Panasonic



WRKT4604E5NC
WRKT4608J5NC
WRKT4612J5NC
WRKT4616Q5NC
WRKT4620Q5NC
WRKT4624Q5NC

WRKT4604E5NC KNX Mix Actuator MX104-16A
WRKT4608J5NC KNX Mix Actuator MX108-16A
WRKT4612J5NC KNX Mix Actuator MX112-16A
WRKT4616Q5NC KNX Mix Actuator MX116-16A
WRKT4620Q5NC KNX Mix Actuator MX120-16A
WRKT4624Q5NC KNX Mix Actuator MX124-16A

⚠ Installation should only be carried out by a technical personnel having certificate of competency

Panasonic

Panasonic Electric Works Elektrik San.ve Tic. A.Ş.
Abdurrahmangazi Mah. Ebubekir Cad. No: 44
34887 Sancaktepe / İstanbul / Turkey
T: 0(216) 564 55 55 F: 0(216) 564 55 44

HOTLINE
444 8456

ewtr.panasonic.com

611460-KNX-EN

General Information

The device is an actuator with different features such as Lighting, Heating, Shutter & Blind and Fan Coil. It has multiple outputs which is between 4 to 24. It has a KNX connection and mains power connection. Each output has own relay, button and LED. The button controls related output's relay and the LED shows releated output's relay status. The device can be programmed by ETS program. It has also Logic, Converter and Sequence functions. It is mounted on din-rail.

Main Features

- Switching – Lighting
- Switching – Heating
- With Shutter/Blind feature you can control AC shutters as well as DC shutter.
- With Fan coil feature you can control 2 pipe and 4 pipe systems.
- Logic function
- Converter function
- Sequence function

Product Versions

Product Features	WRKT4604E5NC (MX104)	WRKT4608J5NC (MX108) WRKT4612J5NC (MX112) WRKT4616Q5NC (MX116) WRKT4620Q5NC (MX120) WRKT4624Q5NC (MX124)
Switching - Lighting	√	√
Switching – Heating	√	√
Shutter/Blind	√	√
Shutter/Blind DC	√	√
Fan Coil 2 Pipe	√	√
Fan Coil 4 Pipe	-	√
Logic	√	√
Converter	√	√
Sequence	√	√

Connection

Each function; Switching, Shutter / Blind, Fan Coil has own connection type. On Figure 2 all possible connection types are shown.

1. Fan Coil (Heating and Cooling)
4 Pipe uses 5 output channels. Channel 1 to channel 5 are used for fan coil.
Channel 1 uses for heating, Channel 2 uses for cooling, Channel 3, Channel 4 and channel 5 uses for fan steps.
2. Fan Coil (Heating or Cooling)
2 Pipe uses 4 output channels. Channel 6 to channel 9 are used for fan coil. Channel 6 uses for heating or cooling, Channel 7, channel 8 and channel 9 uses for fan step.
3. Shutter/Blind DC
4 output channels are used.
Channel 16 to channel 19 are used for shutter/blind DC connection.

⚠ To avoid short circuit, make sure that the ETS configuration of the channels which connected to the DC motor are done correctly.

⚠ Fuse or short circuit protection should be used with DC power supply.

4. Switching
Channel 20 is used for switching – lighting function.
5. Shutter/Blind
Channel 21 and channel 22 are used for shutter/blind connection.
6. Heating
Channel 23 is used for heating function.
NOTE: For the outputs, use circuit breakers for the respective rated current.

Product Components

The device consitsts of two severable parts:
a. Relay module: switching lower part which is mounted on the DIN rail.
b. Control module: Upper part which runs the KNX application.
The KNX application has to be loaded in the upper part (b). Then it can be disconnected from the lower part (a) if required (see figure 1) .

Control buttons for output channels
1. LEDs for signalizing if the channel is switched on or off
2. Push button for direct mode (for respective output)
3. Push button for changing between direct mode and KNX application
4. Key for programming of the physical adress
5. Lock

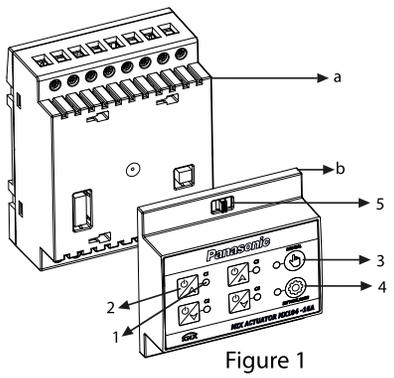


Figure 1

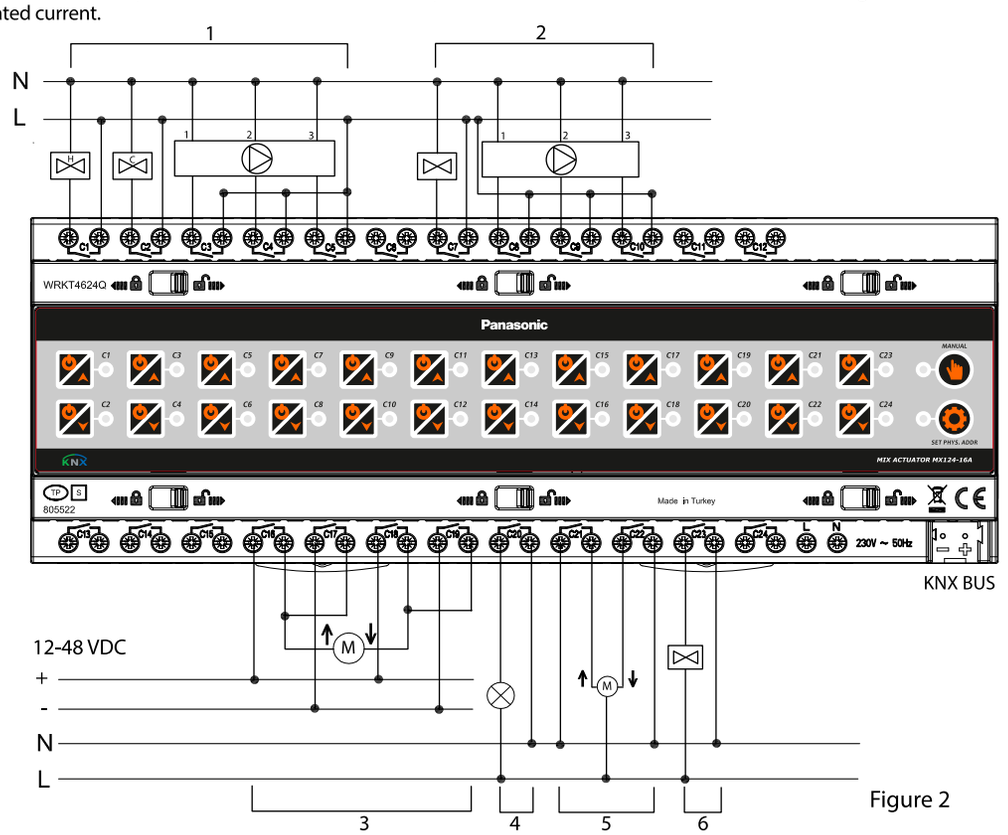
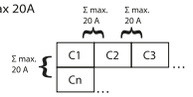


Figure 2

Technical Data

General	
KNX interface	TP1
Configuration mode	S-Mode
Bus voltage	21-32 V DC
Supply voltage	230 V AC
Mains frequency	50 Hz
Installation type	DIN rail
Mounting width	4 Channels - 72mm 8 Channels - 144mm 12 Channels - 144mm 16 Channels - 252mm 20 Channels - 252mm 24 Channels - 252mm
Ambient temperature	-5 C …+45 °C
Storage temperature	-10 C … +55 °C
Transportation temperature	-25 C … +70 °C

Connection	
Bus connection	KNX bus terminal
Connection type	Screw terminals
Max. cable cross section	Single wire: 1.5 mm² to 4 mm² or 2 x 1.5 mm² to 2 x 2.5 mm² Stranded wire without ferrule: 0.75...4 mm² Stranded wire with ferrule: 0.5 mm² to 2.5 mm²
Output contact type	Potential-free closing contacts
Switching Voltage AC	0-230 V AC ± 10%, 50/60 Hz
Switching capacity at 230V AC	16A (PF=1), 3A (PF=0,6)
Switching Voltage DC	0-50 V DC
Switching Capacity at 50 V DC (Resistive Load)	1.2A

Current Load Rating Per Device	
WRKT4604E5NC	Sum of C1… C4 maximum 40A
WRKT4608J5NC	Sum of C1… C8 maximum 80A
WRKT4612J5NC	Sum of C1… C12 maximum 120A
WRKT4616Q5NC	Sum of C1… C16 maximum 160A
WRKT4620Q5NC	Sum of C1… C20 maximum 200A
WRKT4624Q5NC	Sum of C1… C24 maximum 240A
Overall load current rating of neighbouring outputs	Max 20A 

Max. connection load per output	
Ohmic load	3680 W
Capacitive load	max. 21µF at 16A
Inductive load (shutter...)	600W
Max. inrush current	80A / 20ms

Max. lamp load per output	
Incandecent / Halogen load	2000 W
230 V halogen lamps	1800 W
Low voltage halogen lamps with electr. switching power supply	800 W
Low voltage halogen lamps with inductive transformers	800 VA
Fluorescent lamp load (conventional) parallel connected	2 x 58 W (7 µF), 3 x 36 W (4,5 µF), max. 120 W (14 µF)
Fluorescent lamp load (conventional) series connected	14 x 58 W, 20 x 36 W, max. 1000 VA
Fluorescent lamp load with EB	3 x 36 W, 2 x 58 W, max. 120 W
Energy saving lamps	6 x 7 W, 4 x 11 W, 2 x 15 W, 2 x 20 W, 2 x 23 W

Start-up behavior

Factory Default

The device is unloaded in factory default. After power on each output can control by its button. You can test your connection with factory default.

After ETS Programming

User can define the device behavior and connect it to another KNX devices after programming it by ETS. The behavior of the device after programming with the ETS depends on the configuration. The description of the features, parameters and objects is in the device reference manual.

Dimensional Drawings

Product's front view dimentions are shown; for 4 channels in Figure 3, for 8-12 channels in Figure 4 and for 16-20-24 channels in Figure 5.
Product's side view dimentions are shown; for 4-8-12 channels in Figure 6 and for 16-20-24 channels in Figure 7.

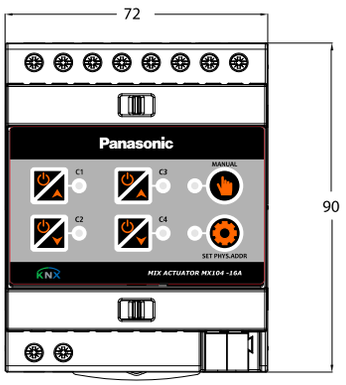


Figure 3 : 4 Channels

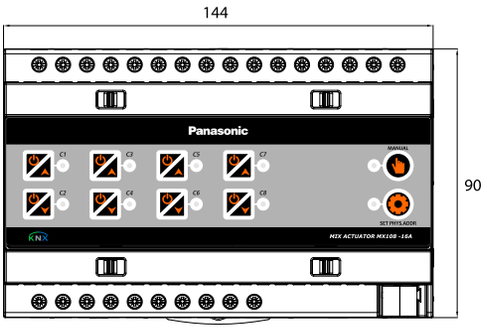


Figure 4 : 8 - 12 Channels

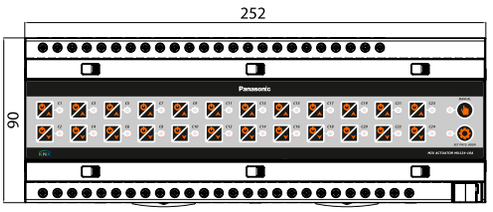


Figure 5 : 16 - 20 - 24 Channels

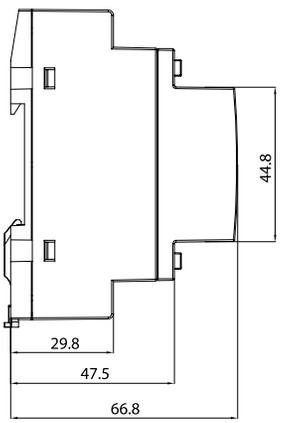


Figure 6 : 4 - 8 - 12 Channels

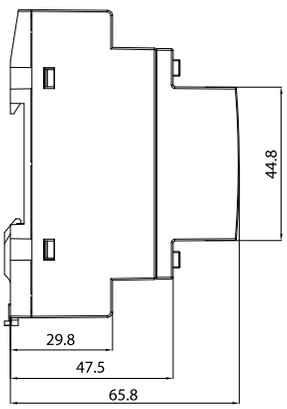


Figure 7 : 16 - 20 - 24 Channels

WARNING

- Ensure that the power is cut off before the assembly of the products.
- Connection and assembly of the electrical devices should be carried out only by the technical personnel having certificate of competency.
- No responsibility is assumed for the entire of the malfunction, accident and loss arising from the assembly or interference of the persons not having the competency certificate.
- Use dry or slightly damp cloth to clean the buttons, cover and frame of the product. Never use alcohol, cologne, detergent or other similar chemicals for cleaning. Do not perform wet cleaning do not contact the product with water when the product is energized.
- In case the surface to which the product is connected is dyed, store the product by removing its cover and the frames.
- Keep the product away from the damp or wet environment during the transportation and shipping.
- It is intended for indoor use only.
- When the product is to no longer be used, it must not be left in place and it must be removed.
- Protect the switch contacts with a series-connected miniature circuit-breaker of characteristic B for a max. rated current of 16A.

Service and Guarantee

- Warranty period starts as of the delivery date of the product and it is 2 years.
- Warranty covers the malfunctions likely to occur due to the manufacturing defects of the product and within the warranty period.
- The product including all of its parts is under waranty as a whole. If the product turns out to be defective, the consumer can use one of the following rights stipulated in Article 11 of Consumer Protection Law no. 6502;

a- Withdrawal from the contract
b- Demanding discount from sales fee
c- Demanding free repair,
d- Demanding the replacement of the sold one with a fungible one free from defects.

- In case the consumer chooses the right of free repair among those rights; the dealer is obliged to repair the product or have the product repaired without claiming any fee under the name of replaced part fee, labor cost or for any other reasons. The consumer can also use the right of free repair against the manufacturer or exporter. The dealer, manufacturer and exporter are jointly and severally liable for the usage of this right by the consumer.
- In case the consumer uses the right of free repair and if the product
  - fails within the warranty period again and
  - the maximum period required for the repair is exceeded and
  - Authorized service station, dealer, manufacturer or exporter state that it's not possible to repair the product in a report,

the consumer can demand the return of the product fee, fee discount at the ratio of the defect or the replacement with the one free of defects, if possible, from the dealer. The dealer can not reject the demand of the consumer. In case this demand is not met, the dealer, manufacturer and exporter shall jointly and severally be held responsible.
- The repair period of the product can not exceed 20 business days. This period starts on the notification of the failure on the product to the authorized service station or the dealer within the warranty period and from the date of delivery of the product to the authorized service station out of warranty period. In case of not eliminating the product malfunction within 10 business days, manufacturer or importer is obliged to dedicate another product with similar characteristics to the use of the consumer until the completion of the product repair. In case the product fails within the warranty period, elapsed time is added to the warranty period.
- Usage of the product contrary to the rules stipulated in user's manual, operating out of determined voltage, current and environmental conditions, damage on the cable connection due to the user's fault and failure of the product due to the facts arising from the fire, flood, earthquake, lightning and similar disasters are not under warranty.
- The consumer can apply to the arbitration committee for consumers or the consumer court where the consumer operations are made or in the residential area for the disputes to be occurred regarding the usage of the rights arising from the warranty.
- In case the dealer doesn't provide this certificate of warranty, the consumer can apply to the General Directorate of Consumer Protection and Market Surveillance of Ministry of Customs and Trade".