SBP2CPY24

CARLO GAVAZZI

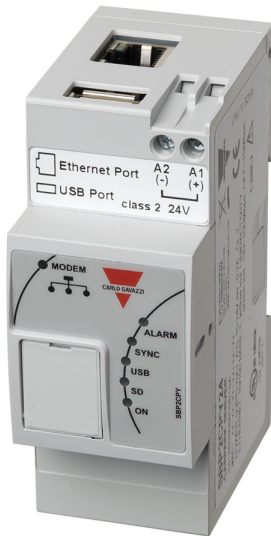## Dupline® Web-based server for Carpark

Benefits

- Micro PC with Web-server capability
- Linux embedded operating system
- Distributed installations management (up to 10)
- Database replica from up to 10
- Data export in Excel® format
- One Ethernet port
- One multipurpose USB 2.0 ports
- 12 to 28 VDC power supply
- Dimensions: 2-DIN modules
- Protection degree (front): IP40

Description

SBP2CPY24 is a micro PC with Web-Server and Web-Services capabilities suitable to gather information from up to 10 SBP2WEB24.
SBP2CPY24 aggregates data from multiple installations in single centralized database, allowing user to access them anywhere by a standard Web-browser, through a highly interactive interface.
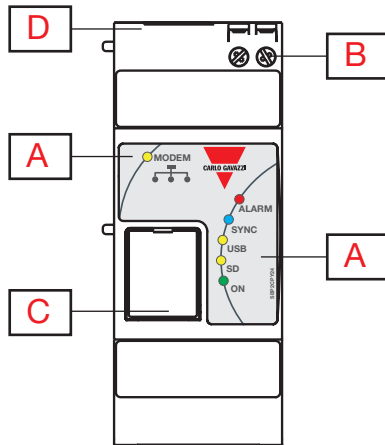All data are available as charts, tables and reports based on XLS format.

Applications

Parking Guidance Systems

Main functions

- The Carpark Server SBP2CPY24 is used in carpark applications to monitor/control informations from up to 10 Carpark controllers SBP2WEB24.

Structure

Element	Component	Function
A	LED	Green LED: Power ON Yellow LED: Modem Blue LED: Syncronization with SBP2WEB24 Yellow LED: USB Yellow LED: Micro SD Red LED: Alarms
B	Screw terminal	For power supply
C	Micro SD holder	Slot to plug-in the proper micro SD or micro SDHC memory and mini USB connector.
D	USB and RJ connector	USB "A" type connector and RJ45 10/100 BaseTX connector for Ethernet communication.

Main hardware characteristics

Memory	
Flash (data)	32 GB
RAM	128 MB (internal)
Communication ports	
Ethernet	According to ISO9847
Other ports	
Mini USB	1, "D" device function for PC connection

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Features

 Power Supply

Power supply	15- 24 VDC (±20%), 0.2 A, CL.2
Consumption	≤ 5 W

 Input/output isolation

Type of input/output	DC Power supply	Ethernet	USB port "D" (service)
DC Power supply	-	0.5 kV	0 kV
Ethernet (LAN/Internet)	0.5 kV	-	0.5 kV
USB port "H" (host)	0 kV	0.5 kV	-
USB port "D" (service)	0 kV	0.5 kV	-

- 0 kV: inputs/outputs are not insulated
- 0.5 kV rms: the insulation is functional type

 LEDs indication

Type	Status	Single colour LED Changing according to the function
Controlled functions	Power supply, USB port, SD port, alarms, database synchronization with SB-P2WEB24	
Colour code and working mode	Power ON	**Green LED** Steady ON: power supply is on
	Modem	**Yellow LED** Steady OFF: modem backup mode disabled Blinking: modem backup mode active
	Sync (SBP2WEB24 Database)	**Blue LED** Steady OFF: database synchronization with SB-P2WEB24 is going on correctly Steady ON: problems with database synchronization with SBP2WEB24
	Alarm	**Red LED** Steady ON: alarms without acknowledgement in progress Steady OFF: no alarms without acknowledgement

▶ Environmental

Ambient temperature	-25°... +65°C (-13°... +158°F)	Operating
	-30° ... +70°C (-22° ... +158°F) (R.H. < 90% non-condensing @ 40°C)	Storage
Insulation (for 1 minute)	See table "input/output Insulation"	
Dielectric strength	4000 VAC rms	for 1 min.
Noise rejection (CMRR)	>65dB	45 to 65 Hz
Overvoltage category	III	IEC60664; EN60664. For inputs from string: equivalent to Cat. I, reinforced insulation.

▶ EMC

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

Ports

 USB

Type	High speed 2.0 (max. 250mA)
Working type	Hot swap
Communication speed	60MB/s (480Mbits/s)
Connections	"Mini A" type as "Device" function on the front of the housing protected by front cover
Device function (mini USB)	Available on the "D" USB port only, it is a virtual Ethernet port and works as a real Ethernet port performing all the functions of the main Ethernet port.

 Ethernet

Protocol	HTTP
IP configuration	Static IP / Netmask / Default gateway
DNS	Primary and secondary DNS as a static or dynamic management (using DHCP server if configured)
Client connections	Max 20 simultaneously
Connections	RJ45 10/100 BaseTX, Max. distance: 100m
Insulation	See "Input/output insulation" table

Data recording

▶ **Memory format and data occupancy**

Description	Value
Total available memory for database and events	32 GB
Maximum backup size (on SD or USB)	32 GB
Resolution	15 min
Database size management	Dynamic, based on: -Current number of SBP2WEB24 units which are replicating their database to SBP2CPY24 -Data resolution (15 minutes)
Range of historical data available with High resolution	4 years
Range of historical data available with Low resolution	30 years

TCP/IP networking

Inbound TCP/IP communication

TCP/IP port number	TCP/IP port description	Purpose
80	HTTP	Access to the internal web-server
52325	SSH	Remote tunneling feature; connection from SBP2WEB24 to SBP2CPY24

Outbound TCP/IP communication

TCP/IP port number	TCP/IP port description	Purpuse
53	DNS	Domain name resolution
37	NTP	Network time services access
25	SMTP	Email message dispatching

Web interface

Main functions

Overall features	Database storage from up to 10 SBP2WEB24 units; access by Web-interface to present real time and historical data for all the carpark devices connected to the SBP2WEB24 units	
Database synchronization	Communication protocol	WEBAPI
	Replication direction	Data push from SBP2WEB24 to SBP2CPY24 so as to avoid firewall hassles
	Internet connection SBP2CPY24	Wired (mobile communication allowed only to access the Web-Interface for maintenance)
Configuration	The configuration of SBP2CPY24 can be carried by using its integrated Web-Server. No additional configuration software is needed. Configuration of SBP2WEB24 units which exchange data with SBP2CPY24 is made by connecting to the SBP2WEB24's Web-Server[1]	
Clock	Functions	Universal clock and calendar with automatic synchronization through Internet connection (NTP server connection is mandatory so as to obtain a unique time shared between SBP2CPY24 and SBP2WEB24)
	Battery life	10 years
Data and Events logging	Memory size	32 GB
	Storage duration and interval	See "SBP2CPY24 memory format and data occupancy"
	Storage data types	According to SBP2WEB24[1]
Alarms management	Overview	Local alarm management performed by SBP2WEB24 units and/or centralized alarm management based on SBP2CPY24 is possible. Local alarm management is based on SBP2WEB24 functions[1] Centralized alarm management allows to send by email alarm queues coming from SBP2WEB24 unit
Data access	User interface	Web-Server access by web-browser (Firefox, Chrome, Explorer, Opera, Safari supported)
	Data Export	Direct export from charts to CSV files Database export to XLS, JPEG, PNG, PDF, SVG files
User management	Concurrent users	Up to 20
	Users profiling	Standard user with access to data and Administrators with access to configuration.
	Internationalization	Multilingual interface

Notes
[1]: Please check the relevant SBP2WEB24 documentation for further information
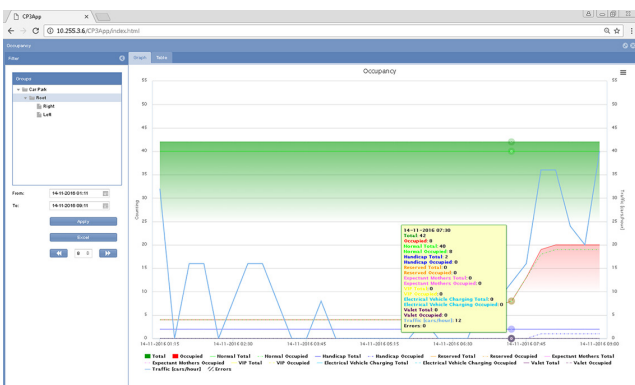
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Web server
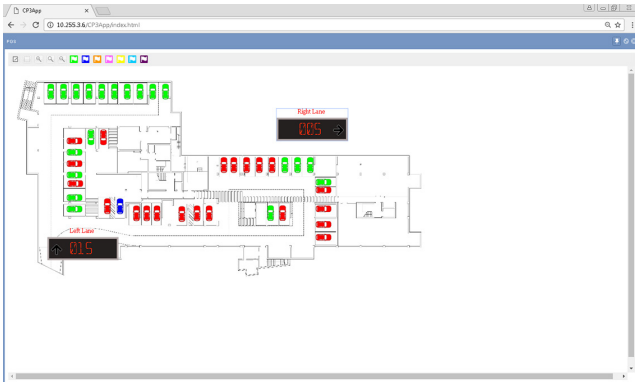
Home page including:
-Main toolbar on the top
-Hierarchical tree view on the right
-Main variables boxes on the left
-Alarms view at the bottom
-Map view in the centre

Monitor view
Each Carpark sensor can be inspected about present and historical trends of any single variable, in the desired time interval

Analysis view
Trends charting tool, allowing to show and compare any combination of variables from one or multiple Carpark sensors
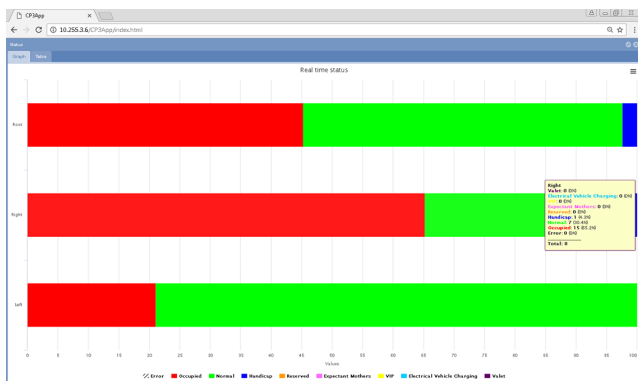
Settings tool

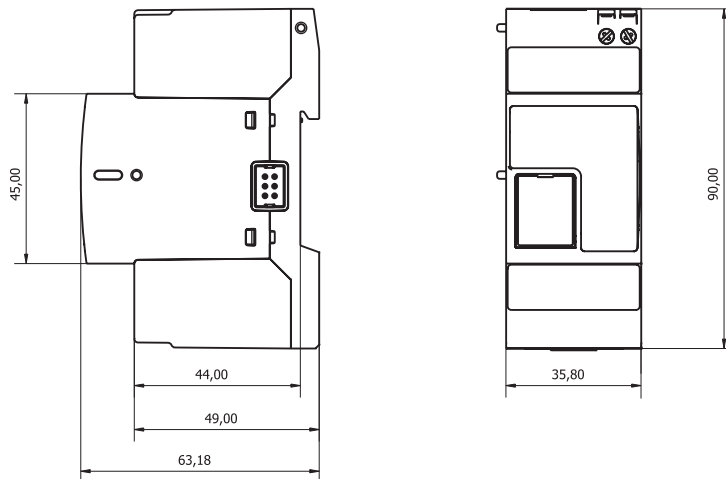It allows to configure the SBP2CPY24's settings and parameters.

It allows also to send broadcast commands to SBP2WEB24 units.

Mechanics

▶ **Housing**

Dimensions (HxWxD)	35.5 (0.5 - 0) x 90 x 67 mm	
Housing material	Noryl, self-extinguishing V-0 (UL94)	
Mounting	DIN rail	
Degree of protection	Front	IP40
	Screw terminal	IP20
Weight	< 600 g	

▶ **Dimensions (mm)**

45,00

44,00

49,00

63,18

90,00

35,80

▶ **Connection**

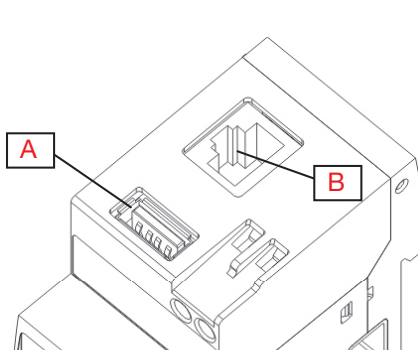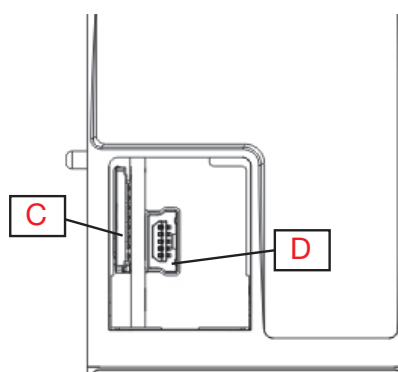| Ethernet	RJ-45 connector (10/100 Base-T)
USB	High speed USB 2.0
Power supply	2 screw terminals 1,5mm² max. min/max.screw tightening torque:0,4 Nm/ 0,8Nm

A

B

C

D

A1 A2

+

−

Fig. 1 *USB host and LAN port*   **Fig. 2** *Micro SD slot and mini USB*   **Fig. 3** *Power supply*
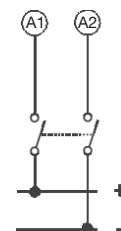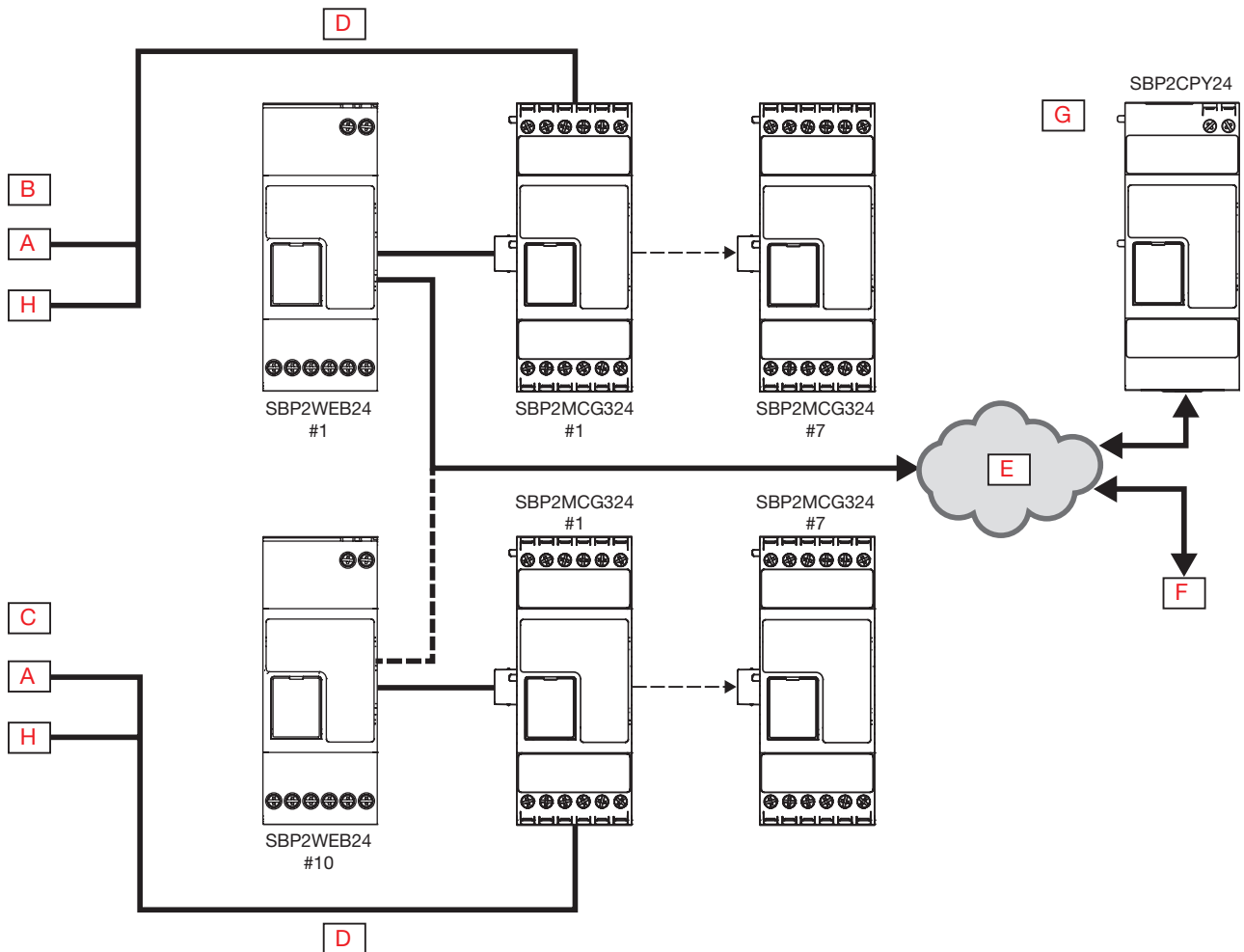
A	USB host	C	Micro SD slot
B	LAN port	D	Mini USB

Wiring

SBP2CPY24

SBP2WEB24 #1

SBP2MCG324 #1

SBP2MCG324 #7

SBP2MCG324 #1

SBP2MCG324 #7

SBP2WEB24 #10

A	50 Sensors	E	Internet
B	Installation 1	F	Computer
C	Installation 10	G	Centralized database User interface Data management tools
D	3-wire Dupline®	H	40 Sensors

Compatibility and conformity

▶ **Approvals and markings**

CE-marking	$C \epsilon$
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)

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References

▶ **Product selection key**

👉 **SBP2CPY24**

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