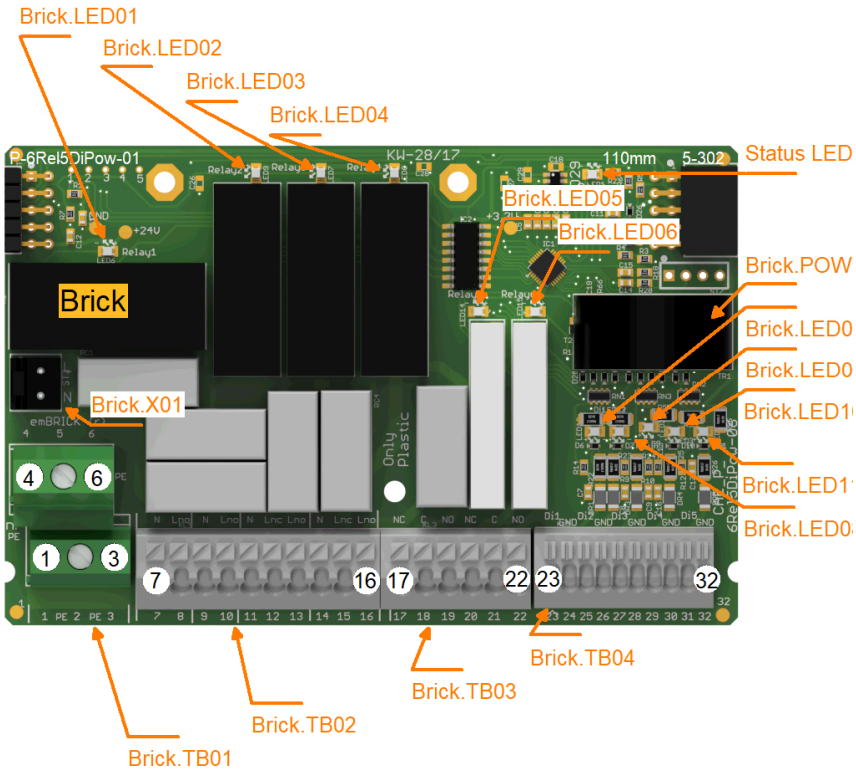
# CAE_P_6Rel5DiPow_01

## 1.1 Description

## 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 | Print Connector | power supply, internal | 2 | MTA-156 | - | 275V / 6A AC |

### 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 | Screw Terminal | AK370 | 5,0mm | 6 | up to 1.5mm² | 250V, 24A |
| Brick.TB02 | Cage Terminal | WAGO250 | 3.5mm | 10 | up to 1.5mm² | 250V, 8A |
| Brick.TB03 | Cage Terminal | WAGO250 | 3.5mm | 6 | up to 1.5mm² | 250V, 8A |
| Brick.TB04 | Cage Terminal | WAGO250 | 2.5mm | 10 | up to 0.5mm² or 0,8mm | signal level |

### 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 | 0 | PE | Protective earth | - |
| Brick.TB01 | 1 | PE | Protective earth | - |
| Brick.TB01 | 2 | PE | Protective earth | - |
| Brick.TB01 | 3 | PE | Protective earth | - |
| Brick.TB01 | 4 | PE | Protective earth | - |
| Brick.TB01 | 5 | PE | Protective earth | - |
| Brick.TB02 | 6 | N | Neutral, Consumer | Relay 1 |
| Brick.TB02 | 7 | Lno | Relay, normally open contact, power switching 230V | Relay 1 |
| Brick.TB02 | 8 | N | Neutral, Consumer | Relay 2 |
| Brick.TB02 | 9 | Lno | Relay, normally open contact, power switching 230V | Relay 2 |
| Brick.TB02 | 10 | N | Neutral, Consumer | Relay 3 |
| Brick.TB02 | 11 | Lnc | Relay, normally close contact, power switching | Relay 3 |
| Brick.TB02 | 12 | Lno | Relay, normally open contact, power switching 230V | Relay 3 |
| Brick.TB02 | 13 | N | Neutral, Consumer | Relay 4 |
| Brick.TB02 | 14 | Lnc | Relay, normally close contact, power switching | Relay 4 |
| Brick.TB02 | 15 | Lno | Relay, normally open contact, power switching 230V | Relay 4 |
| Brick.TB03 | 16 | NC | Relay, normally close contact, isolated | Relay 5 |
| Brick.TB03 | 17 | C | Relay, change over contact, isolated | Relay 5 |
| Brick.TB03 | 18 | NO | Relay, normally open contact, isolated | Relay 5 |
| Brick.TB03 | 19 | NC | Relay, normally close contact, isolated | Relay 6 |
| Brick.TB03 | 20 | C | Relay, change over contact, isolated | Relay 6 |
| Brick.TB03 | 21 | NO | Relay, normally open contact, isolated | Relay 6 |
| Brick.TB04 | 22 | IN | Switching Input, ext.contact | Di1 |
| Brick.TB04 | 23 | 0V | Ground | Di1 |
| Brick.TB04 | 24 | IN | Switching Input, ext.contact | Di2 |
| Brick.TB04 | 25 | 0V | Ground | Di2 |
| Brick.TB04 | 26 | IN | Switching Input, ext.contact | Di3 |
| Brick.TB04 | 27 | 0V | Ground | Di3 |
| Brick.TB04 | 28 | IN | Switching Input, ext.contact | Di4 |
| Brick.TB04 | 29 | 0V | Ground | Di4 |
| Brick.TB04 | 30 | IN | Switching Input, ext.contact | Di5 |
| Brick.TB04 | 31 | 0V | Ground | Di5 |

### 1.2.4 LED Indications

| ID | Type | Specification | Type / Usage |
|---|---|---|---|
| Brick.LED00 | SMD-LED | green | Shows state of Relay 1 |
| Brick.LED01 | SMD-LED | green | Shows state of Relay 2 |

| | | | |
|---|---|---|---|
| Brick.LED02 | SMD-LED | green | Shows state of Relay 3 |
| Brick.LED03 | SMD-LED | green | Shows state of Relay 4 |
| Brick.LED04 | SMD-LED | green | Shows state of Relay 5 |
| Brick.LED05 | SMD-LED | green | Shows state of Relay 6 |
| Brick.LED06 | SMD-LED | green | Shows if high-level is present on Di1 |
| Brick.LED07 | SMD-LED | green | Shows if high-level is present on Di2 |
| Brick.LED08 | SMD-LED | green | Shows if high-level is present on Di3 |
| Brick.LED09 | SMD-LED | green | Shows if high-level is present on Di4 |
| Brick.LED10 | SMD-LED | green | Shows if high-level is present on Di5 |
| Brick.StateLED | SMD-LED | yellow | communicationstate Brick |

## 1.3 Technical Data

### 1.3.1 Digital Inputs

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

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

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

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

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

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

### 1.3.2 Digital Outputs

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

| | |
|---|---|
| Identifier | Relay 1 |
| Type | Relay, normally open contact, power switching 230V |
| max. Switching Volt. | 250V AC |
| max. Switching Cur. | 10A AC, Contact 16A |
| max. Perm. Current | 5A AC |
| nom. Cycles | see datasheet |
| Component | Schrack, RT33L024 |
| Remark | with snubber |

| | |
|---|---|
| Identifier | Relay 2 |
| Type | Relay, normally open contact, power switching 230V |
| max. Switching Volt. | 250V AC |
| max. Switching Cur. | 8A AC, contact 10A |
| max. Perm. Current | 5A AC |
| nom. Cycles | see datasheet |
| Component | Takamisawa, JS24N-K |
| Remark | with snubber |

| | |
|---|---|
| Identifier | Relay 3 |
| Type | Relay, change over contact, power switching 230V |
| max. Switching Volt. | 250V AC |
| max. Switching Cur. | 8A AC, contact 10A |
| max. Perm. Current | 5A AC |
| nom. Cycles | see datasheet |
| Component | Takamisawa, JS24N-K |
| Remark | with snubber |

| | |
|---|---|
| Identifier | Relay 4 |
| Type | Relay, change over contact, power switching 230V |
| max. Switching Volt. | 250V AC |
| max. Switching Cur. | 8A AC, contact 10A |
| max. Perm. Current | 5A AC |
| nom. Cycles | see datasheet |
| Component | Takamisawa, JS24N-K |
| Remark | with snubber |

| | |
|---|---|
| Identifier | Relay 5 |
| Type | Relay, change over contact, isolated |
| 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 | Relay 6 |
| Type | Relay, change over contact, isolated |

| | |
|---|---|
| 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 | - |

### 1.3.3 Analog Inputs

The control unit has the following analogue inputs / measuring inputs:

| | |
|---|---|
| Identifier | Pow1 |
| Type | Current Sensor |
| Range | 0 ... 20A peak |
| Input/Load Resistor | - |
| Resolution | 0.5% |
| Accuracy | 2% |
| Linearity | 1% |
| Filter | - |
| Linearization | - |
| Model / Series | ind. transformer |
| Remark | 4% ripple |

### 1.3.4 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 History

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

### 1.4.1 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 the modification | Impact for (end-)customer | Comment | location in model/source |
|---|---|---|---|---|---|---|---|---|---|---|
| xxxx-xx-xx | | Release | 0.99 | tested | NSt | | | | | |

For questions please contact:


| | | | |
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