

# INSTRUCTION MANUAL

## DAAB COMMUNICATION CARD DB408

*For automatic control unit DAAB EP104  
version 4.07 or higher*



FAAC Nordic AB

BOX 125, SE-284 22 PERSTORP SWEDEN, ☎ +46 435 77 95 00, ✉ support@faac.se

www.faac.se

## Technical data

Dimensions (WxHxD)	23x30x20 mm
Temperature range	0 to 50°C
Indications	2x LEDs
Degree of protection	The PCB is designed for internal installation in an enclosure

## Safety instructions

See operating manual for automatic control unit EP104.

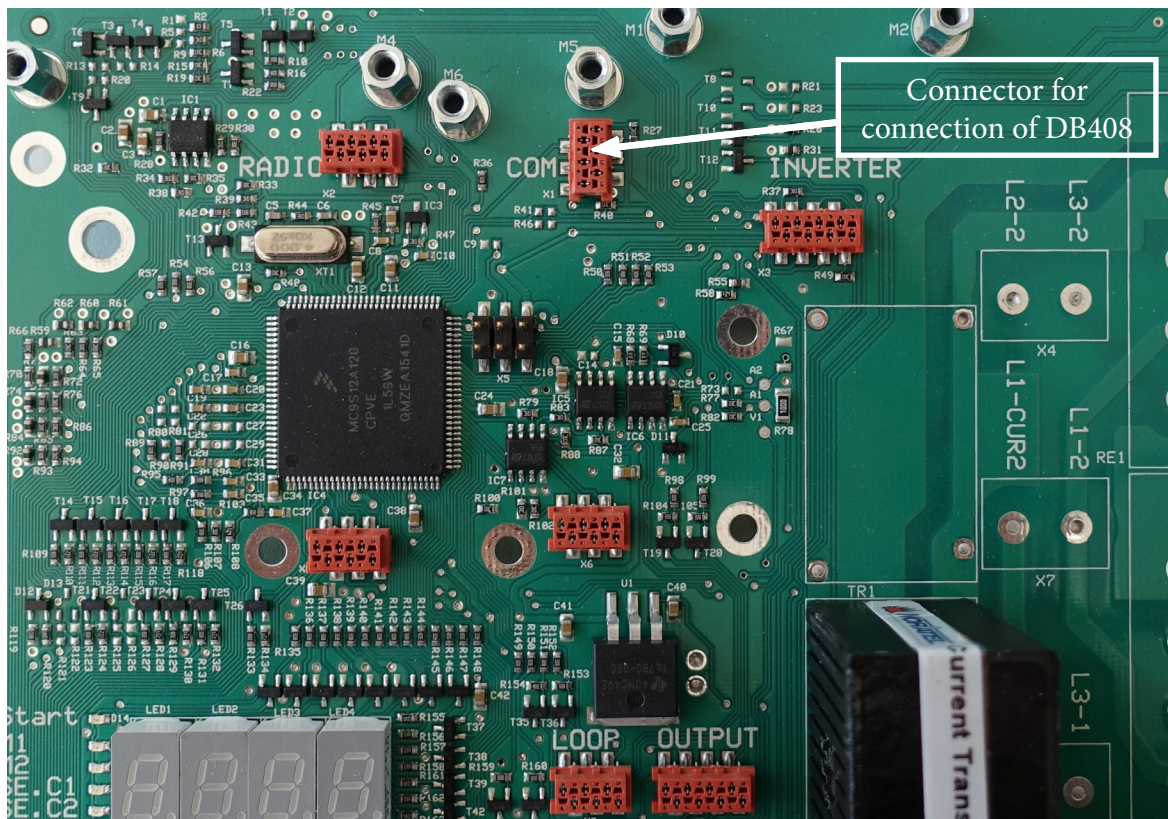
## General description

DB408 is an add-in card to obtain communication between two EP104s. Various interlock functions can be programmed using the communication.

Communication status is indicated by two LEDs mounted on the card. Quick flashing LEDs indicate that the card is sending and receiving information to and from the other card.

## Installation

1. Discharge any static charge in your body by touching an earthed connection before starting installation.
2. Disconnect power to EP104
3. Fit the two red connectors together.
4. Screw the card into place using two M3x5 screws.
5. Connect the communication cable as described under Connection in this document.

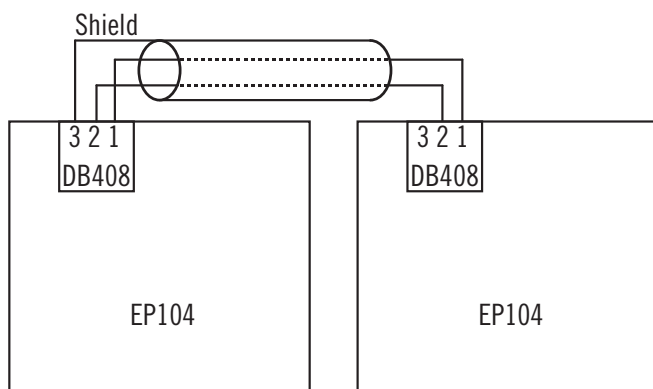


## Connection

To optimise communication between two EP104s, it is important to choose suitable cable and to route it correctly. A suitable cable is FQAR-PG 2X0,5, E0182120. Otherwise use a twisted pair shielded cable with a conductor cross sectional area of at least 0.2 mm<sup>2</sup> and a capacitance of 50-70 pF/m.

Connect the shield at one end only to DB408 terminal 1. At the other hand, trim off the shield after the cable insulation. The cable length must not exceed 1000 m.

Connection must be performed by a qualified electrician.



**When the card has been installed and connected, the power supply to EP104 can be switched on.**

## Functions using add-in card DB408

Two EP104s can send interlocks and start signals between each other through communication. Each of the doors must first be commissioned and tested locally in accordance with the the DAAB Automatic Control Unit EP104 instruction manual. The terms local door and remote door are used in the text. The local door is the door currently being configured. The remote door is the door connected to the local door via the communication cable.

### Communication

To pass signals and values from one EP104 to another configure C695. If C695 = 0, the communication is disabled. Always start by setting C695=2 in one of the units, then start communication by setting C695=1 in the other unit. The automatic control unit with C695=1 immediately starts transmitting values to the automatic control unit with C695=2, which responds by returning the values. If communication fails, the error message E614 appears in the display. This error message means that the automatic control unit with C695=1 does not receive a response to transmitted messages. Possible causes: only one of the automatic control units is configured for communication; C695 is set to the same value in both units; or one of the units is switched off. To acknowledge the error message, press any programming button. The error message continues to appear for as long as the transmitting automatic control unit does not receive a response.

### Blocking of remote door (C664)

The opening and closing function of the remote door is blocked by the position of the local door under the conditions specified for the channel. The setting 0 gives no blocking the value 1 gives blocking of opening of the local door until the remote door is closed. See the channel reference for more configuration options.

### Opening memory, cancel block with stop (C665)

When the interlock and blocking function between two doors is used, the remote door is operated using a programmable input or opening function via the vehicle detector DB402 or the radio card DB411. For programmable input, opening of remote door is configured in channels P190-P690; for the vehicle detector in channels d190 and d290 and for the radio card in channels r190 to r90. Opening memory means that the local door remembers the open signal that was sent, even though it must stay closed until the remote door has reached the open position – the function can be configured in channel C665. With the setting 0, the local door does not remember the open signal, and a stop signal does not cancel a block. If you set the value to 1 the local door will remember the open signal without the stop signal cancelling a block. See the channel reference for more configuration options. Block is cancelled by the stop circuit being broken for at least 5 seconds, after which the block is cancelled.

### Example applications

Examples of some systems with interlock system are described below. Each new example is highlighted in **bold**.

#### **Opening two doors simultaneously:**

To open two adjacent doors at the same time, activate a programmable input, e.g. INP1 for interlock opening. P160 = 1 means that the local door opens and P190 = 1 means that the open command is transmitted to the remote door. If C664 is set to 0, the signal is sent directly to the remote door. If it is set to 1, the signal is not passed on until after the local door has opened and then closed.

#### **Preventing draughts in spaces with two doors, thermal interlock**

If there is a problem with draughts, doors can be blocked so that only one can be opened at a time. The door will not open before the other linked door is closed. The software remembers the most recent opening operation, so the door will be opened once the other door closes, even if it is currently blocked from opening because the other door is opening or is open. The memory function can be disabled in channel C655.

Configuration for the above example with programmable input INP1:

- Door 1, C664 = 1, P160 = 1, P190 = 1, C500/C501 = suitable automatic closing time.
- Door 2, C664 = 1, P160 = 1, P190 = 1, C500/C501 = suitable automatic closing time.

#### **Directional thermal interlock**

A thermal interlock can also be directional – in other words the interlock works from one direction but not the other.

Example: When door 1 is operated using the programmable input, door 1 opens and then closes using the automatic closing time, then door 2 opens automatically and closes using the automatic closing time. When approached from the other direction, however, doors 1 and 2 open at the same time.

Configuration for the above example with programmable input INP1:

- Door 1, C664 = 0, P190 = 1.
- Door 2, C664 = 1, P190 = 1, P196 = 1.

## Channel reference

### Interlock block

No.	Name	Range	Factory	Setting
C664	Block of local door	0 – 3	0	
	0	No block		
	1	Block of open on local door until remote door is closed		
	2	Block of open on local door until remote door is open		
	3	Blocking of close on local door until remote door is closed		
C665	In block of local door	0 – 3	3	
	0	Local door does not remember open and stop, stop does not cancel block of remote door		
	1	Local door remembers open and stop, stop does not cancel block of remote door		
	2	Local door does not remember open and stop, stop cancels block of remote door		
	3	Local door remembers open and stop, stop cancels block of remote door		
C695	Network number for communication	0 – 2	0	
	0	Disabled		
	1	Automatic control unit no. 1 in communication		
	2	Automatic control unit no. 2 in communication		



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