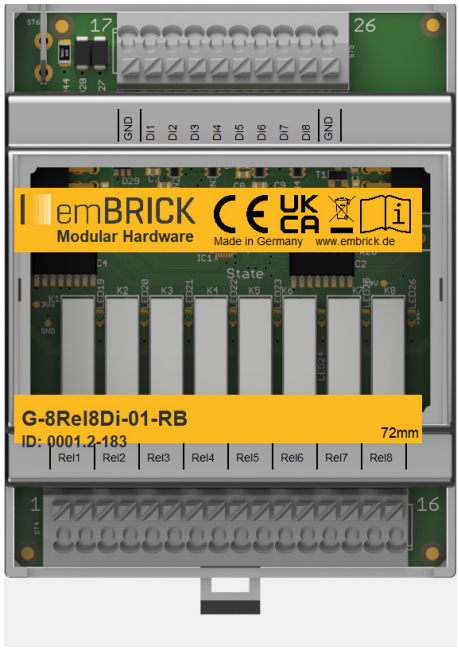
CAE_G-8Rel8Di-01-RB

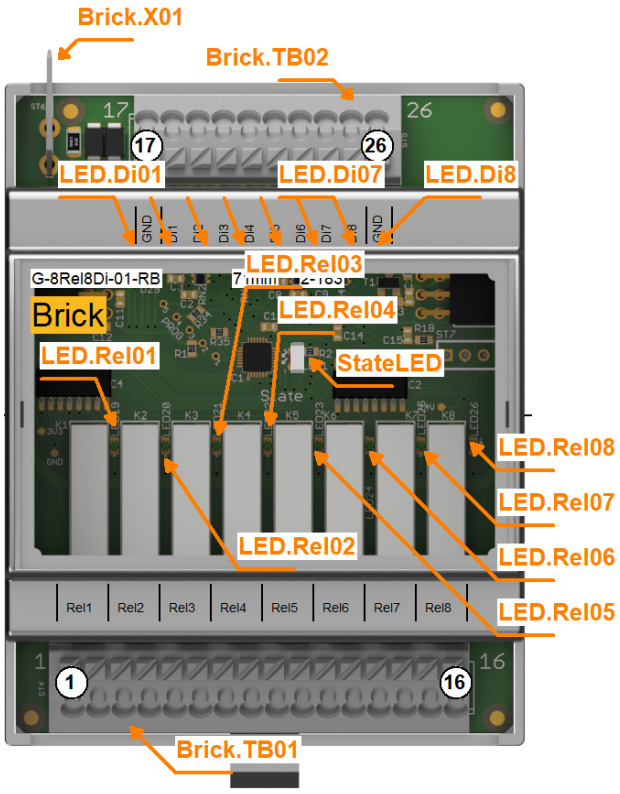


1.1 Description

ID: 2-183
Order No.: CAE_G-8Rel8Di-01-RB
Terminal: cage clamp i.e. PTR STL1550/..-3.5 with 3.5mm pin spacing
Size: (72mm x 90mm)
BBFCP: 2-1-1
Weight: 70g

This module contains eight 24V digital inputs and eight potential free relay outputs. Each output supports a current of 6A. Outputs are either specified for extra-low voltages (≤120V DC / ≤50V AC) or for low voltages (≥120V DC / ≥50V AC) but not for both at the same time. The logical state of each in-/output is visualised by an LED. Common ground for inputs are the terminal pins 17 and 26. All terminals uses cage clamp connection technology by default with 3.5mm pin spacing.

1.2 Connectors and Indication-/Operation-Elements



1.2.1 Connectors (X)

Hereinafter the necessary connections, connectors and there specification for operation are listed. The location of a specific connector is documented with the ID (left coloumn) in the previous Illustrations.

ID	Model	Usage	Num. of term.	Model / Series	connection	elec. usage
Brick.X01	Flachstecker	ground connenction	1	6,3x0,8mm liegend	min. 1,5mm²	aux. ground

1.2.2 Terminal block (TB)

The following Illustration the technical details for Terminal blocks are listed. The location of a specific block is documented with the ID (left coloumn) in the preavious Illustrations.

ID	Model	Model / Series	Grid	Num. of term.	connection	elec. usage
Brick.TB01	Push-in Cage Clamp	Wago250-1##	3.5mm	16	Eindrähtig (starr) = 0.2 .. 1.5mm² Feindrähtig (flexibel) = 0.2 .. 1.5mm² Feindrähtig (mit Aderendhülsen) =	UL: 300V 5A VDE: 160V 8A

					0.25 .. 1.0mm²	
Brick.TB02	Push-in Cage Clamp	Wago250-1##	3.5mm	10	Eindrähtig (starr) = 0.2 .. 1.5mm² Feindrähtig (flexibel) = 0.2 .. 1.5mm² Feindrähtig (mit Aderendhülsen) = 0.25 .. 1.0mm²	UL: 300V 5A VDE: 160V 8A

1.2.3 Terminal assignment

Here the assignment of individual terminals and there affilation to terminal blocks (Te block), terminal numbers (Te no.) and short description (T.desc.) aswell as there electrical function and usage are explained.
The associated mechanical and electrical properties are stated with the specific terminal block in the previous chapter. The position of a terminal is dedicated through the "Te block" and the actual terminal number (Te no.) or the therminal description (T.descr.) in the previous Illustration respectivly.
In the coloumn "usage" the technical-/ device-functional use is listed.

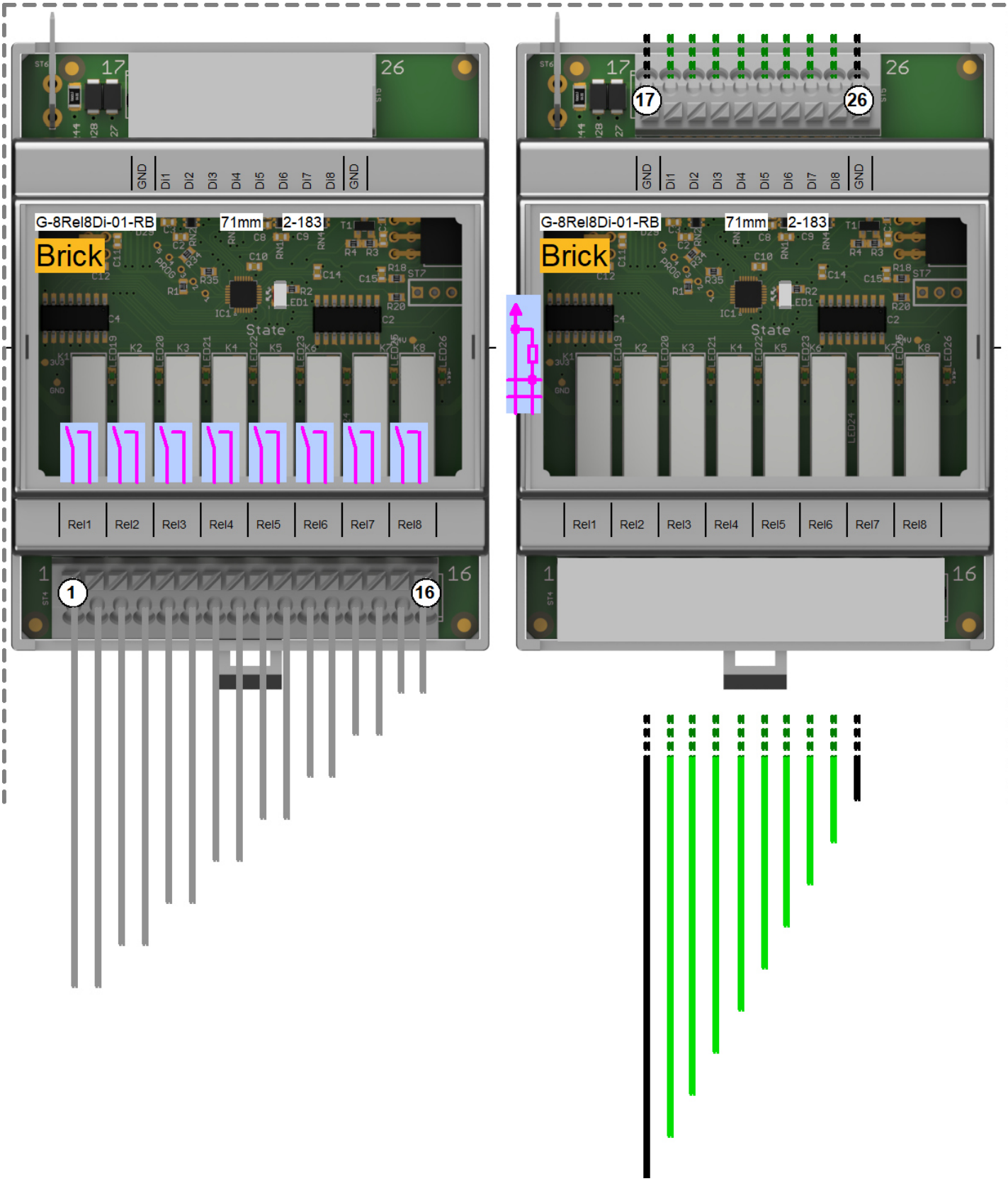
Te block	Te no.	T. descr.	Function	Usage
Brick.TB01	1	NO	Relay, normally open contact, isolated	Rel1
Brick.TB01	2	C	Relay, change over contact, isolated	Rel1
Brick.TB01	3	NO	Relay, normally open contact, isolated	Rel2
Brick.TB01	4	C	Relay, change over contact, isolated	Rel2
Brick.TB01	5	NO	Relay, normally open contact, isolated	Rel3
Brick.TB01	6	C	Relay, change over contact, isolated	Rel3
Brick.TB01	7	NO	Relay, normally open contact, isolated	Rel4
Brick.TB01	8	C	Relay, change over contact, isolated	Rel4
Brick.TB01	9	NO	Relay, normally open contact, isolated	Rel5
Brick.TB01	10	C	Relay, change over contact, isolated	Rel5
Brick.TB01	11	NO	Relay, normally open contact, isolated	Rel6
Brick.TB01	12	C	Relay, change over contact, isolated	Rel6
Brick.TB01	13	NO	Relay, normally open contact, isolated	Rel7
Brick.TB01	14	C	Relay, change over contact, isolated	Rel7
Brick.TB01	15	NO	Relay, normally open contact, isolated	Rel8
Brick.TB01	16	C	Relay, change over contact, isolated	Rel8
Brick.TB02	17		Extern ground	DI ground
Brick.TB02	18	IN	Switching Input, ext.contact	Di1
Brick.TB02	19	IN	Switching Input, ext.contact	Di2
Brick.TB02	20	IN	Switching Input, ext.contact	Di3
Brick.TB02	21	IN	Switching Input, ext.contact	Di4
Brick.TB02	22	IN	Switching Input, ext.contact	Di5
Brick.TB02	23	IN	Switching Input, ext.contact	Di6
Brick.TB02	24	IN	Switching Input, ext.contact	Di7
Brick.TB02	25	IN	Switching Input, ext.contact	Di8
Brick.TB02	26		Extern ground	DI ground

1.2.4 LED Indications

ID	Type	Specification	Type / Usage
Brick.LED.Di01	SMD-LED	green	on = input is high
Brick.LED.Di02	SMD-LED	green	on = input is high
Brick.LED.Di03	SMD-LED	green	on = input is high
Brick.LED.Di04	SMD-LED	green	on = input is high
Brick.LED.Di05	SMD-LED	green	on = input is high
Brick.LED.Di06	SMD-LED	green	on = input is high
Brick.LED.Di07	SMD-LED	green	on = input is high
Brick.LED.Di08	SMD-LED	green	on = input is high
Brick.LED.Rel00	SMD-LED	green	is on if relay is activ
Brick.LED.Rel01	SMD-LED	green	is on if relay is activ
Brick.LED.Rel02	SMD-LED	green	is on if relay is activ
Brick.LED.Rel03	SMD-LED	green	is on if relay is activ
Brick.LED.Rel04	SMD-LED	green	is on if relay is activ
Brick.LED.Rel05	SMD-LED	green	is on if relay is activ
Brick.LED.Rel06	SMD-LED	green	is on if relay is activ
Brick.LED.Rel07	SMD-LED	green	is on if relay is activ
Brick.StateLED	SMD-LED	yellow	communicationstate Brick

1.3 Input-/Output Scheme

The following diagram shows the adaption of the control unit. To avoid overlapping, some wires are displayed interrupted and dashed.



1.4 Technical Data

1.4.1 Digital Inputs

The control unit has the following digital inputs / switch inputs:

Identifier	Di1
Type	Digital input
Low Volt.	< 5V
High Volt.	> 15V
Input Current	< 5mA @ 24V
Component	-
Remark	

Identifier	Di2
Type	Digital input
Low Volt.	< 5V
High Volt.	> 15V
Input Current	< 5mA @ 24V
Component	-
Remark	

Identifier	Di3
Type	Digital input
Low Volt.	< 5V
High Volt.	> 15V
Input Current	< 5mA @ 24V
Component	-
Remark	

Identifier	Di4
Type	Digital input
Low Volt.	< 5V
High Volt.	> 15V
Input Current	< 5mA @ 24V
Component	-
Remark	

Identifier	Di5
Type	Digital input
Low Volt.	< 5V
High Volt.	> 15V
Input Current	< 5mA @ 24V
Component	-
Remark	

Identifier	Di6
Type	Digital input
Low Volt.	< 5V

High Volt.	> 15V
Input Current	< 5mA @ 24V
Component	-
Remark	

Identifier	Di7
Type	Digital input
Low Volt.	< 5V
High Volt.	> 15V
Input Current	< 5mA @ 24V
Component	-
Remark	

Identifier	Di8
Type	Digital input
Low Volt.	< 5V
High Volt.	> 15V
Input Current	< 5mA @ 24V
Component	-
Remark	

1.4.2 Digital Outputs

The control unit has the following digital outputs / switching outputs:

Identifier	Rel1
Type	Relay, normally open contact, isolated, external supply switching
max. Switching Volt.	250V AC
max. Switching Cur.	5A AC, Contact 6A
max. Perm. Current	3A AC
nom. Cycles	see datasheet
Component	FTR, LYCA024V
Remark	

Identifier	Rel2
Type	Relay, normally open contact, isolated, external supply switching
max. Switching Volt.	250V AC
max. Switching Cur.	5A AC, Contact 6A
max. Perm. Current	3A AC
nom. Cycles	see datasheet
Component	FTR, LYCA024V
Remark	

Identifier	Rel3
Type	Relay, normally open contact, isolated, external supply switching
max. Switching Volt.	250V AC

max. Switching Cur.	5A AC, Contact 6A
max. Perm. Current	3A AC
nom. Cycles	see datasheet
Component	FTR, LYCA024V
Remark	

Identifier	Rel4
Type	Relay, normally open contact, isolated, external supply switching
max. Switching Volt.	250V AC
max. Switching Cur.	5A AC, Contact 6A
max. Perm. Current	3A AC
nom. Cycles	see datasheet
Component	FTR, LYCA024V
Remark	

Identifier	Rel5
Type	Relay, normally open contact, isolated, external supply switching
max. Switching Volt.	250V AC
max. Switching Cur.	5A AC, Contact 6A
max. Perm. Current	3A AC
nom. Cycles	see datasheet
Component	FTR, LYCA024V
Remark	

Identifier	Rel6
Type	Relay, normally open contact, isolated, external supply switching
max. Switching Volt.	250V AC
max. Switching Cur.	5A AC, Contact 6A
max. Perm. Current	3A AC
nom. Cycles	see datasheet
Component	FTR, LYCA024V
Remark	

Identifier	Rel7
Type	Relay, normally open contact, isolated, external supply switching
max. Switching Volt.	250V AC
max. Switching Cur.	5A AC, Contact 6A
max. Perm. Current	3A AC
nom. Cycles	see datasheet
Component	FTR, LYCA024V
Remark	

Identifier	Rel8
Type	Relay, normally open contact, isolated, external supply switching
max. Switching Volt.	250V AC
max. Switching Cur.	5A AC, Contact 6A
max. Perm. Current	3A AC
nom. Cycles	see datasheet
Component	FTR, LYCA024V

Remark	

1.4.3 User Notes

• Blinking behavior StateLED:
Each Morse code is 3 seconds long!
not initialized = flashing continuously at approx. 5Hz
no communication = short-long-short
too little communication = short-short-short
disturbed communication = short-long-long
OK = continuous flashing at approx. 1Hz (0.6-1.5Hz)

1.4.4 Developer Notes

♣ A software generated pseudo PWM is possible till approx. 10Hz (depends on the bus/module update rate).

1.4.5 Technican Notes

• Bus power consumption:

1.5 Process Data Image

1.5.1 Outgoing Process Data (from bus master to this brick)

Byte	Function	rCAssign
00	Digital Output 1…8 (DO1..8)	...+eB_B0,0,0,... ...+eB_B0,0,1,... ...+eB_B0,0,2,... ...+eB_B0,0,3,... ...+eB_B0,0,4,... ...+eB_B0,0,5,... ...+eB_B0,0,6,... ...+eB_B0,0,7,...

1.5.2 Incoming Process Data (from this brick to the bus master)

Byte	Function	rCAssign
00	Digital Input 1…8 (DI1..8)	...+eB_B0,0,... ...+eB_B0,1,... ...+eB_B0,2,... ...+eB_B0,3,... ...+eB_B0,4,... ...+eB_B0,5,... ...+eB_B0,6,... ...+eB_B0,7,...

1.6 History

On the following page you will find a list of changes that have been made to the product.

1.6.1 History

Date	Entry scope (HW, SWappl, SWapi, Release)	Entry type (enhancement, improvement, bugfix, release)	Version	Status (development, implemented, tested)	Responsible	Reason for the modification	Items of modification	Impact for (end-)customer	Comment	Location in model/source
xxxx-xx-xx		Release	0.99	Tested	NSt					

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