



WRKT4708J5NC
WRKT4712J5NC
WRKT4716Q5NC
WRKT4720Q5NC
WRKT4724Q5NC



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WRKT4724Q5NC

KNX MIX ACTUATOR MX208 - 16 A
KNX MIX ACTUATOR MX212 - 16 A
KNX MIX ACTUATOR MX216 - 16 A
KNX MIX ACTUATOR MX220 - 16 A
KNX MIX ACTUATOR MX224 - 16 A



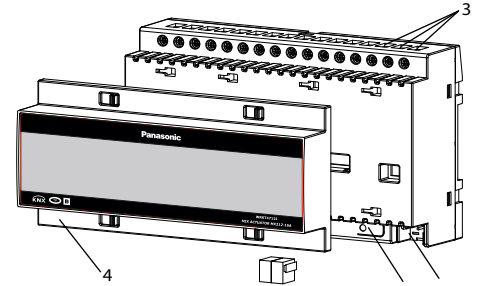
Installation should only be carried out by a technical personnel having certificate of competency

Product Versions

Product Versions	WRKT4708J5NC (MX208)	WRKT4712J5NC (MX212)	WRKT4716Q5NC (MX216)	WRKT4720Q5NC (MX220)	WRKT4724Q5NC (MX224)
Switching-Lighting	Up to 8	Up to 12	Up to 16	Up to 20	Up to 24
Switching-Heating	Up to 8	Up to 12	Up to 16	Up to 20	Up to 24
Shutter Blind AC	Up to 4	Up to 6	Up to 8	Up to 10	Up to 12
Shutter Blind DC	Up to 2	Up to 3	Up to 4	Up to 5	Up to 6
Fan Coil 2-pipe (*)	Up to 4	Up to 6	Up to 8	Up to 10	Up to 12
Fan Coil 4-pipe (*)	Up to 2	Up to 4	Up to 5	Up to 6	Up to 8
Auxiliary Functions (v2.0)	24	24	24	24	24

(*) when only one fan level is controlled.

Product Components



- 1- KNX Programming Button and LED
- 2- KNX Bus Terminal
- 3- Terminals of Output Relays
- 4- Upper Cover

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General Information

KNX Low-Cost Mix Actuators are used to control switching relays from KNX bus where the following functions can be implemented:

- 1- Switching lighting loads and electric consumers.
- 2- Driving shutter / blind AC and DC motors.
- 3- Switching heating products or valves.
- 4- Controlling fan coils 2-pipe and 4-pipe systems.

Furthermore, many complex configurations and creative scenarios can be done thanks to the powerful auxiliary functions.

The versions of the device differ with number of relays 8-12-16-20-24.

The devices are provided with voltage via KNX bus.

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 up to 6 fan levels.
- The device is powered via KNX bus and does not require an additional auxiliary voltage supply.
- 24 auxiliary functions. The type of each function can be selected from 14 different types (Sequencer, Counter, Scene actuator, Filter, Converter, Logic gate, Presence detector, controller, Staircase controller ...).

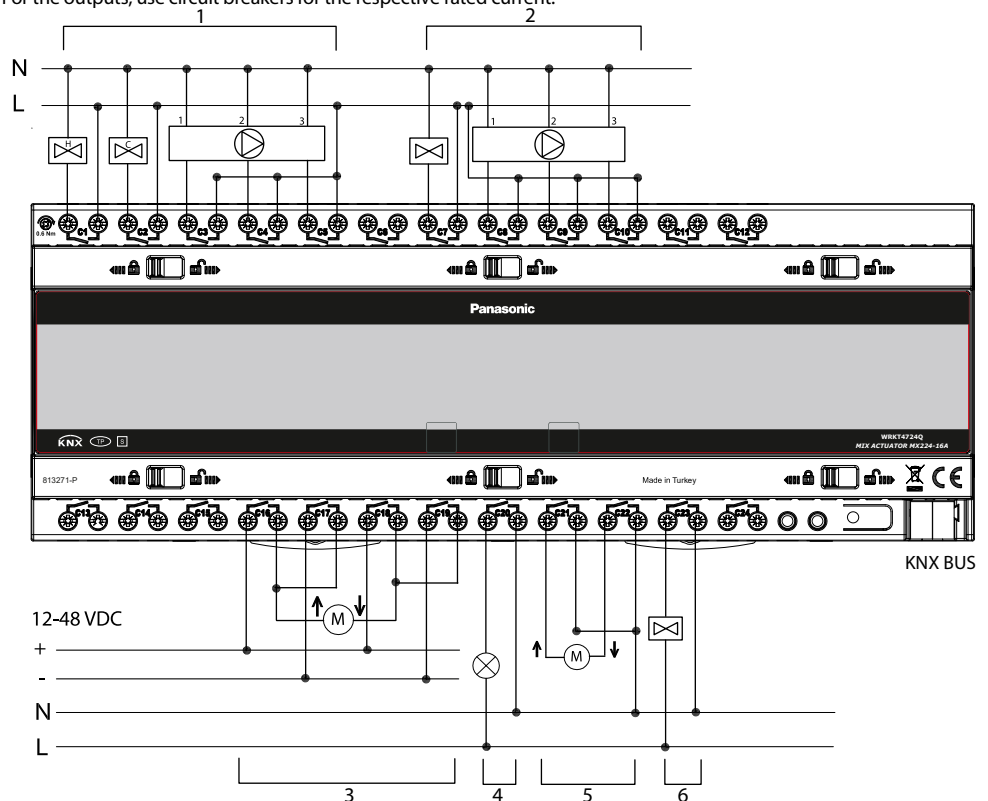
Connection

Note for connecting the cables after connecting the device to the bus.

Each function; Switching, Shutter / Blind, Fan Coil has own connection type. All possible connection types are shown on connection diagram.

1. Fan Coil 4-pipe (Heating and Cooling): Outputs 1 to 5 are used for fan coil. Output 1 is used for heating valve, output 2 is used for cooling valve, outputs 3, 4 and 5 are used for fan levels.
 2. Fan Coil 2-pipe (Heating or Cooling): Outputs 6 to 9 are used for fan coil. Output 6 is used for heating or cooling valve, outputs 7, 8 and 9 are used for fan levels.
 3. Shutter/Blind DC: Outputs 16 to 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 – Lighting: Output 20 is used for switching – lighting function.
 5. Shutter/Blind AC: Outputs 21 and 22 are used for shutter/blind AC connection.
 6. Switching - Heating: Output 23 is used for heating function.

NOTE: For the outputs, use circuit breakers for the respective rated current.



Technical Data

KNX	
KNX interface	TP1
Configuration mode	S-Mode
Bus voltage	21 - 32 V DC SELV

Power	
Operating voltage (Power supply)	DC 21 - 32 V (from KNX bus)
Current consumption (bus) / W/O switching	< 5mA
Current consumption (bus) / switching	< 12mA

Environmental Conditions	
Ambient temperature	-5 °C ... +45 °C
Storage temperature	-10 °C ... +55 °C
Transportation temperature	-25 °C ... +70 °C
Ambient humidity	5...93% (non-condensing)

Housing (Mechanical Design)	
Installation type	DIN rail (IEC60715 35mm top-hat rail TH35)
Mounting width	8 Channels - 144mm (8 modules) 12 Channels - 144mm (8 modules) 16 Channels - 252mm (14 modules) 20 Channels - 252mm (14 modules) 24 Channels - 252mm (14 modules)
Bus connection	KNX Bus terminal (243-211 Wago)
Connection type	Screw terminals
Max. Cable cross section for screw terminals	Single wire: 1.5 mm ² to 4 mm ² or 2x1.5 mm ² to 2x2.5mm ² Stranded wire without ferrule: 0.75..4 mm ² Stranded wire with ferrule: 0.5mm ² to 2.5mm ²
Weight	8 Channels - 320gr 12 Channels - 370gr 16 Channels - 575gr 20 Channels - 625gr 24 Channels - 675gr

Electrical Safety	
Protection type (IEC60529)	IP 20
Pollution degree (IEC60664)	2
Protection class (IEC61140)	II
Overvoltage category (IEC60664)	III

Standards	
EMC - LVD	EN 60669-2-1, EN 50428
KNX	EN 50090

Current Load Rating Per Device	
WRKT4708J-	Sum of C1..C8 maximum 80A
WRKT4712J-	Sum of C1..C12 maximum 120A
WRKT4716Q-	Sum of C1..C16 maximum 160A
WRKT4720Q-	Sum of C1..C20 maximum 200A
WRKT4724Q-	Sum of C1..C24 maximum 240A
Overall load current rating of neighbouring outputs	

Output, (Rated Values)	
Switching Nominal Voltage	230 V AC 50/60 Hz
Switching Nominal Current (at 230 V AC)	16A (PF=1)
Output contact type	Potential-free closing contacts, μ contact
DC Switching Capacity	5A 30V DC (Resistive)

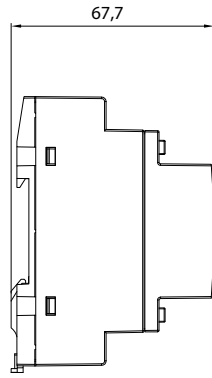
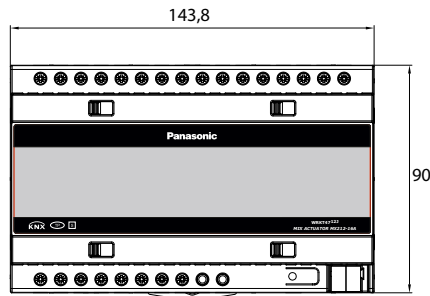
Maximum connection Load Per Output	
Resistive	3680 W
Inductive load (shutter)	600 W
Incandescent / Halogen load	1200 W
Max. inrush current	100A

Note:

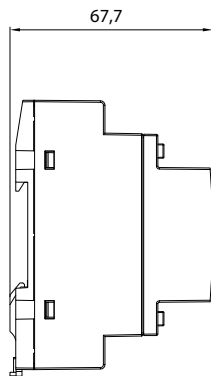
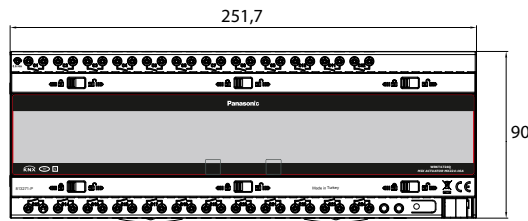
The positions of the output relays can be changed only after the bus voltage has been applied to the device for at least 15 seconds.

Dimensional Drawings

8 – 12 Outputs Devices



16 – 20 – 24 Outputs Devices



Start-up Behavior

Factory Default

The device is unloaded in factory default. Outputs cannot be controlled without downloading application in ETS.

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.

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.
- Installation only in distribution boards and enclosed housing. Installation only on a 35mm DIN rail (TH35).

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 warranty 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".