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JUMO Process Control, Inc.
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JUMO mTRON T Measuring, Control, and Automation System

Relay module 4-channel

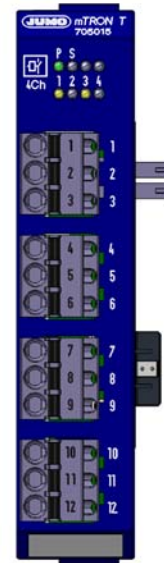
Brief description

The relay module provides four relay outputs controlled through the system bus by digital signals. Each relay output is equipped with an AC 230V/3A changeover contact.

LEDs are used to indicate applied voltage supply, the module operating status, as well as the status of the relay outputs.

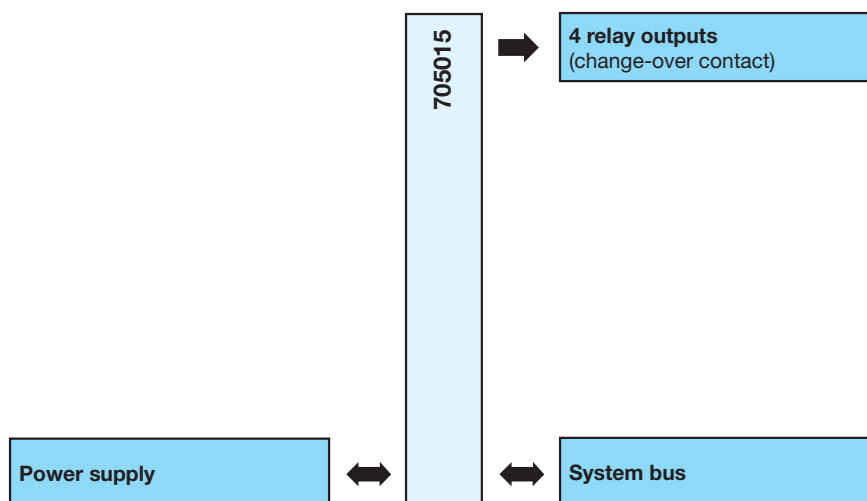
For service work, the module insert can be easily pulled out of the case at the front. The case including the bus PCB remains mounted on the DIN rail.

A setup program or the multifunction panel 840 allows the user to comfortably configure the relay module.



Type 705015/...

Block diagram



Features

- Four relay outputs with changeover contact AC 230 V / 3 A
- Automatic configuration after the module (hot swappable)
- Connection of the outputs at the front
- Removable terminal strips with Push-In technology
- Quick wiring of operating voltage and system bus due to easy module connection

Approval/approval marks (see “Technical data”)



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Technical data

Outputs

| | |
|--------------------------------------|---|
| 4 relay outputs (changeover contact) | |
| Switching capacity | 3 A at AC 230 V resistive load 3 A at DC 30 V resistive load |
| Contact life | 350,000 operations at rated load / 750,000 operations at 1 A |

Electrical data

| | |
|--|--|
| Voltage supply | |
| Connection | Lateral (feed via base unit or router module) |
| Voltage | DC 24 V +25/-20 % |
| Residual ripple | 5 % |
| Current consumption | 120 mA (at DC 19.2 V) |
| Power consumption | 3 W |
| Relay outputs | |
| Connection | At the front (removable terminal strips with Push-In technology) |
| Conductor cross section | |
| Wire or strand without ferrule | Min. 0.5 mm ² , max. 2.5 mm ² |
| Strand with ferrule | Min. 0.5 mm ² , max. 2.5 mm ² |
| 2 x strand with twin ferrule with plastic collar | Min. 0.5 mm ² , max. 1.5 mm ² (both strands with the same cross section) |
| Stripping length | 10 mm |
| Electrical safety | Acc. to EN 61010-1 Overvoltage category III, pollution degree 2 |
| Electromagnetic compatibility | Acc. to EN 61326-1 |
| Interference emission | Class A – only for industrial use – |
| Interference immunity | To industrial requirements |

Case and ambient conditions

| | |
|--|---|
| Case type | Plastic case for DIN rail mounting in the control cabinet (indoor use); DIN rail acc. to DIN EN 60715, 35 mm x 7.5 mm x 1 mm |
| Dimensions (W x H x D) | 22.5 mm x 103.6 mm x 101.5 mm (without connection elements) |
| Weight | Approx. 160 g |
| Protection type | IP20, acc. to DIN EN 60529 |
| Ambient temperature range | -20 to +55 °C |
| Storage temperature range | -40 to +70 °C |
| Resistance to climatic conditions | Relative humidity ≤ 90 % annual average without condensation (climatic class 3K3 acc. to DIN EN 60721-3-3 with extended temperature and humidity range) |
| Site altitude | Up to 2000 m above sea level |
| Mechanical ambient conditions ^a | Classification acc. to DIN EN 60721-3-3, table 6, class 3M2 |

^a Test conditions are listed in the System Description B 705000.8.

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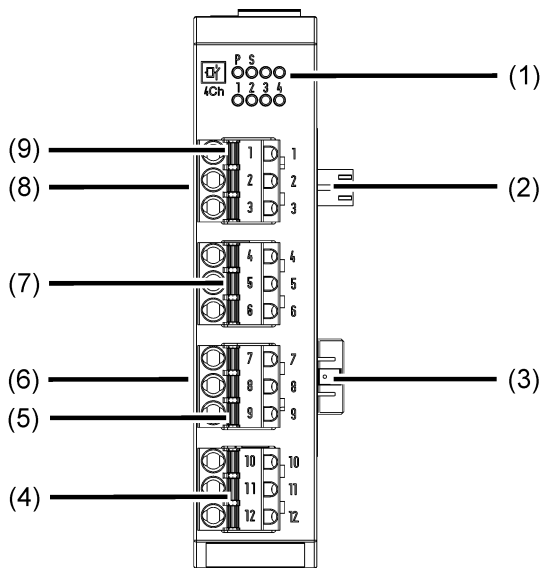
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**Approval/approval marks**

| Approval mark | Testing agency | Certificate/certification number | Inspection basis | Valid for |
|---------------|---------------------------|----------------------------------|--|---|
| c UL us | Underwriters Laboratories | E201387 | UL 61010-1 (3. Ed.), CAN/CSA-22.2 No. 61010-1 (3. Ed.) | all types |
| DNV GL | DNV GL | TAA000016N | Class Guideline DNVGL-CG-0339 | all types; a power supply unit with DNV GL or GL type approval is required (e.g. type 705090) |

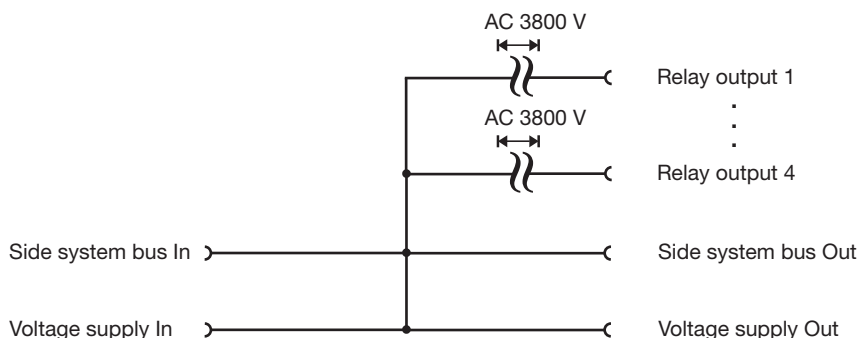


Display and connection elements



- (1) Status displays (LED):
 P = Voltage supply
 S = Status
 1 to 4 = Relay outputs
 (LED is lit: Active)
- (2) Voltage supply Out, DC 24 V
- (3) Side system bus Out
- (4) Relay output 4
- (5) Relay output 3
- (6) Side system bus In
- (7) Relay output 2
- (8) Voltage supply In, DC 24 V
- (9) Relay output 1

Electrical isolation



Connection diagram

The connection diagram included in the data sheet provides initial information about the connection options. Only use the installation instructions or the operating manual for the electrical connection. The know-how and the correct technical implementation of the safety warnings/instructions contained in these documents are the prerequisite for the installation, electrical connection, and initial start as well as for the safety during operation.

| Connection | Output | Terminals | Symbol and terminal designation |
|-----------------------------------|------------------|--|---------------------------------|
| Relay output (changeover contact) | 1 2 3 4 | 1 to 3 4 to 6 7 to 9 10 to 12 | |

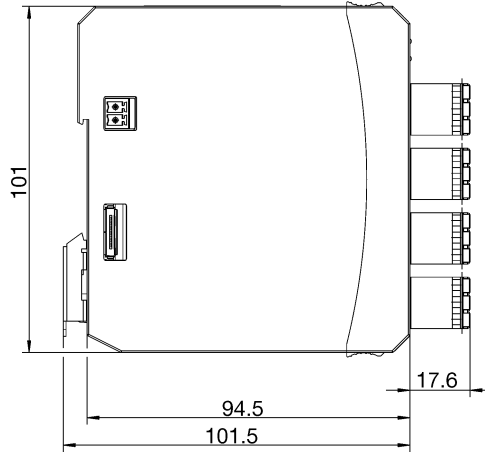
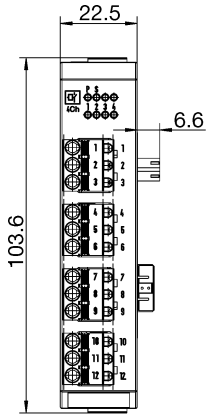
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Dimensions



Module overview

Base units

- Central processing unit
Data sheet 705001

Input/output modules

- Multichannel controller module
Data sheet 705010
- Relay module 4-channel
Data sheet 705015
- Analog input module 4-channel
Data sheet 705020
- Analog input module 8-channel
Data sheet 705021
- Analog output module 4-channel
Data sheet 705025
- Digital input/output module 12-channel
Data sheet 705030
- Thyristor power controller type 70906x
Data sheet 709061, 709062, 709063

Special modules

- Router module
Data sheet 705040

Operating, visualization, recording

- Multifunction panel 840
Data sheet 705060
- Operating panels
Data sheet 705065

Power supply units

- 705090/05-33
Data sheet 705090
- 705090/10-33
Data sheet 705090

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Order details

| | |
|----------------------------|-----------------------------------|
| (1) Basic type | |
| 705015 | Relay module 4-channel |
| (2) Voltage supply | |
| 36 | DC 24 V +25/-20 % |
| (3) DNV GL approval | |
| 000 | Without approval |
| 062 | With DNV GL approval ^a |

^a The power supply unit used must also have a DNV GL or GL type approval (e.g. type 705090).

Order code / /
Order example 705015 / 36 / 000

Scope of delivery

| |
|-----------------------------|
| 1 relay module |
| 1 Installation Instructions |

General accessories

| Description | Part no. |
|---|----------|
| JUMO mTRON T system manual, English | 00575577 |
| Setup program with program editor JUMO mTRON T (on MiniDVD), incl. USB cable (A-plug to mini-B-plug, 3 m) | 00569494 |
| Program editor JUMO mTRON T (on MiniDVD), incl. USB cable (A-plug to mini-B-plug, 3 m) | 00622333 |
| PCA3000/PCC JUMO software package | 00431884 |
| PC Evaluation Software PCA3000 | 00431882 |
| Release automatic print for PC Evaluation Software PCA3000 | 00505548 |
| PCA Communication Software PCC | 00431879 |
| Plant Visualization Software JUMO SVS3000: See data sheet 700755 | - |
| USB cable A-plug mini-B-plug 3 m | 00506252 |

Content of the Mini-DVD:

- Setup program with program editor JUMO mTRON T in case of part no. 00569494
- Program editor JUMO mTRON T in case of part no. 00622333
- CODESYS programming software (free version)
- CODESYS Repository Package - Operating panels (free version)
- GSD file JUMO mTRON T - CPU (free version)
- PC Evaluation Software PCA3000 (30-day trial version)
- PCA Communication Software PCC (30-day trial version)
- Documentation in PDF format