SBP2DI48524

Dupline® Carpark Display Interface

▶ Benefits

- Plug and play installation
- Can be mounted up to 300 m away from the display
- LED's for indication of communication status
- Compact 2-DIN housing suitable for decentral installation

▶ Description

The SBP2DI48524 Display interface module is part of the Dupline® Carpark system which contains other variants of sensors, controllers and displays. The SBP2DI48524 is a Dupline® to Modbus RTU converter and acts as an interface between Dupline® and the Carpark displays.
The module is connected to the display via RS485 and is normally installed close by, but can be installed up to 300m from the display.

▶ Applications

Parking Guidance Systems

▶ Main functions

- Acts as an interface between Dupline® and the carpark displays

Features

▶ Power Supply

Rated operational voltage	24 VDC (±20%), 20 mA, CL.2
Rated operational power	300 mW (display excluded)
Reverse-polarity protection	Yes
Connection	A1 (+) 24 VDC A2 (-) 24 VDC D+ Dupline® bus D- Dupline® bus A (-) RS485 bus for display B (+) RS485 bus for display GND 24 (internally connected Max 5.5 A + display) Be sure to use correct power supply. The display is powered through the SB-P2DI48524 and the internal connection can max handle 5.5 A.
Power-ON delay	Typical 2 s
Power-OFF delay	≤ 1 s
Modbus specifications	- RS485 - Max one display can be connected - Integrated display protocol based on modbus RTU

▶ Dupline® specifications

Dupline® voltage rated	8.2 V
Maximum Dupline® voltage	10 V
Min. Dupline® peak voltage	5.5 V
Maximum Dupline® current	1.1 mA

The Dupline® bus is present on the terminals D+/D-.

▶ LED indication

Green LED	Power status	ON: supply ON OFF: supply OFF
Yellow LED	Dupline® LED	If the Dupline® bus is working properly, it is always ON. If there is a fault on the bus, it will be flashing. It is OFF, if the bus is OFF or not connected.
	TX modbus	Led flashes when module sends a modbus request to display.
	RX modbus	Led flashes when display replies to a modbus request.

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► Environmental

|		
Ambient temperature	-20°... +50°C (-4°... +122°F)	Operating
	-50° ... +85°C (-58° ... +185°F)	Storage
Degree of protection	Front	IP50
	Screw terminal	IP20
Pollution degree	2	IEC 60664-1, par. 4.6.2
Installation category	III	
Humidity (not condensing)	20 ... 80% RH	
Dielectric strength	Power supply to Dupline® and display to Dupline®	4 kVAC for 1 min. 6 kV impulse 1.2/50us

► EMC

Immunity	EN61000-6-2
Emission	EN61000-6-3

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Mechanics

▶ **Housing**

Dimensions	2 DIN module
Housing material	Noryl
Weight	120 g

▶ **Dimensions (mm)**
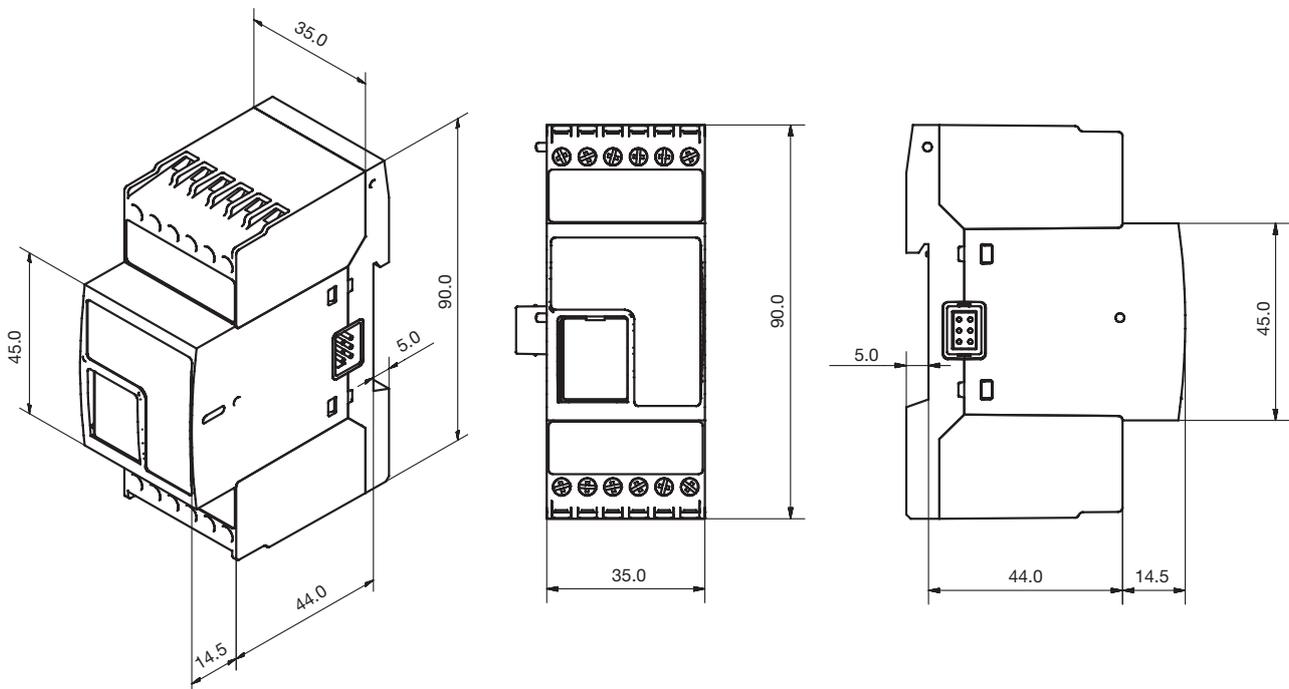
Wiring
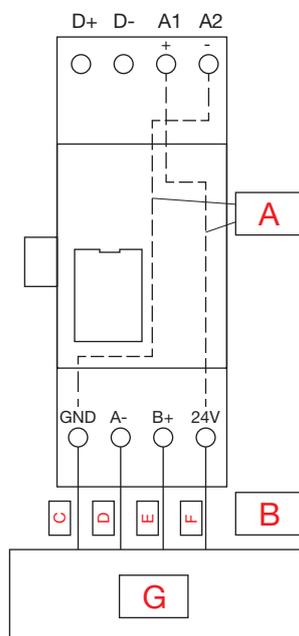
A	Internal jumper Max 5.5 A	**E**	Green
B	Cable distance between display and module is max 300 m.	**F**	Brown
C	White	**G**	Display
D	Yellow		

Connection

Terminal	8-screw type
Cable cross-section area	Max. 1.5 mm²
Tightening torque	0.4 Nm / 0.8 Nm
RS485 cable	Max 300 m from module to display

Compatibility and conformity

▶ **Approvals**

CE-marking	CE
Approvals	c(UL)us

UL notes
- This product is intended to be supplied by a Listed Information Technology Equipment AC Adaptor marked NEC Class 2 or LPS
- Max ambient temperature: 50°C (122°F)

Mode of operation

The SBP2DI48524 is a Dupline® to Modbus RTU converter that is used as an interface between Dupline® and the carpark displays.

The module has no DIP-switch settings, but is configured from the SBP2WEB24 controller configuration software.

Each display must be connected to one SBP2DI48524 module and it can be connected in close range from the display or in a cabinet in a far distance from the display.

When connected and configured, the display interface module has two yellow LED for Tx and Rx. Both LEDs will flash if the transmission is ok.

The SBP2DI48524 continuously checks for presence and correct operation of the display.

▶ **Address assignment**

Automatic: the controller recognises the module through the SIN (Specific Identification Number) that has to be inserted in the SBP2WEB24

References

▶ **Product selection key**

☞ **SBP2DI48524**

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