Actuator 16 A

F523

Description

The device is an actuator with 1 bistable relay sensor with zero crossing functionality, intended for the Load control and/or Automation functions.
The actuator is capable of assessing frequency (50 Hz) and voltage (230 Vac) in an isolated way.

In load control mode:

The actuator will be given a priority indicating the tripping order that will be followed by the F521 central unit for load management (e.g. Priority 1 will be the first load disabled if the threshold is exceeded). This priority coincides with the address that will be used in all configuration software programs. Using the forcing pushbutton it will be possible to re-enable the load for 4 hours after DISABLING by the central unit, or remove the load forcing previously set.

In automation mode, the actuator can perform the following functions:

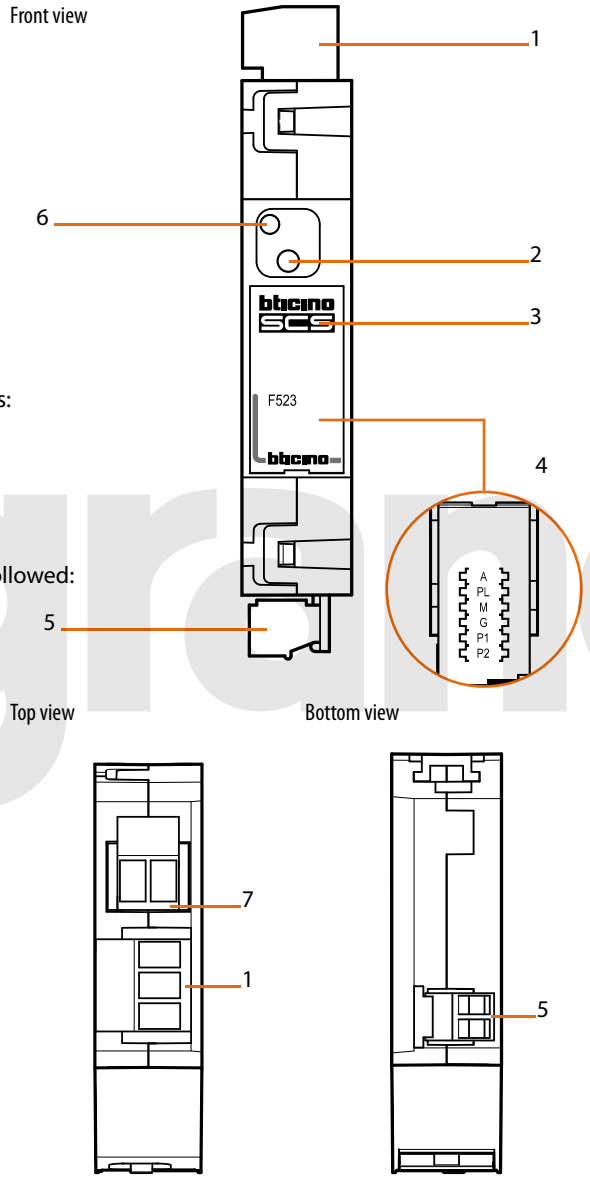
- all operating modes that can be configured on the control devices, with the exception of those requiring the use of two interlocked relays;
- possibility of group configuration (G);
- additional modes using the M configuration socket.

In mixed load control and automation mode, the following rules are followed:

The local key performs the load control management function (forcing/end of forcing)
- if the load is ENABLED or FORCED, the status of the relay follows the commands of the Automation system.
- if the load is DISABLED by the central unit for load management, the status of the relay does not follow the commands of the Automation system, but can only be re-enabled by a control, ENABLING or FORCING, from the load control management.

During disabling, the actuator keeps the statuses requested by the Automation commands in the memory. After RE-ENABLING the relay is placed in the status required by the last automation command.
This function has been conceived for applications where the load control management function is implemented, with the need of performing hourly load scheduling.
If during DISABLING stage the relay is switched off due to the scheduling settings, when re-enabling takes place it will stay switched off.

The bistable relay enables preserving the status of the load also in case of lack of voltage from the SCS bus (e.g. device reset).
The space requirement for the device is equal to 1 DIN module. The device is provided with socket for 6 configurators: A, PL, G, M, P1, P2.



Technical data

Operating power supply
with SCS BUS: 18 – 27 Vdc
Absorption: 10 mA max
Operating temperature: 0 – 40 °C
Loads which can be driven:
- 16 A resistive
- 10 A with incandescence lamps
- 4 A cos 0.5 for ferromagnetic transformers
- 4 A for fluorescent lamps and electronic transformers

Dimensional data

1 DIN module

Legend

1. 230 Vac connection
2. Load forcing pushbutton
3. Virtual configuration pushbutton (future application)
4. Configurator sockets closing door
5. SCS/BUS connection
6. User interface LED, SEE TABLE
7. Load connection

Configuration

The device can be configured by connecting the physical configurators to the correct sockets (Physical configuration)

The device is provided with socket for six configurators, which define:
- A/PL/G/M local address (room, light point), group, and mode in the automation system.
- P1/P2 priority in the load control management system, (P1 = tens, P2 = units)

1) Automation Mode:

The actuator performs all the operating modes that can be configured on the control devices, with the exception of those requiring the use of two interlocked relays; it can also accept extended switch on, switch off, and time delay controls.
In addition, the following table lists the operating modes required for the configurator connected to the M position of the actuator itself.
In the A and PL positions it will be necessary to indicate the device address, while the P1 and P2 positions must be configured equal to zero.
The pushbutton operates in ON/OFF cyclical mode.

Possible function	Configurator in M
Actuator as slave. It receives a command sent by a Master actuator with the same address	SLA
Pushbutton (On monostable) ignores Room and General controls	PUL
Master actuator with delayed Off control on the corresponding Slave actuator. Only for point-point type control. With the Off control, the Master actuator is disabled; the Slave actuator is disabled after the time set using the configurators has elapsed[1)]	1 – 4[1)]

[1)] In the Off delayed mode, the master sends the Off command after a period of time set using the 1 - 4 configurator connected to M as shown in the table:

Configurator in M	Time (minutes)
1	1
2	2
3	3
4	4

LED notifications based on the status of the actuator in automation mode:

Device status	LED
Load OFF	GREEN
Load ON	ORANGE

2) Load control management mode:

In the P1 and P2 positions it will be necessary to indicate the priorities from 01 to 63, the A, PL, G and M positions must be configured equal to zero.

LED notifications based on the status of the actuator in load control management mode:

Device status	LED
Enabled	ORANGE
Forced	ORANGE flashing 1 s/1 s on GREEN
Disabled	RED

2) Load control management and automation:

In the P1 and P2 positions it will be necessary to indicate the priorities from 01 to 63.
In A and PL it will be necessary to indicate the device address.

LED notifications based on the status of the actuator in load control management and automation mode:

Device status	LED
Enabled + ON	ORANGE
Enabled + OFF	GREEN
Disabled	RED
Forced + ON	ORANGE flashing 1 s/1 s on GREEN
Forced + OFF	ORANGE flashing 1 s/1 s

Common LEDs signalling:

Device status	LED
Installation error (230 Vac not detected)	RED flashing 100 ms/900 ms
Configuration error	ORANGE flashing irregularly on GREEN
No configuration	ORANGE flashing 128 ms/128 ms on GREEN

Wiring diagrams

Actuator connection: