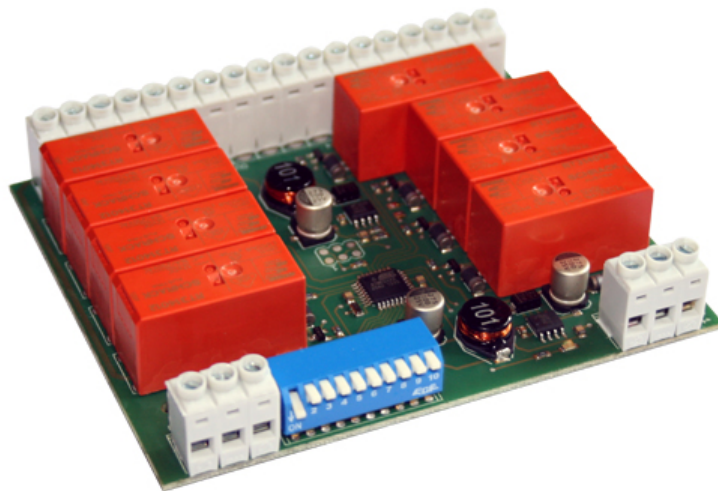


DMX-RELAIS 8 INRUSH

User manual



DMX[®]
4
ALL



For your own safety, please read this user manual and warnings carefully before installation.

Description

The **DMX-RELAIS 8 INRUSH** is designed for several control tasks.

8 potential free switching outputs

The DMX-RELAIS 8 INRUSH has 8 potential free switching outputs (closer / NO) up to 8A switching capacity.

Switching contact for direct and alternating voltage

The relay interface is suitable to direct voltage (DC) or alternating voltage (AC).

DMX FAIL-Function

An adjustable DMX FAIL function offers the option to hold the current state (HOLD) or to adopt a predefined value if the DMX signal fails.

RDM support

The DMX-RELAIS 8 INRUSH allows the configuration via RDM or DMX.

LED-State Display

The DMX state is indicated via the LED status.

Several operation modes

The DMX-RELAIS 8 INRUSH offers several operating modes which can be set via jumper or RDM:

- Hysteresis 127/128
- Hysteresis 0/1
- Hysteresis 100/150
- Exclusive
- Monostable 1Second

Top hat rail mounting available

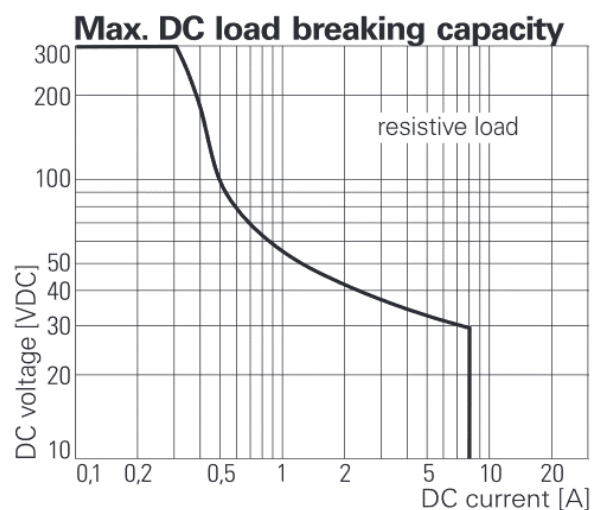
Suitable for the DMX-RELAIS 8 INRUSH the DIN rail housing 1050 is available as accessory. Together with the top-hat rail housing 1050, the interface is optimally suited for control cabinet installation.

Technical Data

Power supply:	12-24V DC (280mA @ 12V / 180mA @ 24V) (Units before 2014 only 12V CD / 400mA)
Protocol:	DMX512 RDM
DMX-Channels:	8 DMX channels
DMX-FAIL:	HOLD / 0-100%
Operation modes:	Hysteresis 127/128 Hysteresis 0/1 Hysteresis 100/150 Exclusive Monostable 1Second
Output:	8 potential-free switching output (closer / NO) each max. 8A 165A@20ms peak switch-on current
Connections:	Screw terminals
Dimensions:	99mm x 82mm

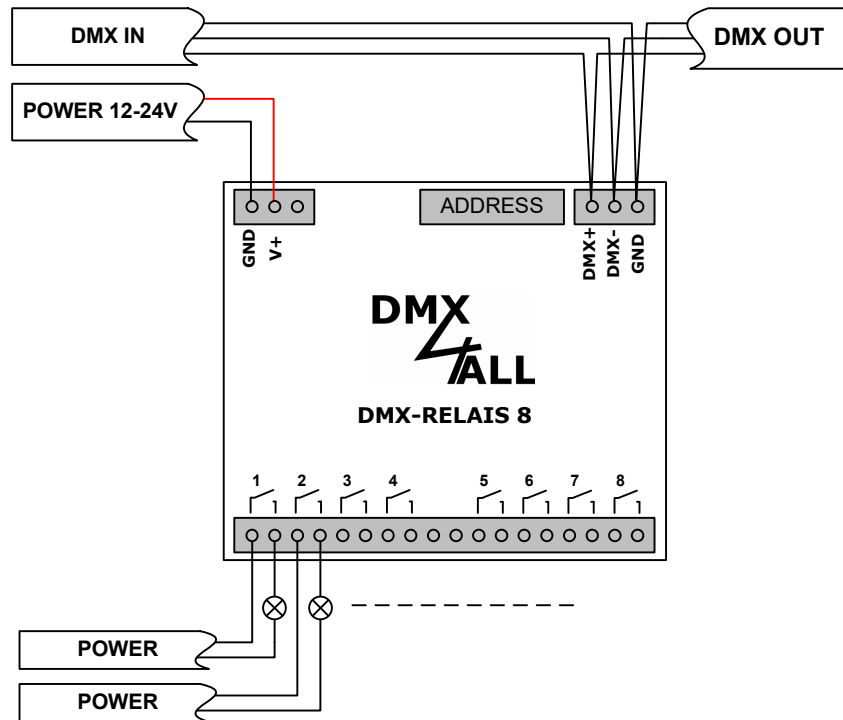
Max. DC load

The maximum current the switch contacts of the **DMX RELAIS 8 INRUSH** can switch is shown in the following graph depending on the switching voltage:



(Source: Data sheet RTS3T012)

Connection



Switch contact
each max. 8A / 250V~
(165A@20ms peak switch-on current)

LED-Display-Codes

The integrated green LED is a multi-function display.

During to the normal operation mode the LED lights permanently. In this case the device is working.

Furthermore, the LED shows the current status. In this case the LED lights up in short pitches and then is missing for longer time.

The number of the flashing lights is equal to the status number.

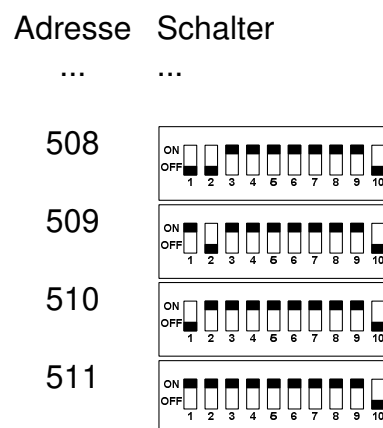
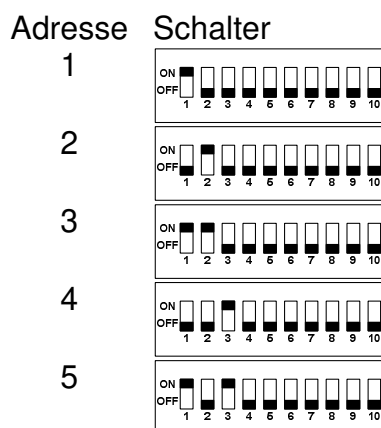
Event-number	Error	Description
1	NO DMX	There is no DMX signal
2	Address error	Please check the set DMX address

Addressing

The start address is adjustable about DIP switch 1-9.

Thereby switch 1 has the valency $2^0 (=1)$, switch 2 the valency $2^1 (=2)$ and so on, up to switch 9 with the valency $2^8 (=256)$.

The sum of the values of the switches set to ON corresponds to the start address.



DMX-HOLD Function

The DMX-RELAIS 8 INRUSH has a DMX-FAIL function keeping the last DMX value (HOLD) or uses a predefined value set by RDM in case of a failed DMX-Signal.

The HOLD function can be activated via RDM or switch 10:

- | | | |
|---------------|---|---|
| Switch 10 ON | ➔ | DMX-HOLD activated |
| Switch 10 OFF | ➔ | DMX-HOLD not activated
(RDM configuration is used) |

If HOLD is switched on (switch 10 = ON), the last received DMX values are remained in case of a DMX signal failure.

If HOLD is switched off (switch 10 = OFF), the DMX values are replaced with a value set by RDM in case of a DMX signal failure. In the delivery state this value is 0, so that the relays switch off.



In case of a power failure the DMX values held with HOLD are discarded!



A value set by RDM is deleted when HOLD is selected. After switching off the HOLD function, the default value 0 is used.

Select operating mode

Hysteresis 127/128

In this operating mode, the relays switch independently of each other each via one DMX channel.

The switching threshold (Hysteresis) is 127/128 which means that the relay is switched off when the DMX value is 127 or less and that the relay is switched on when the DMX value is 128 or greater.

DMX Channel	DMX Value	Function
1	0-127	Output 1 OFF
	128-255	Output 1 ON
2	0-127	Output 2 OFF
	128-255	Output 2 ON
3	0-127	Output 3 OFF
	128-255	Output 3 ON
4	0-127	Output 4 OFF
	128-255	Output 4 ON
5	0-127	Output 5 OFF
	128-255	Output 5 ON
6	0-127	Output 6 OFF
	128-255	Output 6 ON
7	0-127	Output 7 OFF
	128-255	Output 7 ON
8	0-127	Output 8 OFF
	128-255	Output 8 ON

For this operation mode choose via RDM the Personality 1.

Hysteresis 0/1

In this operating mode, the relays switch independently of each other each via one DMX channel.

The switching threshold (Hysteresis) is 0/1 which means that the relay is switched off when the DMX value is 0 and that the relay is switched on when the DMX value is 1 or greater.

DMX Channel	DMX Value	Function
1	0	Output 1 OFF
	1-255	Output 1 ON
2	0	Output 2 OFF
	1-255	Output 2 ON
3	0	Output 3 OFF
	1-255	Output 3 ON
4	0	Output 4 OFF
	1-255	Output 4 ON
5	0	Output 5 OFF
	1-255	Output 5 ON
6	0	Output 6 OFF
	1-255	Output 6 ON
7	0	Output 7 OFF
	1-255	Output 7 ON
8	0	Output 8 OFF
	1-255	Output 8 ON

For this operation mode choose via RDM the Personality 2.

Hysteresis 100/150

In this operating mode, the relays switch independently of each other each via one DMX channel.

The switching threshold (Hysteresis) is 100/150 which means that the relay is switched off when the DMX value is 100 or less and that the relay is switched on when the DMX value is 150 or greater.

DMX Channel	DMX Value	Function
1	0-100	Output 1 OFF
	101-149	Output 1 NO ACTION
	150-255	Output 1 ON
2	0-100	Output 2 OFF
	101-149	Output 2 NO ACTION
	150-255	Output 2 ON
3	0-100	Output 3 OFF
	101-149	Output 3 NO ACTION
	150-255	Output 3 ON
4	0-100	Output 4 OFF
	101-149	Output 4 NO ACTION
	150-255	Output 4 ON
5	0-100	Output 5 OFF
	101-149	Output 5 NO ACTION
	150-255	Output 5 ON
6	0-100	Output 6 OFF
	101-149	Output 6 NO ACTION
	150-255	Output 6 ON
7	0-100	Output 7 OFF
	101-149	Output 7 NO ACTION
	150-255	Output 7 ON
8	0-100	Output 8 OFF
	101-149	Output 8 NO ACTION
	150-255	Output 8 ON

For this operation mode choose via RDM the Personality 3.

Exclusive (Jalousie-Control)

In this operating mode, 2 relays are linked to one another so that only one relay can switch at a time.

The switching threshold (hysteresis) is 127/128, which means that the relay is switched off when the DMX value is 127 or less. The relay is switched on when the DMX value is 128 or greater.

However, two linked relays (1 + 2/3 + 4/5 + 6/7 + 8) cannot be switched on at the same time.

DMX Channel	DMX Value	Function
1	0-127	Output 1 OFF
	128-255	Output 1 ON, if output 2 OFF
2	0-127	Output 2 OFF
	128-255	Output 2 ON, if output 1 OFF
3	0-127	Output 3 OFF
	128-255	Output 3 ON, if output 2 OFF
4	0-127	Output 4 OFF
	128-255	Output 4 ON, if output 3 OFF
5	0-127	Output 5 OFF
	128-255	Output 5 ON, if output 4 OFF
6	0-127	Output 6 OFF
	128-255	Output 6 ON, if output 5 OFF
7	0-127	Output 7 OFF
	128-255	Output 7 ON, if output 6 OFF
8	0-127	Output 8 OFF
	128-255	Output 8 ON, if output 7 OFF

For this operation mode choose via RDM the Personality 4.

Monostable 1Second (Impulse)

In this operating mode, the relays switch independently of each other each via one DMX channel.

As soon as the DMX value is 128 or greater, the relay switches for 1 second. After that, the DMX value must first drop below 128 in order to trigger another switching pulse.

DMX Channel	DMX Value	Function
1	0-127	Output 1 OFF
	128-255	Output 1 1x 1-second ON
2	0-127	Output 2 OFF
	128-255	Output 2 1x 1- second ON
3	0-127	Output 3 OFF
	128-255	Output 3 1x 1- second ON
4	0-127	Output 4 OFF
	128-255	Output 4 1x 1- second ON
5	0-127	Output 5 OFF
	128-255	Output 5 1x 1- second ON
6	0-127	Output 6 OFF
	128-255	Output 6 1x 1- second ON
7	0-127	Output 7 OFF
	128-255	Output 7 1x 1- second ON
8	0-127	Output 8 OFF
	128-255	Output 8 1x 1- second ON

For this operation mode choose via RDM the Personality 5.

RDM (from hardware V2.2)

RDM is the short form for **R**emote **D**evice **M**anagement.

As soon as the device is within the system, device-dependent settings can occur remotely via RDM command due to the uniquely assigned UID. A direct access to the device is not necessary.



If the DMX start address is set via RDM, all address switches at the DMX-RELAIS 8 INRUSH must be set to OFF ! A DMX start address set by the address switches is always prior !

This device supports the following RDM commands:

Parameter ID	Discovery Command	SET Command	GET Command	ANSI/PID
DISC_UNIQUE_BRANCH	✓			E1.20
DISC_MUTE	✓			E1.20
DISC_UN_MUTE	✓			E1.20
DEVICE_INFO			✓	E1.20
SUPPORTED_PARAMETERS			✓	E1.20
PARAMETER_DESCRIPTION			✓	E1.20
SOFTWARE_VERSION_LABEL			✓	E1.20
DMX_START_ADDRESS		✓	✓	E1.20
DEVICE_LABEL		✓	✓	E1.20
MANUFACTURER_LABEL			✓	E1.20
DEVICE_MODEL_DESCRIPTION			✓	E1.20
IDENTIFY_DEVICE		✓	✓	E1.20
FACTORY_DEFAULTS		✓	✓	E1.20
DMX_PERSONALITY		✓	✓	E1.20
DMX_PERSONALITY_DESCRIPTION			✓	E1.20
DMX_FAIL_MODE		✓	✓	E1.37

Parameter ID	Discovery Command	SET Command	GET Command	ANSI/ PID
SERIAL_NUMBER ¹⁾			✓	PID: 0xD400
IDENTIFY_MODE ¹⁾		✓	✓	PID: 0xD402

1) Manufacturer depending RDM control commands (MSC - Manufacturer Specific Type)

Manufacturer depending RDM control commands:

SERIAL_NUMBER

PID: 0xD400

Outputs a text description (ASCII-Text) of the device serial number.

GET Send: PDL=0
 Receive: PDL=21 (21 Byte ASCII-Text)

IDENTIFY_MODE

PID: 0xD402

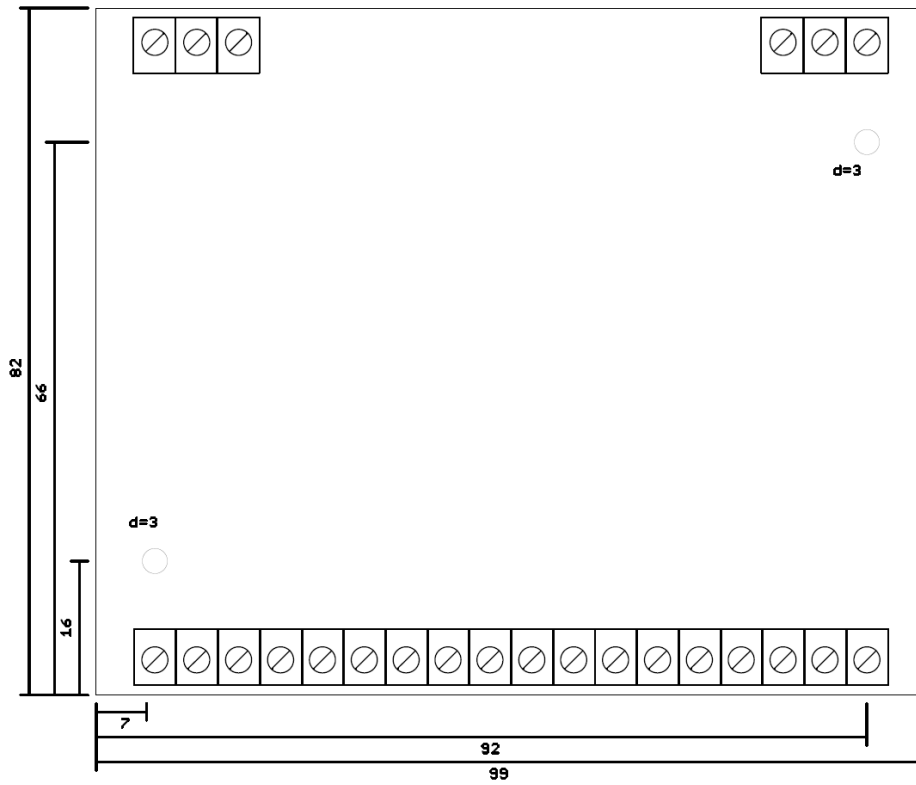
Stellt den Mode ein der mit IDENTIFY_DEVICE ausgeführt wird.

GET Send: PDL=0
 Receive: PDL=1 (1 Byte IDENTIFY_MODE_ID)

SET Send: PDL=1 (1 Byte IDENTIFY_MODE_ID)
 Receive: PDL=0

IDENTIFY_MODE_ID	Funktion
0	FULL Identify All relays switch ON / OFF simultaneously and the status LED flashes
1	LOUD Identify The relays switch ON / OFF one after the other and the status LED flashes
2	QUIET Identify The relays do not switch, only the status LED flashes

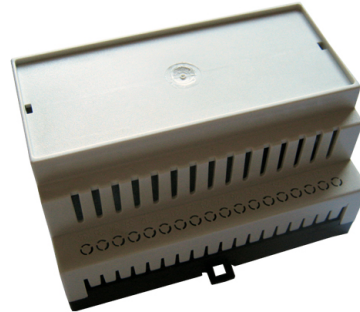
Dimensions



All details in mm

Accessories

Top-hat rail housing 1050



Power supply 12V / 20W

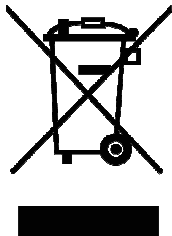


CE-Conformity



This assembly (board) is controlled by a microprocessor and uses high frequency. In order to maintain the properties of the module with regard to CE conformity, installation into a closed metal housing in accordance with the EMC directive 2014/30/EU is necessary.

Disposal



Electronical and electronic products must not be disposed in domestic waste. Dispose the product at the end of its service life in accordance with applicable legal regulations. Information on this can be obtained from your local waste disposal company.

Warning



This device is no toy. Keep out of the reach of children. Parents are liable for consequential damages caused by nonobservance for their children.

Risk-Notes



You purchased a technical product. Conforming to the best available technology the following risks should not be excluded:

Failure risk:

The device can drop out partially or completely at any time without warning. To reduce the probability of a failure a redundant system structure is necessary.

Initiation risk:

For the installation of the board, the board must be connected and adjusted to foreign components according to the device paperwork. This work can only be done by qualified personnel, which read the full device paperwork and understand it.

Operating risk:

The change or the operation under special conditions of the installed systems/components could as well as hidden defects cause to breakdown within the running time.

Misusage risk:

Any nonstandard use could cause incalculable risks and is not allowed.

Warning: It is not allowed to use the device in an operation, where the safety of persons depends on this device.



DMX4ALL GmbH
Reiterweg 2A
D-44869 Bochum
Germany

Last changes: 22.03.2021

© Copyright DMX4ALL GmbH

All rights reserved. No part of this manual may be reproduced in any form (photocopy, pressure, microfilm or in another procedure) without written permission or processed, multiplied or spread using electronic systems.

All information contained in this manual was arranged with the greatest care and after the best knowledge. Nevertheless, errors are to be excluded not completely. It is pointed out that neither a guarantee nor the legal responsibility or any liability for consequences which are due to incorrect information is assumed. This document does not contain assured characteristics. The guidance and the features may be changed at any time and without previous announcement.