

REFERENCE VALUES

OMNICOMM

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INTRODUCTION

This document is intended for verifying the data provided by the Partner in the warranty claim. It covers connection methods for measurements and reference values by Product types for the preparation of the Technical Assessment Report.

1. GENERAL PROVISIONS

Before checking the Product warranty, it is recommended to carefully review the following documents:

- Warranty Policy
- Warranty Acceptance Criteria

2. SPECIAL CONTROL POINTS FOR PRODUCT CHECKS

Do not allow short circuits between connection wires without insulation during diagnostics to avoid short circuits and Product failure.

- Unused connection wires during diagnostics must be insulated to prevent short circuits and Product damage.
- For accurate measurement readings, ensure reliable contact of connection wires with diagnostic equipment.
- When connecting or/and joining wires, it is recommended to use electrical terminals (quick-release connectors).
- When measuring resistance, power (positive) on the Product must be turned off.

2.1 Fuel level sensors Omnicomm

- The color coding of connection wires differs for all types of fuel level sensors Omnicomm. To avoid connection errors during diagnostics, use the installation cable from the fuel level sensors Omnicomm LLS 4 or/and LLS 5 kit.
- For fuel level sensors Omnicomm LLS 4, LLS-AF 4, and LLS 5, all measurements must be made relative to the white wire (power minus).
- For fuel level sensors Omnicomm LLS-Ex 5, all measurements must be made relative to the gray wire (power minus).
- The fuel level sensors Omnicomm LLS-Ex 5 must only be connected through the Spark protection unit Omnicomm BIS-MX.

2.2 GPS-trackers Omnicomm

- To avoid connection errors during diagnostics, use the connection wire from the GPS-trackers Omnicomm kit
- All measurements must be made relative to the white wire (power minus)

2.3 Spark protection unit Omnicomm BIS-MX

- The color coding of connection wires differs for all types of fuel level sensors Omnicomm. To avoid connection errors during diagnostics of the Spark protection unit Omnicomm BIS-MX, use the installation cable from the fuel level sensors Omnicomm LLS 4 or/and LLS 5 kit
- All measurements of input circuits must be made relative to the white wire (power minus)
- All measurements of output circuits must be made relative to the white wire (power minus)

2.4 Display Omnicomm ICON

- The color coding of the Display Omnicomm ICON connection wires does not match other related equipment manufactured by the Manufacturer under the OMNICOMM brand
- All measurements must be made relative to the violet wire (power minus)

2.5 Indicator fuel volume Omnicomm LLD

- All measurements must be made relative to the white wire (power minus)

3. REFERENCE VALUES OF FUEL LEVEL SENSORS OMNICOMM

3.1 Fuel level sensors Omnicomm LLS 4

Measurements of Control Points								
Interface line	RS 485		RS 232		Meter resistance (R)	CNT current	Power supply plus	Current consumption at 12 V
	A	B	TX	RX				
Power supply minus (white)	White-orange	White-blue	Pink	Gray	Between the rod and tube	Length of fuel level sensor Omnicomm LLS 4 – 700 mm	Brown	
Unit of Measurement	kΩ	kΩ	kΩ	kΩ	mΩ	Units	mΩ	mA
Measurement Results	8,4	4,6	∞	5,1	1,9	140 000	24	13

3.2 Fuel level sensors Omnicomm LLS-AF 4

Control Point Measurements									
Interface Line	RS 485		RS 232		R of Meter	U on Analog Output	CNT Current	Power Plus	Current Consumption at 12V
	A	B	TX	RX					
Power Minus (White)	White-Orange	White-Blue	Pink	Gray	Between Rod & Tube	Set/Measured	Fuel level sensor Omnicomm LLS-AF 4 -700 mm Length	Brown	
Unit of Measurement	kΩ	kΩ	kΩ	kΩ	mΩ	V	Units	mΩ	mA
Measurement Results	6,7	4,2	9,3	0	1,9	20/20	131 000	∞	13

3.3 Fuel level sensors Omnicomm LLS 5

Control Point Measurements								
Interface Line	RS 485		RS 232		R of Meter	CNT Current	Power Plus	Current Consumption at 12V
	A	B	TX	RX				
Power Minus (White)	White-Orange	White-Blue	Pink	Gray	Between Rod & Tube	Fuel level sensor Omnicomm LLS-5 - 700 mm Length	Brown	
Unit of Measurement	kΩ	kΩ	kΩ	kΩ	mΩ	Units	κOM	mA
Measurement Results	12	4,6	5,3	5,3	1,9	730 000	365	13

3.4 Fuel level sensors Omnicomm LLS-Ex 5

Control Point Measurements						
Interface Line	RS 485		R of Meter	CNT Current	Power Plus	Current consumption at 12 V (via the Spark protection unit Omnicomm BIS-MX)
	A	B				
Power Minus (Gray)	White-Orange	White-Blue	Between Rod & Tube	Fuel level sensor Omnicomm LLS-Ex 5- 700 mm Length	Pink	
Unit of Measurement	kΩ	kΩ	mΩ	Units	kΩ	mA
Measurement Results	201	407	1,9	705 000	560	110

4. REFERENCE VALUES OF GPS-TRACKERS OMNICOMM

4.1 GPS-trackers Omnicomm Profi or/and Optim

Control Point Measurements											
Interface Line	RS 485 №1		RS 485 №2		RS 232		CAN		iButon +	Power Plus	Current Consumption (at 12V)
	A	B	A	B	TX	RX	L	H			
Power Minus (White)	White-Orange	White-Blue	White-Green	Black-Blue	Pink	Gray	White-Purple	Purple-Orange	Pink-red	Red	
Unit of Measurement	kΩ	kΩ	kΩ	kΩ	kΩ	kΩ	kΩ	kΩ	kΩ	kΩ	mA
Measurement Results	17,43	1,5	1,5	17,43	4,5	∞	∞	∞	55	26	330

4.2 GPS-TRACKERS OMNICOMM SMART OR/AND LIGHT

Control Point Measurements							
Interface Line	RS 485		CAN		iButon+	Power Plus	Current Consumption at 12V
	A	B	L	H			
Power Minus (White)	White-Orange	White-Blue	White-Purple	Purple-Orange	Pink-red	Red	
Unit of Measurement	kΩ	kΩ	kΩ	kΩ	kΩ	kΩ	mA
Measurement Results	17,43	1,5	∞	∞	55	26	330

5. REFERENCE VALUES OF THE OMNICOMM SPARK PROTECTION UNIT OMNICOMM BIS-MX

Control Point Measurements								
Input Circuits								
Interface Line	RS 485		RS 232		Power Plus (Brown)	Current Consumption at 12V (without fuel level sensor Omnicomm)		
Power Minus (White)	A (White-Orange)	B (White-Blue)	TX (Pink)	RX (Gray)				
Unit of Measurement	kΩ	kΩ	kΩ	kΩ	kΩ	mA		
Unit of Measurement	12	4,6	5,3	5,3	356	41		
Output Circuits								
Interface Line	Output #1 of Spark protection unit Omnicomm BIS-MX				Output #2 of Spark protection unit Omnicomm BIS-MX			
	RS 485		Power Plus (Pink)	Fuel level sensor Omnicomm Supply Voltage #1	RS 485		Power Plus (Pink)	Fuel level sensor Omnicomm Supply Voltage #2
Negative power supply (gray)	A (White-Orange)	B (White-Blue)			A (White-Orange)	B (White-Blue)		
Unit of Measurement	kΩ	kΩ	kΩ	V	kΩ	kΩ	kΩ	V
Measurement Results	12	4,6	356	6,95 ± 0,45	12	4,6	356	6,95 ± 0,45

6. REFERENCE VALUES OF THE DISPLAY OMNICOMM ICON

Control Point Measurements				
Interface Line	RS 485		Power Plus	Current Consumption at 12V
	A	B		
Power Minus (Purple)	Blue	Gray	Red	
Unit of Measurement	kΩ	kΩ	kΩ	mA
Measurement Results	8,4	4,6	24	13

7. REFERENCE VALUES OF THE INDICATOR FUEL VOLUME OMNICOMM LLD

Control Point Measurements				
Interface Line	RS 485		Power Plus	Current Consumption at 12V
	A	B		
Power Minus (White)	White-Orange	White-Blue	Brown	
Unit of Measurement	кОм	кОм	кОм	mA
Measurement Results	7,1	4,2	21,6	13

8. REFERENCE VALUES OF THE USB ADAPTER OMNICOMM UNU-USB

Control Point Measurements		
Output Parameters		
Power Minus (Purple)	Output Voltage	Output Resistance
Power Plus (Red)		
Unit of Measurement	V	kΩ
Measurement Results	12,38	∞