

PRODUCT BASIC INFORMATION

ENGINEBOX

Sensors for Today and Tomorrow



ENGINEBOX

Available for single and dual Engine

The EngineBox expands the possibilities of the NavBox for multi-engine applications or can be used as stand-alone when navigation information is not required. The EngineBox has a NMEA2000® and a J1939 CAN port. The EngineBox can also be used on older, completely analogue engines, thanks to the analogue input ports provided and designed for: RPM data, 0-400 Ohm sensors and 4-20 mA sensors.

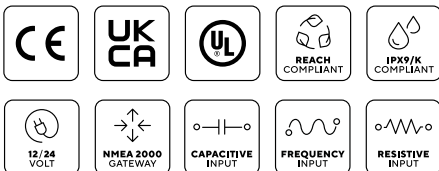
EngineBox is available in 2 versions: Single Engine and Dual Engine. The Dual Engine version is designed with double frequency and resistive inputs. This allows customers simplified installation wiring, reduced commissioning time and the required installation space.

The EngineBox has to be set up using an intuitive PC Configuration Tool making it easy for programming the inputs (delivered free of charge).

The EngineBox is designed to be installed also in hazardous areas (for additional information please check the technical characteristics described in the installation manual).

KEY FEATURES

- J1939 to NMEA2000® gateway
- Analogue to NMEA2000® gateway
- 1 x M12 5 pins NMEA2000® connector
- 1 x Input 0-4KHz for RPM (2 Inputs with Dual Engine Model)
- 4 x Inputs 0-400 Ohm (up to 8 Inputs with Dual Engine Model)
- 2 x Inputs 4-20 mA
- 1 x Input 0-5Volt (2 Inputs with Dual Engine Model)
- 2 models for single engine and dual engine configurations.
- Compact design



TECHNICAL DATA

Housing	Material: Pa6-GF30
Dimensions	WxH: 136 x 130.1 Installation Depth: 41.4 mm
Start-Up Time	Cold Start: < 1 second Warm Start: < 1 second
Operating Voltage	9 -32 VDC
Current Consumption	150mA @ 12V
Operating Temperature	-20°C to 70°C
Storage Temperature	-40°C to 85°C
Protection Class	IEC 60495 exposed (IP69k-f)
Flammability	UL-94 V0
EMC	IEC 60945:2002 / ISO7637-2
Reverse Polarity Protection	Yes
Short Circuit Protection	Yes
Approval	CE, ISO 8846:1990, NMEA2000®
Load Factor	3
Data Input	NMEA2000, J1939, Frequency 0-4KHz, resistive 0-400Ohm. Capacitive 4-20mA, 0-5 Volt
Connector	Delphi Packard Micro-Pack MW100 series, 32Pins
Variants	Single Engine & Dual Engine

CONNECTOR: 1x Delphi Packard Micro-Pack MW100 series, 32Pins.

ART. NR. A2C1824820001

Single Engine

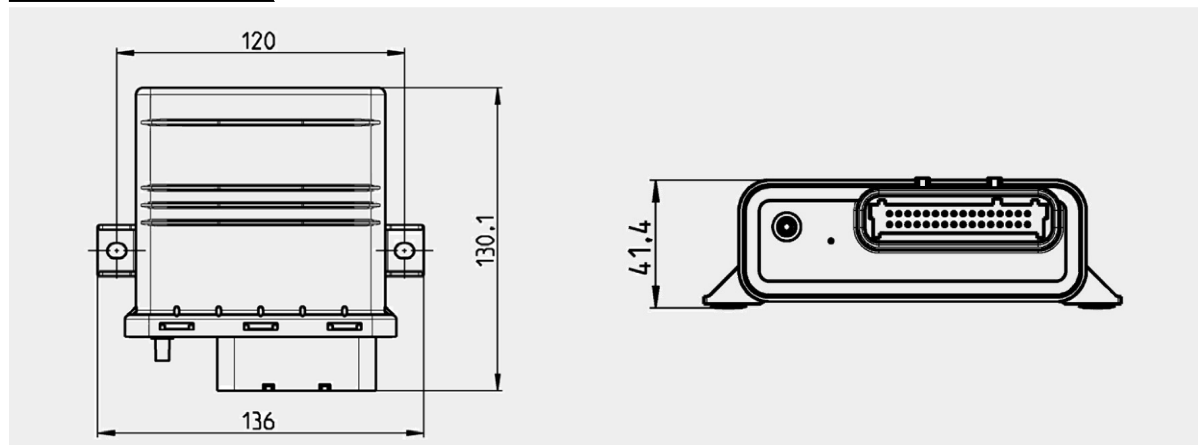
PIN	SIGNAL
01	Power Supply GND
02	Power Supply GND
03	n.c.
04	Engine Frequency GND
04	NMEA2000: CAN_L
06	NMEA2000: CAN_H
07	NMEA2000: Shield
08	0..400Ohm (1)
09	0..400Ohm (3)
10	0..400Ohm (5)
11	0..400Ohm (7)
12	0..5V (1)
13	n.c.
14	4..20mA
15	n.c.
16	J1939:CAN2_L
17	Power Supply 12/24VDC
18	Ignition
19	n.c.
20	Engine Frequency 1
21	NMEA2000: GND
22	NMEA2000: NET+
23	n.c.
24	n.c.
25	n.c.
26	n.c.
27	0..5V (2)
28	n.c.
29	n.c.
30	4..20mA
31	n.c.
32	J1939:CAN2_L

ART. NR. A2C1767000001

Dual Engine

PIN	SIGNAL	WIRE COLOR
01	Power Supply GND	Black
02	Power Supply GND	Black
03	Engine Frequency 2	White / Black
04	Engine Frequency GND	Green / White
04	NMEA2000: CAN_L	Blue
06	NMEA2000: CAN_H	White
07	NMEA2000: Shield	-
08	0..400Ohm (1)	Blue
09	0..400Ohm (3)	Pink
10	0..400Ohm (5)	Orange
11	0..400Ohm (7)	Violet
12	0..5V (1)	Gray
13	0..5V (3)	Turquoise
14	4..20mA	Brown / White
15	J1939:CAN3_L	Fuchsia / White
16	J1939:CAN2_L	Light Blue / White
17	Power Supply 12/24VDC	Red
18	Ignition	Yellow
19	Engine Frequency 2 GND	White
20	Engine Frequency 1	Green
21	NMEA2000: GND	Black
22	NMEA2000: NET+	Red
23	0..400Ohm (2)	Blue / White
24	0..400Ohm (4)	Pink / White
25	0..400Ohm (6)	Orange / White
26	0..400Ohm (8)	Violet / White
27	0..5V (2)	Gray / White
28	0..5V (4)	Turquoise / White
29	Cable Harness Detn.	Red / White
30	4..20mA	Brown
31	J1939:CAN3_H	Fuchsia
32	J1939:CAN2_H	Light Blue

DIMENSIONS



SUPPORTED MESSAGES

SAE J1939 PGN/SPN	DESCRIPTION	NMEA 2000® PGN
PGN61443/92	Engine Percent Load	127488
PGN61444/190	Engine Speed	127488
PGN61444/513	Percentage Torque	127489
PGN65270/102	Engine Turbo Charger Boost Pressure	127489
PGN65262/175	Engine Oil Temperature	127489
PGN65292/110	Engine Coolant Temperature	127489
PGN65271/167	Alternator Potential (Voltage)	127489
PGN65266/183	Engine Fuel Rate	127489
PGN65253/247	Engine Total Hours Operation	127489
PGN65263/109	Engine Coolant Pressure	127489
PGN65263/94	Engine Fuel Delivery Pressure	127489
PGN65263/100	Engine Oil Pressure	127489
PGN65214/189	Engine rate Speed	127498
PGN65260/237	Vehicle Identification Number	127498
PGN65242/234	Software Indication	127498
PGN61445/523	Transmission Current Gear	127493
PGN65272/127	Transmission Oil Pressure	127493
PGN65272/177	Transmission Oil Temperature	127493
PGN65276/96	Fuel Level	127505
PGN65270/173	Exhaust Gas Temperature	130316
PGN65030/2440	Generator Average Line-Line AC RMS Volt	65030
PGN65030/2444	Generator Average Line-Neutral AC RMS Volt	65030
PGN65030/2436	Generator Average Frequency	65030
PGN65030/2448	Generator Average Current	65030

NMEA 2000 SUPPORTED PGNS

Rudder	127245
Engine Speed (rpm)	127448
Engine Parameters Dynamic	127489
Transmission Parameter Dynamic	127493
Fluid Level	127505
Battery Status	127508
Temperature extended Range	130316
Small Craft Status	130576
Generator Average Basic AC Quantities	065030
TX/RX PGN List	126464

ACCESSORIES

NMEA 2000® Cable 0.5m	A2C96243700
NMEA 2000® Cable 2m	A2C96243800
NMEA 2000® Cable 6m	A2C96244000
NMEA 2000® T-Splitter	A2C39312700
NMEA 2000® inline terminator	A2C39312500

OUTDOOR INSTRUMENTATION ENGINEERED IN SWITZERLAND



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