

EY-FM 264: Field module digital outputs 0-I, modu264

How energy efficiency is improved

SAUTER EY-modulo 2 – tried and tested technology to meet the highest requirements

Features

- Remote unit as part of the SAUTER EY3600 and EY-modulo 2, 4 and 5 system families
- Regulation, control, monitoring and optimisation of operational systems, e.g. in HVAC engineering
- 4 digital outputs
- Independent, local priority operation through external power supply
- Individual activation of field module
- Manual control of digital outputs
- Feedback (digital output status) available
- Priority function with definable relay statuses for system errors
- Front insert for direct labelling
- LED indicators and manual operation



EY-FM264F001

Technical data

| Power supply | | |
|-----------------------------------|--|---|
| Power supply | 24 V~, ±20%, 50...60 Hz 24 V=, ±10% | |
| Current consumption | ≤ 290 mA | |
| Power consumption | ≤ 3 W | |
| Ambient conditions | | |
| Operating temperature | 0...45 °C | |
| Storage and transport temperature | -25...70 °C | |
| Admissible ambient humidity | 10...85% rh, no condensation | |
| Inputs/Outputs | | |
| Digital outputs | 4 × 0-I relay, change-over contacts | |
| Electrical life | > 5 × 10 ⁶ cycles | |
| Load | 250 V~/10 A resistive load | |
| Connections | Screw terminals for - power supply - function activation - priority control - control of devices - feedback signals | |
| Construction | | |
| Dimensions W x H x D | 105 × 90 × 60 mm | |
| Weight | 0.25 kg | |
| Standards and directives | | |
| Type of protection | IP 00 (EN 60529) | |
| Protection class | II (EN 60730-1) | |
| Environment class | 3K3 (IEC 60721) | |
| CE conformity as per | EMC directive 2004/108/EC ¹⁾ | EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4 |
| | Low-voltage directive 2006/95/EC | EN 60730-1 |
| Overview of types | | |
| Type | Properties | |
| EY-FM264F001 | Field module for digital outputs 0-I, modu264 | |
| Accessories | | |
| Type | Description | |
| 0920000164 | Front insert, printable, yellow, 1 A4 sheet with 6 inserts each, perforated | |

¹⁾ EN 61000-6-2: In order to meet the European Standard (EN 61000-6-2), the power cables for the outputs must not exceed 30 m in length



Additional information

| | |
|--|---------------|
| Fitting instructions | MV P100006618 |
| Declaration on materials and the environment | MD 92.920 |

Engineering notes

The modu264 field module is mounted directly on an EN 60715 top-hat rail in the cabinet or at a suitable location in the HVAC installation.



► The device may only be connected when the system is disconnected from the electrical supply.

The actuation, feedbacks and plant devices of the field module are connected to screw terminals. The following conditions must be observed:

- Conductor cross-section min. 0.8 mm², max. 2.5 mm² copper wire in accordance with standards and national installation requirements.
- Special standards such as IEC/EN 61508, IEC/EN 61511, IEC/EN 61131-1, IEC/EN 61131-2 and similar were not taken into account.
- Local standards regarding installation, application, access, access rights, accident prevention, safety, dismantling and disposal must be taken into account. Furthermore, installation standards EN 50178, 50310, 50110, 50274 and 61140 must be observed.



Note:

For further information on the installation, see the fitting instructions P100006618.

Description of operation

As a remote unit with 4 digital outputs, the field module enables direct actuation of plant devices. The module requires an external power supply of 24 V AC or DC and can be activated by various devices (automation stations (AS), PLCs, etc.). The functions of the individual channels (digital outputs) and feedbacks (statuses) are provided by wiring connection terminals nos. 20...24 and nos. 26...34. All channels can be activated manually with slide switches.

Due to the external power supply, the field module can be used for system-independent, local priority operation.

| | |
|--------------------------------|--|
| Number of outputs | 4 × 0-I |
| Type of outputs | Relay (change-over contacts) |
| Load on outputs | Max. 250 V~ / 10 A (resistive load) |
| Actuation of outputs (F1...F4) | Internal power supply 20...40 V Terminals 21...24, GND 20 |

With actuation via open collector outputs, the following additional specifications must be adhered to:

| | |
|------------------------------|----------|
| Switching threshold inactive | > 9.5 V |
| Switching threshold active | < 4 V |
| Input current | < 1.5 mA |

The slide switches on the front of the device can be used to actuate the channels individually through the positions AUTO - 0 - I.

Slide switch

| Position | Description |
|----------|---|
| Auto | The AUTO position enables a channel to be actuated externally |
| 0 | Position 0 deactivates a channel directly |
| I | The I position enables a channel to be activated directly |

Intended use


This product is only suitable for the purpose intended by the manufacturer, as described in the "Description of operation" section.

All related product documents must also be adhered to. Changing or converting the product is not admissible.

Automatic mode

Activation of the relay outputs by connecting terminals nos. 21...24 (F1...F4) and terminal no. 20 (ground). The actuation is performed via potential-free digital outputs such as open collectors or relays from an AS, PLC, etc.

Feedbacks

The activation of a manual actuation (switch in position 0 or I) as well as the relay On status (unreal feedback) can be tapped individually for each channel at the various Feedback I and  terminals. The COM terminal is for the shared ground connection of the feedbacks. These are generally connected as digital inputs for an AS.

Relay outputs

The relay outputs (change-over contacts) can be supplied with a voltage of 250 V~ and a steady current of up to 10 A. Connecting different phases or voltages is only admissible at relay outputs F1...F3.



Note:

► Relay outputs F3 and F4 must always have the same phases or voltages to ensure separation.

LED signal indicators

There are a total of 5 LED signal indicators on the front of the device.

The power supply is indicated by the Power LED (green). For each channel, one LED (green) indicates status I for the relay actuation.

Priority mode

The priority mode is used to achieve a direct, defined position for the outputs in the case of a malfunction in the actuation (e.g. AS failure).

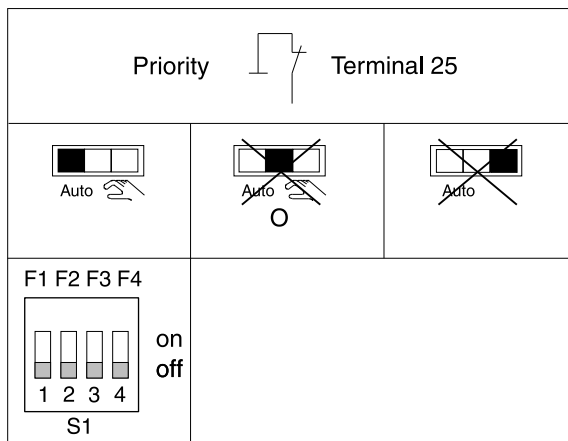
If the Priority connection (terminal no. 25) is connected directly with the ground, the channels are switched according to the setting of DIP switches F1...F4 into status 0 or I. The DIP switches are located in the middle of the top of the device.



Note:

In priority mode, manual controlling of the outputs is not possible!

Operation diagram for priority mode



Labelling concept

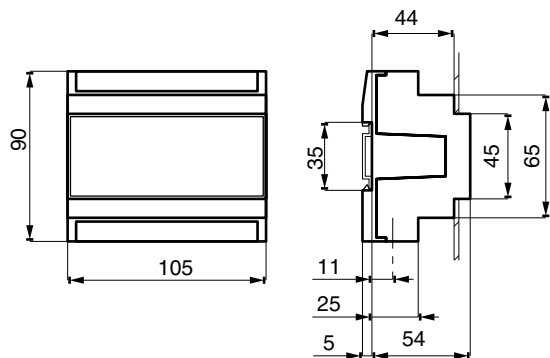
The printable front insert, which can be inserted behind the transparent cap, enables the output channels to be labelled individually. Labelling sheets in DIN A4 format are available for this. The labelling is usually carried out using texts generated from SAUTER CASE engineering software, and the labels are created using commercial printers.

Disposal

When disposing of the product, observe the currently applicable local laws.

More information on materials can be found in the Declaration on materials and the environment for this product.

Dimension drawing



Connection diagram

