

JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

JUMO UK LTD
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
6724 Joy Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com



JUMO I/O system

16-channel digital output module

Areas of application

- Heating, ventilation, and air-conditioning
- Industrial furnaces and heating systems
- Water and wastewater
- Food and beverage industry

The module is worth considering for a variety of other areas of application due to its universal usability.

Special features

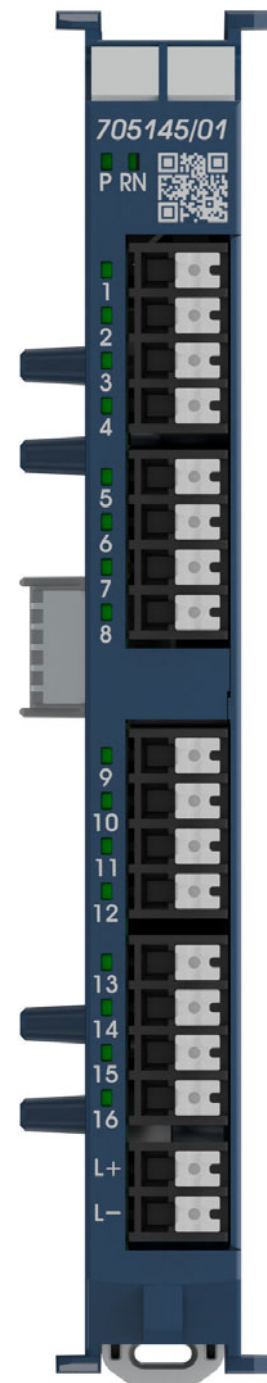
- Terminal strips with PUSH IN technology
- Quick wiring of operating voltage and system bus by simply plugging the modules together
- Mixed operation with the modules from the 7050xx series
- Cycle time of the module configurable via the central processing unit
- Two LEDs for displaying the module status (Power/Run)
- One LED per output for displaying the signal state (High/Low)
- Increased vibration and shock resistance due to optional connector bars

Description

The 16-channel digital output module (705145) is a module of the JUMO I/O system (7051xx) and provides 16 digital outputs (DC 0/24 V) for the JUMO variTRON (7050xx) automation system. It is suitable for indoor use and is installed on a DIN rail inside a control cabinet.

The 16-channel digital output module is intended for operation on a central processing unit of the JUMO variTRON automation system. A system module (705171) is required for direct connection to JUMO variTRON 500; a 3-channel communication module (705163) is required for connection to JUMO variTRON 300 and 500 touch.

The 16-channel digital output module can be operated on a third-party PLC if it supports the JUMO system bus. A 3-channel communication module is also required for this.






JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO UK LTD
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6724 Joy Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



Approval marks and certificates

	Designation	DNV®
	Test facility	DNV®
	Certificate no.	Submitted
	Inspection basis	Class Guidelines CG 0339
	Valid for	Module with extra code 062
	Designation	UL
	Test facility	Underwriters Laboratories
	Certificate no.	Submitted
	Inspection basis	CAN/CSA-C22.2 No. 61010-1-12 (3rd Ed.) / UL 61010-1 (3rd Ed.)
	Valid for	All versions of the module

Technical data

Electrical data

Voltage supply	For module electronics
Connection	Side (supply via central processing unit with system module or via communication module)
Voltage	DC 24 V +25/-20 % SELV
Residual ripple	5 %
Current consumption (module electronics only)	0.1 A (at 19.2 V)
Power consumption	2 W (module electronics only) 241.69 W (max.)
External voltage supply	For digital outputs
Connection	At the front (terminal strip, 2-pole with PUSH IN technology)
Voltage	DC 24 V +25/-20 % SELV
Admissible current	8 A
Conductor cross section	
Wire or stranded wire	Min. 0.25 mm ² , max. 1.5 mm ²
Stranded wire with ferrule	
Without plastic collar	Min. 0.25 mm ² , max. 1.5 mm ²
With plastic collar	Min. 0.25 mm ² , max. 0.75 mm ²
Stripping length	8 to 10 mm
Electrical safety	According to DIN EN 61010-1:2020 Overvoltage category III, pollution degree 2

Digital outputs

Number	16
Connection	At the front (terminals with PUSH IN technology)
Output signal	DC 0/24 V (depending on external voltage supply)
Current	Max. 500 mA per output
Conductor cross section	
Wire or stranded wire	Min. 0.25 mm ² , max. 1.5 mm ²
Stranded wire with ferrule	
Without plastic collar	Min. 0.25 mm ² , max. 1.5 mm ²
With plastic collar	Min. 0.25 mm ² , max. 0.75 mm ²
Stripping length	8 to 10 mm

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO UK LTD
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6724 Joy Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



Electrical isolation

	a	Functional galvanic isolation for the connection of SELV or PELV electrical circuits
	1	Digital outputs To ensure galvanic isolation, the digital outputs must be supplied by a separate power supply unit whose secondary side is galvanically isolated from the system's voltage supply.
	2	EtherCAT (side) Out system bus
	3	Voltage supply (side) Out
	4	Voltage supply (side) In
	5	EtherCAT (side) In system bus
6	External voltage supply for digital outputs	

Environmental influences

Storage conditions	1K21 according to DIN EN 60721-3-1:2018-12
Temperature range (expanded)	-40 to +70 °C
Operating conditions	3K22 according to DIN EN 60721-3-3:2018-12
Temperature range (expanded)	-20 to +55 °C
Relative humidity (expanded)	≤ 90 % without condensation
Vibration resistance	According to DIN EN 60068-2-6:2008-10
Amplitude	0.15 mm from 10 to 58.1 Hz
Acceleration	20 m/s ² from 58.1 to 150 Hz
Shock resistance	According to DIN EN 60068-2-27:2010-02
Peak acceleration	150 m/s ²
Shock duration	11 ms
Shock resistance	IK06 according to DIN EN 62262:2022-02
Site altitude	Max. 2000 m above sea level
Protection type	IP20 according to DIN EN 60529:2014-09
Electromagnetic compatibility	According to DIN EN 61326-1:2022-11
Interference emission	Class A – only for industrial use –
Interference immunity	Industrial requirement

Mechanical features

Housing type	Plastic housing for DIN-rail mounting in the control cabinet (indoor use); DIN rail according to DIN EN 60715, 35 mm × 7.5 mm × 1 mm
Weight	Approx. 90 g

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

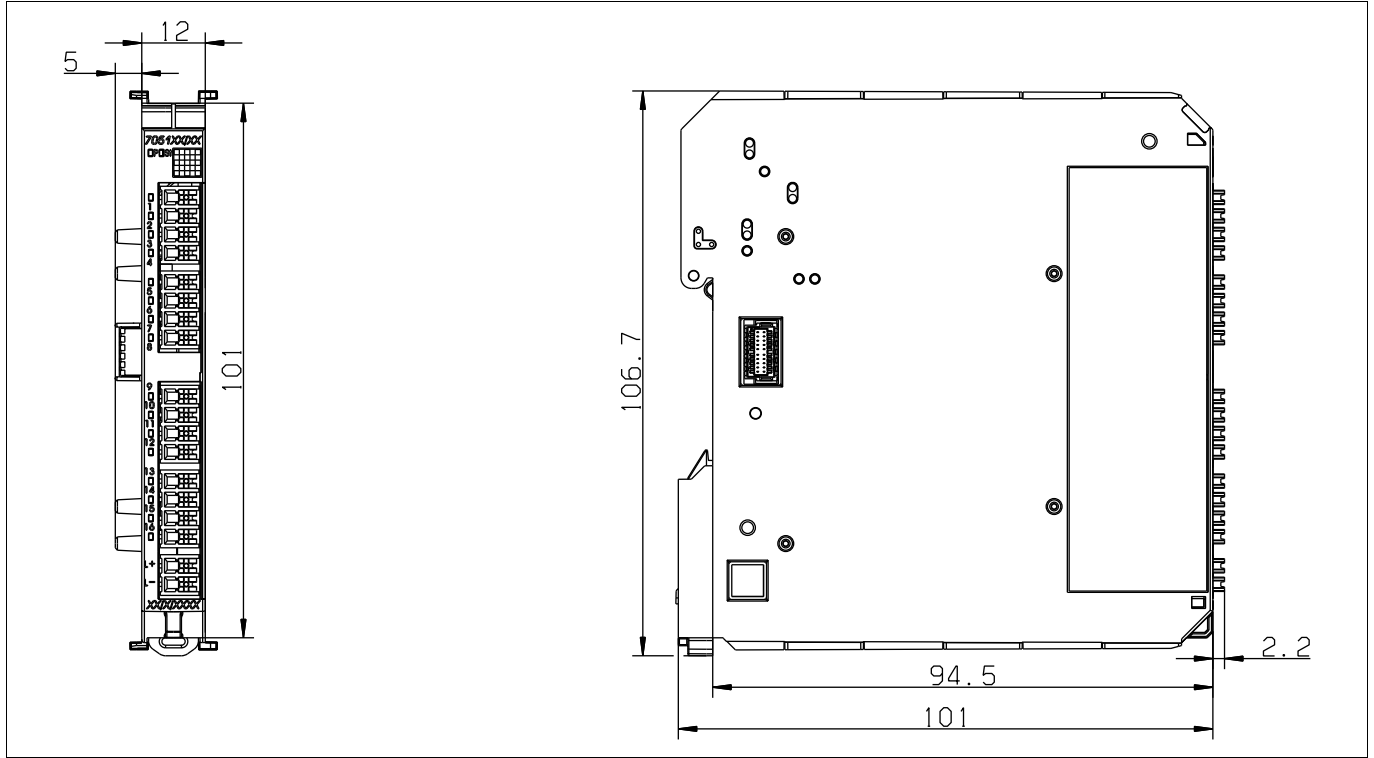
JUMO UK LTD
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6724 Joy Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com

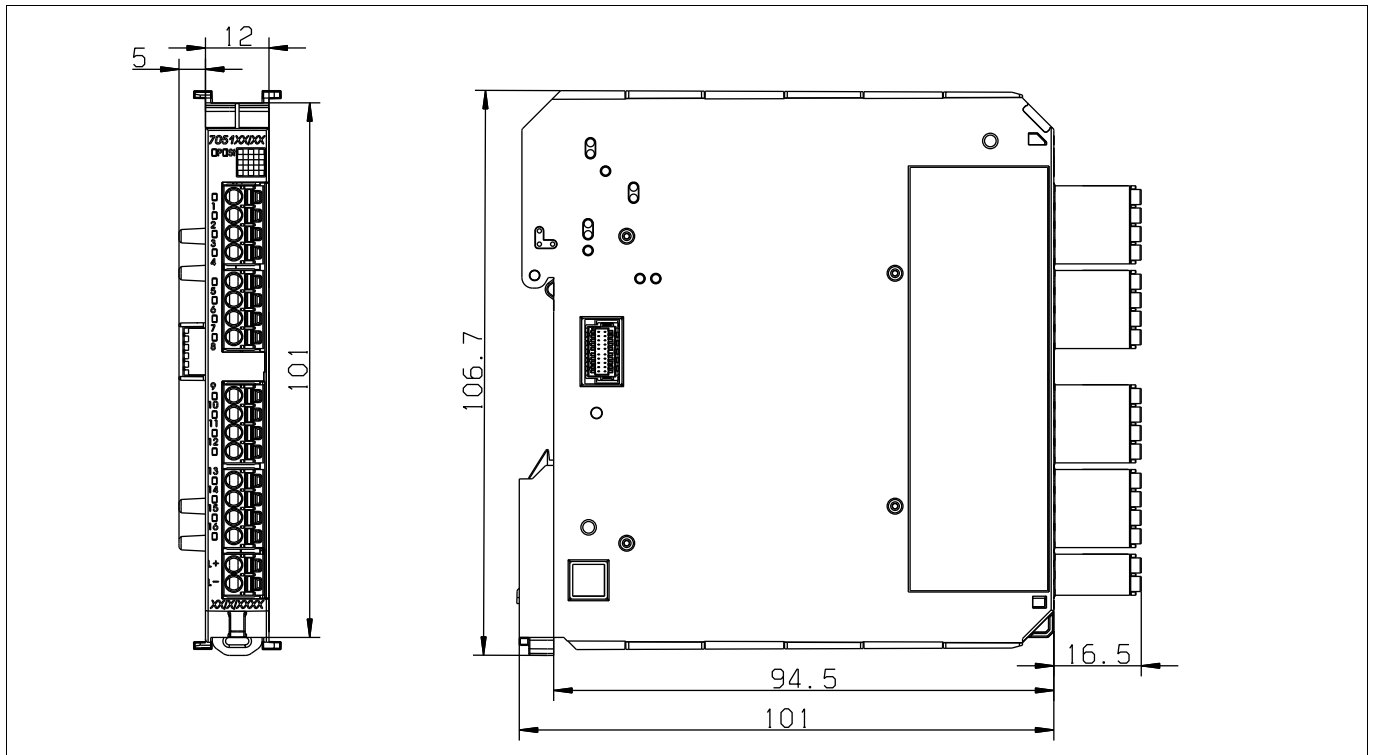


Dimensions

Module with PCB terminal blocks



Module with pluggable terminals (circuit board plug connectors)



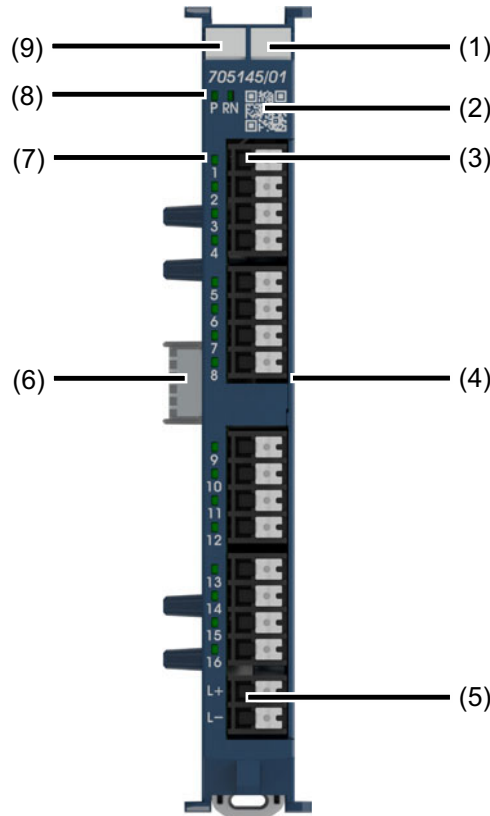
JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

JUMO UK LTD
JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
6724 Joy Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com



Display and connection elements



- 1 Space for inscription label (not included in scope of delivery)
- 2 QR code (web link to JUMO product page)
- 3 Connection terminal for digital output (here: output 1)
- 4 Plug connector (socket, side) for Out voltage supply and EtherCAT Out system bus
- 5 Connection terminals for external voltage supply
- 6 Plug connector (side) for In voltage supply In and EtherCAT In system bus
- 7 Status display of the digital output (lights up = output signal active)
- 8 Status display of the module (P = Power, RN = Run)
- 9 Space for inscription label (not included in scope of delivery)

JUMO GmbH & Co. KG
 Delivery address: Mackenrodtstraße 14
 36039 Fulda, Germany
 Postal address: 36035 Fulda, Germany
 Phone: +49 661 6003-0
 Fax: +49 661 6003-607
 Email: mail@jumo.net
 Internet: www.jumo.net

JUMO UK LTD
 JUMO House
 Temple Bank, Riverway
 Harlow, Essex, CM20 2DY, UK
 Phone: +44 1279 63 55 33
 Fax: +44 1279 62 50 29
 Email: sales@jumo.co.uk
 Internet: www.jumo.co.uk

JUMO Process Control, Inc.
 6724 Joy Road
 East Syracuse, NY 13057, USA
 Phone: +1 315 437 5866
 Fax: +1 315 437 5860
 Email: info.us@jumo.net
 Internet: www.jumousa.com



Connection diagram

The connection diagram in the data sheet provides information on product selection.

For the electrical connection, only use the installation instructions or the operating manual.

Digital outputs

Signal type	Output	Terminals	Symbol and terminal designation
Digital signal DC 0/24 V Reference potential: L- (GND)	1 to 16	1 and L- to 16 and L-	

External voltage supply

The external voltage supply is strictly required to operate the galvanically isolated digital outputs.

Voltage	Terminals	Symbol and terminal designation
DC 24 V SELV (front)	L+ (+24 V) and L- (GND)	

JUMO GmbH & Co. KG

Delivery address: Mackenrodtstraße 14
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
Email: mail@jumo.net
Internet: www.jumo.net

JUMO UK LTD

JUMO House
Temple Bank, Riverway
Harlow, Essex, CM20 2DY, UK
Phone: +44 1279 63 55 33
Fax: +44 1279 62 50 29
Email: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.

6724 Joy Road
East Syracuse, NY 13057, USA
Phone: +1 315 437 5866
Fax: +1 315 437 5860
Email: info.us@jumo.net
Internet: www.jumousa.com



Module overview of the automation system

Central processing units

- JUMO variTRON 300
Data sheet 705003
705163 communication module required.
- JUMO variTRON 500
Data sheet 705002
705171 system module required.
- JUMO variTRON 500 touch
Data sheet 705004
705163 communication module required.

Input/output modules

- 16-channel digital input module
705135 data sheet
- 4-channel digital output module (relay)
705143 data sheet
- 16-channel digital output module
705145 data sheet
- Input and output modules from the 7050xx series (JUMO mTRON T/variTRON)
(see data sheet of the central processing unit)

Special modules

- 2-channel communication module
705162 data sheet
- 3-channel communication module
705163 data sheet
- System module
705171 data sheet

Panels

- JUMO variTRON web panels
Data sheet 705070

24 V power supply units

- Type 705090/03-33 (3.4 A)
705090 data sheet
- Type 705090/05-33 (5 A)
705090 data sheet
- Type 705090/10-33 (10 A)
705090 data sheet