



F&F Filipowski sp. j.
Konstantynowska 79/81, 95-200 Pabianice, POLAND
phone/fax (+48 42) 215 23 83 / (+48 42) 227 09 71
www.fif.com.pl; e-mail: biuro@fif.com.pl

OM-633

Power consumption limiters
with a voltage relay function



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Do not dispose of this device in the trash along with other waste!

According to the Law on Waste, electro coming from households free of charge and can give any amount to up to that end point of collection, as well as to store the occasion of the purchase of new equipment (in accordance with the principle of old-for-new, regardless of brand). Electro thrown in the trash or abandoned in nature, pose a threat to the environment and human health.



Purpose

The OM-633 power consumption limiter is designed for automatic disconnection of the power supply of the electrical installation circuit in case of exceeding the set value of power consumed by the receivers in this circuit as well as for monitoring the power supply voltage of this receiver and protecting it against the effects of voltage increase or decrease beyond the set values.

Features

- » Adjustable threshold of tripping power 1÷10 kW;
- » Protection against the drop of UL power supply voltage (150÷210 V);
- » Protection against the rise of UL power supply voltage (230÷260 V);
- » Counter of relay actuations with automatic disconnection of system power supply after exceeding a set number of actuations;

- » Automatic lock of the system power supply for 10 minutes in the case in case the power was exceeded fivefold;
- » Automatic power-off when the power consumption is 8 times higher than the set threshold value;
- » Automatic power-off when the power consumption is greater than 16 kW;
- » Adjustable tripping time (1 s÷3 min.);
- » Adjustable reconnection time (4 s÷6 min.);
- » LED display for indicating power consumption and device configuration,

Functioning

Power P

The power limiter allows you to power the circuit when the total power of the receivers in the controlled circuit is lower than the one set on the limiter scale. Exceeding the set power consumption threshold in a controlled circuit results in a disconnection of the power supply to this circuit after a user-set time. The power supply will be restored automatically after a preset time. If the power consumed is still greater than the set value, the circuit will be disconnected again.

Automatic disconnection will also occur if the power consumption is 8 times higher than the set threshold and if the power consumption exceeds 16 kW. The limiter is locked for 30 seconds.

Voltage UL/UH

This function controls the number of consecutive actuations of the limiter. When the preset counter value is reached, the limiter disconnects the power supply permanently (no automatic return). The system can be switched on again after a manual reset of the lock. By default (parameter 0) the limiter has the lockout function set to 10 minutes after 5 consecutive disconnections.

The accrued value of the counter is reset in case of permanent operation of the limiter longer than 10 minutes.

CTO trigger counter

This function controls the number of consecutive actuations of the limiter. When the preset counter value is reached, the limiter disconnects the power supply permanently (no automatic return). The system can be switched on again after a manual reset of the lock. By default (parameter 0) the limiter has the lockout function set to 10 minutes after 5 consecutive disconnections. The accrued value of the counter is reset in case of permanent operation of the limiter longer than 10 minutes.

Operating mode

In operating mode, the display shows the value of the power consumed. Led R indicates contact status: off - contact open (position 7-9); on- contact closed (position 8-9). After pressing the „+” button, the display shows the current measured voltage value. After pressing the „-” button, the display shows the current measured value of the disconnection counter.

Indication of emergency states

- UH exceeding the upper voltage threshold
- UL exceeding the lower voltage threshold
- permanent disconnection when the disconnection counter is exceeded
- P-/0.15 exceeding the threshold of the power consumption limit. The information about the tripping and the re-start time is displayed alternately and cyclically.

- 9.59 blocking the power-on return for 10 minutes. The backwards countdown of the remaining time and cyclical appearance of -P-
- 1- signalling of exceeded 8-fold power setting or 16 kW. The information about the tripping and the re-start time is displayed alternately and cyclically.

Lock reset

After exceeding the value of the trigger counter.

Press and hold the „-“ (minus) button to reset.

The limiter will start operation with the previous settings.

Restart

After the power supply is switched on, the limiter starts working after 10 seconds. The display shows the remaining time to start.

Programming

Setting parameters:

- P- disconnection power; range 1÷10 kW; step of 0.1 kW
- UH upper threshold of disconnection voltage; range 230÷260 V; step of 5 V
- UL lower threshold of disconnection voltage; range 150÷210 V; step of 5 V
- [-+] disconnection counter; range 0÷20; step of 1. For a value of 0, the 10 minutes lock function is activated at 5 disconnections.
- t_o on-delay; range 1 s÷3 min.; step of 1 s (0.01)
- t_p re-start delay; range 4 s ÷ 6 min.; step of 2 s (0.02)

Settings

Press the **PROG** button sequentially to select a setting parameter. After 2 seconds, the value of this parameter is automatically displayed. To enter the editing mode, press the **PROG** button again and hold it for 3 seconds until the display blinks. Then set the correct value of the parameter with the „+/-“ buttons. After 4 seconds of inactivity, the parameter will be saved automatically and the limiter will switch to operating mode.

Installation

1. Turn off the power supply.
2. Fix the limiter on a rail in the control box.
3. Connect the power supply of the limiter to terminals 1-2.



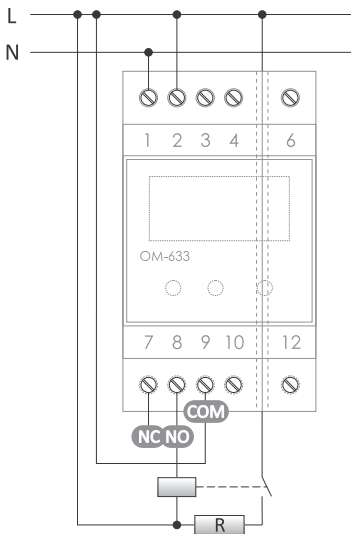
It is essential to connect L to terminal 2 and N to terminal 1.

4. Connect the power supply of the controlled circuit or contactor coil in series via terminals 8-9.
5. Lead the control circuit cable through the through-channel (points).
6. Set the operating parameters.



The power limiter should not be used in systems with electronic ignition (energy-saving fluorescent lamps), pulse power supplies, and other devices generating higher harmonics than 3 and above.

Connection diagram



Technical data

power supply	195÷253 V AC
contact	separated 1×NO/NC
maximum load current (AC-1)	16 A
power	
power limitation (adjustable)	1÷10 kW
tripping time (adjustable)	1÷180 s
return time (adjustable)	4÷360 s
voltage	
lower tripping threshold UL	150÷210 V
upper tripping threshold UH	230÷260 V
lower tripping time UL	5 s
upper tripping time UH	0.3 s
diameter of a through-hole	5 mm
power consumption	2.5 W
working temperature	-25÷50°C
terminal	2.5 mm ² screw terminals (cord) 4.0 mm ² screw terminals (wire)
tightening torque	0.5 Nm
dimensions	3 modules (52.5 mm)
installation	on TH-35 rail
ingress protection	IP20

Warranty

F&F products are covered by a 24-month warranty from the date of purchase. The warranty is only valid with proof of purchase. Contact your dealer or contact us directly.

CE declaration

F&F Filipowski sp. j. declares that the device is in conformity with the essential requirements of The Low Voltage Directive (LVD) 2014/35/EU and the Electromagnetic Compatibility (EMC) Directive 2014/30/UE. The CE Declaration of Conformity, along with the references to the standards in relation to which conformity is declared, can be found at www.fif.com.pl on the product page: www.fif.com.pl from the product subpage.