

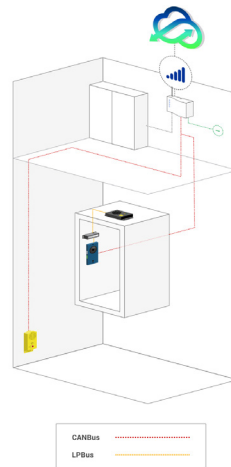
Digital Audio Unit (CAN DAU LPBus)

CAN, Low Power Bus, Integrated back-up battery, slim design

Installation Guide

Ref No: MU-89120ME101-AU V01

Part No: AC-DAB10-120-F-0L-000



Typical CAN DAU LPBus System Architecture

In the Box

- + DAU unit
- + Connector P-3.5 H-4V (x1)
- + Connector P-3.5 H-6V (x1)
- + Mounting Clip (x2)
- + Multi-Product Installation guide
- + Connector & Wire for pictograms

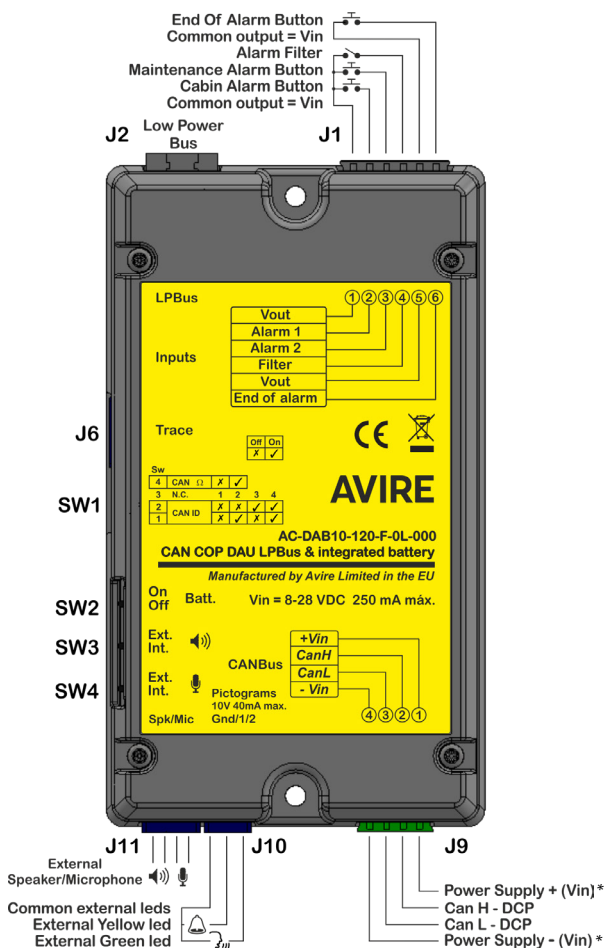
Not Included

- + Digital Communications Platform (DCP)
- + Pit DAU
- + Triphony unit
- + Inductive loop
- + Wiring and external accessories



INTRODUCTION

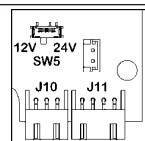
1. The Digital Audio Unit (AC-DAB10-120-F-0L-000) connects with the Digital Communication Platform (DCP) to provide a 2-way communication point in the lift car.
2. The DAU is mounted behind the lift car operating panel (COP) and connected to the machine room mounted DCP via a 2 or 4 wire digital CAN Bus, providing stable communication over trailing cables of up to 200m.
3. The DAU can be installed with 2 or 4 wires: 2 wires uses CAN H and CAN L to reduce interference problems with the DAU LPBus and requires an external power supply between 8-28VDC 250mA, while 4 wires means no external power supply is needed because the DCP will supply the power required by the DAU LPBUS.
4. It is recommended that customers use shielded twisted pair cable to ensure minimal disruption to the audio channel from ambient electrical noise in the travelling cable.

CONNECTORS



* Connect to external power supply for 2-wire system & to DCP for 4-wire system installations.

J1	Vout	Common output (5VDC/ Batt)	
	Alarm 1	Cabin alarm button *	
	Alarm 2	Maintenance alarm button*	
	Filter	Alarm filter *	
	Vout	Common output (5VDC/ Batt)	
	EOA	End of Alarm signal input	
J2	LPBus	Low Power Bus (LPBus) which connects to external audio units and other LPBUS devices	
J6	Trace	Required for debugging (only for Avire Technical Support)	
J9	+Vin (8-28 VDC)	2-Wire System: 8-28VDC 250mA max from external power supply. CAN H and CAN L communication connected to the DCP.	
	CAN H	4-Wire System: Connection from DCP/CANBus Splitter. Power supply is not required, as DAU LPBus will receive its power from DCP/ CANBus Splitter. It is recommended to use twisted pair wiring for CAN H and CAN L.	
	CAN L		
	-Vin (Ground)		
J10	Green	Pictogram	Please Note: 2 outputs of 12Vdc or 24Vdc are supplied with a max current of 20mA each. The output voltage can be selected using the SW5 switch located inside the device (default: 12Vdc). It is possible to connect any type of indicator that doesn't exceed these specifications.
	Yellow	Pictogram	
	Ground	Negative reference	
J11	MIC +	External microphone connections. Please only use microphones approved by Avire.	
	MIC -		
	SPK +	External speaker connections. Please only use speakers approved by Avire.	
	SPK -		
SW4	Microphone Config 	Internal/External microphone (default: Internal)	
SW3	Speaker Config 	Internal/External speaker (default: Internal)	
SW2	Battery	Battery Config (Enabled/Disabled) (default: Disabled) **	
SW1	DAU configurations	See chapter DAU configurations	



* - Only for contacts without voltage. Place an intermediate relay if any button has voltage.

** - In installations where the DAU is powered from a power supply that also has a battery backup, its internal battery may be disconnected. In all other cases the battery should be connected, otherwise the system won't work in the case of mains power failure.

Note: Connections use a positive 5vdc common and all DAU programming is done via the DCP

End of Alarm (EOA): This indicates that the emergency lift trapping rescue is over and the alarm can be turned off or reset.




























Alarm Filter: The Cabin Alarm button will not activate unless the lift is in a fault condition or the doors are closed, this filter is mostly used to prevent nuisance calls. DAU LPBus does not need to be programmed but requires the lift signals.

Maintenance Alarm Button: This allows dialling of a different telephone number if a trapped person is a member of maintenance staff (SOS number requires programming via the DCP, P030)

Cabin Alarm button: This is the main alarm button in the car operating panel which needs a voltage free contact from the Alarm push to trigger an emergency Alarm call. The button is defaulted to Normally Open, but can be reconfigured to Normally Closed (see programming guide DAU below PC117)

LPBus (Low Power Bus): This connector allows the connection of Triphony and Inductive loop units.

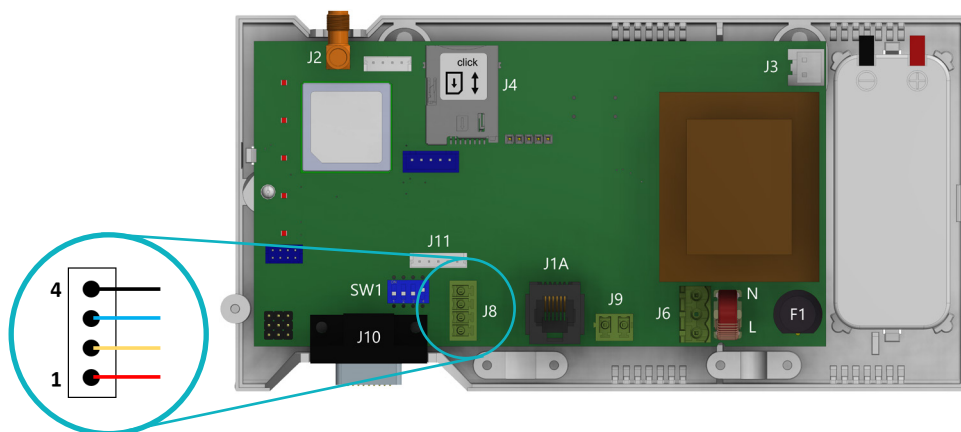
DAU CONFIGURATIONS (SW1)

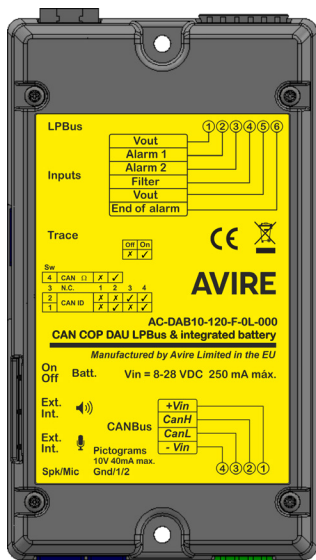
SW1	FUNCTION	DESCRIPTION															
	Shaft (car) number	<p>In a system with more than one lift car you need to select the lift shaft for each DAU. The below table shows how you can set the ID for each DAU.</p> <table border="1"> <thead> <tr> <th>Car</th> <th>1</th> <th>2</th> <th>3</th> <th>4</th> </tr> </thead> <tbody> <tr> <td>SW1- 1</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SW1- 2</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Car	1	2	3	4	SW1- 1					SW1- 2				
Car	1	2	3	4													
SW1- 1																	
SW1- 2																	
	Not used	Not used															
	CAN Ω	<p>Activates the CANBus End of Line (EOL) for the CAN connector.</p> <p>ON - DAU LPBus if the last device in line</p> <p>OFF - Other devices are connected to DAU apart from DCP</p>															

CONNECTION TO CANBUS

When installing a DAU connect the unit or the CAN Bus Splitter to J8 using a 4-core cable (a CAN Bus Splitter is required when a DCP is supporting more than one lift). **Please note that if the device is wired incorrectly, the DAU will not work.**

- If only the DAU is connected to the DCP set SW1:4 to ON (default setting) on both, as these devices are End of Line.
- If the DAU is an intermediate device between the DCP and another CAN device, set SW1:4 on the DAU to OFF.
- The use of shielded twisted pair cables is recommended.



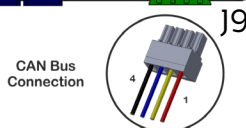


CANBus connection on DCP

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

CANBus connection on DAU

J9	CAN BUS	1	+Vin (8-28 VDC)
		2	CAN H
		3	CAN L
		4	-Vin (Ground)



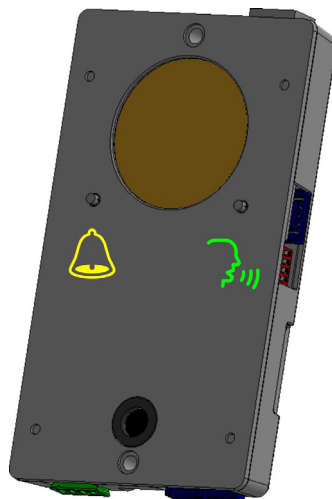
LED INDICATORS / PICTOGRAMS

External LED indicators can be connected to the DAU through the J10 connector, as can be seen in the wiring diagram on page 2.

The following table describes the operation of the two LEDs (green and yellow) on the DAU:

Yellow LED	Green LED	FUNCTION
OFF	OFF	End of alarm or Device on standby
ON	OFF	Alarm started, communication is established OR End of voice communication
ON	ON	Start voice communication
OFF	ON	Audio module communication established
OFF	Quick Flashing	External audio module communication established

If the DCP doesn't have access to voice call, yellow and green LEDs will both flash until the issue is solved.



PROGRAMMING THE DAU

The CAN DAU LPBus is configured via the DCP. The DCP can be configured remotely via the Avire Hub or via SMS.

1) THE AVIRE HUB

- + All settings can be configured remotely via the Avire Hub
- + The link to the Avire Hub is avirehub.avire-global.com Please contact your local sales office to get access to the Avire Hub.

2) SMS COMMANDS

- + All DAU parameters can be remotely configured via SMS.
- + Each SMS message should begin with 'Pin1234' which is the access code to read or to 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:

Pin1234, PcXX then value to set, (send)

'c' indicates the cabin number for each lift shaft (1, 2, 3 or 4)

To read parameter information:

Pin1234, PcXX? (send)

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

Example:

To find out values set for the parameters 12, 19 and 23 for cabin 1:

Pin1234, P112?, P119?, P123?

To set parameters 19=1 and 23=3 for cabin 2:

Pin1234, P219 1, P223 3

Example how to set type of cabin alarm button (Pc17) in cabin 3 to normally closed (value 1):

Pin1234, P317 1

The table below indicates all the parameters which can be set on the DAU:

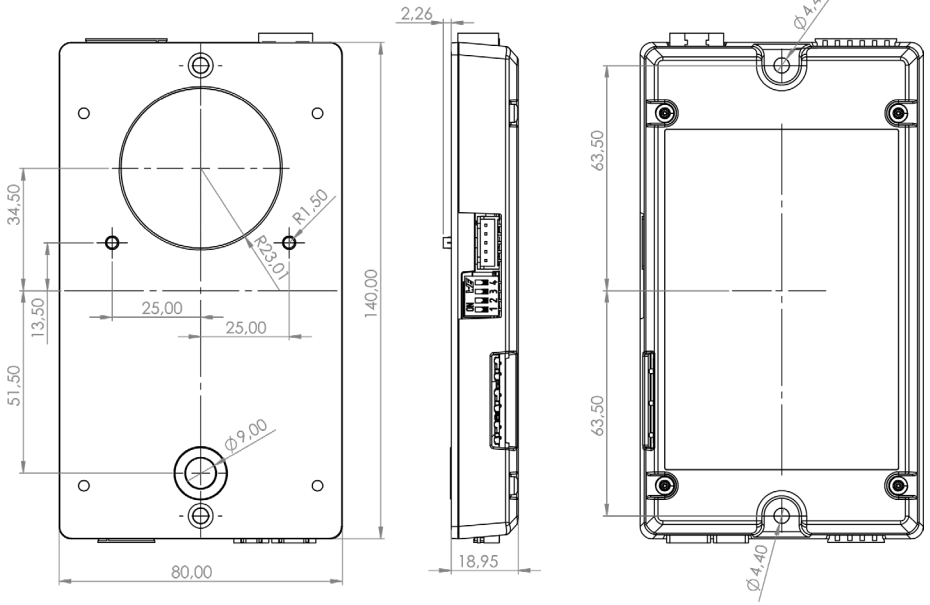
CMD	Description	Default value
Pc01	End of Alarm (EOA)	-
Pc02	Reset of Alarm (ROA)	-
Pc03	Firmware Version	-
Pc06	Device Status	-
Pc07	Direct the first alarm call to DCP telephone (0 = No, 1 = Yes)	0
Pc08	Alarm call bypass filter time (0-10 s)	10
Pc09	Reset to Factory Default	1234567890
Pc10	Reboot Digital Audio Unit	1234567890
Pc11	Alarm Button Countdown timer (seconds)	3
Pc12	Alarm Filter Input (0=Off ; 1=On)	1
Pc13	Cancel alarm by pressing alarm button (0=Off ; 1=On)	0
Pc14	Wait for Alarm Acknowledgment (0=Off ; 1=On) *	1
Pc15	Automatic End of Alarm EOA (0=Off ; 1=On)	0
Pc16	Privacy Mode ** (0= Off, 1= On)	1
Pc17	Type of cabin alarm button (0= n/o; 1=n/c)	0
Pc18	Type of maintenance alarm button (0= n/o; 1= n/c)	0
Pc19	Type of end of alarm button (EOA) (0= n/o; 1=n/c)	0
Pc21	LED Mode (0=Full ; 1=EN81-28)	1
Pc22	Alarm Call Retry Attempts	5
Pc23	Maintenance Call Retry Attempts	3
Pc24	Lift Car Microphone Volume	5
Pc25	Lift Car Speaker Volume	5
Pc26	Lift Car Announcement Volume	5
Pc27	Floor voice synthesis	1
Pc28	Language *** (1=Spanish;2=Portuguese;3=Italian;4=English;5=German;6=French)	400000
Pc29	Time between alarm calls (in seconds)	0
Pc32	Extended Address	00
Pc33	Battery check enabled	1
c = number of the car you need to check/ configure		

*If the Alarm Acknowledgement is on, the Operator must press "0" to acknowledge the alarm.

**The microphone inside the car is disconnected if there's no emergency alarm call.

***The DAU can use up to six simultaneous languages, each digit being its sequence order.

DIMENSIONS



ENVIRONMENT CONDITIONS

This device is designed to be used indoors (0°C to 45°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 DAU LPBus 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

BATTERY

The DAU LPBus has a NiMH 3.6 V/650 mAh battery that allows it to keep functioning in the event of a mains power failure. This battery should be replaced every 2 years. Replacing the battery involves removing the lid of the DAU, disconnecting the existing battery and replacing it with the new battery from Avire (the part number is on the battery label).

This battery should be properly recycled and not disposed of with unsorted household waste.

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 3 January 2013 regarding the restriction of use of hazardous substances in electric and electronic appliances.

