Dupline®
Carpark Monitor
Type GP34829091724

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- Monitor module for the L_1 bus and the L_2 bus
- Able to handle 123 sensors for each monitor 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
- H4-Housing
- Programmed with the Carpark configurator GP73800080
- Termination switch for RS485 on the front

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 monitors or master monitor.

It is also possible to connect one or several displays on the RS485 bus. The Carpark monitor is programmed with the Carpark configurator GP 7380 0080

Ordering Key

GP34829091724

Type: Dupline® Carpark
H4-Housing

Type Selection

	Ordering no.
Carpark Monitor	**GP34829091724**

Output Specifications

Output	
RS 485	Gnd on pin 22
	A on pin 27
	B on pin 28

Communication	
Standard	RS 485
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.

Specifications are subject to change without notice (26.03.2009)
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Mode of Operation

The GP 3482 9091 724 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 four different configurable modes:

1. Slave mode
In slave mode the unit can collect data from maximum 123 sensors connected on Dupline net c.
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. Roof mode
Roof mode is designed for the top floor where it is not possible to mount sensors over the cars. One sensor detects when a car enters the roof. And another sensor detects when a car is leaving the roof. The number of free parking spaces is transmitted to Dupline net L_2 in order to allow Carpark Monitors in Master mode to read the information.

3. 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 Slaves and the Roof module (if used).
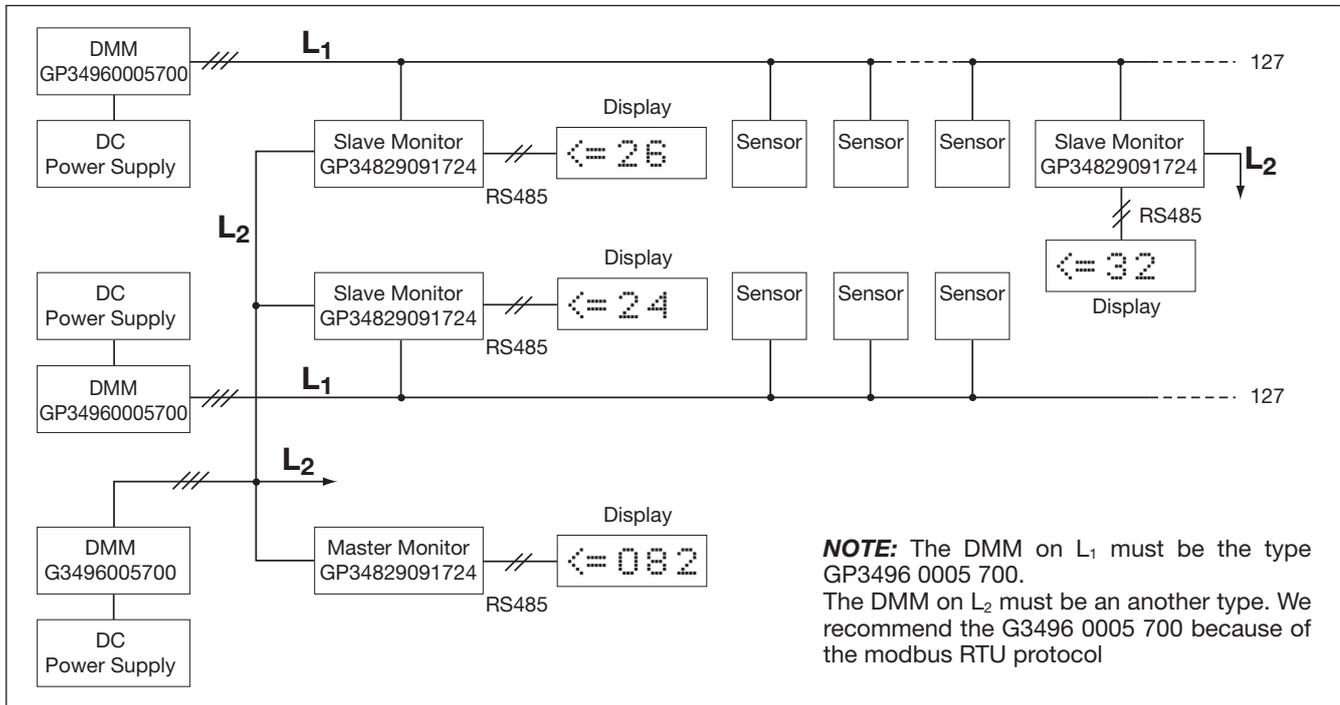
4. Master Indicator mode
In Master mode the unit is only connected to the Dupline net L_2. The Master Indicator read and summarize on L_2 the total of free parking spaces transmitted from selected Slaves and the Roof module (if used).
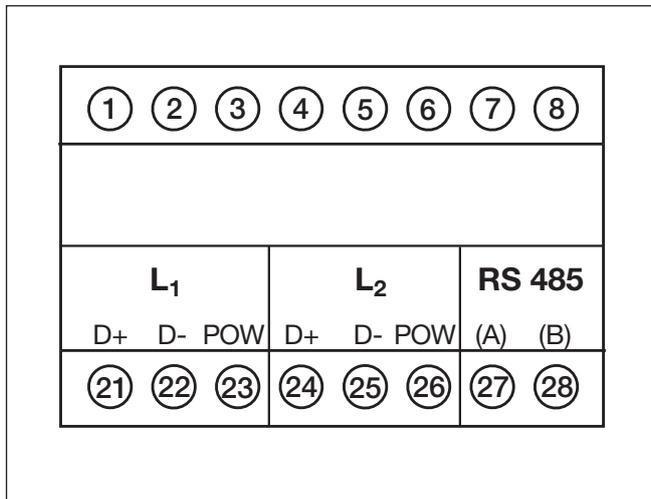
The Master Indicator mode is e.g. used to summarize the total amount of free places on one floor by adding the numbers from the slaves on that floor.
All monitors are identified with a unique ID number. In Master Indicator mode, the monitor can be used to monitor a specified ID area from the multiplexer (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.

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

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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)

Dimensions (mm)

H4-housing

General information

Each monitor can in slave mode have up to 123 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 → 123 x 480 = 59.040 sensors in total.

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