Dupline®
Carpark Monitor
Type GP34829091724-x

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- Monitor module for the L_1 bus and the L_2 bus
- GP34829091724 is able to handle 120 sensors for each monitor modul on the L_1 bus
- GP34829091724-1 is able to handle 60 sensors for each monitor modul on the L_1 bus
- Possible to install 480 monitors in a system
- One or several displays can be connected to the built-in RS485
- Output function on the L2 bus for e.g. gate control
- Booking function for 3-colour sensors in cooperation with the Dupline CarPark Software. Only GP34829091724-1
- H4-Housing
- Programmed with the Carpark configurator GP73800080
- Termination switch for RS485 on the front
- cULus approved

Product Description

The Carpark monitor GP 3482 9091 is a part of the Dupline® Carpark concept. It is the intelligent part of the system. The monitor GP 3482 9091 have two independent busses L_1 and L_2. The L_1 bus is connected to the sensors and the L_2 is connected to other monitor modules.

It is possible to connect one or several displays on the RS485 bus. The Carpark monitor is programmed with the Carpark configurator GP 7380 0080.
The GP34829091724-1 is designed to work only with 3-colour sensors and the Dupline® Carpark Software.

Ordering Key

GP34829091724

Type: Dupline® Carpark
H4-Housing

Type Selection

	Ordering no.
Carpark Monitor	**GP34829091724**
Carpark Monitor with booking function	**GP34829091724-1**

Output Specifications

Output	
RS 485	Gnd on pin 22
	A on pin 27
	B on pin 28
Communication	
Standard	RS 485
Baudrate	4800
Dielectric voltage	
RS485 - Dupline® L_1+L_2	500 VAC (rms)
Protokol	Carpark

Supply Specifications

Primary bus L_1		20-30 VDC pulsating (3-wire Dupline® bus)
L_1 bus	Dupline®+	pin 21
	Dupline®-	pin 22
	Power	pin 23
Current consumption		≤ 27 mA ± 10%
Current consumption Dupline®		< 0.03 mA (High impedance)
Primary bus L_2		20-30 VDC pulsating (3-wire Dupline® bus)
L_2 bus	Dupline®+	pin 24
	Dupline®-	pin 25
	Power	pin 26
Current consumption		≤ 8 mA ± 10%
Current consumption Dupline®		< 0.03 mA (High impedance)
Power dissipation		≤ 1 W
Dielectric Voltage		
Dupline® L_1 - Dupline® L_2		500 VAC (rms)

General Specifications

Programming	By GP73800080
Environment	
Degree of protection	IP20 B
Operating temperature	-40° to +50°C (-40° to +122°F)
Storage temperature	-50° to +85°C (-58° to +185°F)
Humidity (non-condensing)	20 to 95%
Mechanical resistance	
Shock	15 G (11 ms)
Vibration	2 G (6 to 55 Hz)
Dimensions	H4-housing
LED	
Green LED	Power ON
First yellow LED	Dupline® bus L_1
Second yellow LED	Dupline® bus L_2
EMC performance	EN61000-6-3 (emission)
	EN61000-6-1 (immunity)
Power-on delay	3 sec.
Termination switch for RS485	The switch on the front of the monitor, turns the built-in resistor on 120Ω ON or OFF.
Approval	cULus (UL60950)
MTBF	100,000 hours

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Mode of Operation

The GP34829091724-x is monitoring an area of the Carpark system and transmits the available parking spaces in that area to the display via the RS485 interface built into a H4 housing module.

The unit has three different configurable modes:

1. Slave mode

In slave mode the GP34829091724-x can collect data from maximum 120 sensors connected on the Dupline® bus L_1.

The addressing of the sensors is done with the Carpark Configurator GP7380 0080. The numbers of free parking spaces is transmitted to the Dupline® net L_2 in order to allow Carpark Monitors in Master mode to read the information. It is possible to have up to 480 slave monitors on L_2.

There is no limit to the amount of Slave Monitors on L_1.

2. Master mode

This mode is equal to the Master Indicator mode. However. There can only be one Master monitor in the entire system. This Master provide the system with the sync signal and read and summarize on L_2 the total of free parking spaces transmitted from selected Slave modules.

3. Master Indicator mode

In Master Indicator mode, the unit collects the data from all the Slaves on the L1 busses in the system and sends the info to the L_2 bus. By selecting the ID range, the Master can read a specific amount of ID's (Slaves on the L_1 bus) and send this info to the connected display.
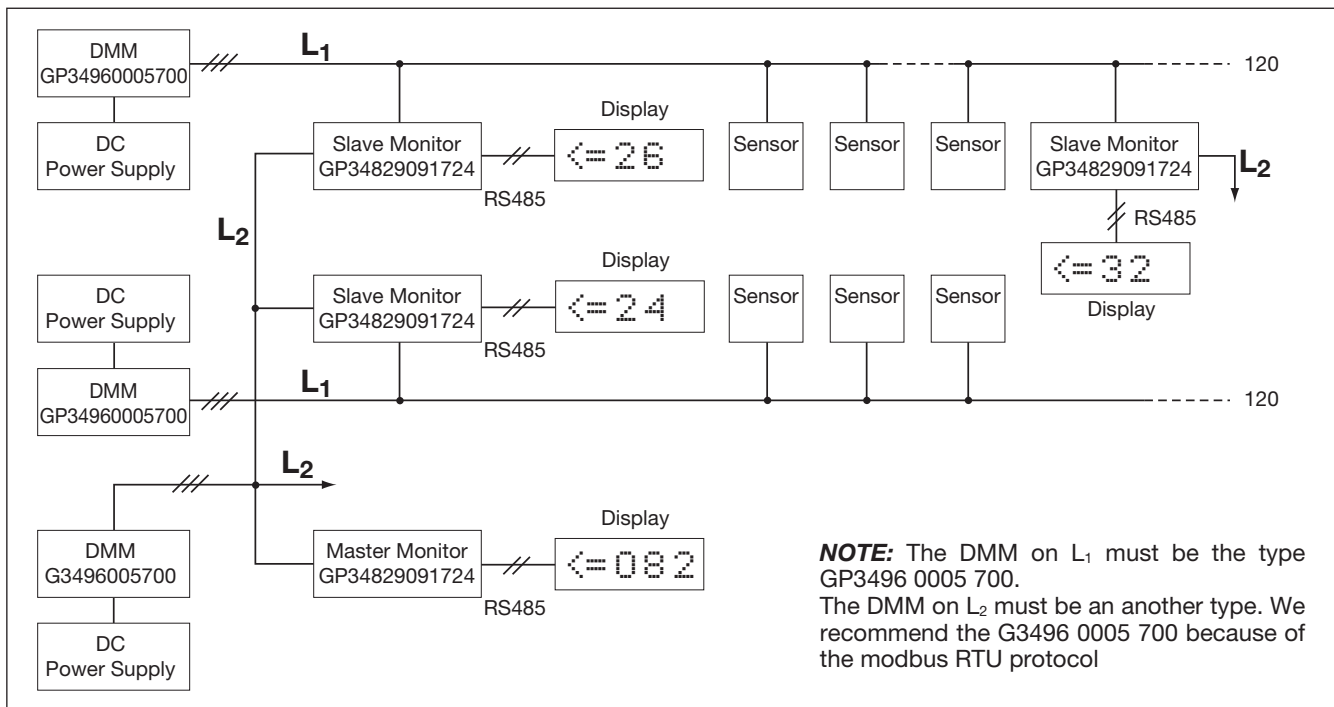
All monitor modules in slave mode are identified with a unique ID number. In Master Indicator mode, the monitor can be used to monitor a specified ID area from the multiplexer (example ID 50 to 200). This means that the monitor collects all the free parking spaces from ID 50 to ID 200 and sends the information to the Display via RS485. There is no limit to the amount of Master indicator on L_2.

An Option for e.g. gate control can be selected. This feature works on the L2 bus on Dupline® Address A7. If the CarPark is full (occupied), the Monitor module activates A7 on the L2 bus. This can be used to e.g. activate a gate that closes the parking area or the complete Parking. When the area is no longer full, the A7 will be deactivated again. It is possible to force A7 "On" by
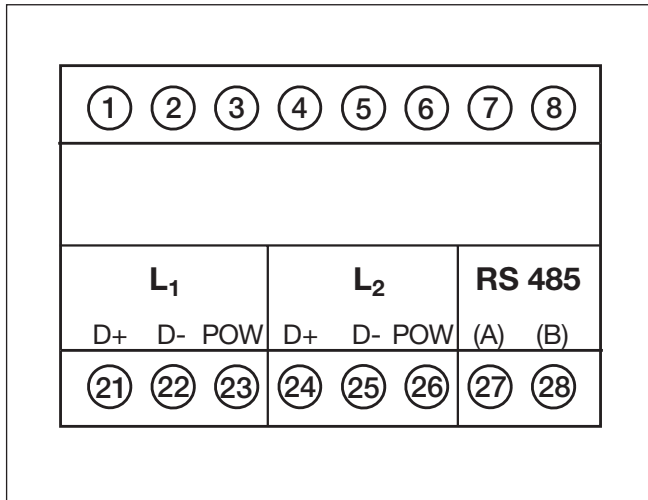
using a toggle switch with a Dupline® transmitter module, if needed.

The GP34829091724-1 has the same functions in Master and Master Indicator Mode. In Slave Mode it is different. This module is designed to work with the 3-coloured Sensors and the Dupline® CarPark Software. If the Dupline® Software is not used or out of function, the 3-colour sensors works as a standard 2-colour sensors installation. Red for occupied and Green for vacant. In Slave Mode, the installer only can use the addresses A1 to H4 in "Units of Grp.". That is totally 60 3-coloured sensors. The rest of the Slave Mode is equal to the standard version.

Drawing example

NOTE: The DMM on L_1 must be the type GP3496 0005 700.
The DMM on L_2 must be an another type. We recommend the G3496 0005 700 because of the modbus RTU protocol

Specifications are subject to change without notice (21.11.2014)

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Wiring Diagram

①	②	③	④	⑤	⑥	⑦	⑧

L_1			L_2			RS 485	
D+	D-	POW	D+	D-	POW	(A)	(B)
㉑	㉒	㉓	㉔	㉕	㉖	㉗	㉘

Use 3*1,5mm2 single core wire for L_1 and L_2 bus
Use 2 wires with shield for the RS485 connection (Distance up to 1200 Meter)

General information

Each monitor can in slave mode have up to 120 sensors connected. The Carpark system allows the integrator to install up to 480 monitors in slave mode (with unique ID). This means that the system can have up to → 120 x 480 = 57,600 sensors in total.

Dimensions (mm)

H4-housing

72, 70, 77, 45, 25
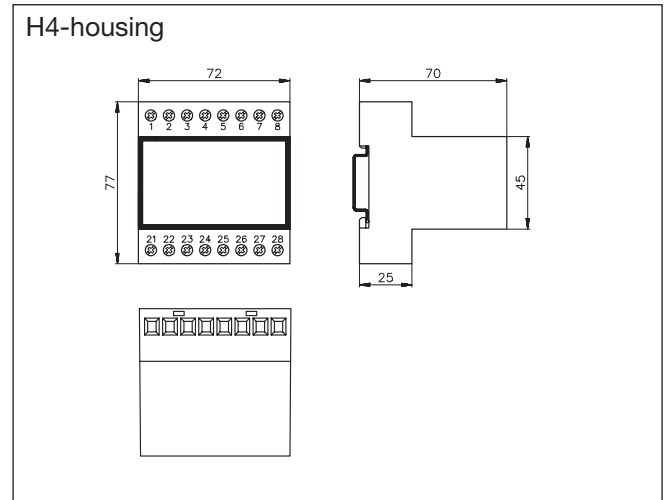
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