# Dupline® Carpark Monitor Type GP34829091724-x



# **Product Description**

The Carpark monitor GP 3482 9091 is a part of the Dupline<sup>®</sup> 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.

# **Output Specifications**

| Output<br>RS 485   | Gnd on pin 22<br>A on pin 27<br>B on pin 28 |
|--|---|
| Communication<br>Standard<br>Baudrate<br>Dielectric voltage<br>RS485 - Dupline <sup>®</sup> L <sub>1</sub> +L <sub>2</sub><br>Protokol | RS 485<br>4800<br>500 VAC (rms)<br>Carpark  |

## **Supply Specifications**

| Primary bus L <sub>1</sub>  |                        | 20-30 VDC pulsating                                   |
|---|------------------------|---|
| L1 bus  | Dupline®+<br>Dupline®- | (3-wire Dupline <sup>®</sup> bus)<br>pin 21<br>pin 22 |
| Power<br>Current consumption<br>Current consumption Dupline®                                    |                        | pin 23<br>≤ 27 mA ± 10%<br>< 0.03 mA (High impedance) |
| Primary bus L <sub>2</sub>  |                        | 20-30 VDC pulsating                                   |
| • -   |                        | (3-wire Dupline <sup>®</sup> bus)                     |
| L2 bus  | Dupline®+              | pin 24  |
|   | Dupline <sup>®</sup> - | pin 25  |
|   | Power                  | pin 26  |
| Current consumption   |                        | ≤ 8 mA ± 10%  |
| Current consumption Dupline®  |                        | < 0.03 mA (High impedance)                            |
| Power dissipation   |                        | ≤ 1 W   |
| Dielectric Voltage<br>Dupline <sup>®</sup> L <sub>1</sub> - Dupline <sup>®</sup> L <sub>2</sub> |                        | 500 VAC (rms)   |

- Monitor module for the L<sub>1</sub> bus and the L<sub>2</sub> bus
- GP34829091724 is able to handle 120 sensors for each monitor modul on the  $L_1\, \mbox{bus}$
- GP34829091724-1 is able to handle 60 sensors for each monitor modul on the L<sub>1</sub> 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

### **Ordering Key**

Type: Dupline<sup>®</sup> Carpark -H4-Housing \_\_\_\_\_



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### **Type Selection**

|   | Ordering no.    |
|---|-----------------|
| Carpark Monitor<br>Carpark Monitor with | GP34829091724   |
| booking function                        | GP34829091724-1 |

### **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 <sup>®</sup> bus L <sub>1</sub>   |
| Second yellow LED            | Dupline <sup>®</sup> bus L <sub>2</sub>   |
| 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-<br>in resistor on $120\Omega$ ON or OFF. |
| Approval                     | cULus (UL60950)   |
| MTBF                         | 100,000 hours   |
|                              |   |

### 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<sup>®</sup> bus L<sub>1</sub>.

The addressing of the sensors is done with the Carpark Configurator GP7380 0080. The numbers of free parking spaces is transmitted to the Dupline<sup>®</sup> 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  $L_2$ .

**Drawing example** 

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

#### 2. Master mode

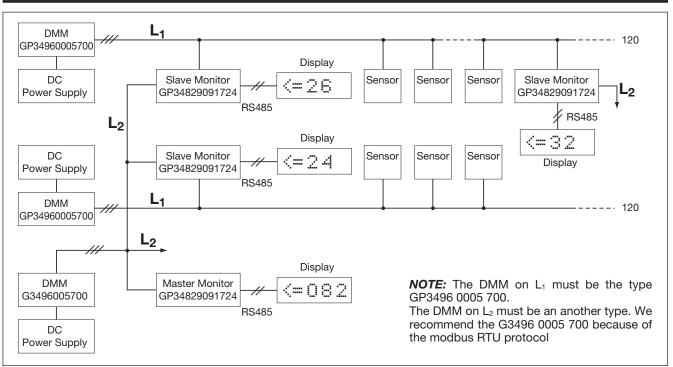
This mode is equal to the Master Indicator mode. However. There can only be one Master monitor in the entire system. This Master provide the system with the sync signal and read and summarize on  $L_2$  the total of free parking spaces transmitted from selected Slave modules.

#### 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<sub>2</sub> bus. By selecting the ID range, the Master can read a specific amount of ID's (Slaves on the L<sub>1</sub> 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<sup>®</sup> transmitter module, if needed.

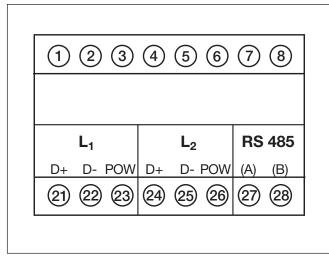
The GP34829091724-1 has the same functions in Master and Master Indicator Mode. In Slave Mode it is different. This module is designed to work with the 3-coloured Sensors and the Dupline® CarPark Software. If the Dupline<sup>®</sup> Software is not used or out of function, the 3-colour sensors works 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.





### CARLO GAVAZZI

### **Wiring Diagram**

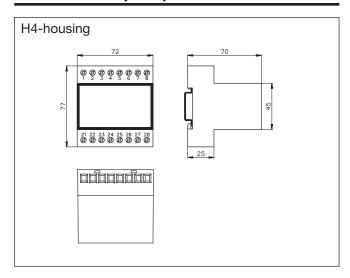


Use 3\*1,5mm2 single core wire for  $L_1$  and  $L_2$  bus Use 2 wires with shield for the RS485 connection (Distance up to 1200 Meter)

### **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  $\rightarrow$  120 x 480 = 57,600 sensors in total.

### **Dimensions (mm)**



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