



DCP

Digital Communication Platform

Installation Guide

Ref No MC-xCM10 850 ML Version 4

2G (R2S32): MC-2CM10-100-F-20-000

3G (R5232): MC-3CM10-100-F-20-000

2G (RS422/485): MC-2CM10-100-F-40-000

3G (RS422/485): MC-3CM10-100-F-40-000



PRODUCT DESCRIPTION

The Digital Communication Platform (DCP) provides an information gateway between all compatible connected Avire devices in the lift shaft and our online monitoring platform the Avire Hub. The product is installed as a stand-alone device and doesn't require connection to the controller panel.

In the Box

- + 2G **or** 3G DCP
- + Antenna
- + P-5 H-2V connector (x1)
- + P-3.5 H-4V connector (x1)
- + P-10 H-2V connector (x1)
- + Grey clamp (x2)
- + Manual
- + Wall plugs (x2)
- + Screws (x2)

Not Included

- + Screwdriver
- + SIM card

*Configure your DCP using the Avire App

ELEVATOR SAFETY

Please follow all Health and Safety rules & take all necessary precautions before and during installation.

SETTING UP THE DCP

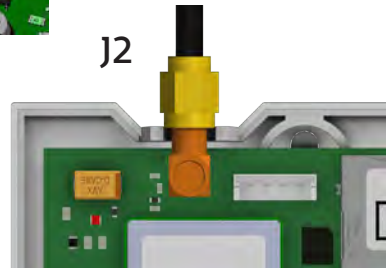
Avire SIM cards come activated and ready to be installed. If a non-Avire SIM card is used, please make sure that the SIM card is activated and unlocked.

1. Open the DCP with a PZ1 screwdriver.
2. Insert SIM into J4, pushing the SIM until it clicks.

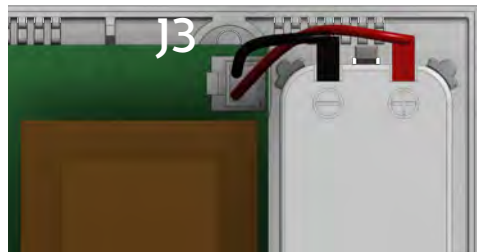


3. Connect the antenna on the DCP to J2 and ensure it is completely tightened.

NOTE: Only use antennas authorised by Avire.



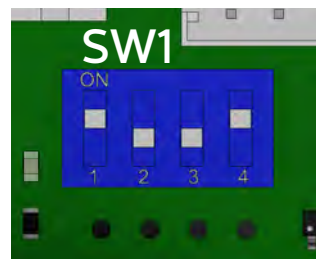
4. Connect the battery to J3.
5. Wait for the LED lights to turn on.
Check the SIM LED to make sure it is green or amber (check step 10). If it's flashing red check it's been inserted correctly and then unlock the SIM card using instructions on page 5.



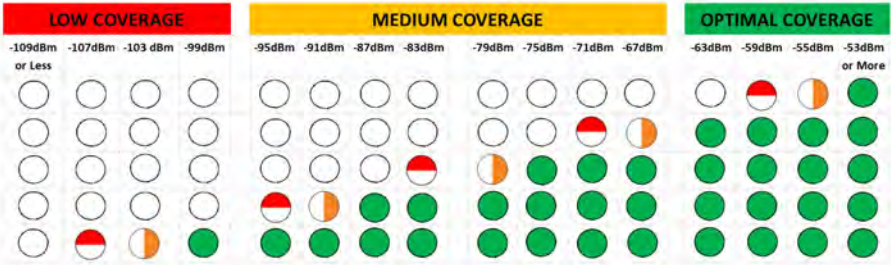
6. Check the signal strength by using the built-in network signal strength scanner. To use the signal scanner function:

- + Turn SW1 dipswitch 1 to ON (check dipswitch 4 is also ON)

Please refer to pages 13 and 14 for the full picture and connector information



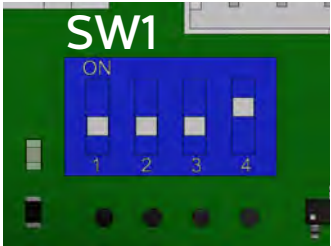
+ LEDs on the front of the DCP unit will show the network signal level



Note: The signal scanner will indicate the best location for the device to receive signal, Network coverage will vary based on local conditions.

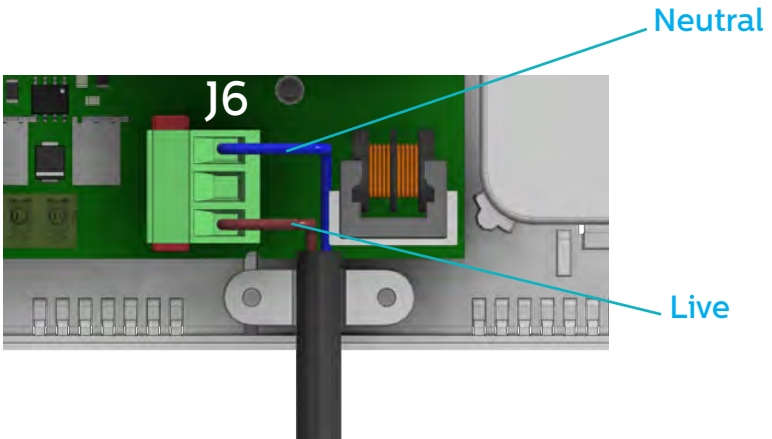


+ Once finished turn SW1 dipswitch 1 back to OFF.

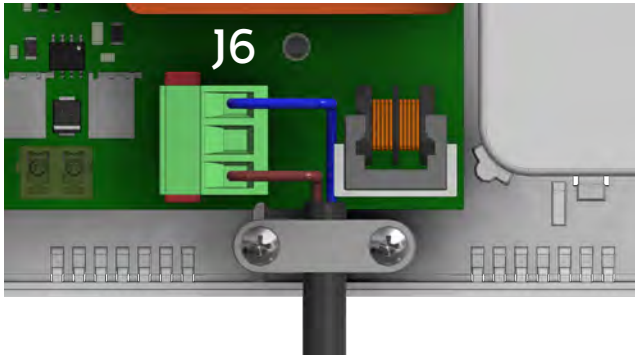


You can check the status of the power supply, battery, connection, coverage or Phone Line (SLIC) at any time by referring to the LED Indicators (page 15).

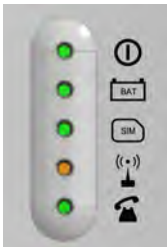
7. Connect the power supply 230VAC to J6, using the 3pin connector supplied with the unit.



- Clamp the power cable using the grey clamp provided inside the box.

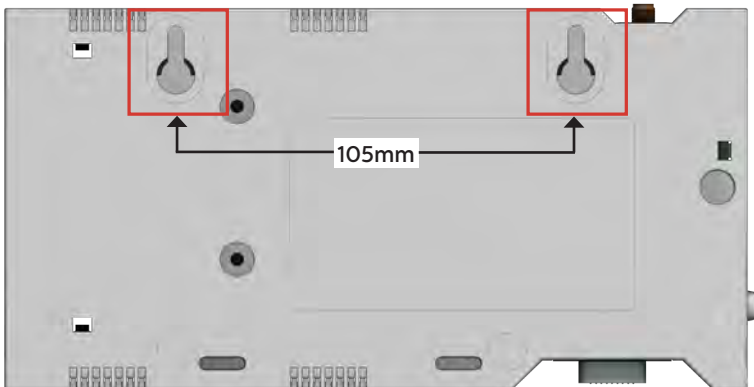


- Place the lid back on the top of the DCP and fasten the lid with the screw.
- Turn on the power to the DCP. The RUN LED on the DCP should change colour from flashing amber to flashing green when the mains power connection is made. If you see any other colour, please consult the LED Indication list on page 15.



RUN LED flashes green	Power supply is OK
BAT LED is always on	Battery is OK
SIM LED is green or amber	Device is connected to the network
Coverage LED is green or amber	Good coverage
SLIC LED is green	Device is in standby

- To fix the device in position, drill two holes in the wall and insert the wall plugs and screws provided with the device. Hang the DCP on these two points using the tear-shaped holes at the back box of the DCP (mid points of holes are 105mm apart).



- If a non-Avire SIM card is used, APN settings must be set prior to configuring it on the Avire Hub; please refer to “Setting Parameters on non-Avire SIM cards” (page 6). If the SIM LED is flashing red, please see “SIM Card unlocking” (see page 5).

CONFIGURING THE DCP

Avire App

The Avire App (available on Apple App store and Google play) allows installers to quickly and intuitively setup/configure the DCP and connect to the Avire Hub. The Avire App removes the need for configuration using SMS and instead walks you through the connection process on your smart phone. The App is available at the links below:



SMS Setup

Parameter 91 (P091) allows quick and easy configuration of APN settings, depending on the country and network provider. Configure settings for the DCP based on the tables below by texting the DCP using P091.

Example

P091	Digit 1	Digit 2	Digit 3	Digit 4
	Country	SIM0 Network	Type of Connection	SIM1 Network
Single Sim	4 = (UK)	3 = (EE)	1 = (Avire HUB)	0 = (No SIM)

Pin1234,P0914312

MK-775: TRACK_GSM_MK_775
P091=4312

The Digital Communications Platform comes pre-configured with factory settings of 0000 (this configuration doesn't specify any use case or country).

Digit 1	Digit 2	Digit 3	Digit 4
Continent	SIM0 Network	Type of connection	SIM1 Network

Digit 1	0	1-6	7	8
Continent	Default	Europe	Americas	Australasia

Digit 2 & 4	1	2	3	4	5	6
Country	Spain	Portugal	Italy	UK	Germany	France
0	default	default	default	default	default	default
1	AvireSim	AvireSim	AvireSim	AvireSim	AvireSim	AvireSim
2	Telefonica	MEO	Wind	O2	Telekom DE	Orange
3	Orange	NOS	TIM	EE	ABD	SFR
4	Vodafone	Vodafone	Vodafone	Vodafone	Vodafone DE	Bouygues Telecom
5			Iliad	3	O2 DE	Free Mobile
6			tre(3)	Virgin	BASE	
7				1P	Swisscom	
8	Telit	Telit	Telit	BT	A1	Telit
9				GiffGaff	tmobileAT	

Digit 3	0	1	2	3
Type	Transparent Gateway	Avire Hub	P100	P100 + Avire Hub

Transparent Gateway	Enables DCP to provide data/cellular connection to a device which is connected to it. This setting is often used when connecting the DCP to a non-avire PSTN phone or to a lift controller.
Avire Hub	Avire Hub setting is used when the intention is to monitor your *devices using the Avire Hub
P100	P100 setting allows connection to devices utilising the P100 protocol without connection to the Avire Hub
P100 + Hub	P100 + Hub allows connection to devices utilising P100 protocol and monitoring of devices through the Avire Hub

*Avire Ecosystem devices only

If your SIM's APN details are not listed on the previous tables, you will need to obtain this information and then manually programme the details using Parameters 60 and 61. Further details on these settings can be found using this link.



go.avire-global.com/DCP

OPTION 2

If super settings are not used, then APN settings need to be set up manually:

Command	Description
P060 (P zero six zero)	APN address
P061 (P zero six one)	APN username
P062 (P zero six two)	APN password
P063 (P zero six three)	Type of connection

These parameters must be configured by sending an SMS to the SIM card number. Examples for various regional providers are shown below:

Carrier	P060	P061	P062
Vodafone UK	wap.vodafone.co.uk	wap	wap
DeutscheTelekom	Telekom	(blank)	(blank)
Orange France	Orange.fr	orange	orange

P063	0	1	2	3
Type	Transparent Gateway	Avire Hub	P100	P100 + Avire Hub

Other APN settings are available on the web and can be easily found online. If an APN is incorrect for the provider or is not set up correctly, the DCP will not check into the Avire HUB.

Important Note: The default PIN code for DCP is always 1234.

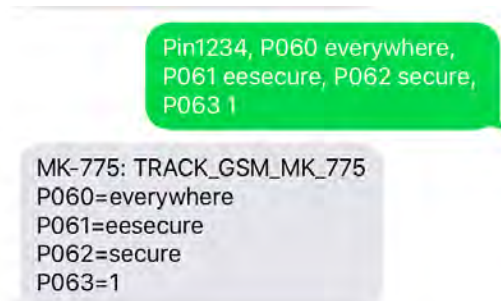
Example of an SMS for single SIM card device (for example if the SIM card is from Vodafone):

Pin1234,P060 wap.vodafone.co.uk,P061 wap,P062 wap,P063 1

If either APN username and/or APN password are (blank) (DeutscheTelekom example) and the DCP is configured to be used with the Avire Hub, then the text message will be:

Pin1234,P060 (blank),P063 1

If everything is configured correctly, you will receive a text within a few minutes:



Obtaining the CCID number

AVIRE SIM CARDS

Avire SIM cards come unlocked to be used with our products immediately after plugging them in and setting correct Super settings. You will need to know the CCID number to add this information to the Avire Hub.



The CCID Number is shown on the back of the SIM card and also on the outer plastic case of the SIM card (highlighted in red on the picture below).



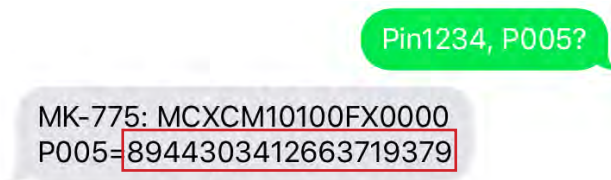
Important Note: Make sure the complete CCID number is entered when adding the DCP to the Avire Hub, or the DCP will not be able to communicate with the Hub.

NON-AVIRE SIM CARDS

It is also possible to retrieve the CCID number by sending a SMS command to a SIM card telephone number; the command needs to be separated by a comma as shown below:

Pin1234,P005?

You will receive a text with the CCID number back within a few minutes; in this example, the number shown after "P005=" is the CCID number of this SIM card.



Important note: Example CCID number is highlighted in red on picture above.

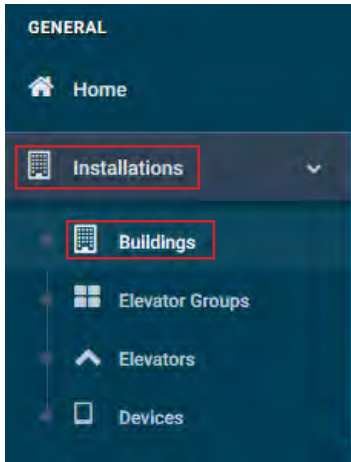
You will need to retrieve the CCID number when the DCP installation is set up on the Avire Hub online platform. Please make sure that if this installation is set up by the office, they know the details for installation.

AVIRE HUB

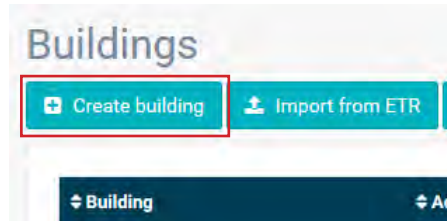
Please contact your local sales office for access to the Avire Hub.

The link to the Avire Hub is <http://avirehub.avire-global.com>

To view installation tutorial videos please go to the “Help” section of the Avire Hub.



Click on “Installations” in the menu on the side and then on “Buildings”. Inside of “Buildings” tab click on “Create Building”



Enter information relevant to your installation in General data

General data

Building *	<input type="text"/>
Address *	<input type="text"/>
City	<input type="text"/>
Province	<input type="text"/>
Latitude	<input type="text"/>
Longitude	<input type="text"/>
Postcode	<input type="text"/>
Country	Select <input type="text"/>
Comments	<input type="text"/>
Tags	add a tag <input type="text"/>
Group	ABC Ascenseurs <input type="text"/>

On the other side of the page please enter the number of elevator group you have in this installation and how many elevators you have in the group. As an example, if this is a simplex installation the number of elevator groups will be “1” and the number of elevators will also be “1”. If it’s a duplex installation it will be “1” and “2” respectively.

Form

Number of elevator groups: 1

Number of elevators per elevator group

Change name of elevators group: Group 1

Select number of elevators: 1

Next >

You can also edit the group names to easily identify installations. Once all information is entered click “Next”.

In the new page, you should be able to see “Groups” and “Elevators”. Click on “Add gateway” under the term “Gateway” and select the “DCP” option (see example image below). A pop up window will appear where you can enter the SIM information (Note: Avire SIM cards have the country code (+31), but this has no impact on costs). Enter all required information and then click “Apply”.

Note: The Background Call Period is the frequency of test checks and 72hrs is the maximum period as per guidance from standards.

Group 1

+ Add gateway

+ Add elevator

Devices

- DCP
- LandLine
- GSM Link
- LAN
- DCP-4G

Gateway

Add gateway

Elevator 1

Add emergency device

Add device

Full gateway: DCP

Prefix * Avire SIM +31

Phone *

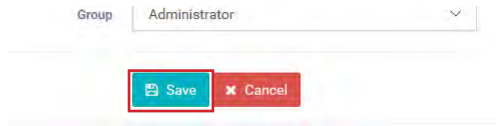
Identifier

CCID *

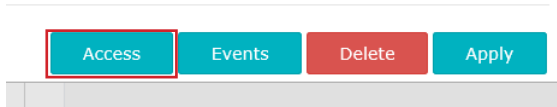
Background Call Period (Hours) 72

Cancel Apply

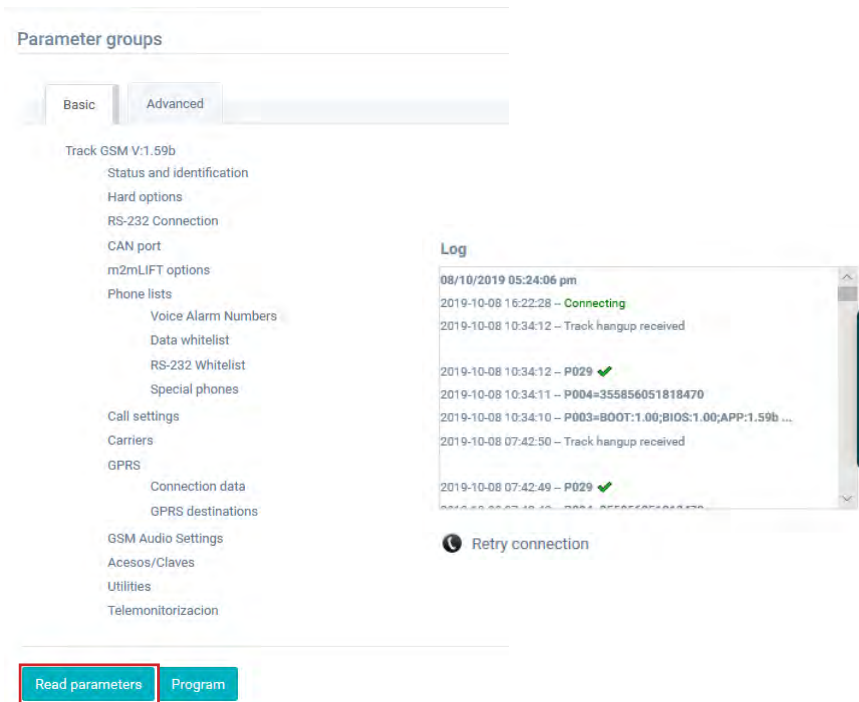
Click “Save” in the left corner under the General data column.



To make sure that everything has been set up correctly click on the green DCP button. The buttons “Access” and “Events” should now be accessible.



Click on the “Access” button.



As soon as access is available, click on the “Read parameters” button. A window with the time, the date and the green highlighted word “Connection is being established” is then displayed on the right of the page. Once the DCP is connected to the Avire Hub, parameters are displayed, which means that the DCP is ready to connect to emergency phones and other products within our ecosystem.

ADDITIONAL INFORMATION FOR PROGRAMMING THE DCP

SMS COMMANDS

- + All DCP parameters can be remotely configured via SMS sent to the SIM card's number.
- + Each SMS message should begin with 'Pin1234' which is the access code to read or make any changes to the configuration of the DCP.
- + You can modify or check several parameters in each SMS by separating them with commas ","

To send parameter information:

Text	Description
Pin1234,Pzzz xxx (send)	<ul style="list-style-type: none"> • Pin1234 is default PIN code for DCP • Pzzz is the programming command • xxx is the parameter

To read parameter information:

Text	Description
PinXXXX,Pzzz? (send)	<ul style="list-style-type: none"> • Pin1234 is default PIN code for DCP • Pzzz is the programming command • "?" is to request a parameter read

Note: Use a question mark '?' when you are reading parameters.

Examples:

- To program telephone number 1 in the DCP when connected to a DAU
E.g: Pin1234, P031 0123456789 (send, text message will come back with P031=0123456789)
- To retrieve telephone number 1 in the DCP when connected to a DAU
E.g: Pin1234, P031? (send, text message will come back with P031= or with the programmed number)

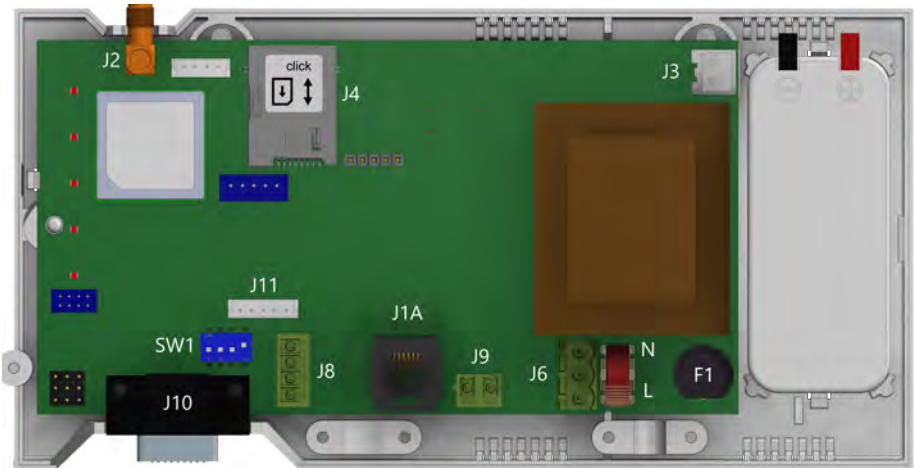
CMD	Description	Default value
P005	CCID- Unique Identifier of the Sim Card	Country dependent
P020	DCP Background Call Mode P020=00 -> Transparent Protocol P020=06 -> CAN Protocol P020=21 -> P100 Protocol	21 (Autodialler's need to make Background calls in P100 Protocol)
P064	Background Call Periodicity (in Minutes)	4320 (3 days)
P030	Maintenance Alarm Number	(Blank)
P031	Alarm Number 1	(Blank – Insert your alarm number here)
P032	Alarm Number 2	(Blank)
P033	Alarm Number 3	(Blank)
P034	Alarm Number 4	(Blank)
P035	Background Number (not used with DAU)	3308084431 (must match Background Number in Autodialler, without prefixes)
P008	Enable Guidance Message	0 (disabled) 1 (enabled)
P085	Language	1 – Spanish, 2 – Portuguese, 3 – Italian, 4 – English, 5 – German, 6 – French
P091	Super settings set up	0000
P003	DCP information (software version, type of DCP)	See example on next page

Note: The DCP's default settings are set to 000.

Example of text received when requesting P003



Connector Description



	Description
J2	External antenna
J3	Battery
J6	Power Supply
J8	CANBus
J9/ J1A	Phone line
J10	Serial connector
J11	Programmable I/O

To access dipswitches and connectors, open the DCP case by unfastening the front screw (using a PZ1 screwdriver) and removing the lid.

J2 - External antenna - Connect the external antenna delivered with the kit to the J2 connector. Only antennas approved by Avire should be used in the installation, otherwise the device might not function properly and may be damaged.

J3 - Battery

Pin	Function	Signal
1	+12	Positive
2	GND	Negative

J6 - Power Supply

Pin	Function	Signal
1	L	Live
2	N	Neutral

Supply voltage: 100-240 VAC, 50/60 Hz

J8 - CANBus

Pin	Function	Signal
1	VCC	Unregulated output
2	CANH	Bus CAN H
3	CANL	Bus CAN L
4	GND	Ground

VCC is an unregulated output 10-21 VDC + battery support 10-14 VDC

J9/ J1A - Phone line (SLIC)

Pin	Function	Signal
1	L1	Tip
2	L2	Ring

J10 CONNECTOR - RS-232 or 422/485 Serial Connector

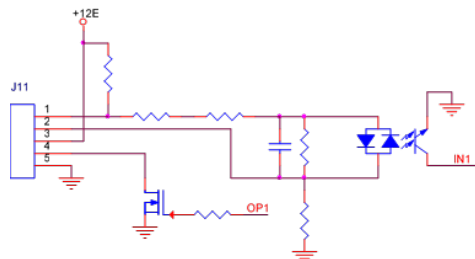
The J10 connector is a standard serial communication port that allows the connection of computers, controls or any other device that needs remote communication through a reliable wireless data channel. The connectivity provided by the port is in real time and acts as a point to point transmitter.

Pin	Signal		Pin	Signal	
2	TX	Out	7	RTS	Out
3	RX	In	8	CTS	In
5	Ground	Ground	RS-232		

Pin	Signal		Pin	Signal	
2	T+	T+ RS422	7	T-	T- RS422
3	R-	R- RS422	8	R+	R+ RS422
5	Ground	Ground	RS-422		

J11 - Digital Input/ Output

Pin	Function	Signal
1	AK1	Input Outo-Coupler
2	AK2	Input Outo-Coupler
3	VCC	Output 10-21 VDC
4	OP1	Open collector Mosfet N
5	GND	Ground



LED INDICATORS


The DCP has five indicator LEDs that constantly report the device status. The indicators will be either red, amber or green.


Each indicator will be fully on, fully off or flashing. On start-up, you should see the following within 60 seconds:




RUN LED flashes in green.	Power supply is OK
BAT LED is always on	Battery is OK
SIM LED is green or amber	Device is connected to the network
Coverage LED is green or amber	Good coverage
SLIC LED is green	Device is in standby

The below tables provide an overview for what each LED colour means:


RUN LED	OFF	ON			FLASHING		
		Green	Amber	Red	Green	Amber	Red
		CRITICAL SYSTEM ERROR			Proper Operation (AC)	Proper Operation (BAT)	Restarting System

BATTERY	OFF	ON			FLASHING	
		Green	Amber	Red	Amber	Red
		OK	Charging	Low	DAU battery failure	Error

Important Note: DCP shows battery status of DCP or battery failure of any attached DAU units as per EN81-28:2018.

SIM	OFF	ON			FLASHING		
		Green	Amber	Red	Green	Amber	Red
	AT modem	Available GSM and GPRS	GSM available GPRS not available	Out of Service / Initialising	Ongoing Data Transmission	Ongoing voice call	Sim error or missing pin
					Amber/Red Missing PUK		

COVERAGE	OFF	ON		
		Green	Amber	Red
	AT modem	OK	Medium	Low

SLIC	OFF	ON			FLASHING
		Green	Amber	Red	Green
	RS-232 local configuration	Local line ready	Initialising local line	Local line out of service	Local line in use

System Architectures



DCP



Triphony Unit



Universal Power Supply



PIT Phone



LPBus Digital Audio Unit



Induction Loop



CAN Bus Splitter



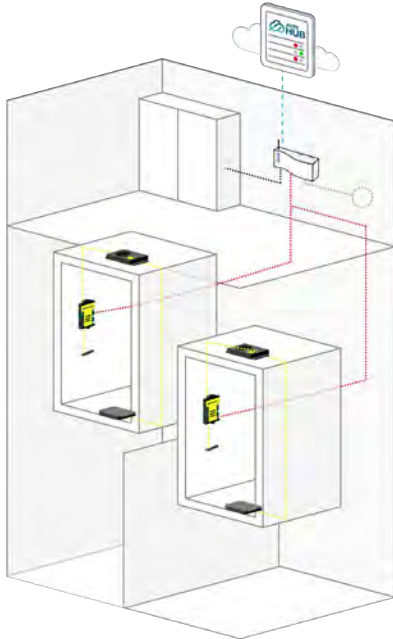
*Lift car system architecture with DCP, LPBus DAU, TOC
Triphony Unit and Inductive Loop*



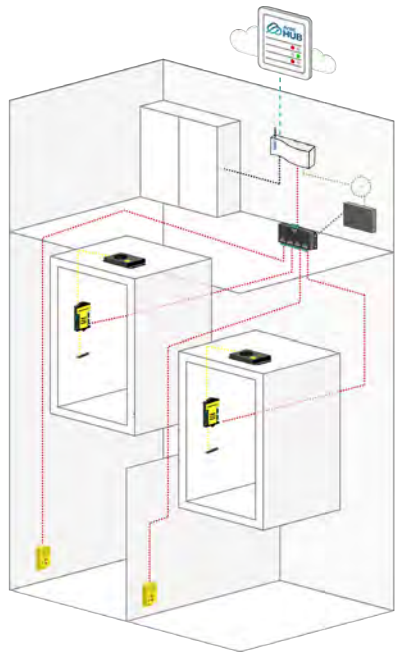
CANBus
.....

LPBus
.....

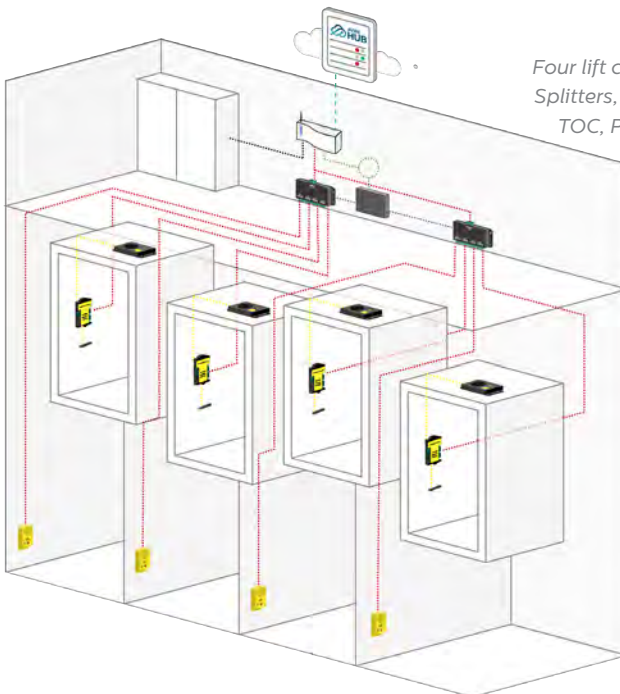
Two lift car system architecture with DCP, LPBus DAU, TOC and BOC Triphony Units and Inductive Loops



Two lift cars with DCP, UPS, CANBus Splitter, TOC Triphony Unit, LPBus DAU, PIT Phone and Inductive Loops



Four lift cars with DCP, UPS, CANBus Splitters, LPBus DAU, Triphony Units TOC, PIT Phones and Inductive Loops



Notes:

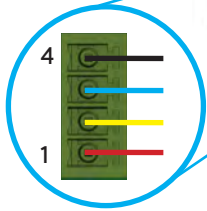
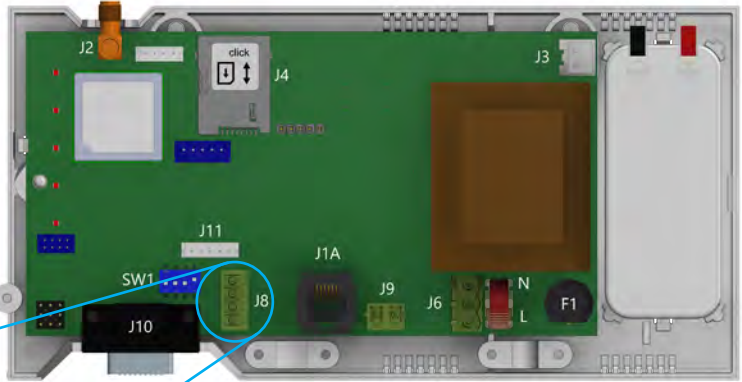
UPS battery back up only uses H and L wires from DCP.

There is a maximum of two CANBus Splitters per DCP.

Installation with a Digital Audio Unit

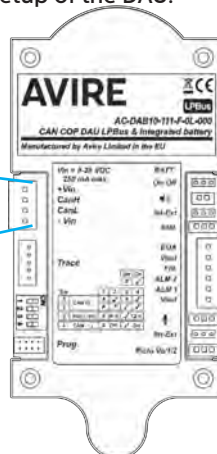
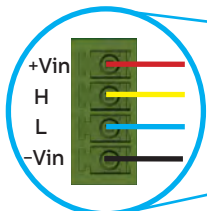
When connecting a Digital Audio Unit (DAU) connect the unit or the CAN Bus Splitter to J8 using a 4-core cable (2 wires for power and 2 for communication)

- + If only connecting 1 device to the DCP (e.g. DAU) set SW1 dipswitch 4 to ON
- + It is recommended to use shielded twisted pair cables
- + If connecting 2 devices to the DCP (e.g. 1 DAU and 1 PIT unit) set SW1 dipswitch 4 to OFF
- + There are no standard wiring colours for CANBus wiring



J8	CAN BUS	1	+Vin
		2	CAN H
		3	CAN L
		4	-Vin

Please refer to the DAU Installation guide for full setup of the DAU.

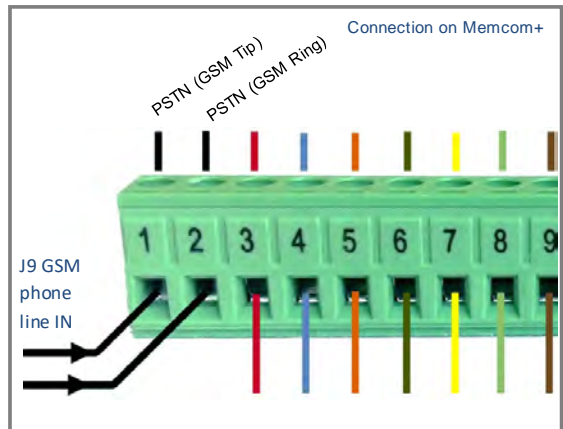
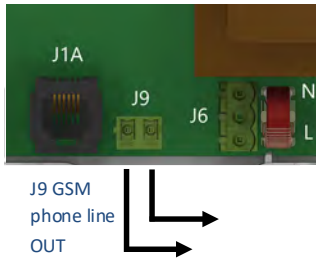


Installation with a Memcom+

When connecting a Memcom+ use the analogue phone line connection from J1A or J9.

Please refer to the Memcom+ installation guide for full set up of the Memcom+.

Connections on DCP



INSTALLATION

The equipment is intended for installation in restricted areas by qualified personnel.

ENVIRONMENT CONDITIONS

This device is designed to be used indoors (0°C to 65°C with relative humidity between 20% to 80% not condensing). Sudden changes of temperature and humidity should be avoided.

CLEANING AND MAINTENANCE

Use a soft dry cloth. Do not use solvent or abrasive products.

SAFETY

Please read these safety instructions before starting the device.

- + Do not expose this device to liquids or excessive humidity. The DCP is an indoor device and is not waterproof.
- + Do not expose the device to fire.
- + Do not try to modify the device.
- + Do not use the device in potentially hazardous areas or where there is risk of explosion.

The DCP emits low levels of radio frequency when in operation.

BATTERY

The DCP includes a NiCd 12 V/600 mAh battery that allows it to keep functioning in the event of a mains power failure.

This battery should be replaced every 3 years. Only install batteries authorized by Avire, and only allow qualified personnel to replace the battery.

This battery should be properly recycled and not disposed of with unsorted household waste. Please take all necessary precautions when changing the battery.

DISPOSAL

The device complies with regulations 2002/95/CE and 2003/108/CE regarding the use and disposal of hazardous substances in electric appliances.

Do not dispose of this device with unsorted household waste. Disposing of the device in an unauthorised way could result in a fine in line with local regulations.

ENVIRONMENTAL REGULATIONS

RoHS - Avire certifies that its production process complies with the 2011/65/EU European Directive of 03 January 2013 regarding the restriction of use of hazardous substances in electric and electronic appliances.

GENERAL NOTE

Any wiring or plug used together with the equipment must be certified in line with relevant product standards. The wiring insulation must comply with the applicable IEC 60332 or IEC 60695/11/21 standards.

AVIRE

Avire Trading Ltd

Unit 1, The Switchback
Gardner Road
Maidenhead
Berkshire
SL6 7RJ, UK

T: 01628 540100
F: 01628 621 947
E: sales.uk@avire-global.com
W: www.avire-global.com

