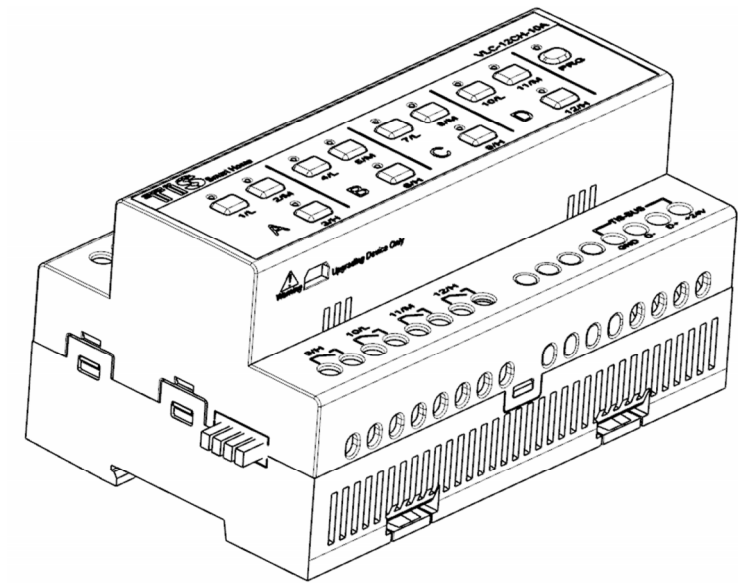# TIS Power Relay
## 12 Channels 10 Amps
Model: RLY-12CH-10A
Data Sheet Rev 1.2



## Safety instructions
Electrical equipment may only be installed and fitted by electrically skilled persons.
Failure to observe the instructions may cause damage to the device and other hazards.
These instructions are an integral part of the product, and must remain with the end customer.

## Basic information
This device is a product of the TIS system. It is a DIN-rail mountable device with 12 independent free voltage Relay channels which can be controlled separately with TIS protocol messages, technical knowledge obtained in TIS training courses is a prerequisite to proper understanding how to install device. Basic Manual Programming can be done without the software. Advanced Programming knowledge about software obtained in the advanced training courses.

## Intended use
Control lighting, curtains, Fan speeds e.g. light on/off, shades open/close, Motor, Pumps, fan low, fan med, fan high, scene, and sequence.

# Product characteristics

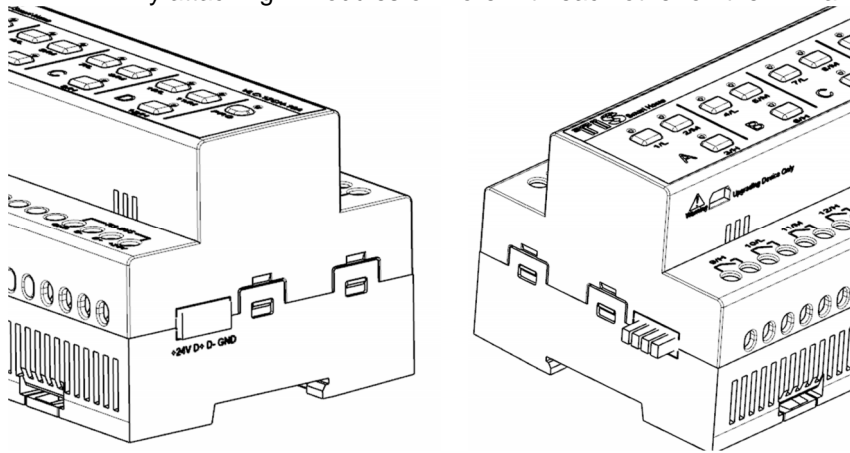| | | |
|---|---|---|
| **Outputs** | Number of channels | 12 |
| | Nominal voltage | 0 – 230 V AC 50/60 Hz |
| | Nominal current per channel | 10 A / 230 VAC |
| | Maximum total channels load | 120 A / 230 VAC |
| **Output switching current** | Max switching current | 16A/230 VAC Resistive |
| | | 8A/230 VAC florescent |
| | Max Continues current | 10A/230 VAC |
| | Max. switching Voltage | 440VAC / 125VDC |
| **Output service life** | Mechanical service life | > 10,000,000 Times |
| **Output switching times** | Operating time | 15mS (at nomi. Volt) |
| | Releasing time | 8 mS  (at nomi. Volt) |
| | Max. operating frequency | 20 cycle/min |
| **TIS Bus** | Number of devices on 1 line | Max. 64 |
| | Bus voltage | 12-32 V DC |
| | Current consumption (Normal) | <15 mA / 24 V DC |
| | Current consumption (Peak) | <140 mA / 24 V DC |
| | Protection | Reverse Polarity Protection |
| **Reaction time** | | approx. 20ms |
| **Operating and display elements** | Programming button/LED | For assignment of the physical address |
| | 1-12 buttons | Manually ON/OFF and Programming |
| | By TIS bus | TIS Protocol massages and commands |
| | Programming | Manual basic Prog, or by software. |
| | Upgrading | 1 X mini USB for up to date upgrading. |
| **Mounting** | Din Rail | Standard 35 mm Din rail |
| | Wall mount | screw holder on the back of the module |
| **Connection terminal** | Load and Power | Screw terminal  0,25…4mm2 |
| | Data / bus | Male female connectors Link + screw Terminal |
| **Functions** | Lighting control ON/OFF Dimming | 12 channel controlled separately |
| | Curtain control | Can set 6 group of curtain (open/close) option |
| | Fan speed control | Can set 4 group of Fan (low, med, high) option |
| | Scenes | 12 different scenarios |
| | Sequences | 12 different sequences |
| **Weight** | Without packaging | 0.45 KG |
| **Dimensions** | Width x length x height | 91mm x 145mm x 75mm |
| **Housing** | Materials | ABS anti fire |
| | Casing color | Black Gray |
| | Button color | Silver |
| **Temperature range** | Operation | 0…60°C |
| | Storage | -20…50°C |
| | Transport | -25…75°C |
| **Air humidity** | | <85% non-condensing |

# Wiring diagram

## Data connection
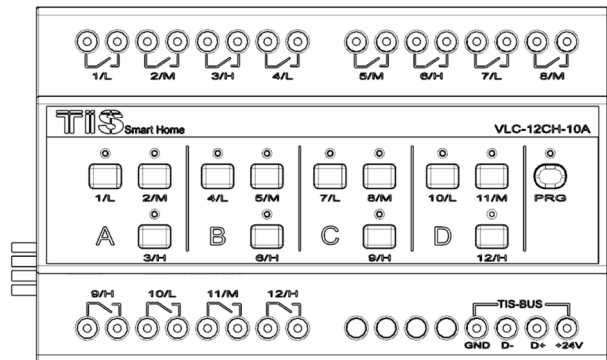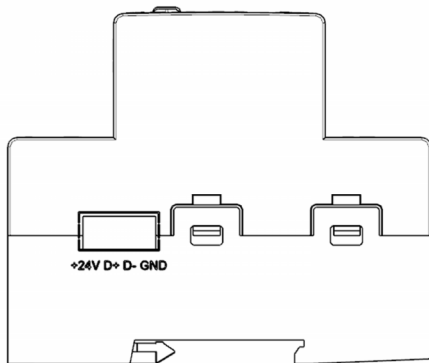TIS Bus connection can be done by 2 ways

### A- Train Connector
By attaching 2 modules or more with each other on the Din rail

### B- Screw terminals connection
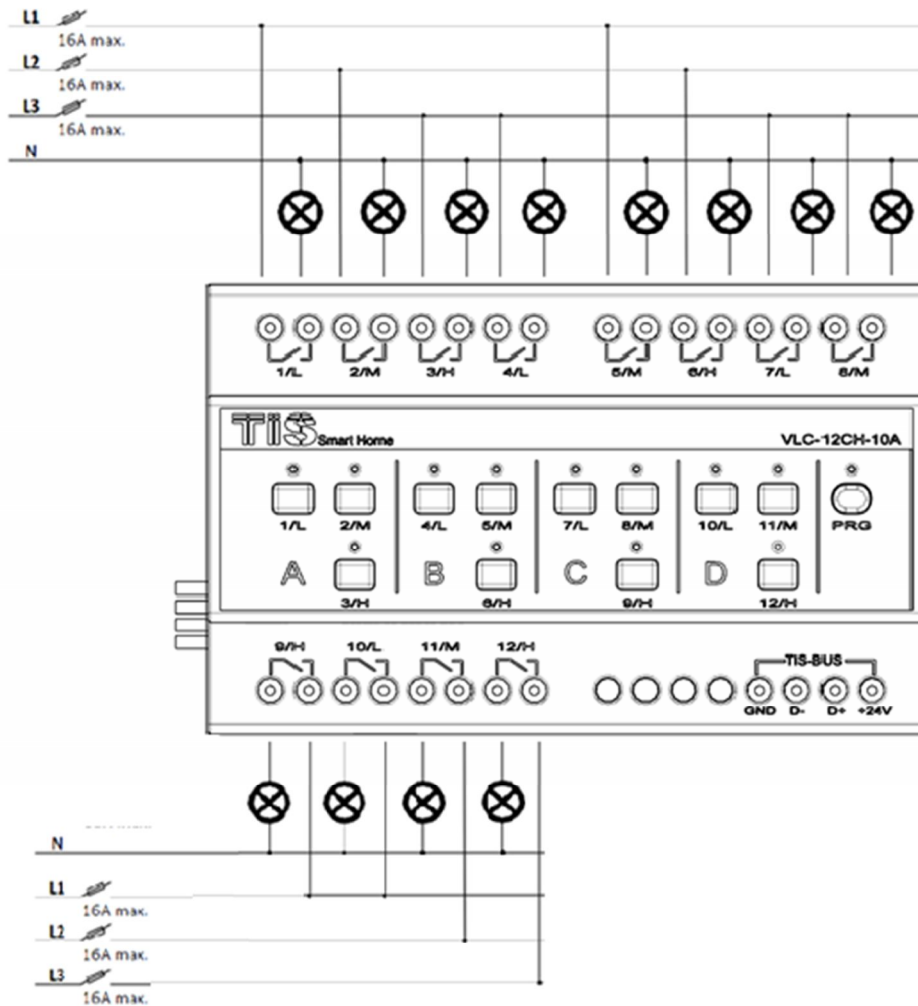By using the Cat5e cable to connect to TIS bus 4 terminals (24V,D+, D-, GND)

Recomanded UTP cat5e color connection

24V – Orange
D+   – Blue
D-   – White Blue
GND – White Orange

**Electrical wire Connections:**



| Input Phase: | 1.5 or 2.5 mm electrical wire. |
|---|---|
| Load connection (1,2,3,4) : | 1.5 or 2.5 mm electrical wire. |

# Warranty
We provide a warranty as provided for by law.
Hologram warranty seal and product serial number is provided by each device.
Please send the description of the defect with Product S/N to our dealer network.

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