

## OPERATION AND MAINTENANCE MANUAL

### Operating instructions



**Power supply equipment**

### Output Module – Extension Module type:

**mcr R0424-1**  
**mcr R0424-2**  
**mcr R0448-1**  
**mcr R0448-2**  
**mcr R0448-4**  
**mcr R0424-K**  
**mcr R0448-K**

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**We recommend to preserve this manual inside the unit for future reference.**

The mcr R04xx Extension Module meets the requirements of **EN 12101-10:2005 + AC:2007 standard** and the essential requirements of EU directives: 2014/35/EU (**LVD**) concerning electrical equipment designed for use within certain voltage limits; 2014/30/EU (**EMC**) regarding electromagnetic compatibility.



### Related documents:

- Certificate of Constancy of Performance **CNBOP-PIB No. 1438-CPR-0590** confirming compliance with the requirements of **EN 12101-10:2005+AC:2007**,
- Certificate of Admittance **CNBOP-PIB No. 3149/2018**,
- Declaration of Performance No. **090/HO/2018** of 06.05.2018,
- EU Declaration of Conformity No. **089/HO/2018** of 07.03.2018

The above documents can be downloaded from the website of "MERCOR" S.A.:  
[www.mercor.com.pl](http://www.mercor.com.pl)

Thank you for choosing mcr R04xx extension module. Please read this manual carefully and follow the instructions before working on the device. This will ensure correct and trouble-free operation.

"MERCOR" S.A. is not liable for damages resulting from improper use of the device.

"MERCOR" S.A. reserves the right to make changes to this manual without prior notice.

**"MERCOR" S.A.**

Waste electrical and electronic equipment should be collected selectively and then subjected to recovery and recycling processes!



## 1. Introduction

This operation and maintenance manual will make the user familiar with the purpose, design, principle of operation, proper installation and operation of mcr R extension modules in versions **mcr R0424-1**, **mcr R0424-2**, **mcr R0448-1**, **mcr R0448-2**, **mcr R0448-4**, **mcr R0424-K**, **mcr R0448-K**. The manual includes also additional information about the conditions of use, maintenance and warranty of the product.

Observance of the recommendations included in technical and user documentation will ensure proper functioning of the smoke ventilation systems and safety of the system users.

"MERCOR" S.A. reserves the right to make changes in the product or in this document without notice.

## 2. Intended use

The mcr R04xx extension modules are part of a smoke control system which also includes other "MERCOR" S.A. products, such as: mcr PROLIGHT, mcr S-THERM, mcr ULTRA-THERM point smoke exhaust vents, smoke vents integrated in continuous rooflights and skylights of the mcr PROLIGHT system, smoke control units mcr 9705 and mcr 0204 and others.

The mcr R04xx extension modules are used for the control and supply of 24 V= voltage to electric actuators installed in mcr PROLIGHT, mcr S-THERM, mcr ULTRA-THERM smoke exhaust vents, smoke exhaust windows equipped with MCR W or MCR L actuators, mcr PROSMOKE FS CE curtains (mcr R0424-1, mcr R0424-2, mcr R0448-1, mcr R0448-2, mcr R0448-4 modules) or to control and supply with 24V= voltage electric motors of mcr PROSMOKE CE/C1 smoke curtains (mcr R0424-K, mcr R0448-K modules). The modules can also be used to power other devices (of other manufacturers), **only after checking interoperability and issuing an appropriate written statement by "MERCOR" S.A.**

Making options:

1. mcr R0424-1 1x 24 A output line,
2. mcr R0424-2 2x output lines, 12 A each,
3. mcr R0424-K for curtains, 1÷10x output lines, 24 A,
4. mcr R0448-1 1x 48 A output line,
5. mcr R0448-2 2x output lines, 24 A each,
6. mcr R0448-4 4x output lines, 12 A each,
7. mcr R0448-K for curtains, 1÷10x output lines, 48 A.

The mcr R04xx extension modules are designed to work with the mcr 9705 and mcr 0204 control units, which control the module functions, correctness of its operation (module status) and continuity of the panel-module and module-actuators lines.

## 3. Design and operation

The extension modules comprise the following key components:

1. enclosure with module status indicators on the door;
2. supply and battery charging circuits (configuration depending on the module version, T1, U1, U2, C1, Z1);
3. control system (US);
4. set of relays (number depends on module version, K1÷K5);
5. battery bank (B1, B2);
6. terminal block with fuses (F1÷F6).

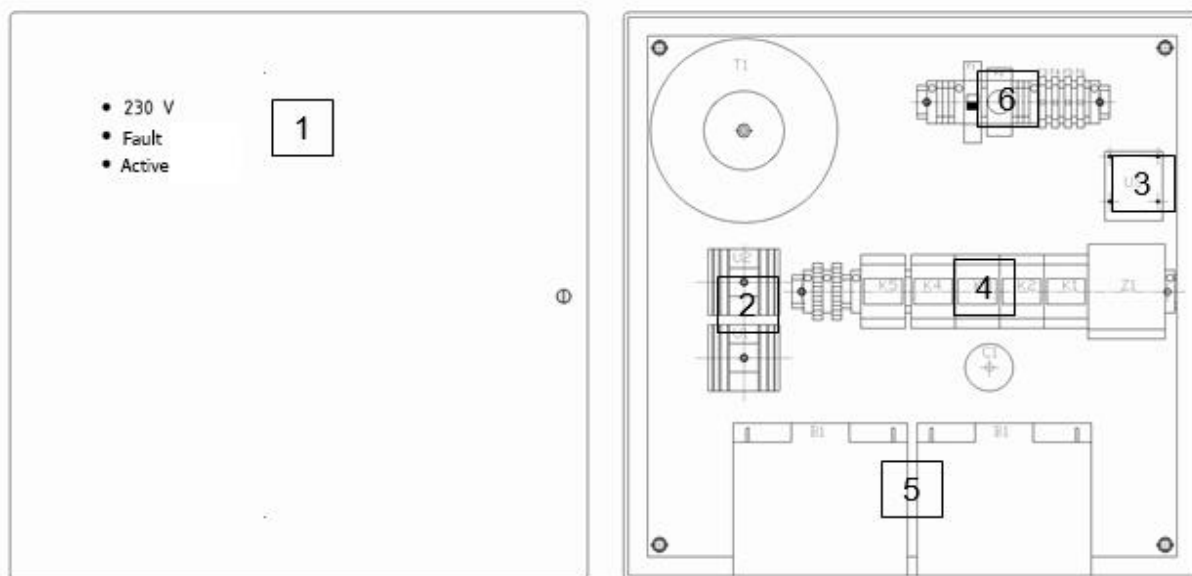


Fig. 1. Extension module (on the left - view of the door, on the right - inside the enclosure - mcr R0448-4 version).

The unit's steel enclosure, painted light gray (~RAL7035), is designed for surface mounting, with the option of leading the wires out from the top or back. The enclosure door are lockable with a key.

Items 2, 3, 4, 6 are placed inside the enclosure on the mounting plate. Batteries B1, B2 (items 5) are seated on the bottom of the enclosure and connected to the corresponding terminals.

The output lines of the device (to actuators) and the battery circuit are protected against short circuit by fuses; the number of fuses and their rating depends on the module version. The module also has an overcurrent protection switch F1 for the 230 V~ supply network, rated at D 10 A.

Tab. 1. Fuse rating summary

Module type	Fuse				
	F2	F3	F4	F5	F6
0424-1	25 A				
0424-2	25 A	12 A	12 A		
0448-1	50 A				
0448-2	25 A	25 A			
0448-4	50 A	12 A	12 A	12 A	12 A
0424-K	25 A				
0448-K	50 A				

The device is equipped with indication of the following states:

1. Power supply 230 V~ present - green LED on,
2. Fault - yellow LED on + signal transmitted to the control unit (active in case of: 230V~ mains power failure, batteries missing or discharged, output line damage).
3. Actuator operation - yellow LED on.

For operation it is necessary to connect the module input to the actuator output of the mcr 9705 or mcr 0204 control unit. Only one extension module can be used per control unit actuator output. The modules can be connected in a cascade, i.e. the input of the next module can be connected to the output of a module.

The module activates the actuators according to the signals from the control unit at the actuator line output (opens on alarm, closes after alarm reset, opens and closes for venting).

If the 230 V~ mains power supply to the module or the control unit is missing, the smoke vents can only be opened in the event of an alarm; the ventilation function is blocked to protect the batteries from discharging.

Caution: do not leave the unit without mains power for more than 72 h with the batteries connected, due to the possibility of damage to the batteries. In case of using the module to power mcr PROSMOKE FS CE curtains, this time is up to 6.5 h (see operation and maintenance manual for mcr PROSMOKE FS CE curtains).

## 4. Transport, delivery, storage

The modules are delivered assembled in individual packages. Batteries are supplied separately. The devices should be stored in dry rooms, in temperatures 0°C÷40°C.

## 5. Module mounting

The module should be mounted near the devices it controls, in a location that allows access to the device. During mounting, disconnect all power sources to the equipment being installed.

Use conductor types compliant with the local regulations, with appropriate cross sections.

Install the module in the following order:

1. Fix the enclosure to the wall with steel fasteners matched to the substrate material: fasteners with a minimum diameter of Ø8, e.g. M8, are recommended (**note**: do not drill holes in walls through the enclosure).
2. Make electrical connections according to the attached diagrams (connect control units, actuators, line termination resistors).
3. Connect the unit to the mains supply. Attach the connectors to the battery terminals. Turn on the overcurrent circuit breaker inside the enclosure. The 230 V~ LED should light up. The ACTIVE and FAULT LEDs should remain unlit; when connected to the mcr 9705 control unit with door automation function, the ACTIVE LED will be lit.
4. Verify system operation by sounding the alarm from all available sources.
5. The device is ready to operate after the batteries are charged (up to 48 h after the first mains connection, if the connected actuators are not used).

## 6. Operation

The module is basically a maintenance-free device; however, to ensure the efficiency of the smoke ventilation system the condition of the device should be checked according to the following list:

1. Check the status of the module's control units - whether they signal any damage (daily).
2. Check the power supply to the extension modules (every 3 days or so). If the power supply decay has lasted (or is suspected to have lasted) for more than 72 hours, an authorised "MERCOR" S.A. service centre should be called to check the batteries' condition. In case of using the module to power mcr PROSMOKE FS CE curtains, this time is up to 6.5 h (see operation and maintenance manual for mcr PROSMOKE FS CE curtains)
3. Verify system operation by activating the alarm signal, then clear the alarm signal. Check that connected devices have opened and closed correctly (1 time per month).

## 7. Service and maintenance

The technical condition of fire-fighting equipment installed in the facility **is critical to ensuring the safety of the facility's users**. A guarantee of reliable operation of the equipment can only be achieved by providing regular and professional service.

"MERCOR" S.A. equipment should be subjected to **periodical technical inspections** and maintenance operations **every 6 months** during the entire period of operation, i.e. during the warranty period, as well as after the warranty period. Inspections and maintenance should be carried out **by the manufacturer** or by companies with valid authorization to service "MERCOR" S.A. equipment.

Maintenance carried out in accordance with the above recommendations is one of the basic conditions for maintaining the rights under warranty and the obligation of users/owners or managers of facilities under the law.

**Physical access to the equipment** is required to perform maintenance as well as service and warranty activities such as inspections and repairs.

It is recommended to perform the following between inspections:

1. Check the status of the indicator LEDs.
2. Check the condition of electrical connections, paying particular attention to clearances and mechanical damage.

In matters related to technical inspections, maintenance and repairs of the equipment you may consult the representatives of "MERCOR" S.A. service, phone 58/341 42 45 from 8 a.m. to 4 p.m., e-mail: [serwis@mercort.com.pl](mailto:serwis@mercort.com.pl).

## 8. Warranty terms and conditions

1. "MERCOR" S.A. grants a 12-month quality guarantee for equipment, starting from the date of purchase, unless the agreement provides otherwise.
2. If during the term of guarantee any physical defects of the equipment become evident, "MERCOR" S.A. shall remove them within 21 days of the written notification, subject to paragraph 6.
3. "MERCOR" S.A. reserves the right to lengthen the repair time in the event of complicated repairs or those that require non-standard sub-assemblies [elements] or spare parts to be purchased.
4. Liability under the Guarantee covers only defects resulting from causes inherent in the equipment sold.
5. In the event of defects resulting from inappropriate operation of the equipment or due to other reasons stated in par. 6, the Buyer/Guarantee Holder shall bear the costs of their removal.
6. The guarantee does not cover:
  - damages and breakdowns of the equipment due to inappropriate operation, user's interference, lack of maintenance or periodic servicing; Smoke and Heat Exhaust Control Unit mcr 9705 - User Instruction Manual;
  - equipment damages resulting from causes other than those that "MERCOR" S.A. is responsible for, in particular: acts of God such as torrential rainfall, flood, hurricane, flooding, stroke of thunder, overvoltage in the mains, explosion, hail, fall of aircraft, fire, avalanche,

landslide and secondary damages due to the above-listed causes. Torrential rain is defined as rain with an efficiency index of at least 4 (or 5 in Chomicz scale or torrential rain grade IV (A4)). Should it be impossible to determine the index mentioned in the previous sentence, the actual condition and the degree of damage at the place of its origin proving that it is the consequence of torrential rain will be considered. Hurricane is defined as wind blowing at the speed of at least 17.5 m/s (damages are deemed to have been caused by hurricane if the effects of hurricane have been found in the immediate neighborhood);

- damages due to failure to immediately report the defect discovered;
- worsened quality of coating due to the natural ageing process (fading, oxidation);
- defects due to using abrasive or aggressive cleaning products;
- parts liable to natural wear and tear during operation (e.g. seals) unless a manufacturing fault has occurred;
- damages due to aggressive external factors, especially chemical and biological ones.

7. Each defect under guarantee should be reported to a local representative of "MERCOR" S.A. immediately, i.e. within 7 days of its discovery.

8. Applications can be made by phone at +48/58 341 42 45, by email to [claim@mercor.com.pl](mailto:claim@mercor.com.pl) or by sending a letter to: "MERCOR" S.A. 80-408 Gdańsk, Grzegorza z Sanoka 2.

9. The Buyer/Guarantee Holder is responsible for proper operation and maintenance of the equipment and for regular (min. twice a year) servicing.

10. The Guarantee shall expire forthwith if:

- The Buyer/Guarantee Holder makes design modifications on his own without consulting "MERCOR" S.A.,
- Maintenance or periodic servicing are not done in due time or are performed by unauthorized persons or a service center not authorized by "MERCOR" S.A., or the equipment is operated in the wrong way,
- Any interference of unauthorized persons – except activities connected with normal operation of the equipment.

11. Moreover, in the cases specified in par. 10, "MERCOR" S.A. has no warranty obligations.

As regards matters not regulated by these "Warranty terms and conditions", relevant regulations in the Civil Code, and in particular Art. 577-581 shall apply.

## 9. Technical specification

Parameter	Value
Supply mcr R0448 mcr R0424	230 V, 50 Hz, 1500 VA max; 750 VA max;
Recommended mains circuit protection	type D
Voltage on output line(s)	24 V=
Batteries used	2x 12 V, 22 Ah, e.g. EUROPOWER EV 22-12
Battery charging voltage	27.2 V $\pm$ 0.2 @ 20°C
Compatible control units	mcr 0204, mcr 9705
Control line voltage	24 V= $\pm$ 15%;
Resistance of the control input	750 $\Omega$
Operating temperature range	-5°C ÷ 40°C
Environmental class of the power supply according to EN 12101-10	I
Enclosure protection grade	IP54
Resistance of output line continuity check resistors	10 k $\Omega$
Standby time without mains voltage (after this time the module can start the connected devices once)	72 h
Number of control groups	1
Load capacity and number of output lines mcr R0424-2 mcr R0424-1 mcr R0448-4 mcr R0448-2 mcr R0448-1 mcr R0424-K mcr R0448-K	2x output lines of max 12 A 1x output line of max 24 A 4x output lines of max 12 A 2x output lines of max 24 A 1x output line of max 48 A nx output lines - max 24 A nx output lines - max 48 A  n – number of output lines n = 1 ÷ 10 (depends on power consumption of individual smoke curtain)
Load capacity of the output control lines for mcr R0424-K, mcr R0448-K modules	max 0.5 A
Battery protection mcr R0424 mcr R0448	25 A 50 A
Device dimensions (H x W x D)	600 x 600 x 200 mm
Maximum cable cross-section on output lines	10 mm <sup>2</sup>



## 10. Wiring diagrams

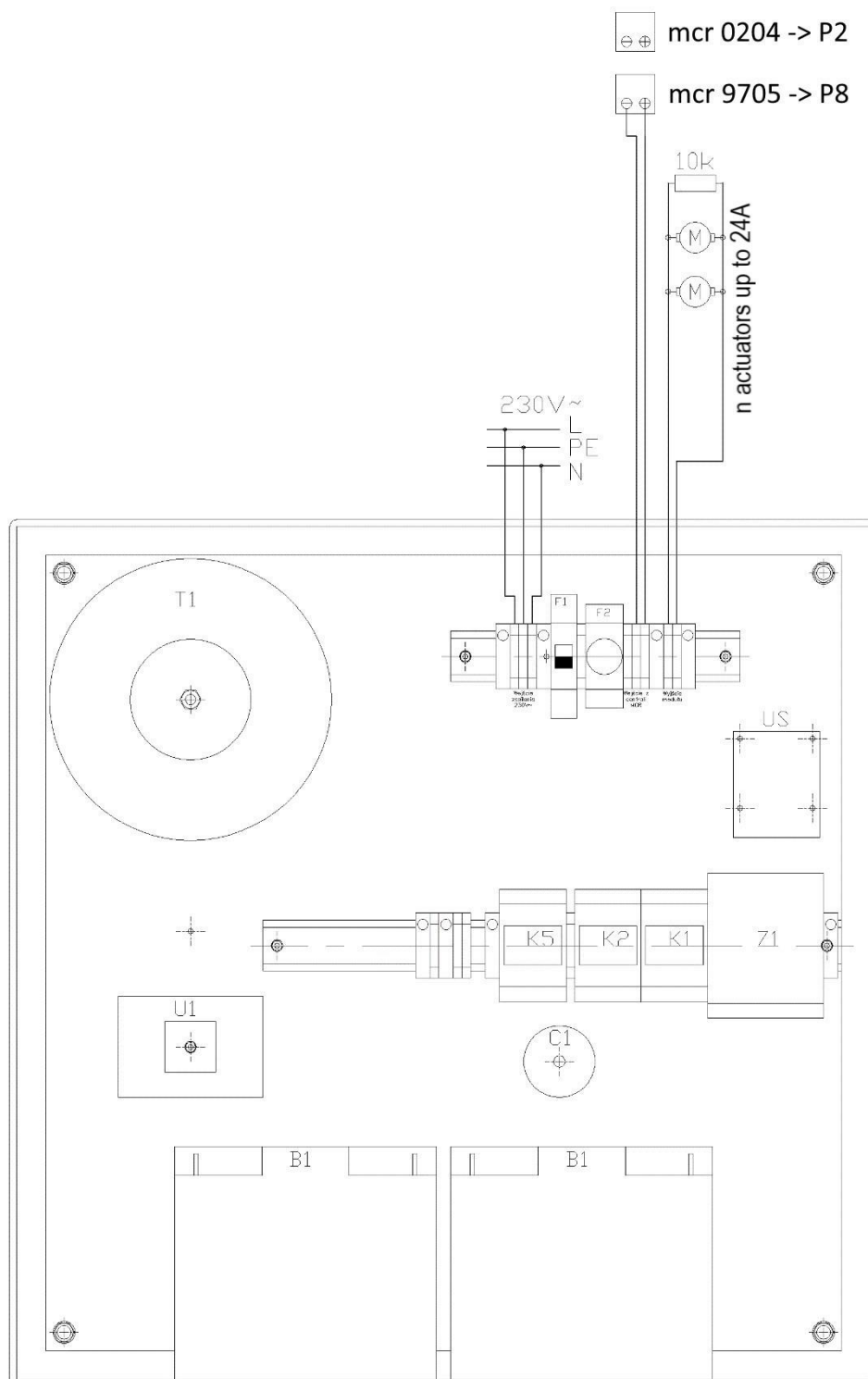


Fig. 2. Wiring diagram for mcr R0424-1 module for use with smoke vent actuators.

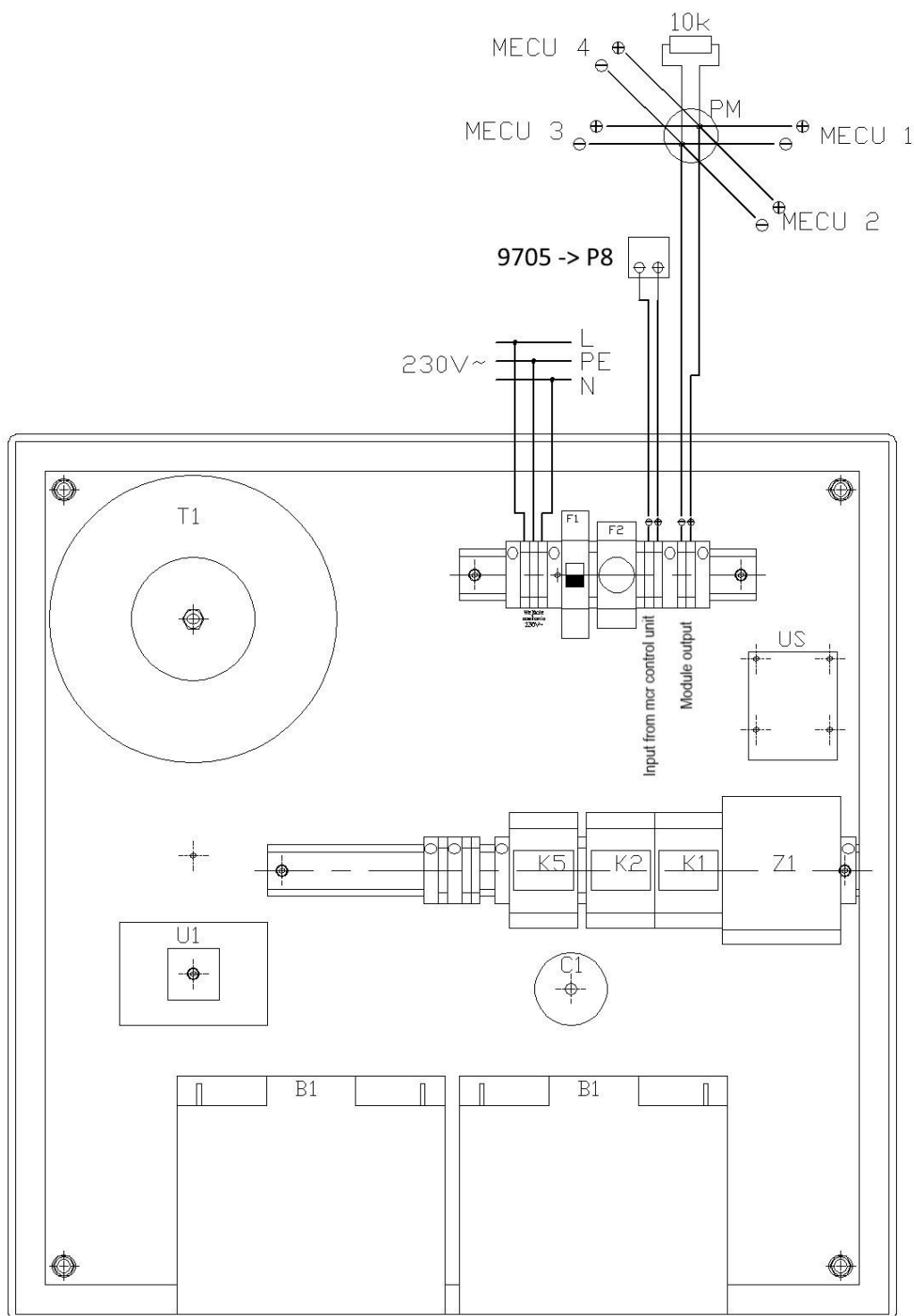


Fig. 3. Wiring diagram for mcr R0424-1 module for use with mcr PROSMOKE FS CE curtain unit

PM - installation box (in close proximity to mcr PROSMOKE FS CE curtains).  
 MECU - curtain control unit

Note:

1. additional information in Technical and Operation Documentation of mcr PROSMOKE FS CE curtains
2. max. number of mcr PROSMOKE FS CE curtain modules acc. to curtain's operation and maintenance manual.

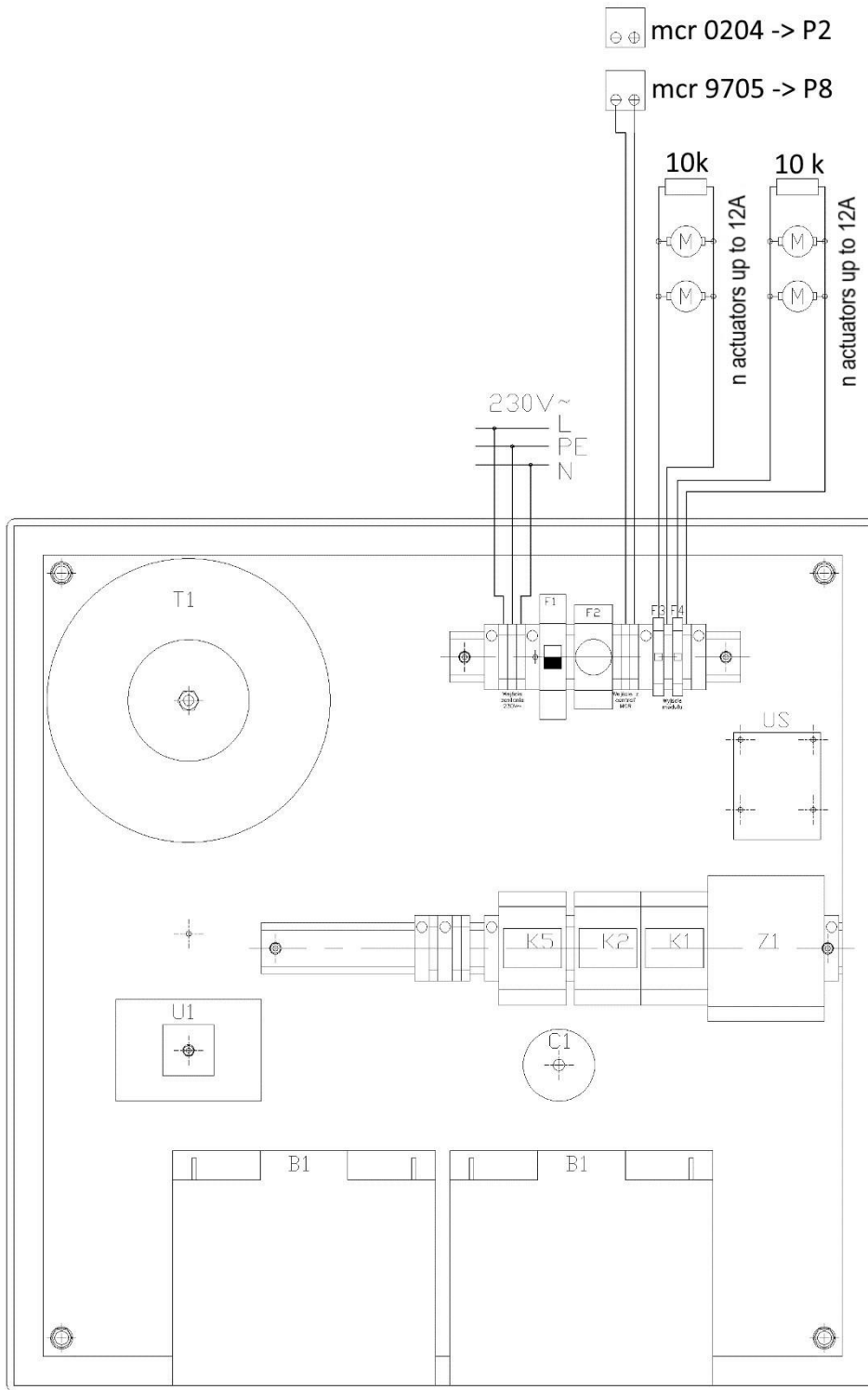


Fig. 4. Wiring diagram for mcr R0424-2 module



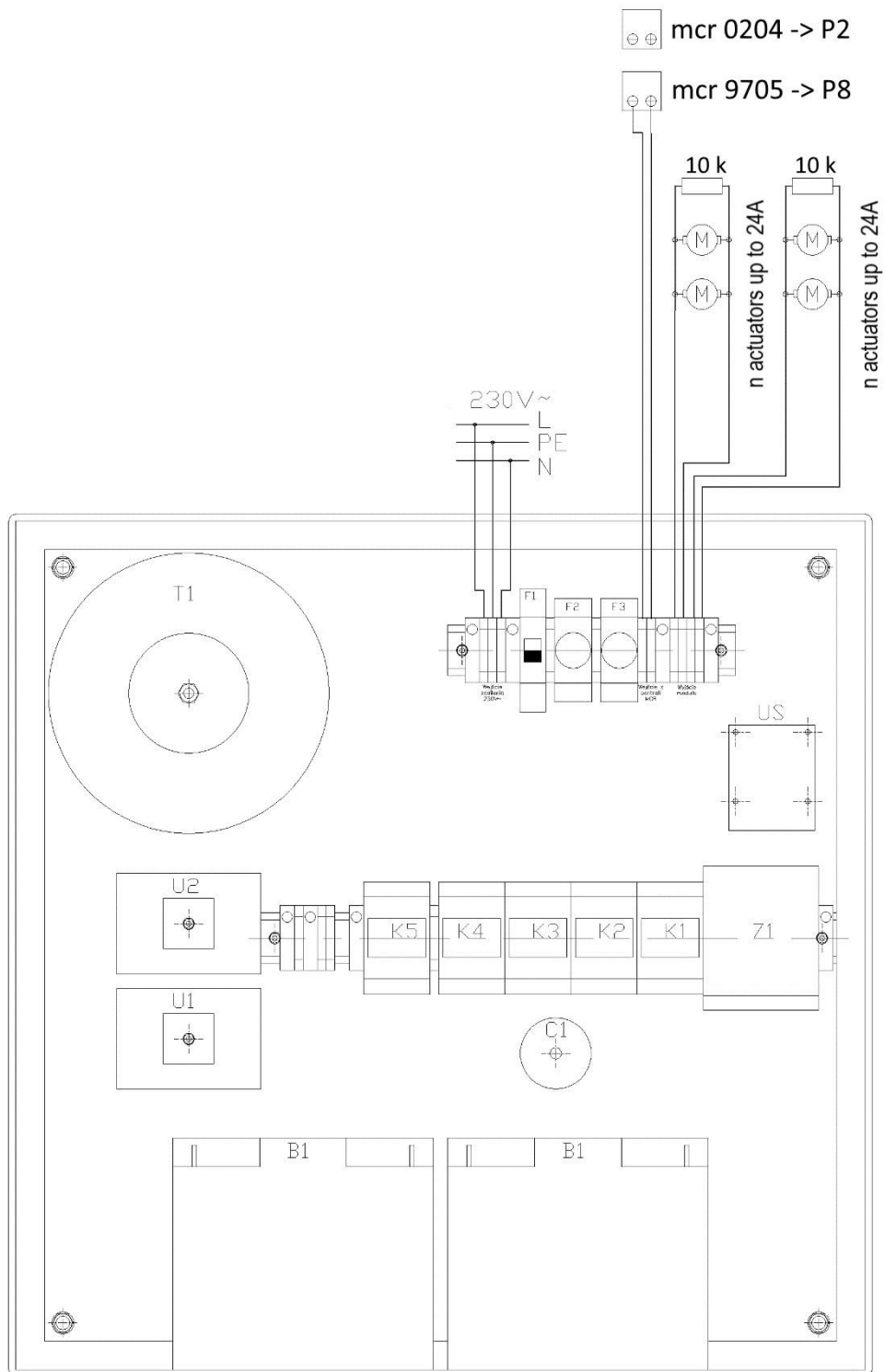


Fig. 6. Wiring diagram for mcr R0448-2 module

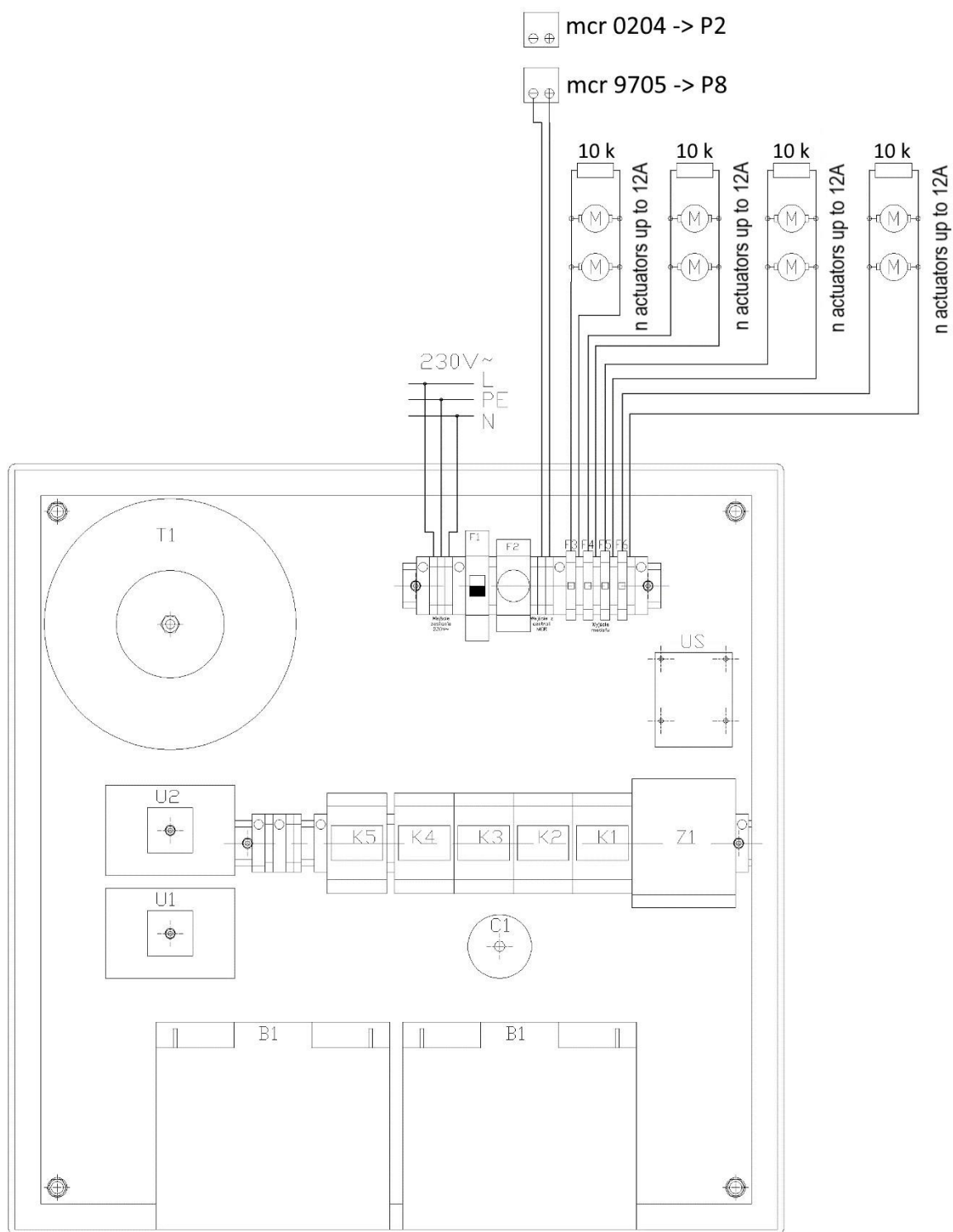


Fig. 7. Wiring diagram for mcr R0448-4 module

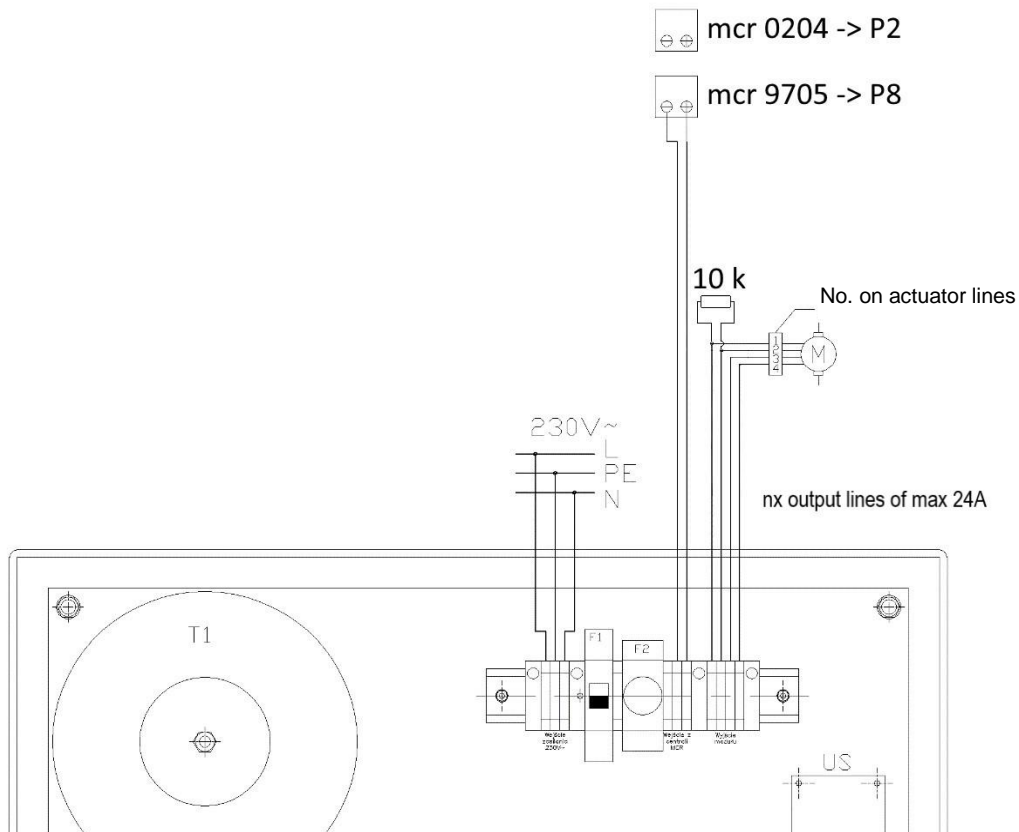


Fig. 8. Wiring diagram for mcr R0424-K module

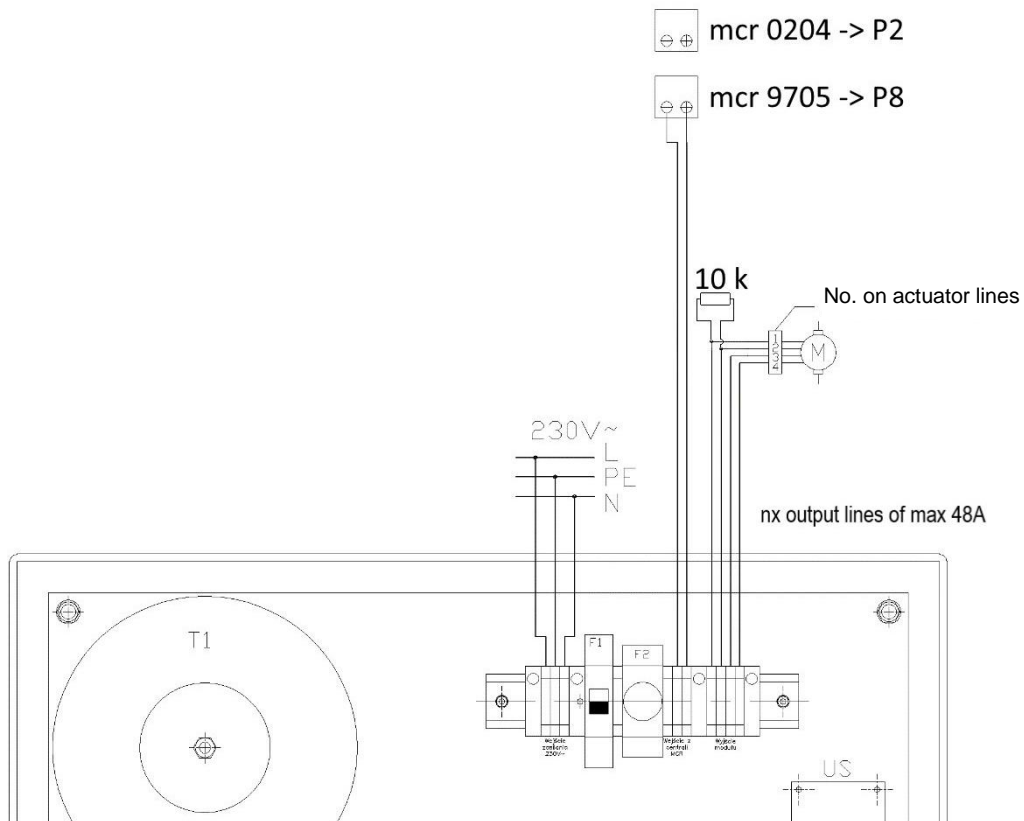


Fig. 9. Wiring diagram for mcr R0448-K module

## 11. Certificate of approval



**JEDNOSTKA NOTYFIKOWANA / NOTIFIED BODY 1438**

**Centrum Naukowo-Badawcze Ochrony Przeciwpożarowej**

*im. Józefa Tuliszkowskiego*

**Państwowy Instytut Badawczy**

ul. Nadwiślańska 213, 05-420 Józefów

**Polska / Poland**



### CERTYFIKAT STAŁOŚCI WŁAŚCIWOŚCI UŻYTKOWYCH CERTIFICATE OF CONSTANCY OF PERFORMANCE

**1438-CPR-0590**

Zgodnie z Rozporządzeniem Parlamentu Europejskiego i Rady (UE) 305/2011 z dnia 9 marca 2011 r. (Rozporządzenie CPR), niniejszy certyfikat odnosi się do wyrobu budowlanego:

**Zasilacz do systemów kontroli rozprzestrzeniania dymu i ciepła – moduł wyjściowy – moduł rozszerzający typu mcr R0424 i mcr R0448**

<Opis wyrobu, zamierzone zastosowanie, właściwości użytkowe patrz kolejne strony certyfikatu>  
wprowadzanego do obrotu pod nazwą handlową lub znakiem firmowym producenta:

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the construction product:

**Power supply equipment for smoke and heat control systems – output module – extension module type mcr R0424 and mcr R0448**

<Product description, intended use, performances see the following pages of the certificate>  
placed on the market under the name or trade mark of:

**„MERCOR” S.A.  
ul. Grzegorza z Sanoka 2  
80-408 Gdańsk**

i wytwarzanego w zakładzie produkcyjnym:

**GAL – Stanisław Chamski  
ul. Polna 11  
80-209 Tuchom**

and produced in the manufacturing plant:

Niniejszy certyfikat potwierdza, że wszystkie postanowienia dotyczące oceny i weryfikacji stałości właściwości użytkowych określone w załączniku ZA normy:

This certificate attests that all provisions concerning the assessment and verification of constancy of performance described in Annex ZA of the standard:

**EN 12101-10:2005 Smoke and heat control systems – Part 10: Power supplies  
EN 12101-10:2005/AC:2007**

w ramach systemu 1 w odniesieniu do właściwości użytkowych określonych w niniejszym certyfikacie są stosowane oraz że producent wdrożył zakładową kontrolę produkcji, która jest oceniana w celu zapewnienia stałości właściwości użytkowych wyrobu budowlanego.

under system 1 in relation to the performance set out in this certificate are applied and that the manufacturer has implemented factory production control, which is assessed to ensure constancy of performance of the construction product.

Niniejszy certyfikat został wydany po raz pierwszy w dniu **26.03.2018** i pozostaje ważny, zgodnie z umową nr **17/DC/CPR/2018**, do dnia **25.03.2028** dopóki nie zmieni się norma zharmonizowana, sam wyrób budowlany, metody OIW SWU i warunki jego wytwarzania nie ulegną istotnej zmianie oraz pod warunkiem, że nie zostanie zawieszony, cofnięty lub nie nastąpi zakończenie certyfikacji przez notyfikowaną jednostkę certyfikującą wyrób.

This certificate was first issued on **26.03.2018** and will remain valid, in accordance with the agreement no **17/DC/CPR/2018**, until **25.03.2028** as long as neither the harmonised standard, the construction product, the AVCP methods nor the manufacturing conditions in the plant are modified significantly, unless suspended, withdrawn or terminated by the notified product certification body.

Nr wydania certyfikatu: **1**  
Certificate issue no:

Data wydania: **26.03.2018**  
Issue date:



**DYREKTOR CNBOP-PIB  
DIRECTOR of CNBOP-PIB**

bryg. dr hab. inż. Dariusz Wróblewski





## JEDNOSTKA NOTYFIKOWANA / NOTIFIED BODY 1438

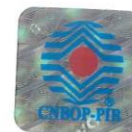
Centrum Naukowo-Badawcze Ochrony Przeciwpżarowej

im. Józefa Tułiszowskiego

Państwowy Instytut Badawczy

ul. Nadwiślańska 213, 05-420 Józefów

Polska / Poland


**CERTYFIKAT STAŁOŚCI WŁAŚCIWOŚCI UŻYTKOWYCH**  
**CERTIFICATE OF CONSTANCY OF PERFORMANCE**  
**1438-CPR-0590**

<b>Nazwa wyrobu budowlanego:</b> <i>Name of construction product:</i>	Zasilacz do systemów kontroli rozprzestrzeniania dymu i ciepła – moduł wyjściowy – moduł rozszerzający typu mcr R0424 i mcr R0448 <i>Power supply equipment for smoke and heat control systems – output module – extension module type mcr R0424 and mcr R0448</i>
<b>Deklarowane zamierzone zastosowanie:</b> <i>Declared performance:</i>	Bezpieczeństwo pożarowe <i>Fire safety</i>
<b>Europejska norma zharmonizowana:</b> <i>European harmonised standard:</i>	EN 12101-10:2005+AC:2007 Smoke and heat control systems - Part 10: Power supplies

## Opis wyrobu / Product description

Dane podstawowe / Basic data		
Typ wyrobu / Product type	mcr R0424	mcr R0448
Rodzaj zasilania / Type of power supply	elektryczne / electric	
Zakres temperatur pracy / Operating temperature	-5°C + +40°C	
Stopień ochrony obudowy IP / IP protection	IP 54	
Typ obudowy i wymiary (długość x szerokość x wysokość) [mm] <i>Enclosure type and dimensions (Length x Width x Height) [mm]</i>	600 x 600 x 200 mm	
Klasa funkcjonalna wg EN 12101-10:2005+AC:2007 <i>Functional class according to EN 12101-10:2005+AC:2007</i>	A	
Klasa środowiskowa wg EN 12101-10:2005+AC:2007 <i>Environmental class according to EN 12101-10:2005+AC:2007</i>	1	
Wyjściowy prąd obciążenia $I_{max,a}$ / Output operating current $I_{max,a}$	0,1 A	
Wyjściowy prąd obciążenia $I_{max,b}$ / Output operating current $I_{max,b}$	24 A	48 A
Obwody wyjściowe: zakres napięć wyjściowych zasilacza <i>Output circuits: range of output voltage</i>	24 V DC	
Zasilanie podstawowe / Main supply		
Zasilanie podstawowe: napięcie zasilania / <i>Main supply: supply voltage</i>	230 V AC	
Obwody wejściowe: liczba wejść / <i>Input circuits: number of inputs</i>	1	
Maksymalny pobór prądu z sieci / <i>Maximum current consumption</i>	3,3 A	6,6 A



Nr wydania certyfikatu: **1**  
Certificate issue no:  
Data wydania: **26.03.2018**  
Issue date:

DYREKTOR CNBOP-PIB  
DIRECTOR of CNBOP-PIB

bryg. dr hab. inż. Dariusz Wróblewski



## JEDNOSTKA NOTYFIKOWANA / NOTIFIED BODY 1438

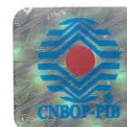
Centrum Naukowo-Badawcze Ochrony Przeciwpowarowej

im. Józefa Tuliszkowskiego

Państwowy Instytut Badawczy

ul. Nadwiślańska 213, 05-420 Józefów

Polska / Poland


**CERTYFIKAT STAŁOŚCI WŁAŚCIWOŚCI UŻYTKOWYCH**  
**CERTIFICATE OF CONSTANCY OF PERFORMANCE**  
**1438-CPR-0590**

Nazwa wyrobu budowlanego: <i>Name of construction product:</i>	Zasilacz do systemów kontroli rozprzestrzeniania dymu i ciepła – moduł wyjściowy – moduł rozszerzający typu mcr R0424 i mcr R0448 <i>Power supply equipment for smoke and heat control systems – output module – extension module type mcr R0424 and mcr R0448</i>
Deklarowane zamierzone zastosowanie: <i>Declared performance:</i>	Bezpieczeństwo pożarowe <i>Fire safety</i>
Europejska norma zharmonizowana: <i>European harmonised standard:</i>	EN 12101-10:2005+AC:2007 Smoke and heat control systems - Part 10: Power supplies

## Opis wyrobu / Product description

Zasilanie rezerwowe / Reserve supply	
Typ akumulatorów / <i>Power Supply: Battery type</i>	szczelne, kwasowo-olowiowe (EUROPOWER EV 22-12) <i>seal, lead-acid (EUROPOWER EV 22-12)</i>
Maksymalny prąd ładowania akumulatorów <i>Maximum current of battery charging</i>	2,3 A
Maksymalna wewnętrzna rezystancja baterii i przyłączonych do niej elementów obwodu <i>Maximal internal resistance of the battery and elements connected to the battery circuit</i>	---
Maksymalna pojemność akumulatorów / <i>Maximum battery capacity</i>	22 Ah
Napięcie ładowania akumulatorów w trybie pracy buforowej <i>Battery charge voltage in floating mode</i>	---
Kompensacja temperaturowa napięcia w trybie pracy buforowej <i>Temperature compensation in floating mode</i>	---

Elementy składowe zasilacza (zgodnie z dokumentacją techniczną v3 MCR R-04XX z dnia 18.09.2006): DOP-1C; M-0448-200; PWS-40RM-27,2st (Polwat) lub ELN-60-27D (Mean Well); kondensatory; akumulator EUROPOWER EV 22-12; mostek z radiatorom A4240 L70; diody LED; C40A(GE,FAEL); TST750/497/06; TST1500/497/06; bezpiecznik topikowy; obudowa SAREL.

Power supply components (in accordance with technical documentation v3 MCR R-04XX dated 18.09.2006): DOP-1C; M-0448-200; PWS-40RM-27,2st (Polwat) or ELN-60-27D (Mean Well); capacitors; battery EUROPOWER EV 22-12; bridge with heatsink A4240 L70; diode LED; C40A(GE,FAEL); TST750/497/06; TST1500/497/06; fuse; enclosure SAREL.

**Charakterystyka funkcji zasilania w zakresie systemów kontroli rozprzestrzeniania dymu i ciepła /**  
**Characteristics of the product functions in field of smoke and heat control systems**

1. Zasilanie elektryczne / *electric power supply:*
  - a) zasilanie z podstawowego źródła zasilania (elektryczne) – wg 6.1 EN 12101-10:2005+AC:2007 tak / yes  
*power supply from main source (electric) – according to 6.1 EN 12101-10:2005+AC:2007*
  - b) zasilanie z rezerwowego źródła zasilania (baterii) – wg 6.2 EN 12101-10:2005+AC:2007 tak / yes  
*power supply from reserve source (battery) – according to 6.2 EN 12101-10:2005+AC:2007*
  - c) zasilanie z rezerwowego źródła zasilania (prądnicy) – wg 6.3 EN 12101-10:2005+AC:2007 nie dotyczy / not applicable  
*power supply from reserve source (generator) – according to 6.3 EN 12101-10:2005+AC:2007*
  - d) rozpoznawanie i sygnalizacja uszkodzeń (elektrycznych) – wg 6.4 EN 12101-10:2005+AC:2007 tak / yes\*  
*detection and signaling of faults (electric) – according to 6.4 EN 12101-10:2005+AC:2007*

\* Dotyczy punktów a + d zgodnie z pkt. 6.4 EN 12101-10:2005+AC:2007  
*Applicable for points a + d in accordance with point 6.4 EN 12101-10:2005+AC:2007*

Nr wydania certyfikatu: 1  
Certificate issue no:  
Data wydania: 26.03.2018  
Issue date:



DYREKTOR CNBOP-PIB  
DIRECTOR of CNBOP-PIB

bryg. dr hab. inż. Dariusz Wróblewski



## JEDNOSTKA NOTYFIKOWANA / NOTIFIED BODY 1438

Centrum Naukowo-Badawcze Ochrony Przeciwpożarowej

im. Józefa Tulliszewskiego

Państwowy Instytut Badawczy

ul. Nadwiślańska 213, 05-420 Józefów

Polska / Poland

**CERTYFIKAT STAŁOŚCI WŁAŚCIWOŚCI UŻYTKOWYCH**  
**CERTIFICATE OF CONSTANCY OF PERFORMANCE**  
**1438-CPR-0590**

Nazwa wyrobu budowlanego: Name of construction product:	Zasilacz do systemów kontroli rozprzestrzeniania dymu i ciepła – moduł wyjściowy – moduł rozszerzający typu mcr R0424 i mcr R0448 Power supply equipment for smoke and heat control systems – output module – extension module type mcr R0424 and mcr R0448
Deklarowane zamierzone zastosowanie: Declared performance:	Bezpieczeństwo pożarowe Fire safety
Europejska norma zharmonizowana: European harmonised standard:	EN 12101-10:2005+AC:2007 Smoke and heat control systems - Part 10: Power supplies

## Wykaz właściwości użytkowych / Table of performance

Lp. No.	Zasadnicze charakterystyki wyrobu Essential characteristics of the product	EN 12101-10: 2005+AC:2007	Właściwości użytkowe <sup>1)2)</sup> Performance <sup>1)2)</sup>
		Rozdział Clause	
<b>Niezawodność eksploatacyjna / Operational reliability</b>			
1	Funkcje / Functions	6	Spełnia / Pass
2	Materiały, konstrukcja i wykonanie / Materials, design and manufacture	7	Spełnia / Pass
<b>Parametry eksploatacyjne w warunkach pożaru / Operating parameters in fire conditions</b>			
3	Postanowienia ogólne / General provisions	4.1	Spełnia / Pass
4	Źródła zasilania – postanowienia ogólne / Power supply source – general provisions	5.2.1	Nie dotyczy / Not applicable
<b>Czas zadziałania / Response time</b>			
5	Postanowienia ogólne / General provisions	4.1	Spełnia / Pass
6	Źródła zasilania – postanowienia ogólne / Power supply source – general provisions	5.2.1	Nie dotyczy / Not applicable
7	Zasilanie z rezerwowego źródła zasilania (baterii) / Power supply from reserve source (battery)	6.2.2	Spełnia / Pass
8	Zasilanie z rezerwowego źródła zasilania (prądnicy) / Power supply from reserve source (generator)	6.3.1	Nie dotyczy / Not applicable
<sup>1)</sup> „NPD” (tj. właściwości użytkowe nieustalone, ang. No Performance Determined) oznacza, że właściwości użytkowe nie zostały ustalone przez CNBOP-PIB. “NPD” (ie. No Performance Determined) means that performances were not determined by CNBOP-PIB. <sup>2)</sup> Zapis „Nie dotyczy” oznacza, że zasadnicza charakterystyka nie ma zastosowania dla danego wyrobu. “Not applicable” means that the essential characteristic does not apply to the product in question.			

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