

INSTRUCTION MANUAL

DAAB OUTPUT CARD DB410

*For DAAB automatic control units
EP104 version 4.07 or higher
EP105*

Revision: 1.4



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Technical data

Dimensions (WxHxD)	44 x 90 x 24 mm
Temperature range	0 to 50°C
Indications	6x LEDs
Outputs	6 relay outputs max 6 A resistive load per relay output with 230 VAC or 2 A for 24 VDC
Degree of protection	The circuit board is intended for internal installation in an enclosure

Safety instructions

See instruction manual for automatic control unit EP104 or EP105.

General description

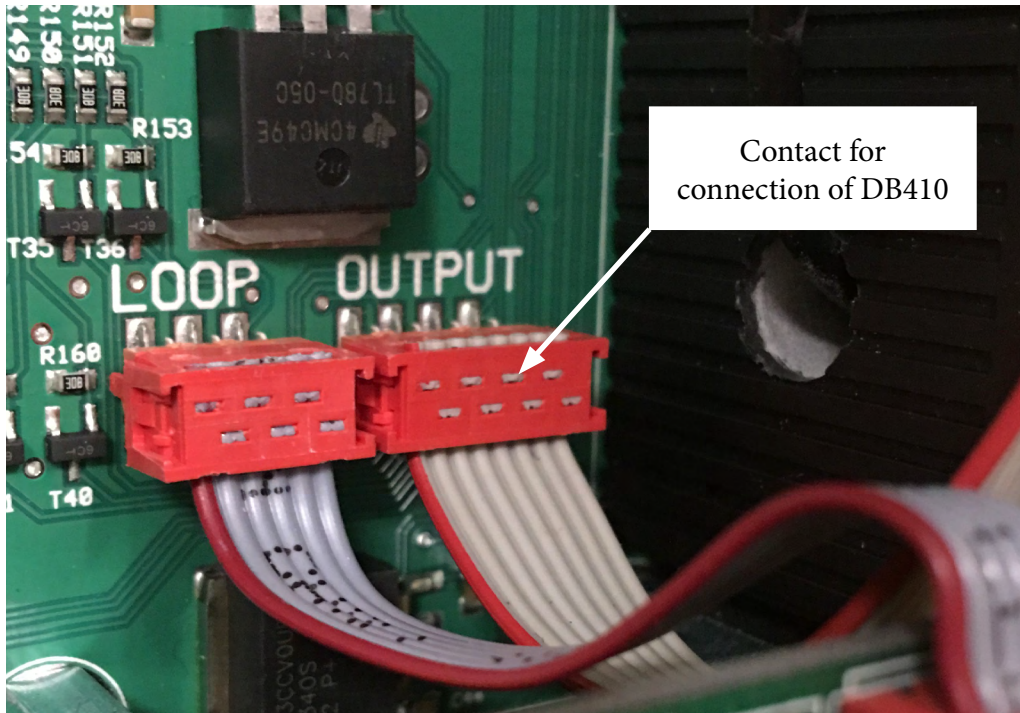
The DB410 is an add-in card to obtain 6x outputs on the automatic control unit.

All the outputs have programmable function. Output functions are set on the automatic control unit.

The status of the outputs indicated by LEDs installed at the top of the card. A lit LED indicates closed function.

Installation

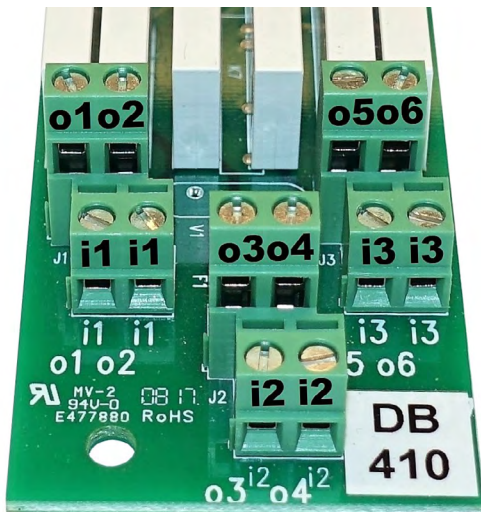
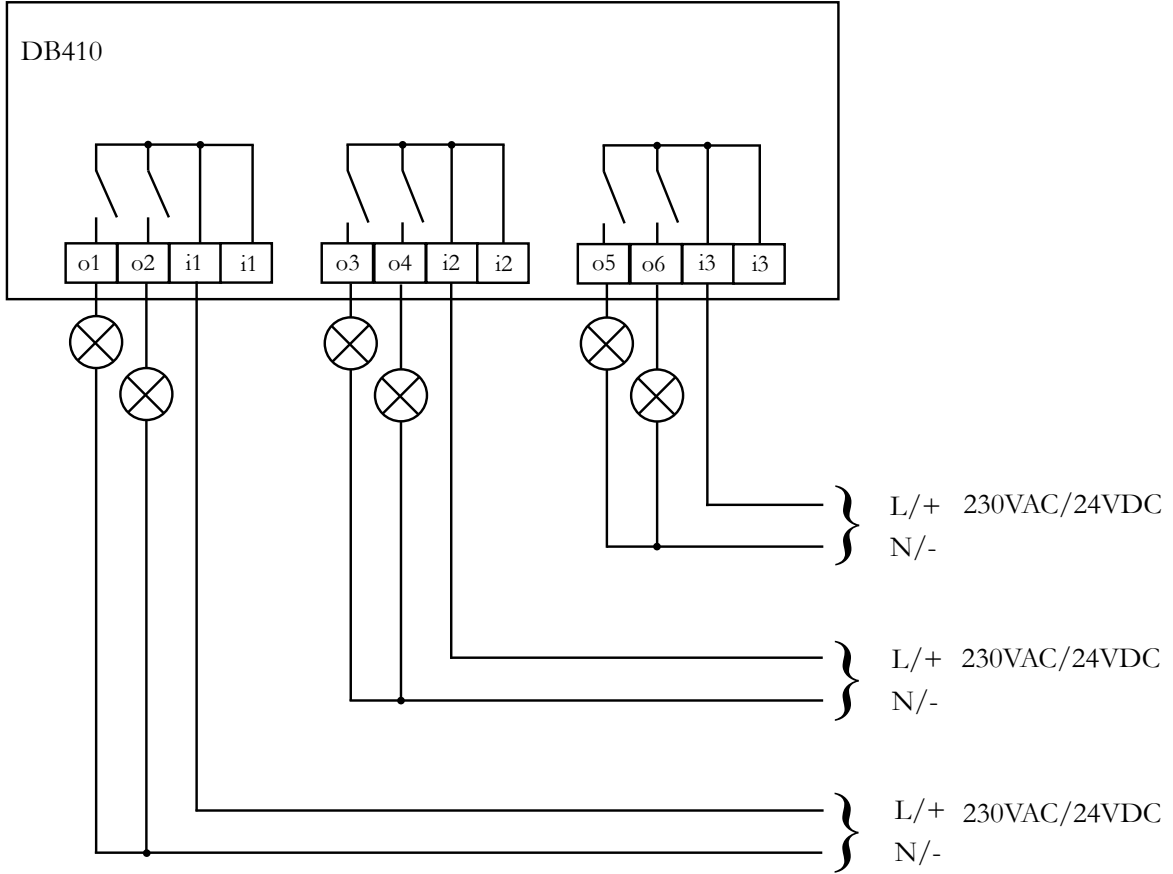
1. Discharge any static charge in your body by touching an earthed connection before starting installation.
2. Disconnect power to the automatic control unit.
3. Screw the DB410 card into place on the spacers on the automatic control unit using two M4x6 screws.
4. Connect cable to "OUTPUT" contact.
5. Connect the card as described in Connection.



Connection

If extra low voltage is used together with low voltage, cables connected to groups i1, o1, o2 and i2, o3, o4 and i3, o5, o6 must be secured with cable ties as close to the terminal as possible.

Connection must be performed by a qualified technician.



When the card has been installed and connected, the power supply to the automatic control unit can be switched on.

NOTE! Channel selection for flashing function must not be used in combination with this card but only together with DB407 with triac.

Functions using add-in card DB410

With DB410 installed there is access to six programmable relay outputs. These outputs are grouped into three groups with two common positions. Note that the positions located closest to the printed circuit board on each terminal are the common positions. These positions are marked i1, i2 and i3. The outputs are the upper terminal positions. Display of the o-channels in EP105 is determined by the setting in channels C707 and C710.

Functions of programmable outputs 1 - 6

The instructions are identical for all six programmable outputs, apart from the channel number – output 1 has channel number o1nn, output 2 has channel number o2nn, etc.

The settings below are for output 1.

Activate programmable output 1 by setting o100 to the desired function. A value of 0 means that the output is disabled (open) regardless of the settings of other channels.

If you set the value to 1, the output can be used as a traffic light signal based on the position indication. Movement and warning time signals are also available with this setting. The value 2 is for presence detection in the vehicle loop, the value 3 is for motor locks, and the value four turns the output into an alarm output.

Channel o110 Open position

Set to 1 for a constant signal in the open position.

Channel o111 Mid position

Set 1 to obtain constant signal in mid position.

Channel o112 Closed position

Set 1 to obtain constant signal in closed position.

Example for a green light: o110 = 1, o111 = 0, o112 = 0.

Example for a red light: o110 = 0, o111 = 1, o112 = 1.

Channel o113 Movement

Use this channel to specify function during movement. The function will be active as soon as the door starts moving. See the channel reference for the available options. Only output 4 is able to send a flashing signal.

Channel o114 Delayed switch-off

Indicated time delays disabling of the output. Can be used to let lighting be on for a certain time after the door has left the open position. Let o110 turn on the lighting when the door has reached the open position. When the door closes and leaves the open position, the lighting will remain on during the time in o114.

Channel o120 Warning time before start.

Settable time 0.0 – 600.0 seconds, 0.0 means closed. Which function is to be warned is selected in o121.

Channel o121 Warning function in combination with channel o120

Set value 1 to obtain constant signal before automatic close, 2 to obtain constant signal before park and automatic close, 3 to obtain constant signal before close signal, park and automatic close, 4 for signal before all control signals.

Channel o122 Function during warning

Select 1 if the output signal is to be disabled during storing in any output.

Select 2 if the output is to continue to indicate position or movement regardless of warning.

Channel o130 Delay for alarms specified in o131 and o132. The alarm is delayed by the set time of 0.0 – 600.0 seconds. The factory setting is 0.0. When errors according to o131 - o142 cases, the output signal, the alarm, also ceases. There is no alarm acknowledgement.

Channel o131-o142 Alarm in different conditions

If it is set to 1, the output gives a signal when the condition, according to the channel specification, has been fulfilled for longer than the time set in o130.

Select the output to be normally open or normally closed by setting channel o183 to:

The value 1 is for normally open (NO) and the value 2 is for normally closed (NC).

Channel o191 Function when LOOP1, LOOP2 or PHOTO are activated:

Used to set the presence detection required from the vehicle loop. See the channel reference for the available options.

Function of programmable output 4

There is an alternative in channel o410-o413 for flashing function for this output, but together with this card, DB410, these alternatives may **not** be programmed, as the relay is not designed for flashing function. If this alternative is nevertheless selected, the card will suffer permanent damage! DB407 must be selected for flashing function.

- Deactivation of fence alarm or other alarm equipment.

Outputs o1 or 2 are available for fence alarms. Note that i1+i1 are two common inputs for o1 and o2. If there is a voltage drop, these outputs are open, NO. Remember that the outputs must be connected so that the fence alarm is activated if a cable is detached, there is a break in a cable or the automatic control unit loses its power supply. Specify the following settings to use output 1 for fence alarm.

o100 = 1, Position indication.

o110 = 1, Signal in open position.

o111 = 1, Signal in mid position.

o113 = 3, Signal in opening/closing movement.

o114 = Delay in switch-off, at least 1 second according to alarm manufacturer's instructions.

o120 = Warning test before start, according to the alarm manufacturer's instructions.

o121 = 4, Constant signal before all movements.

o122 = 2, Output signal as configured in o110-o113.

• Channel list, o-channels

Programmable output 1

Note that the display of the o-channels is determined by the setting in C707 and C710 for EP105

No.	Name	Range	Factory	Setting
o100	Function of output 1	0 - 4	1	
	0	Disabled		
	1	Position indication/Movement/Warning. Signal as configured in o110 – o122		
	2	Presence detection/Direction sensing. Signal as configured in o191		
	3	Lock		
	4	Alarm output. Signal as configured in o114, o130 – o142		
o110	Open position	0 - 1	1	
	0	Disabled		
	1	Constant signal		
o111	Mid position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o112	Closed position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o113	Movement	0 - 4	4	
	0	Disabled		
	1	Constant signal in the opening movement		
	2	Constant signal in the closing movement		
	3	Constant signal in the opening and closing movement		
	4	No signal during movement, used in combination with o110, o111 and o112.		
o114	Delayed switch-off. Switch off after the specified time. Used for example for lighting that is switched off a specified time after closing.	000.0-600.0 seconds	000.0	
o120	Warning time before start	000.0-600.0 seconds	000.0	
o121	Warning function in combination with o120	1 - 4	2	
	1	Constant signal before automatic closing		
	2	Constant signal before park and automatic closing		
	3	Constant signal before close signal, park and automatic closing		
	4	Constant signal before all signals		
o122	Function during warning time	1 - 2	1	
	1	Output signal disabled during warning in other output		
	2	Output signal as configured in o110-o113		

No.	Name	Range	Factory	Setting
o130	Alarm delay. Alarm in channels o131 – o142 must be active in this time to produce output signal.	000.0-600.0 seconds	000.0	
o131	Alarm if pressed safety edge.	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o132	Alarm for critical error message in display	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o133	Alarm if stop circuit interrupted	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o134	Alarm if door open	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o135	Alarm if door is in mid position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o136	Alarm if door is in closed position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o137	Alarm if vehicle loop 1 is activated	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o138	Alarm if vehicle loop 2 is activated	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o139	Alarm if photocell interrupted	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o142	Alarm for uncritical error message in display. E008, E015, E028, E046, E047, E048, E201, E202, E206, E207, E931, E932	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o183	Selection of contact function for output	1 - 2	1	
	1	Normally open, NO		
	2	Normally closed, NC		

No.	Name	Range	Factory	Setting
o191	Function when LOOP2, LOOP2 or PHOTO is activated	01 - 14	01	
01	Presence detection. Signal when LOOP1 is activated, remains until LOOP1 is clear.			
02	Presence detection. Signal when LOOP2 is activated, remains until LOOP2 is clear.			
03	Presence detection. Signal when both LOOP1 and LOOP2 are activated, remains until either LOOP1 or LOOP2 is clear.			
04	Presence detection. Signal when PHOTO is activated, remains until PHOTO is clear.			
05	Presence detection. Signal when PHOTO and LOOP1 are activated, remains until either PHOTO or LOOP1 is clear.			
06	Presence detection. Signal when PHOTO and LOOP2 are activated, remains until either PHOTO or LOOP2 is clear.			
07	Presence detection. Signal when PHOTO, LOOP1 and LOOP2 are activated, remains until either PHOTO, LOOP1 or LOOP2 is clear.			
08	Presence detection. Signal when either LOOP1 or LOOP2 is activated, remains until either LOOP1 or LOOP2 is clear.			
09	Direction sensing. Signal when first LOOP1 and then LOOP2 are activated. The signal remains until LOOP2 is clear.			
10	Direction sensing. Signal when first LOOP1 and then PHOTO are activated. The signal remains until PHOTO is clear.			
11	Direction sensing. Signal when first LOOP2 and then LOOP1 are activated. The signal remains until LOOP1 is clear.			
12	Direction sensing. Signal when first LOOP2 and then PHOTO are activated. The signal remains until PHOTO is clear.			
13	Direction sensing. Signal when first PHOTO and then LOOP1 are activated. The signal remains until LOOP1 is clear.			
14	Direction sensing. Signal when first PHOTO and then LOOP2 are activated. The signal remains until LOOP2 is clear.			

Programmable output 2

Note that the display of the o-channels is determined by the setting in C707 and C710 for EP105

No.	Name	Range	Factory	Setting
o200	Function of output 2	0 - 4	1	
	0	Disabled		
	1	Position indication/Movement/Warning. Signal as configured in o210 – o222		
	2	Presence detection/Direction sensing. Signal as configured in o291		
	3	Lock		
	4	Alarm output. Signal as configured in o214, o230 – o242		
o210	Open position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o211	Mid position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o212	Closed position	0 - 1	1	
	0	Disabled		
	1	Constant signal		
o213	Movement	0 - 4	4	
	0	Disabled		
	1	Constant signal in the opening movement		
	2	Constant signal in the closing movement		
	3	Constant signal in the opening and closing movement		
	4	No signal during movement, used in combination with o210, o211 and o212.		
o214	Delayed switch-off. Switch off after the specified time. Used for example for lighting that is switched off a specified time after closing.	000.0-600.0 seconds	000.0	
o220	Warning time before start	000.0-600.0 seconds	000.0	
o221	Warning function in combination with o220	1 - 4	2	
	1	Constant signal before automatic closing		
	2	Constant signal before park and automatic closing		
	3	Constant signal before close signal, park and automatic closing		
	4	Constant signal before all signals		
o222	Function during warning time	1 - 2	1	
	1	Output signal disabled during warning in other output		
	2	Output signal as configured in o210-o213		

No.	Name	Range	Factory	Setting
o230	Alarm delay. Alarm in channels o231 – o242 must be active in this time to produce output signal.	000.0-600.0 seconds	000.0	
o231	Alarm if pressed safety edge.	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o232	Alarm for critical error message in display	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o233	Alarm if stop circuit interrupted	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o234	Alarm if door open	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o235	Alarm if door is in mid position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o236	Alarm if door is in closed position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o237	Alarm if vehicle loop 1 is activated	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o238	Alarm if vehicle loop 2 is activated	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o239	Alarm if photocell interrupted	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o242	Alarm for uncritical error message in display. E008, E015, E028, E046, E047, E048, E201, E202, E206, E207, E931, E932	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o283	Selection of contact function for output	1 - 2	1	
	1	Normally open, NO		
	2	Normally closed, NC		

No.	Name	Range	Factory	Setting
o291	Function when LOOP2, LOOP2 or PHOTO is activated	01 - 14	01	
01	Presence detection. Signal when LOOP1 is activated, remains until LOOP1 is clear.			
02	Presence detection. Signal when LOOP2 is activated, remains until LOOP2 is clear.			
03	Presence detection. Signal when both LOOP1 and LOOP2 are activated, remains until either LOOP1 or LOOP2 is clear.			
04	Presence detection. Signal when PHOTO is activated, remains until PHOTO is clear.			
05	Presence detection. Signal when PHOTO and LOOP1 are activated, remains until either PHOTO or LOOP1 is clear.			
06	Presence detection. Signal when PHOTO and LOOP2 are activated, remains until either PHOTO or LOOP2 is clear.			
07	Presence detection. Signal when PHOTO, LOOP1 and LOOP2 are activated, remains until either PHOTO, LOOP1 or LOOP2 is clear.			
08	Presence detection. Signal when either LOOP1 or LOOP2 is activated, remains until either LOOP1 or LOOP2 is clear.			
09	Direction sensing. Signal when first LOOP1 and then LOOP2 are activated. The signal remains until LOOP2 is clear.			
10	Direction sensing. Signal when first LOOP1 and then PHOTO are activated. The signal remains until PHOTO is clear.			
11	Direction sensing. Signal when first LOOP2 and then LOOP1 are activated. The signal remains until LOOP1 is clear.			
12	Direction sensing. Signal when first LOOP2 and then PHOTO are activated. The signal remains until PHOTO is clear.			
13	Direction sensing. Signal when first PHOTO and then LOOP1 are activated. The signal remains until LOOP1 is clear.			
14	Direction sensing. Signal when first PHOTO and then LOOP2 are activated. The signal remains until LOOP2 is clear.			

Programmable output 3

Note that the display of the o-channels is determined by the setting in C707 and C710 for EP105

No.	Name	Range	Factory	Setting
o300	Function of output 3	0 - 4	1	
	0	Disabled		
	1	Position indication/Movement/Warning. Signal as configured in o310 – o322		
	2	Presence detection/Direction sensing. Signal as configured in o391		
	3	Lock		
	4	Alarm output. Signal as configured in o314, o330 – o342		
o310	Open position	0 - 1	1	
	0	Disabled		
	1	Constant signal		
o311	Mid position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o312	Closed position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o313	Movement	0 - 4	4	
	0	Disabled		
	1	Constant signal in the opening movement		
	2	Constant signal in the closing movement		
	3	Constant signal in the opening and closing movement		
	4	No signal during movement, used in combination with o310, o311 and o312.		
o314	Delayed switch-off. Switch off after the specified time. Used for example for lighting that is switched off a specified time after closing.	000.0-600.0 seconds	000.0	
o320	Warning time before start	000.0-600.0 seconds	000.0	
o321	Warning function in combination with o320	1 - 4	2	
	1	Constant signal before automatic closing		
	2	Constant signal before park and automatic closing		
	3	Constant signal before close signal, park and automatic closing		
	4	Constant signal before all signals		
o322	Function during warning time	1 - 2	1	
	1	Output signal disabled during warning in other output		
	2	Signal as configured in o310-o313		

No.	Name	Range	Factory	Setting
o330	Alarm delay. Alarm in channels o331 – o242 must be active in this time to produce output signal.	000.0-600.0 seconds	000.0	
o331	Alarm if pressed safety edge.	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o332	Alarm for critical error message in display	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o333	Alarm if stop circuit interrupted	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o334	Alarm if door open	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o335	Alarm if door is in mid position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o336	Alarm if door is in closed position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o337	Alarm if vehicle loop 1 is activated	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o338	Alarm if vehicle loop 2 is activated	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o339	Alarm if photocell interrupted	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o342	Alarm for uncritical error message in display. E008, E015, E028, E046, E047, E048, E201, E202, E206, E207, E931, E932	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o383	Selection of contact function for output	1 - 2	1	
	1	Normally open, NO		
	2	Normally closed, NC		

* = Only when o300 is set to 4.

No.	Name	Range	Factory	Setting
o391	Function when LOOP2, LOOP2 or PHOTO is activated	01 - 14	01	
	01	Presence detection. Signal when LOOP1 is activated, remains until LOOP1 is clear.		
	02	Presence detection. Signal when LOOP2 is activated, remains until LOOP2 is clear.		
	03	Presence detection. Signal when both LOOP1 and LOOP2 are activated, remains until either LOOP1 or LOOP2 is clear.		
	04	Presence detection. Signal when PHOTO is activated, remains until PHOTO is clear.		
	05	Presence detection. Signal when PHOTO and LOOP1 are activated, remains until either PHOTO or LOOP1 is clear.		
	06	Presence detection. Signal when PHOTO and LOOP2 are activated, remains until either PHOTO or LOOP2 is clear.		
	07	Presence detection. Signal when PHOTO, LOOP1 and LOOP2 are activated, remains until either PHOTO, LOOP1 or LOOP2 is clear.		
	08	Presence detection. Signal when either LOOP1 or LOOP2 is activated, remains until either LOOP1 or LOOP2 is clear.		
	09	Direction sensing. Signal when first LOOP1 and then LOOP2 are activated. The signal remains until LOOP2 is clear.		
	10	Direction sensing. Signal when first LOOP1 and then PHOTO are activated. The signal remains until PHOTO is clear.		
	11	Direction sensing. Signal when first LOOP2 and then LOOP1 are activated. The signal remains until LOOP1 is clear.		
	12	Direction sensing. Signal when first LOOP2 and then PHOTO are activated. The signal remains until PHOTO is clear.		
	13	Direction sensing. Signal when first PHOTO and then LOOP1 are activated. The signal remains until LOOP1 is clear.		
	14	Direction sensing. Signal when first PHOTO and then LOOP2 are activated. The signal remains until LOOP2 is clear.		

Programmable output 4

Note that the display of the o-channels is determined by the setting in C707 and C710 for EP105

No.	Name	Range	Factory	Setting
o400	Function of output 4	0 - 4	0	
	0	Disabled		
	1	Position indication/Movement/Warning. Signal as configured in o410 – o422		
	2	Presence detection/Direction sensing. Signal as configured in o491		
	3	Lock		
	4	Alarm output Signal as configured in o414, o430 – o442		
o410	Open position	0 - 2	0	
	0	Disabled		
	1	Constant signal		
	2*	Flashing signal, invalid selection for DB410		
o411	Mid position	0 - 2	1	
	0	Disabled		
	1	Constant signal		
	2*	Flashing signal, invalid selection for DB410		
o412	Closed position	0 - 2	1	
	0	Disabled		
	1	Constant signal		
	2*	Flashing signal, invalid selection for DB410		
o413	Movement	0 - 7	0	
	0	Disabled		
	1	Constant signal in the opening movement		
	2	Constant signal in the closing movement		
	3	Constant signal in the opening and closing movement		
	4	No signal during movement, used in combination with o410, o411 and o412.		
	5*	Flashing signal in opening movement, invalid selection for DB410		
	6*	Flashing signal in closing movement, invalid selection for DB410		
	7*	Flashing signal in opening and closing movement, invalid selection for DB410		
o414	Delayed switch-off. Switch off after the specified time. Used for example for lighting that is switched off a specified time after closing.	000.0-600.0 seconds	000.0	
o420	Warning time before start	000.0-600.0 seconds	000.0	
o421	Warning function in combination with o420	1 - 8	2	
	1	Constant signal before automatic closing		
	2	Constant signal before park and automatic closing		
	3	Constant signal before close signal, park and automatic closing		
	4	Constant signal before all signals		
	5*	Flashing signal before automatic closing, invalid selection for DB410		
	6*	Flashing signal before park and automatic closing, invalid selection for DB410		
	7*	Flashing signal before close signal, park and automatic closing, invalid selection for DB410		
	8*	Flashing signal before all signals, invalid selection for DB410		

* WARNING! This setting is possible, but **NOT** permitted! Selecting it means that the relay output will cease to function. The channel selection for flashing function may be used only together with DB407.

No.	Name	Range	Factory	Setting
o422	Function during warning time	1 - 2	1	
	1	Output signal disabled during warning in other output		
	2	Output signal as configured in o410-o413		
o423	Flashing frequency	0.1-2.0 seconds	0.5	
o430	Alarm delay. Alarm in channels o431 – o442 must be active in this time to produce output signal.	000.0-600.0 seconds	000.0	
o431	Alarm if pressed safety edge.	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o432	Alarm for critical error message in display	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o433	Alarm if stop circuit interrupted	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o434	Alarm if door open	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o435	Alarm if door is in mid position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o436	Alarm if door is in closed position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o437	Alarm if vehicle loop 1 is activated	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o438	Alarm if vehicle loop 2 is activated	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o439	Alarm if photocell interrupted	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o442	Alarm for uncritical error message in display. E008, E015, E028, E046, E047, E048, E201, E202, E206, E207, E931, E932	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o483	Selection of contact function for output	1 - 2	1	
	1	Normally open, NO		
	2	Normally closed, NC		

No.	Name	Range	Factory	Setting
o491	Function when LOOP2, LOOP2 or PHOTO is activated	01 - 14	01	
01	Presence detection. Signal when LOOP1 is activated, remains until LOOP1 is clear.			
02	Presence detection. Signal when LOOP2 is activated, remains until LOOP2 is clear.			
03	Presence detection. Signal when both LOOP1 and LOOP2 are activated, remains until either LOOP1 or LOOP2 is clear.			
04	Presence detection. Signal when PHOTO is activated, remains until PHOTO is clear.			
05	Presence detection. Signal when PHOTO and LOOP1 are activated, remains until either PHOTO or LOOP1 is clear.			
06	Presence detection. Signal when PHOTO and LOOP2 are activated, remains until either PHOTO or LOOP2 is clear.			
07	Presence detection. Signal when PHOTO, LOOP1 and LOOP2 are activated, remains until either PHOTO, LOOP1 or LOOP2 is clear.			
08	Presence detection. Signal when either LOOP1 or LOOP2 is activated, remains until either LOOP1 or LOOP2 is clear.			
09	Direction sensing. Signal when first LOOP1 and then LOOP2 are activated. The signal remains until LOOP2 is clear.			
10	Direction sensing. Signal when first LOOP1 and then PHOTO are activated. The signal remains until PHOTO is clear.			
11	Direction sensing. Signal when first LOOP2 and then LOOP1 are activated. The signal remains until LOOP1 is clear.			
12	Direction sensing. Signal when first LOOP2 and then PHOTO are activated. The signal remains until PHOTO is clear.			
13	Direction sensing. Signal when first PHOTO and then LOOP1 are activated. The signal remains until LOOP1 is clear.			
14	Direction sensing. Signal when first PHOTO and then LOOP2 are activated. The signal remains until LOOP2 is clear.			

Programmable output 5

Note that the display of the o-channels is determined by the setting in C707 and C710 for EP105

No.	Name	Range	Factory	Setting
o500	Function of output 1	0 - 4	0	
	0	Disabled		
	1	Position indication/Movement/Warning. Signal as configured in o510 – o522		
	2	Presence detection/Direction sensing. Signal as configured in o591		
	3	Lock		
	4	Alarm output. Signal as configured in o514, o530 – o542		
o510	Open position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o511	Mid position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o512	Closed position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o513	Movement	0 - 4	4	
	0	Disabled		
	1	Constant signal in the opening movement		
	2	Constant signal in the closing movement		
	3	Constant signal in the opening and closing movement		
	4	No signal during movement, used in combination with o510, o511 and o512.		
o514	Delayed switch-off. Switch off after the specified time. Used for example for lighting that is switched off a specified time after closing.	000.0-600.0 seconds	000.0	
o520	Warning time before start	000.0-600.0 seconds	000.0	
o521	Warning function in combination with o520	1 - 4	2	
	1	Constant signal before automatic closing		
	2	Constant signal before park and automatic closing		
	3	Constant signal before close signal, park and automatic closing		
	4	Constant signal before all signals		
o522	Function during warning time	1 - 2	1	
	1	Output signal disabled during warning in other output		
	2	Output signal as configured in o510-o513		

No.	Name	Range	Factory	Setting
o530	Alarm delay. Alarm in channels o531 – o542 must be active in this time to produce output signal.	000.0-600.0 seconds	000.0	
o531	Alarm if pressed safety edge.	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o532	Alarm for critical error message in display	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o533	Alarm if stop circuit interrupted	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o534	Alarm if door open	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o535	Alarm if door is in mid position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o536	Alarm if door is in closed position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o537	Alarm if vehicle loop 1 is activated	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o538	Alarm if vehicle loop 2 is activated	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o539	Alarm if photocell interrupted	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o542	Alarm for uncritical error message in display. E008, E015, E028, E046, E047, E048, E201, E202, E206, E207, E931, E932	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o583	Selection of contact function for output	1 - 2	1	
	1	Normally open, NO		
	2	Normally closed, NC		

No.	Name	Range	Factory	Setting
o591	Function when LOOP2, LOOP2 or PHOTO is activated	01 - 14	01	
	01	Presence detection. Signal when LOOP1 is activated, remains until LOOP1 is clear.		
	02	Presence detection. Signal when LOOP2 is activated, remains until LOOP2 is clear.		
	03	Presence detection. Signal when both LOOP1 and LOOP2 are activated, remains until either LOOP1 or LOOP2 is clear.		
	04	Presence detection. Signal when PHOTO is activated, remains until PHOTO is clear.		
	05	Presence detection. Signal when PHOTO and LOOP1 are activated, remains until either PHOTO or LOOP1 is clear.		
	06	Presence detection. Signal when PHOTO and LOOP2 are activated, remains until either PHOTO or LOOP2 is clear.		
	07	Presence detection. Signal when PHOTO, LOOP1 and LOOP2 are activated, remains until either PHOTO, LOOP1 or LOOP2 is clear.		
	08	Presence detection. Signal when either LOOP1 or LOOP2 is activated, remains until either LOOP1 or LOOP2 is clear.		
	09	Direction sensing. Signal when first LOOP1 and then LOOP2 are activated. The signal remains until LOOP2 is clear.		
	10	Direction sensing. Signal when first LOOP1 and then PHOTO are activated. The signal remains until PHOTO is clear.		
	11	Direction sensing. Signal when first LOOP2 and then LOOP1 are activated. The signal remains until LOOP1 is clear.		
	12	Direction sensing. Signal when first LOOP2 and then PHOTO are activated. The signal remains until PHOTO is clear.		
	13	Direction sensing. Signal when first PHOTO and then LOOP1 are activated. The signal remains until LOOP1 is clear.		
	14	Direction sensing. Signal when first PHOTO and then LOOP2 are activated. The signal remains until LOOP2 is clear.		

Programmable output 6

Note that the display of the o-channels is determined by the setting in C707 and C710 for EP105

No.	Name	Range	Factory	Setting
o600	Function of output 1	0 - 4	0	
	0	Disabled		
	1	Position indication/Movement/Warning. Signal as configured in o610 – o622		
	2	Presence detection/Direction sensing. Signal as configured in o691		
	3	Lock		
	4	Alarm output. Signal as configured in o614, o630 – o642		
o610	Open position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o611	Mid position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o612	Closed position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o613	Movement	0 - 4	4	
	0	Disabled		
	1	Constant signal in the opening movement		
	2	Constant signal in the closing movement		
	3	Constant signal in the opening and closing movement		
	4	No signal during movement, used in combination with o610, o611 and o612.		
o614	Delayed switch-off. Switch off after the specified time. Used for example for lighting that is switched off a specified time after closing.	000.0-600.0 seconds	000.0	
o620	Warning time before start	000.0-600.0 seconds	000.0	
o621	Warning function in combination with o620	1 - 4	2	
	1	Constant signal before automatic closing		
	2	Constant signal before park and automatic closing		
	3	Constant signal before close signal, park and automatic closing		
	4	Constant signal before all signals		
o622	Function during warning time	1 - 2	1	
	1	Output signal disabled during warning in other output		
	2	Output signal as configured in o610-o613		

No.	Name	Range	Factory	Setting
o630	Alarm delay. Alarm in channels o631 – o642 must be active in this time to produce output signal.	000.0-600.0 seconds	000.0	
o631	Alarm if pressed safety edge.	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o632	Alarm for critical error message in display	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o633	Alarm if stop circuit interrupted	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o634	Alarm if door open	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o635	Alarm if door is in mid position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o636	Alarm if door is in closed position	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o637	Alarm if vehicle loop 1 is activated	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o638	Alarm if vehicle loop 2 is activated	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o639	Alarm if photocell interrupted	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o642	Alarm for uncritical error message in display. E008, E015, E028, E046, E047, E048, E201, E202, E206, E207, E931, E932	0 - 1	0	
	0	Disabled		
	1	Constant signal		
o683	Selection of contact function for output	1 - 2	1	
	1	Normally open, NO		
	2	Normally closed, NC		

No.	Name	Range	Factory	Setting
o691	Function when LOOP2, LOOP2 or PHOTO activated	01 - 14	01	
01	Presence detection. Signal when LOOP1 is activated, remains until LOOP1 is clear.			
02	Presence detection. Signal when LOOP2 is activated, remains until LOOP2 is clear.			
03	Presence detection. Signal when both LOOP1 and LOOP2 are activated, remains until either LOOP1 or LOOP2 is clear.			
04	Presence detection. Signal when PHOTO is activated, remains until PHOTO is clear.			
05	Presence detection. Signal when PHOTO and LOOP1 are activated, remains until either PHOTO or LOOP1 is clear.			
06	Presence detection. Signal when PHOTO and LOOP2 are activated, remains until either PHOTO or LOOP2 is clear.			
07	Presence detection. Signal when PHOTO, LOOP1 and LOOP2 are activated, remains until either PHOTO, LOOP1 or LOOP2 is clear.			
08	Presence detection. Signal when either LOOP1 or LOOP2 is activated, remains until either LOOP1 or LOOP2 is clear.			
09	Direction sensing. Signal when first LOOP1 and then LOOP2 are activated. The signal remains until LOOP2 is clear.			
10	Direction sensing. Signal when first LOOP1 and then PHOTO are activated. The signal remains until PHOTO is clear.			
11	Direction sensing. Signal when first LOOP2 and then LOOP1 are activated. The signal remains until LOOP1 is clear.			
12	Direction sensing. Signal when first LOOP2 and then PHOTO are activated. The signal remains until PHOTO is clear.			
13	Direction sensing. Signal when first PHOTO and then LOOP1 are activated. The signal remains until LOOP1 is clear.			
14	Direction sensing. Signal when first PHOTO and then LOOP2 are activated. The signal remains until LOOP2 is clear.			



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