SCHEIBER

French innovation since 1965

CAN / NMEA INTERFACE

Ref: 36.15949.00 [000008]

User Manual

SCHEIBER

2 Bellevue, 85120 Saint-Pierre du Chemin • France

Tel: +33 (0)2 51 51 73 21 • clients@scheiber.fr • sav@scheiber.fr • www.scheiber.fr

Thanks

We thank you for your purchase and hope that this product brings you complete satisfaction.

Before using the product, it is advisable to read the following instructions carefully.
This manual describes how to use and install the product in accordance with its intended use.

Safety Warnings

CAUTION: Do not disassemble the device
Contact with internal components of the product may result in injury.
In case of malfunction, only a qualified technician is authorized to repair the device

CAUTION: In case of impact
If the product is dropped or subjected to severe shock, immediately contact a qualified person to ensure that the device is working properly.

CAUTION: Unpacking the equipment
After unpacking the product, ensure that it is complete and in good condition; if in doubt, contact someone with the required professional qualifications immediately.

CAUTION: Unpacking the equipment
Do not leave any part of the packaging within the reach of children or unaccountable persons.

Associated accessories

Designation	Reference
Scheiber CAN 6-way / M12 CAN adapter cable 50.FIL14014A.00	
CAN cable (from 0.2m to 15m)	0D.CRD4xx
Micro SD card	0R.INF330

Description

The CAN/NMEA interface is intended for connecting the SCHEIBER CAN network with a NMEA 2000 CAN network.

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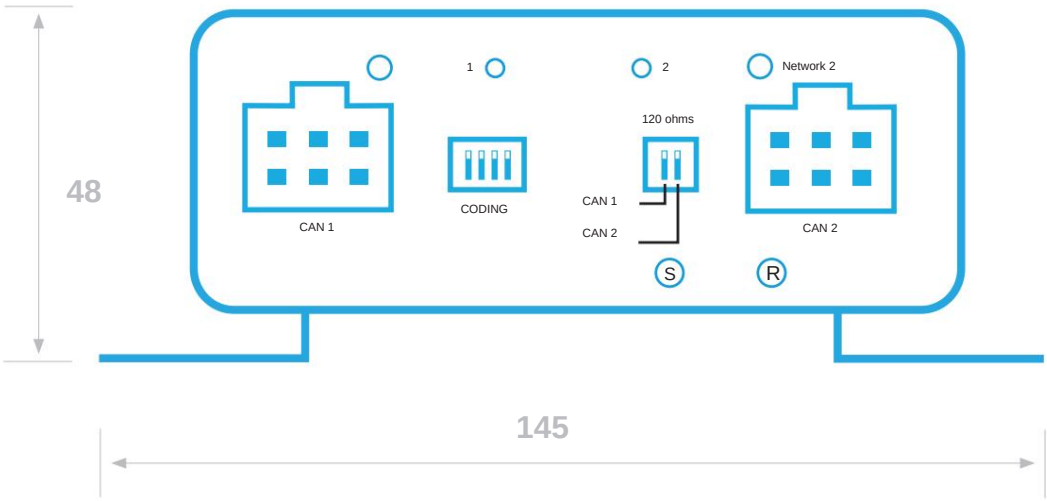
Technical Characteristics

REFERENCE	36.15949.00 XXXXXX
FOOD	12V DC via CAN BUS cord

Description of the markings used

V	Volt
HAS	Ampere
⎓ or DC	Direct current



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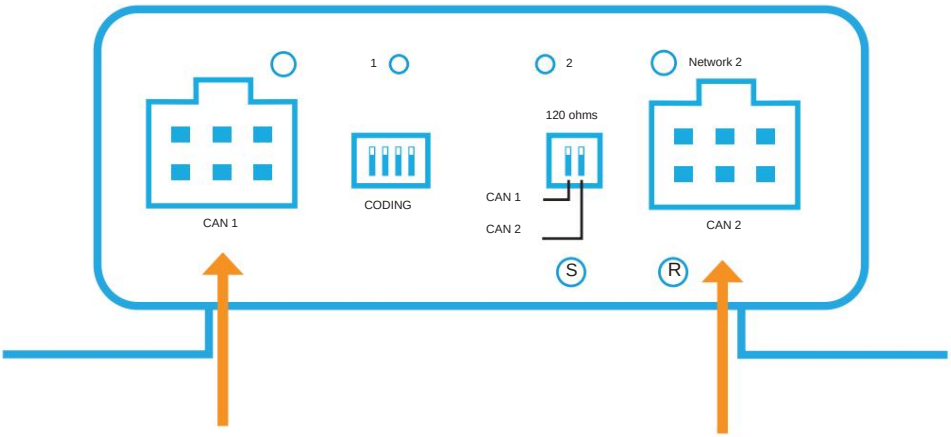
Facility

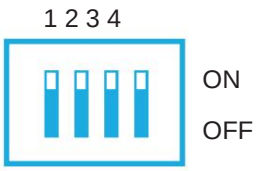
• This device must be placed in a ventilated area protecting it from any risk of water projection. • Do not install on heat-sensitive surfaces such as carpet, PVC flooring, etc.
• It is essential to install the product away from heat and humidity

CAUTION: Connect, disconnect under voltage
Do not connect or disconnect while live.

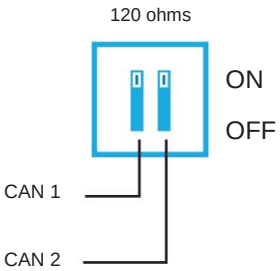
Wiring



CONNECTOR	CAN 1	CAN 2
Description	NMEA CAN BUS	CAN BUS Scheiber



Switch for product coding in the Scheiber network



Switch for 120 ÿ termination

The CAN 1 (NMEA) 120 ÿ termination switch must not be used on a NMEA 2000 network; an external plug must be used to comply with the NMEA 2000 standard.

INDEX	HEX VALUE	TYPE	INFORMATION	FRAME DETAIL
0	0x000	ALIVE_FRAME	Life story	Details of the life story
1232	0x4D0	Engine parameters, Dynamic (PGN 127489)	NMEA2000 gateway	See NMEA standards for data description
1233	0x4D1	Engine param., Rapid update (PGN 127488)	NMEA2000 gateway	See NMEA standards for data description
1234	0x4D2	Vessel heading (PGN 127250)	NMEA2000 gateway	See NMEA standards for data description
1235	0x4D3	Position, rapid update (PGN 129025)	NMEA2000 gateway	See NMEA standards for data description
1236	0x4D4	Water depth (PGN 128267)	NMEA2000 gateway	See NMEA standards for data description
1237	0x4D5	Speed, water referenced (PGN 128259)	NMEA2000 gateway	See NMEA standards for data description
1238	0x4D6	COG & SOG, Rapid Update (PGN 129026)	NMEA2000 gateway	See NMEA standards for data description
1239	0x4D7	Wind data (PGN 130306)	NMEA2000 gateway	See NMEA standards for data description
1240	0x4D8	Fluid level (PGN 127505)	NMEA2000 gateway	See NMEA standards for data description
1241	0x4D9	Owner (PGN 61184)	NMEA2000 gateway	See NMEA standards for data description
1242	0x4DA	Rudder (PGN 127245)	NMEA2000 gateway	See NMEA standards for data description
1243	0x4DB	transmission parameters, dy-namic (PGN 127493)	NMEA2000 gateway	See NMEA standards for data description
1244	0x4DC	trip fuel consumption, engine (PGN 127497)	NMEA2000 gateway	See NMEA standards for data description
1245	0x4DD	engine parameters, static (PGN 127498)	NMEA2000 gateway	See NMEA standards for data description
1246	0x4DE	binary status report (PGN 127501)	NMEA2000 gateway	See NMEA standards for data description
1247	0x4DF	switch bank control (PGN 127502)	NMEA2000 gateway	See NMEA standards for data description

INDEX HEX VALUE TYPE			INFORMATION	FRAME DETAIL
1248	0x4E0	AC input status (PGN 127503)	NMEA2000 gateway	See NMEA standards for data description
1249	0x4E1	AC output status (PGN 127504)	NMEA2000 gateway	See NMEA standards for data description
1250	0x4E2	DC detailed status (PGN 127506)	NMEA2000 gateway	See NMEA standards for data description
1251	0x4E3	charger status (PGN 127507)	NMEA2000 gateway	See NMEA standards for data description
1252	0x4E4	battery status (PGN 127508)	NMEA2000 gateway	See NMEA standards for data description
1253	0x4E5	Inverter status (PGN 127509)	NMEA2000 gateway	See NMEA standards for data description
1254	0x4E6	Load configuration status (PGN 127510)	NMEA2000 gateway	See NMEA standards for data description
1255	0x4E7	Inverter configuration status (PGN 127511)	NMEA2000 gateway	See NMEA standards for data description
1256	0x4E8	Battery configuration status (PGN 127513)	NMEA2000 gateway	See NMEA standards for data description
1257	0x4E9	Log distance (PGN 128275)	NMEA2000 gateway	See NMEA standards for data description
1258	0x4EA	GNSS Position Data (PGN 129029)	NMEA2000 gateway	See NMEA standards for data description
1259	0x4EB	Local Time Offset (PGN 129033)	NMEA2000 gateway	See NMEA standards for data description
1260	0x4EC	Navigation Data (PGN 129284)	NMEA2000 gateway	See NMEA standards for data description
1261	0x4ED	AIS Class A Static and Voyage Related Data (PGN 129794)	NMEA2000 gateway	See NMEA standards for data description
1262	0x4EE	Environmental Parameters (PGN 130310)	NMEA2000 gateway	See NMEA standards for data description
1263	0x4EF	Environmental Parameters (PGN 130311)	NMEA2000 gateway	See NMEA standards for data description
1264	0x4F0	Temperature (PGN 130312)	NMEA2000 gateway	See NMEA standards for data description

INDEX HEX	VALUE	TYPE	INFORMATION	FRAME DETAIL
1265	0x4F1	Humidity (PGN 130313)	NMEA2000 gateway See NMEA standards for data description	
1266	0x4F2	Salinity Station Data (PGN 130321)	NMEA2000 gateway See NMEA standards for data description	
1267	0x4F3	Current Station Data (PGN 130322)	NMEA2000 gateway See NMEA standards for data description	
1268	0x4F4	Meteorological Station Data (PGN 130323)	NMEA2000 gateway See NMEA standards for data description	
1269	0x4F5	Data Direction (PGN 130577) NMEA2000 gateway See NMEA standards for data description		
1270	0x4F6	Vessel Speed Components (PGN 130578)	NMEA2000 gateway See NMEA standards for data description	
1271	0x4F7	System time (PGN 126992)	NMEA2000 gateway See NMEA standards for data description	
1272	0x4F8	Proprietary (PGN 65293)	NMEA2000 gateway See NMEA standards for data description	
1273	0x4F9	Proprietary (PGN 61184)	NMEA2000 gateway See NMEA standards for data description	
...	...	0x500 => 0x600: free		
1537	0x601	Venus description	NMEA2000 Gateway - Victron	Data(1..4) = Refer to register 0x0100 from VE.Can registers
1538	0x602	Battery #1	NMEA2000 Gateway - Victron	Data(0..1) = Service battery voltage in 0.01V [+/- 327.64] V Data(2..3) = Current Service battery current in 0.1A [+/- 3276.4] A Data(4) = State of charge [0:252]% Data(5..6) = Remaining time [0:65532] minutes Data(7) = Dummy 0xff
1539	0x603	Battery #2	NMEA2000 Gateway - Victron	Data(0..1) = Battery temperature [0:655.32]°K Data(2..5) = Energy consumed in 0.1Ah Data(6..7) = Dummy 0xff
1540	0x604	MPPT	NMEA2000 Gateway - Victron	Data(0..1) = Load output current in 0.1A [+/- 3276.4] A Data(2..5) = User yield 0.01kW.h (register 0xEDDC of MPPT resetable by user) Data(6..7) = Dummy 0xff
1541	0x605	Multiplus: AC In 1 Charger	NMEA2000 Gateway - Victron	Data(0..1) = RMS Voltage AC Input 1 Line A to line B [0:64255] V (1V/bit) Data(2..3) = RMS Voltage AC Input 1 Line A to Neutral [0:64255] V (1V/bit) Data(4..5) = RMS Current AC Input 1 [0: 64255] A (1A/bit) Data(6..7) = Frequency [0: 501.99] Hz

INDEX HEX VALUE TYPE			INFORMATION	FRAME DETAIL
1542	0x606	Multiplus: AC In 2 Charger	NMEA2000 Gateway - Victron	Data(0..1) = RMS Voltage AC Input 1 Line A to line B [0:64255] V (1V/bit) Data(2..3) = RMS Voltage AC Input 1 Line A to Neutral [0:64255] V (1V/bit) Data(4..5) = RMS Current AC Input 1 [0: 64255] A (1A/bit) Data(6..7) = Frequency [0: 501.99] Hz
1543	0x607	Multiplus: DC Current	NMEA2000 Gateway - Victron	Data(0..1) = Load DC Current [+/- 3276.4] A Data(2..3) = Inverter DC Current [+/- 3276.4] A Data(4..7) = Dummy 0xff
1544	0x608	Multiplus: Inverter AC output NMEA2000 gateway - Victron		Data(0..1) = RMS Voltage AC output Line A to Neutral [0:64255] V (1V/bit) Data(2..3) = RMS Current AC output [0: 64255] A (1A/bit) Data(4..5) = Frequency [0: 501.99] Hz Data(6..7) = Dummy 0xff
1545	0x609	Multiplus: status	NMEA2000 Gateway - Victron	Data(0) = Mode 1 => Charger only 2 => Inverter only 3 => ON 4 => OFF" Data(1..2) = AC In1 current limit in 0.1A Data(3..4) = AC In2 current limit in 0.1A Data(5..7) = Dummy 0xff
1546	0x60A	Multiplus: fashion set	NMEA2000 Gateway - Victron	Data(0) = Mode 1 => Charger only 2 => Inverter only 3 => ON 4 => OFF" Data(2..7) = Dummy 0xff
1547	0x60B	Multiplus: set AC current limit NMEA2000 gateway - Victron		Data(0..1) = AC In1 current limit in 0.1A Data(2..3) = AC In2 current limit in 0.1A Data(4..7) = Dummy 0xff
1548	0x60C	Inverter Phoenix: AC Output NMEA2000 Gateway - Victron		Data(0..1) = RMS Voltage AC output Line A to Neutral [0:64255] V (1V/bit) Data(2..3) = RMS Current AC output [0: 64255] A (1A/bit) Data(4..5) = Frequency [0: 501.99] Hz Data(6..7) = Dummy 0xff
1549	0x60D	Phoenix Inverter: Status	NMEA2000 Gateway - Victron	Data(0) = Mode 3 => ON 4 => OFF" Data(1..2) = Current in 0.1A Data(3..7) = Dummy 0xff
1550	0x60E	Phoenix Inverter: Set Mode	NMEA2000 Gateway - Victron	Data(0) = Mode 3 => ON 4 => OFF" Data(1..7) = Dummy 0xff

INDEX HEX VALUE TYPE			INFORMATION	FRAME DETAIL
1551	0x606	Multiplus: AC In 2 Charger	NMEA2000 Gateway - Victron	Data(0) = NMEA address of Battery device Data(1) = NMEA address of MPPT device Data(2) = NMEA address of Battery charger (eg: Multiplus charger) Data(3) = NMEA address of Ship main device (eg: Multiplus inverter) Data(4) = NMEA address of Auxiliary hands (eg: Phoenix inverter) Data(5) = NMEA address of Auxiliary charger (eg: Phoenix charger)
...	...	0x610 => 0x700: Reserved for Victron		
1792	0x700	Device list - Request with RTR bit	NMEA2000 Gateway - Merger	Data(0) = Fusion device 1's address Data(1) = Fusion device 2's address Data(2) = Fusion device 3's address Data(3) = Fusion device 4's address Data(4) = Fusion device 5's address Data(5) = Fusion device 6's address Data(6) = Fusion device 7's address Data(7) = Fusion device 8's address If more than 8 devices, value=254
1793	0x701	Set current device	NMEA2000 Gateway - Merger	Data(0) = Fusion device to communicate with All frames 'Fusion command' are sent to this device All frames 'Fusion answer' comes from this device Data(1..7) = Dummy 0xff
1794	0x702	Fusion command	NMEA2000 Gateway - Merger	Data(0) = Frame ID, if first frame: 0x00 else counter Data(1) = if frame ID=0 => nb data bytes else data byte Data(2..7) = Data bytes Data byte description corresponds exactly to Fusion protocol description. Data byte(0) = 0xA3 Data byte(1) = 0x99 ...
1795	0x703	Fusion answer	NMEA2000 Gateway - Merger	Data(0) = Frame ID, if first frame: 0x00 else counter Data(1) = if frame ID=0 => nb data bytes else data byte Data(2..7) = Data bytes Data byte description corresponds exactly to Fusion protocol description. Data byte(0) = 0xA3 Data byte(1) = 0x99 ...

NMEA 2000® Product Certificate

Company Name: Scheiber

Product Scheiber Gateway NMEA2000

Product model number Scheiber Gateway NMEA2000

Authorized by NMEA-Technical

Date 5/5/2021

This certifies that the product above meets all requirements of the NMEA 2000® standard.

Legal notices

The manufacturer cannot be held responsible and declines all liability for damage suffered by people or property as a result of improper use and with reference to the warnings given in this manual.

SCHEIBER reserves the right to modify product characteristics in the interest of its customers.

The manuals provided with this product may not be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language, in whole or in part, by any means, without the prior written consent of SCHEIBER.

Although every effort has been made to provide you with accurate and complete information in these manuals, we would be grateful if you would bring to the attention of the SCHEIBER representative in your country any errors or omissions that may have escaped our attention.

SCHEIBER reserves the right to modify at any time and without notice the characteristics of the hardware and software described in these manuals.

Our warranty conditions

PURPOSE OF THE GUARANTEE:

SCHEIBER guarantees its equipment against defects and hidden defects under the conditions set out in Articles 1641 et seq. of the French Civil Code. Repairs carried out during the warranty period do not affect the terms and duration of this warranty, which is 2 years, except in special cases. Services under the warranty are subject to presentation of the invoice certifying the warranty start date. It is the user's responsibility to prove the construction or assembly defect or the material defect, in accordance with the legislation in force. Industrial warranties, of whatever nature, will cease in all cases, at the latest fifteen months after the equipment is made available in our factories or stores, even in the event that shipping or assembly is delayed for any reason, but independent of its doing.

WARRANTY EXCLUSION:

This warranty does not apply in the event of alteration, poor storage conditions before installation or improper use of the devices (connection error, fall, shock, replacement of fuses with non-compliant values). It does not cover re-calibration or re-calibration resulting from drift and normal aging of the equipment. Corrosion or erosion of the devices is not guaranteed.

Under no circumstances is SCHEIBER responsible for equipment that has been transformed, repaired or dismantled, even partially.

Warranty Terms: Shipping costs are the customer's responsibility. If the equipment received is non-compliant, the company reserves the right to refuse to repair it free of charge and will provide a quote. For goods, outbound shipping must be paid by the sender; return shipping costs are covered by SCHEIBER in the case of a warranty repair or exchange. For any service, the after-sales service only covers parts covered by specific warranties. Travel and labor costs will not be covered under any circumstances.

Repairs, modifications or replacement of parts recognized as defective cannot have the effect of extending the warranty period.

LIMITATIONS OF LIABILITY:

SCHEIBER cannot under any circumstances be held liable for direct or indirect damage resulting from the use of the equipment or from breakdowns and operating anomalies thereof.

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Any questions?

contact@scheiber.fr

A problem?

sav@scheiber.fr

2 Bellevue,
85120 • Saint-Pierre du Chemin
France

Tel: +33 (0)2 51 51 73 21
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www.scheiber.fr