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

## Analog output module 4-channel

### Brief description

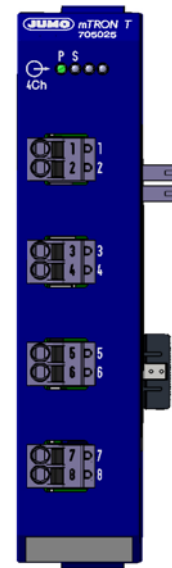
The analog output module 4-channel is equipped with four outputs. The output signal, 0(2) to 10 V or 0(4) to 20 mA, can be configured individually for each channel.

The analog outputs are controlled via the system bus.

LEDs are used to indicate applied voltage supply and the module operating status.

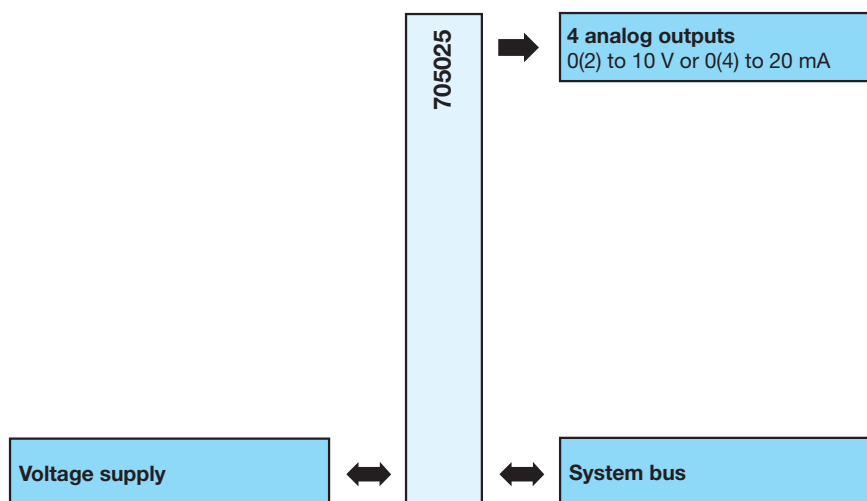
For retrofitting or service work, the module insert can be easily pulled out of the case to the front. The case, including the bus PCB, remains installed on the DIN rail.

The user can use a setup program or the multifunction panel 840 for straight-forward configuration of the analog output module 4-channel.



Type 705025/...

### Block diagram



### Features

- Four analog outputs 0(2) to 10 V or 0(4) to 20 mA (configurable per channel)
- Configurable behavior in case of an error, e.g. acc. to NAMUR recommendation NE 43
- Automatic configuration after the module insert has been exchanged (hot swappable)
- Connection of outputs on front
- Removable terminal strips with Push-In technology
- Quick wiring of operating voltage and system bus provided by simple module connection principle

### Approvals/approval marks (see "Technical data")



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## Technical data

### Analog outputs

4 analog outputs (configurable)	Load resistance $R_{load}$	Accuracy	Ambient temperature influence
Voltage DC 0(2) to 10 V	$\geq 500 \Omega$	< 0.1 %	$\pm 150 \text{ ppm/K}$
Current DC 0(4) to 20 mA	$\leq 500 \Omega$	< 0.1 %	$\pm 150 \text{ ppm/K}$

Selectable output behavior in case of an error acc. to NAMUR recommendation NE 43 (for signal type 2 to 10 V and 4 to 20 mA).

### Electrical data

Voltage supply	
Connection	Lateral (feed via base unit or router module)
Voltage	DC 24 V +25/-20 %
Residual ripple	5 %
Current consumption	240 mA (at DC 19.2 V)
Power consumption	4.8 W
Outputs (terminals 1 to 8)	
Connection	At the front (removable terminal strips with Push-In technology)
Conductor cross section on terminals 1 to 8	
Wire or strand without ferrule	Min. 0.14 mm <sup>2</sup> , max. 1.5 mm <sup>2</sup>
Strand with ferrule	Without plastic collar: min. 0.25 mm <sup>2</sup> , max. 1.5 mm <sup>2</sup> With plastic collar: min. 0.25 mm <sup>2</sup> , max. 0.5 mm <sup>2</sup>
Stripping length on terminals 1 to 8	9 mm
Electrical safety	According to DIN EN 61010-1 Overvoltage category III, pollution degree 2
Electromagnetic compatibility	Acc. to DIN EN 61326-1
Interference emission	Class A - only for industrial use -
Interference immunity	Industrial requirement

### 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. 140 g
Protection type	IP 20, according to DIN EN 60529
Ambient temperature range	-20 to +55 °C
Storage temperature range	-40 to +70 °C
Resistance to climatic conditions	Relative humidity $\leq 90$ % 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 <sup>a</sup>	Classification acc. to DIN EN 60721-3-3, table 6, class 3M2

<sup>a</sup> Test conditions are listed in the System Description B 705000.8.

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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)



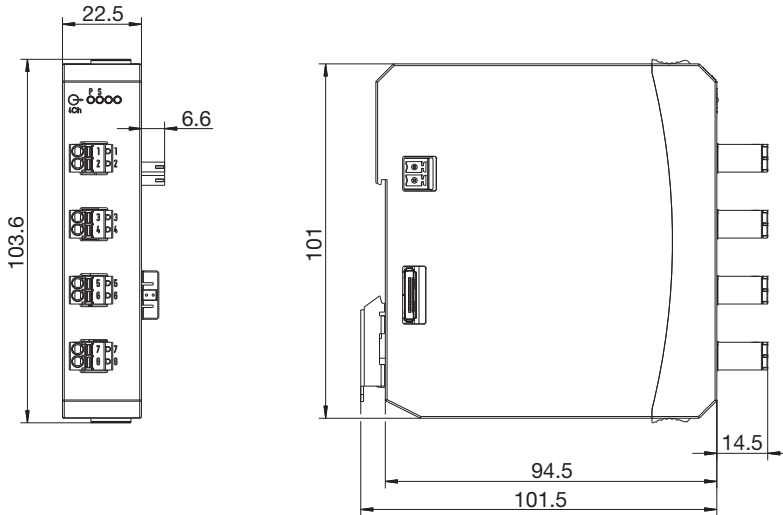
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## Dimensions



## 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

<b>(1) Basic type</b>	
705025	Analog output module 4-channel
<b>(2) Voltage supply</b>	
36	DC 24 V +25/-20 %
<b>(3) DNV GL approval</b>	
000	Without approval
062	With DNV GL approval <sup>a</sup>

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

<b>Order code</b>	<input type="text" value="(1)"/>	/	<input type="text" value="(2)"/>	/	<input type="text" value="(3)"/>
<b>Order example</b>	705025	/	36	/	000

## Scope of delivery

1 analog output module 4-channel
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