

AcquaLink NavBox

Description

The AcquaLink® NavBox is the core of the AcquaLink® system. It acts as a CPU and signal interface. The NavBox provides a wide range of digital and analogue input possibilities. These include J1939 CAN, NMEA 2000®, VDO Wind sensor and Sumlog® paddle wheel sensor inputs. For all analogue input requirements, the NavBox provides multiple, 0 – 5 V, 4 – 20 mA and 0 to 400 Ω connections via the supplied auxiliary harness. Data output to three separate VDO Bus lines allows flexible and easy routing to multiple control stands or table charts.

Use the daisy chain connectors on AcquaLink® gauges and TFTs to expand the system.



A2C59501979

Features

- NMEA 2000® certified
- Moulded front cover with LED signal status indication
- Aluminium base plate
- Front & rear side protection rating IPX4
- 3x VDO bus lines with 3x M12 Connectors
- 1x J1939 CAN bus with 1x M12 Connectors
- 1x NMEA 2000® bus with 1x M12 Connector
- 1x VDO Digital Wind Sensor Input (M12 connector)
- 2x VDO Sumlog® Inputs (2x M12 connectors)
- AMP Super Seal power input
- 26 pin AUX input (analogue signals, NMEA 0183 receive)

Technical Data	
Material	Housing: Al Mg9 F/ e-coated (epoxi based) black RAL9005 Top Cover: >PBT-GB20<, Black / Schwarz
Dimensions	WxH: 241mm X 132mm Depth: 65mm
In-/Outputs	See "In-/Output Table" below
Operating Voltage	8-28 VDC
Current Consumption	160 mA
Operating Temperature	-15°C to +55°C
Storage Temperature	-30°C to +80°C
Nominal Position	NL 0 to NL 85; According to DIN 16257
Mounting/Fixing	Top
Protection Class	IEC 60945 protected equipment (IPX4)
Flammability	UL-94
EMC	IEC 60945:2002 / ISO7637-2
Reverse Polarity Protection	Yes, 1 minute
Short Circuit Protection	Yes, 1 minute
Approval	CE, NMEA2000®
Data Input	VDO Bus, Analogue Input, J1939
LEN (NMEA2000)	1

Connectors

3x VDO Bus:

Pin	Signal
1	Ignition / Kl. 15
2	GND / Kl. 31
3	Battery+ / Kl. 30
4	CAN H
5	CAN L
6	GND / Kl. 31
7	Ignition / Kl. 15
8	GND / Kl. 31



Figure 1 - VDO CanBus cable (just for example)

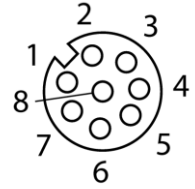
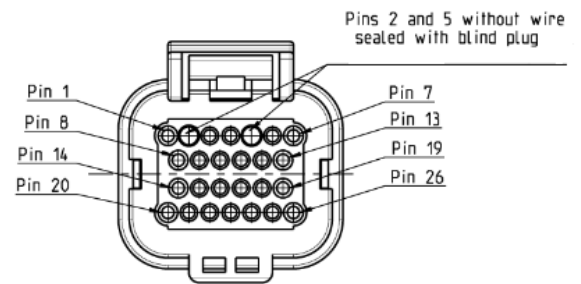


Figure 2 - VDO CanBus female plug.

26-Pol Connector

Pin	Signal	Color
1	Low Side Switch 0.5A (Buzzer)	Brown
2	Not Used	---
3	Not Used	Grey-Pink
4	Not Used	White-Pink
5	Not Used	---
6	0-5V GND	Black
7	High Side 0.7A (Aux)	Red
8	Engine Freq. GND	Brown-Blue
9	Engine Freq. (universal WWG)	White-Blue
10	Engine Cool Water Temp	Blue
11	NMEA0183 B(Talker)	White
12	NMEA0183 B(Talker)	White-Grey
13	Engine Oil Temp	Violet
14	NMEA0183 B (RX)	Brown-Red
15	Engine Oil Pressure	Green
16	Rudder Angle	Yellow
17	Fuel 1Signal	White-Green
18	Fuel 1 GND	Brown-Green
19	Transmission Oil Pressure	Pink
20	NMEA0183 A (RX)	White-Red
21	4 ÷ 20 mA (Fresh Water)	White-Yellow
22	4 ÷ 20 mA (Black Water)	Grey
23	Amperometer (-)	Yellow-Brown
24	Amperometer (+)	Red-Blue
25	Generic GND	Pink-.Brown
26	0-5V Signal	Grey-Brown



Wind Sensor Input

Pin	Signal
1	Sensor Power
2	Sensor Power
3	COS
4	GND
5	SIN
6	Wind Speed

NMEA 2000

Pin	Signal
1	Shield
2	NET-S (V+)
3	NET-C (V-)
4	NET-H (CAN H)
5	NET-L (CAN L)

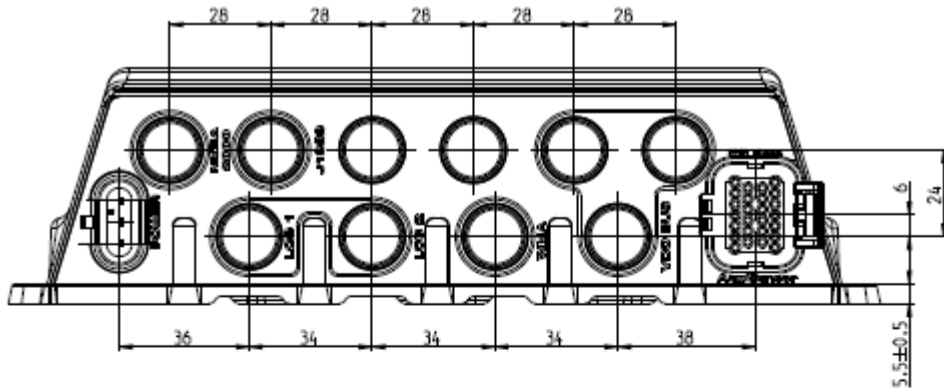
J1939

Pin	Signal
1	Shield
2	Ignition
3	GND
4	CAN H
5	CAN L

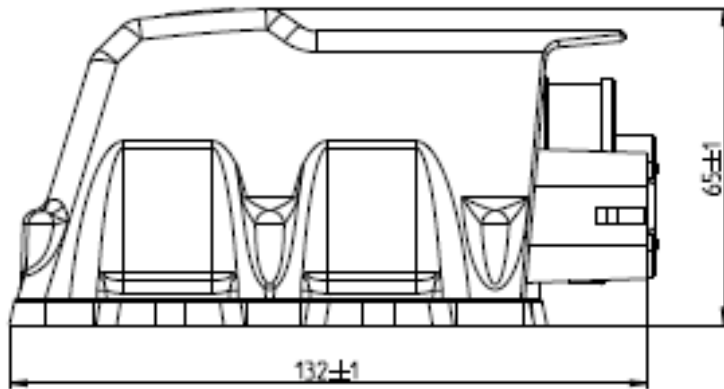
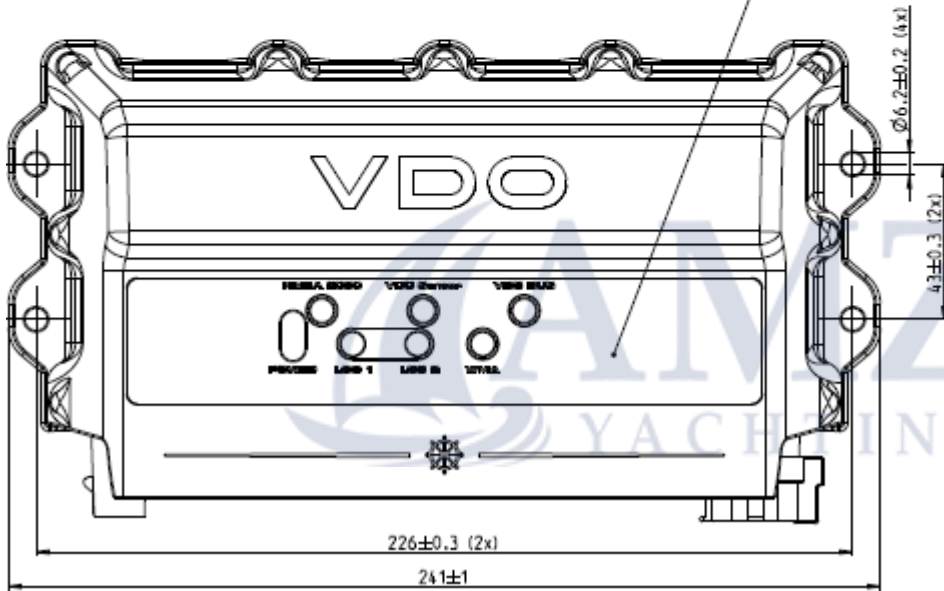
Power Supply

Pin	Signal
1	KL30 (Battery)
2	KL31 (GND)
3	KL15 (Ignition)

Mechanical Design



Dial illuminated - green / Zifferblatt beleuchtet - grün



Accessories

Part Number	Item specifics
A2C96243700	NMEA2000 Cable 0.5m
A2C96243800	NMEA2000 Cable 2m
A2C96244000	NMEA2000 Cable 6m
A2C96244200	NMEA2000 Cable 10m
A2C59501950	NMEA2000 Cable 30m
A2C96244600	VDO Bus cable 0.3 m
A2C38805700	VDO Bus cable 2.0 m
A2C96245000	VDO Bus cable 5m
A2C96245100	VDO Bus cable 10m
A2C96244900	VDO Bus to NMEA 2000 Adapter
A2C38805500	VDO Bus Gender Changer
A2C99793900	VDO Bus Termination
A2C39488200	Connection cable (Sumlog® to NavBox)
A2C99794200	Termination Resistor Inline J1939
A2C9875480001	NavBox Power Cable
A2C9875610001	26 Pin Analogue input cable

