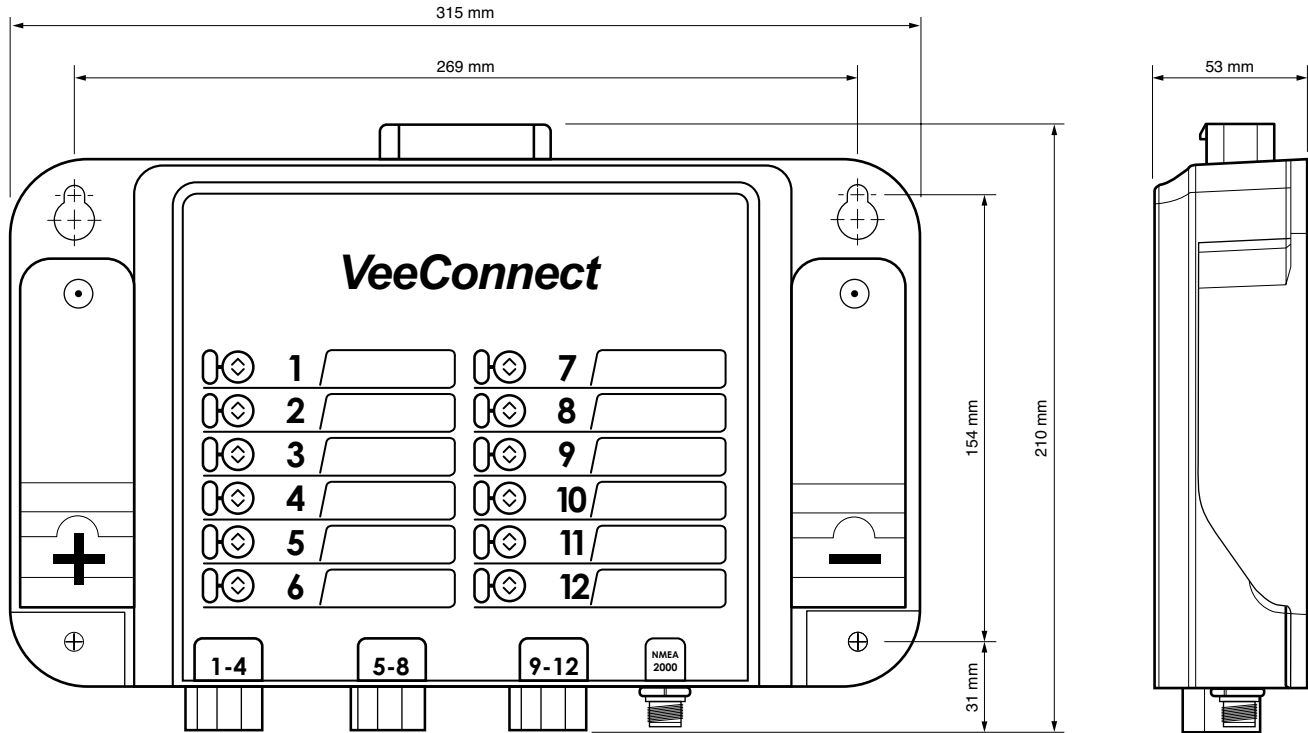
Ethernet

1	TD+
2	RD+
3	TD-
4	RD-

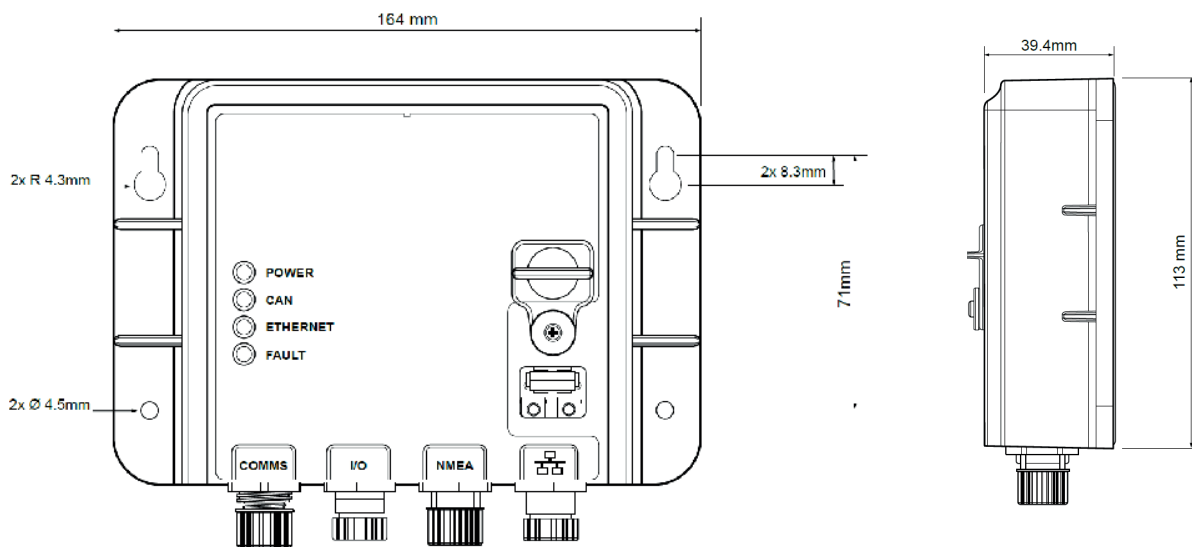


*Coming soon

VEECONNECT SWITCHING MODULE



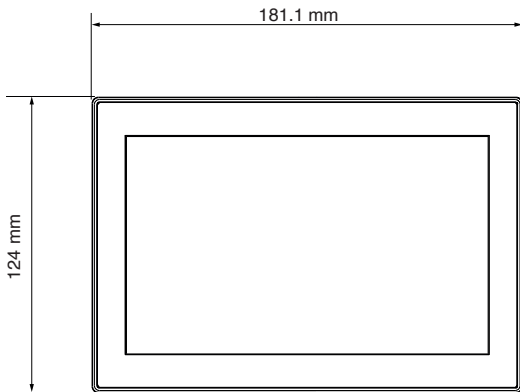
H1 MODULE



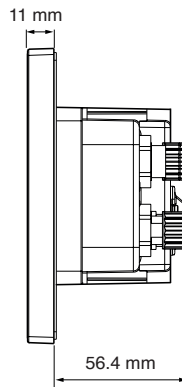
Dimensions

T71 7" TOUCH DISPLAY

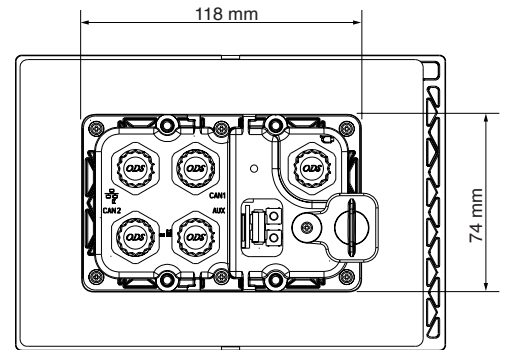
FRONT VIEW



SIDE VIEW

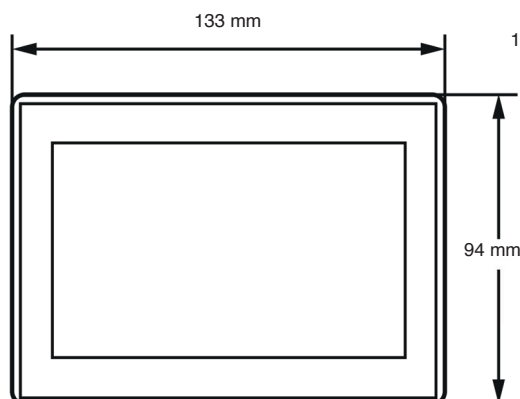


REAR VIEW

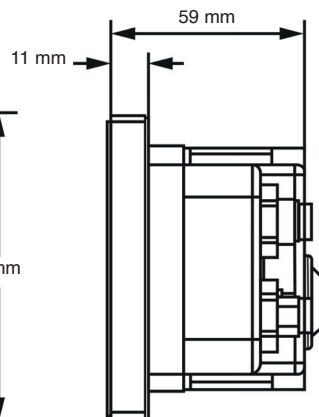


T5 5" TOUCH DISPLAY

FRONT VIEW



SIDE VIEW



REAR VIEW

