EY-FM 174: Field module for digital inputs, moduLink174

EY-FM174F001

How energy efficiency is improved

SAUTER EY-modulo – thoroughly proven technology with a new design

Features

- Part of the SAUTER EY-modulo system family
- 16 digital inputs
- Remote unit for modu590 and modu225
- Front insert for direct labelling
- Can be located up to 100 m from the automation station (AS)
- Bi-colour LED indicators (red/green)
- Communication and power supply via novaLink bus (2-wire) of AS

Technical data

Power supply		
	Power supply	From AS (via novaLink)
	Current consumption	≤ 120 mA
	Input resistance	≤ 1 kΩ (incl. cable)
	Power loss	≤ 1 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 inputs	16 potential-free contacts, grounded
	Polling cycle	150 ms
	Detection time	30 ms
Interfaces and communication		
	Control	From modu590, modu225, nova225, nova106 (EYX 176)
	Connection	novaLink bus ≤ 100 m (cable shielded, twisted and grounded at both ends, < 5 nF/< 7.5 Ω)
Construction		
	Dimensions W x H x D	105 × 90 × 60 mm
	Weight	0.24 kg
Standards and directives		
	Type of protection	IP 00 (EN 60529)
	Protection class	III (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

Overview of types

Type	Properties
EY-FM174F001	Field module for digital inputs, moduLink174

Accessories

Type	Description
0920000174	Front insert, printable, yellow, 1 A4 sheet with 6 inserts each, perforated

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

Additional information

Fitting instructions	P100003215
Declaration on materials and the environment	MD 92.830

Description of operation

The moduLink174 field module is used to receive digital inputs (alarm/status) in operational systems, e.g. in HVAC.

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.

Engineering notes

The moduLink174 field module can be fitted using an EN 60715 top-hat rail directly in the cabinet or at a suitable location in the system. However, the distance for the connection to the AS must not exceed 100 m (5 nF/7.5 Ω)! The connection to the AS is directly via the specified novaLink terminals, by means of which the relevant data is transferred. Observe the correct polarity when making the connection.
The novaLink connection cable must be twisted and shielded (shielding on both ends to ground). The field module can be labelled individually under the frontal transparent cap.

Description of the inputs

Number of inputs	16 (indicated via bi-colour LED)
Type of inputs	Digital, potential-free contacts with ground connection opto-coupler, transistor (open collector)
Current of the input	≤ 0.7 mA with respect to ground
Max. line resistance	1 kΩ
Protection against external voltage	≤ 24V~/=

The moduLink174 field module can receive a total of 16 items of digital information.
The inputs to be monitored are connected between the input terminals and ground. The field module applies a voltage of approximately 12 V to the terminal. If a contact is open, this corresponds to a bit = 0. If a contact is closed this is bit = 1 and 0 V is applied, with a current of approximately 0.7 mA. Short-term changes of 30 ms between the station queries are stored temporarily and processed during the next cycle. The inputs do not have any hysteresis.
It can be defined individually for each input whether it is used as an alarm or a status input. An alarm is generally indicated in red when the contact is open, and a status is generally indicated in green when the contact is closed.

Labelling concept

The field module can be labelled under the frontal transparent cap. There are specific perforated label sheets available for this purpose. The labelling is usually carried out using texts generated from SAUTER CASE engineering software, and the labels are printed using commercial printers.

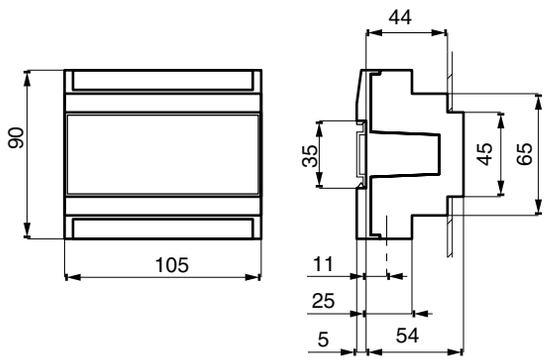
LED indicator

The field module contains a green LED (power), which lights up when there is a correct connection and power supply via the AS.
16 bi-colour LEDs (red/green) indicate the status of the inputs (alarm/status). The definition of the LED colour, and whether an opened or closed input is indicated, is only set via the software parameters.

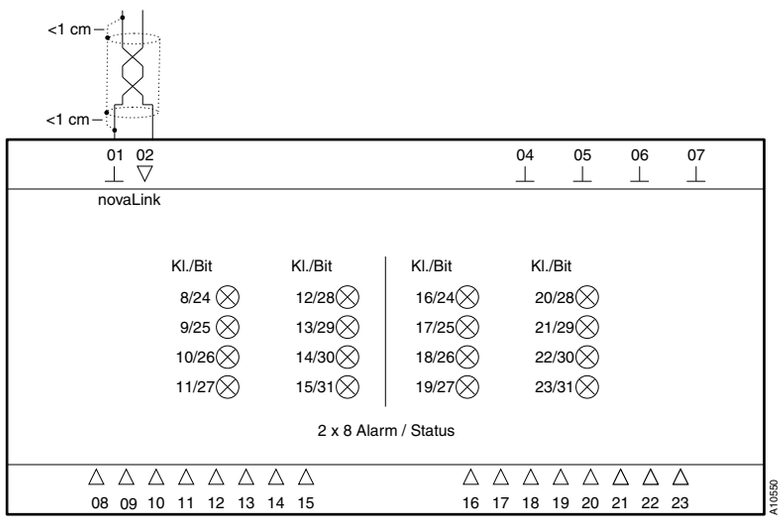
Disposal

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



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