

# INSTRUCTION MANUAL

## DAAB COMMUNICATION CARD DB512

*For DAAB EP105  
automatic control system*



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### Technical data

Dimensions (WxHxD)	70 x 37 x 20 mm
Temperature range	0 to 50°C
Indications	6x LEDs
Degree of protection	The circuit board is intended for internal installation in an enclosure

### Safety instructions

See operating manual for automatic control unit EP105.

### General description

DB512 is an add-in card to obtain communication between two EP105s. Various interlocks and operating functions can be programmed using the communication, see also “Example of use” on page 4. EP105 with DB512 connected can also be linked to older EP104 automatic control units.

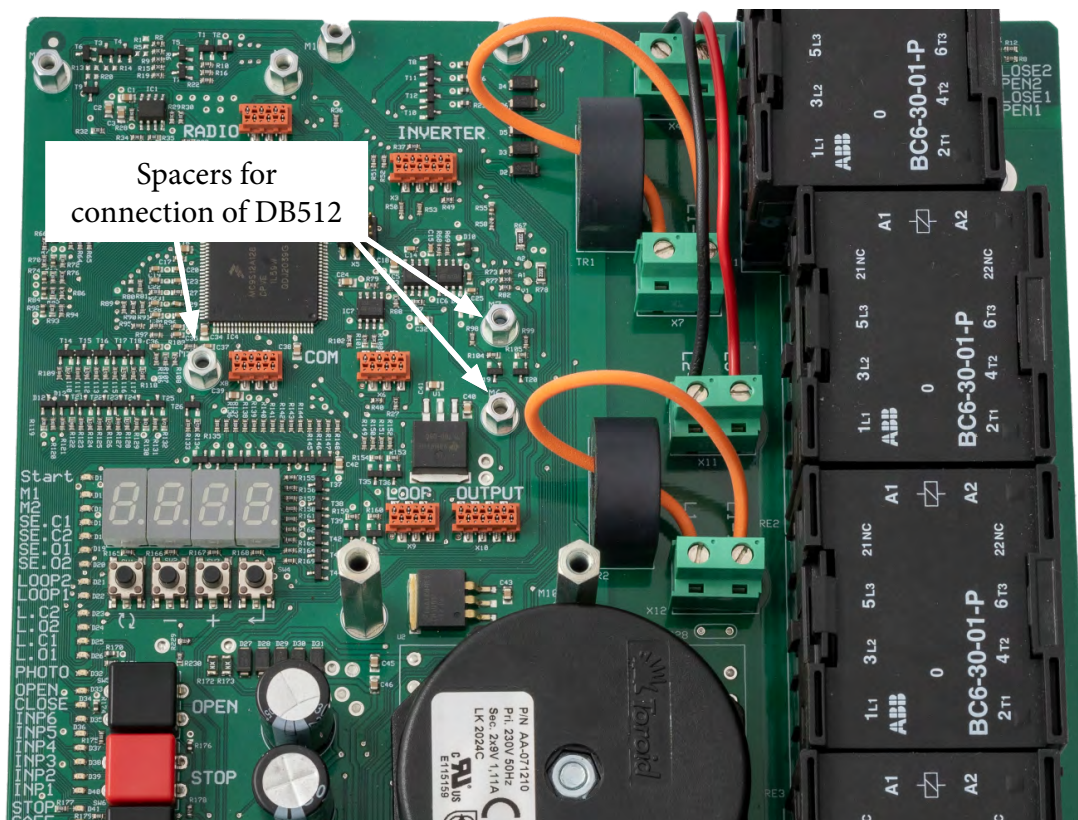
### Indications

Communication status is indicated by six LEDs mounted on the card.

Rapid flashing LEDs D2 and D3 indicate that the card is sending and receiving information to and from the other card. Unlit LED D6 indicates that the interlock function is selected.

### Installation

1. Discharge any static charge in your body by touching an earthed connection before starting installation.
2. Disconnect power to EP105.
3. Fit the two red connectors together.
4. Screw the card into place using three M3x5 screws.
5. Connect the communication cable as described under **Connection** in this document.

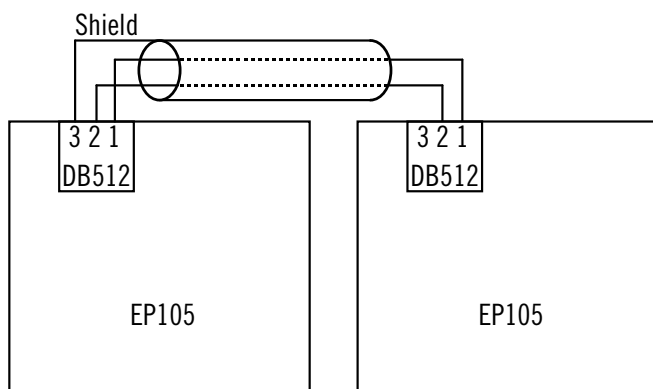


## Connection

To optimise communication between two EP105s, it is important to choose the right 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 DB512 terminal 1. At the other hand, trim off the shield after the cable insulation. The cable length must not exceed 1000 metres.

Connection must be performed by a qualified technician.



**When the card has been installed and connected, the power supply to EP105 can be switched on.**

## Functions using add-in card DB512

Two EP105s 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 DAAB Automatic Control Unit EP105 instruction manual. The terms local door and remote door are used in the text below. 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 EP105 to another EP105, configure C600. If  $C600 = 0$ , the communication is disabled. Start by setting C600 to 1, interlock, on both of the controls. To then start communication, set C610 to 1 on any automatic control unit. The automatic control unit with  $C610=1$  immediately starts transmitting values to the automatic control unit with  $C610=2$ , which then 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  $C610=1$  does not receive a response to transmitted messages. Possible causes: only one or both of the automatic control units is or are configured for interlock communication in channel C600, on both automatic control units C610 is set to the same value; 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.

### C614 Blocking of local door

The opening or closing function of the door is blocked by the position of the remote door in the conditions indicated in this channel. The setting 0 does not produce any blocking of the local door, which can be opened or closed independently of the position of the remote door. The value 1 produces blocking of opening of the local door until the remote door is closed. It is always the door that first receives an opening signal via a programmable input, vehicle detector or radio that will open first of the two doors. Note that not all combinations of C614 on both doors produces functioning blocking functions.

### C615 Opening memory, cancel blocking with stop

Two different configurations are made in this channel. Firstly if the local door has to remember an open signal, and secondly if stop buttons and the stop circuit are to cancel blocking of the local door.

Opening memory means that the local door remembers the open signal that occurred when the local door was blocked by the remote door. If C615 is set to 1 or 3, the local door remembers the local open signal. If C615 is set to 0 or 2, the local door **does not** remember the local open signal. At this setting, the remote door must reach a position such that it no longer blocks the local door, so that a local opening signal will open the local door.

Alternatives 0 and 1 mean that an interrupted safety circuit or activated stop button on the remote door **does not** cancel blocking of the local door. Alternatives 2 and 3 mean that an interrupted safety circuit or activated stop button on the remote door cancels blocking of the local door. At this setting it will be possible to open the local door, even if the position of the remote door blocks the local door, if a stop button is depressed on the remote door.

Note that the stop circuit is required to be interrupted for at least 5 seconds to cancel a blocking!

### Opening of remote door

When the interlock and blocking function between two doors is used, the remote door is operated using an opening function via programmable input, vehicle detector DB402 or 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.

### Programmable inputs INP1 to INP6

The channels for "Interlock opening", P190-P690, are used to transfer an opening signal from local door to remote door. Note that the operating function in channels P160-P660 for the same programmable input must be set to 1, Open. The channels for "Cancelled blocking", P196-P696, are used to close the blocking function in C614. With a constant signal on the programmable input INP2, when  $P296=1$ , C614 will be regarded as set to 0, no blocking. The setting applies to both local door and remote door.

The channels for "Disabled automatic closing", P198-P698, are used to prevent automatic closing from closing the remote door. With a constant signal on the programmable input INP1, when  $P198=1$  on the local door, the remote door will be held open. The local door is held open by the setting  $P180=2$ , Automatic closing disabled with constant signal.

### Example of use

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.

### 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.

Configuration for the above example with programmable input INP1:

- Door 1, C614 = 1, P160 = 1, P190 = 1, C500/C501 = suitable automatic closing time.
- Door 2, C614 = 1, P160 = 1, P190 = 1, C500/C501 = suitable automatic closing time.

Channel C615 is used to choose whether the door concerned is to remember an opening signal when the door concerned cannot be opened because the other door is blocking opening.

### Directional thermal interlock

A thermal interlock can also be directional, i.e. 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.

Setting for the above example with programmable input INP1:

- Door 1, C614 = 1, P190 = 1, P196 = 1.
- Door 2, C614 = 1, P190 = 1.

## Channel list

### Interlock block

No.	Name	Range	Factory	Setting
C600	Choice of communication	0 - 2	0	
	0	Disabled		
	1	Interlock		
	2	Simply connect		
C610	Choice of unit address	1 - 2	2	
C614	Block of local door	0 - 3	0	
	0	No blocking, opens and closes independently of the position of the remote door		
	1	Blocking of open on local door until remote door is closed		
	2	Blocking of open on local door until remote door is open		
	3	Blocking of close on local door until remote door is closed		
C615	In blocking of local door	0 - 3	3	
	0	Local door does not remember open, stop does not cancel blocking of remote door		
	1	Local door remembers open, stop does not cancel blocking of remote door		
	2	Local door does not remember open, stop cancels blocking of remote door		
	3	Local door remembers open, stop cancels block of remote door		

### Programmable input, INP1-6

No.	Name	Range	Factory	Setting
Pn90	Interlock opening	0 - 1	0	
n=1-6	0	Disabled		
	1	Opens the local door if Pn60 is set to open, and passes the signal on to the remote door		
Pn96	Blocking disabled for local and remote doors. Works only with a constant signal.	0 - 1	0	
n=1-6	0	Disabled, function according to channel C614		
	1	Blocking disabled		
Pn98	Automatic closing switched off for remote door. Only works if there is a constant signal	0 - 1	0	
n=1-6	0	Disabled, function according to channel C500		
	1	Automatic closing switched off		



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