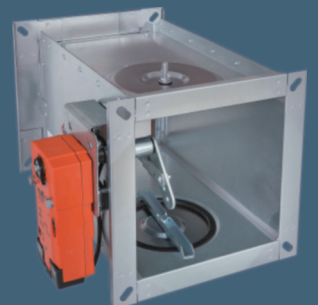


# MANDÍK<sup>®</sup>

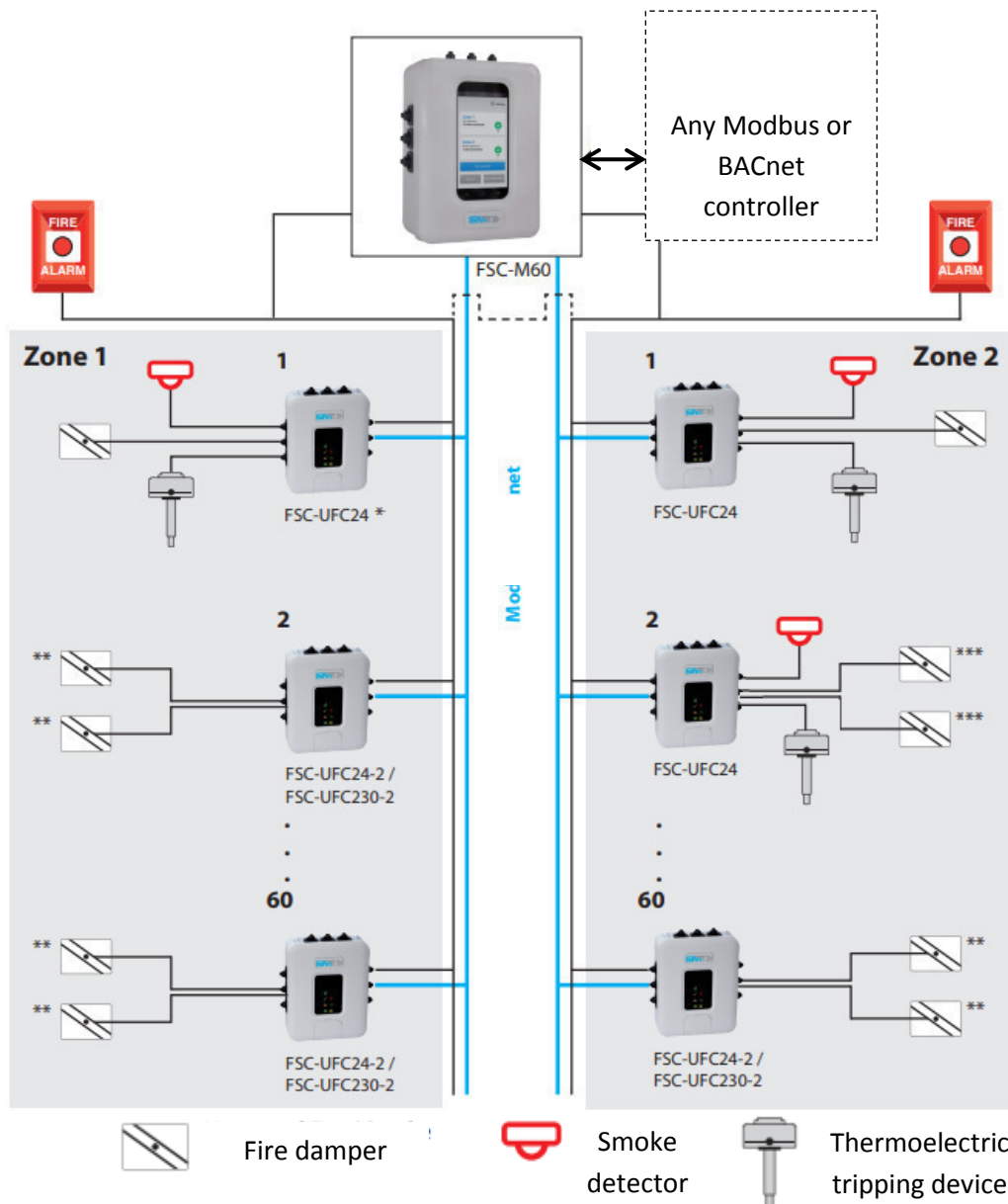
## Electronic control system MCS-B Product overview





# Electronic control system MCS-B MANDÍK®

This system is used to monitor and control up to 240 motorized fire dampers and is compatible with all standard 24V or 230V actuators. The system consists of communication modules and from a central control unit, which communicates with individual communication modules via Bus communication RS-485. The entire system operates on the Master & Slave principle, where the communications modules (Slaves) have set the address through the Dip switch, the central control unit (Master) automatically detects individual modules and no further adjustments are required.



\* Individual control of 1 fire damper with the communication module FSC-UFC24 resp. FSC-UFC24-230

\*\* Individual control of 2 fire dampers with the communication module FSC-UFC24-2 resp. FSC-UFC230-2

# Central control unit FSC-M60 MANDÍK®

M60 is a smart controller with high resolution touch screen to control and monitor up to 120 communication modules UFC through the BACnet protocol.

- **Easy to use:** Pre-programmed for the specific fire safety and smoke extraction application. Does not require programming knowledge. Intuitive handling through high resolution touch screen and thanks to the user-friendly interface.
- **Simple system:** Auto detect / addressing of the connected UFC devices. Control of 2 fire and / or smoke extraction zones possible
- **Communication:** Via Modbus RTU or BACnet MS/TP. Remote access via Wi-Fi or cellular connection (SIM card) possible
- **High flexibility:** Simple integration into superior systems with standard interfaces (BACnet, Modbus) or directly through the fans (conventional DI/DO). In combination with the Universal System Link UFC; Choosing functionality and control modes during commissioning on site possible.
- **Easy testing:** Integrated real time clock for automatic test runs of the whole system incl. test report.



## Technical data

|                   |  |
|-------------------|--|
| Operating voltage | 5V DC  |
| Connections       | Quick connection terminals                             |
| Communication     | Modbus RTU or BACnet MS/TP                             |
| Baud rate Modbus  | 9600 bps   |
| Baud rate BACnet  | 9600, 19200, 38400, 76800 bps (aut. detection)         |
| Slave function    | For easy integration into any Modbus or BACnet system. |

For more details see [technical data sheet](#)

## Application

The FSC-M60 is a smart controller with a high resolution touch screen to control and monitor up to 120 communication modules UFC through the BACnet protocol. Thanks to the ability to connect up to two motorized fire dampers to one UFC module it can monitor up to 240 motorized fire dampers. The device allows remote control via Wi-Fi. Thanks to the integrated real time clock it allows automatic control of individual dampers or the entire system, the device records the test reports.

# Communication module UFC24 MANDÍK®

Universal controller for motorized fire damper with 24V AC/DC actuator. Communication with the superior system is via RS-485 line (protocols Modbus RTU or BACnet MS/TP) or analogue connection.

- **New flexibility:** Universal System Link between motorized fire damper and any Modbus or BACnet system or analog control.
- **Compatibility:** The Universal Field Controller is compatible for all standard actuators on 24 V AC/DC such as Belimo, Gruner etc.
- **Easy to install:** Thanks to the new mounting bracket, the UFC24 can easily be snapped-on any time during the project (at the damper manufacturer or at the job site). AMP plug-in and quick connections (terminals) for high flexibility, when connecting fire or smoke extraction damper actuators. Clamping connections for additional safety devices e.g. smoke detectors and thermoelectric tripping devices.
- **Easy configuration:** All changes to configuration and control modes are made using dip switches. No further programming skills are required.
- **Safety function:** Application dedicated safety function for fire and smoke extraction. Analog application for override safety function (Fire Alarm System).
- **Clear indication:** Easy and clear indication of function, position and status with LEDs.
- **Easy testing:** Independent functional control through test key at any time. The UFC24 offers a 'Full Auto Test' function. Can be controlled through the Modbus or BACnet controller.



## Technical data

|                       |                                     |
|-----------------------|-------------------------------------|
| Nominal voltage       | 24 V AC/DC                          |
| Nominal voltage Range | -20%... + 20%                       |
| Dimensioning          | 2 VA + actuator (max. 24 VA)        |
| Power consumption     | 2W + actuator                       |
| Connections           | Quick connections (terminals)       |
| Communication         | Modbus RTU (RS-485), BACnet (Ms/Tp) |

**For more details see technical data sheet**

## Application

The FSC-UFC24 allows the control one motorized fire damper with 24V AC/DC actuator. It is also possible to connect one smoke detector and one thermoelectric tripping device to the communication module. It offers Modbus, BACnet or an analog connection to the superior system, control modes can be selected using the DIP switch.

# Communication module UFC24-2 MANDÍK®

Universal controller for 2 motorized fire dampers with 24V AC/DC actuators. Communication with the superior system is via RS-485 line (protocols Modbus RTU or BACnet MS/TP) or analogue connection.

- **New flexibility:** Universal System Link between 2 motorized fire dampers and any Modbus or BACnet system or conventional control. One bus address offers individual control and status messages for each of the two connected actuators.
- **Compatibility:** The UFC24-2 is compatible for all major 24 V standard type fire damper actuators such as Belimo, Gruner etc.
- **Easy to install:** Thanks to the new mounting bracket, the UFC24-2 can easily be snapped-on any time during the project (at the damper manufacturer or at the job site).
- **Easy configuration:** All changes to configuration and control modes are made using dip switches. No further programming skills are required.
- **Safety function:** Application dedicated safety function for fire and smoke extraction. Analog application for override safety function (Fire Alarm System).
- **Clear indication:** Easy and clear indication of function, position and status with LEDs.
- **Easy testing:** Independent, individual functional control per damper through the two test keys at any time. The UFC24-2 offers a 'Full Auto Test' function. Can be controlled through the Modbus or BACnet controller.



## Technical data

|                       |                                     |
|-----------------------|-------------------------------------|
| Nominal voltage       | 24 V AC/DC                          |
| Nominal voltage Range | -20%... + 20%                       |
| Dimensioning          | 2 VA + actuator (max. 24 VA)        |
| Power consumption     | 2W + actuator                       |
| Connections           | Quick connections (terminals)       |
| Communication         | Modbus RTU (RS-485), BACnet (Ms/Tp) |

**For more details see technical data sheet**

## Application

The FSC-UFC24-2 allows the control two motorized fire dampers with 24V AC/DC actuator. The two connected fire dampers are controlled individually, so it is possible to indicate their faults separately. It offers Modbus or BACnet connection to the superior system, control modes can be selected using the DIP switch.

# Communication module UFC24-230 MANDÍK®

Universal controller for motorized fire damper with 230V AC actuator. Communication with the superior system is via RS-485 line (protocols Modbus RTU or BACnet MS/TP) or analogue connection.

- **New flexibility:** Universal System Link between motorized fire damper and any Modbus or BACnet system or analog control.
- **Compatibility:** The Universal Field Controller is compatible for standard actuators on 230 V AC such as Belimo, Gruner etc.
- **Easy to install:** Thanks to the new mounting bracket, the UFC24-230 can easily be snapped-on any time during the project. AMP plug-in and quick connections (terminals) for high flexibility, when connecting fire or smoke extraction damper actuators. Clamping connections for additional safety devices e.g. smoke detectors and thermoelectric tripping devices.
- **Easy configuration:** All changes to configuration and control modes are made using dip switches. No further programming skills are required.
- **Safety function:** Application dedicated safety function for fire and smoke extraction. Analog application for override safety function (Fire Alarm System).
- **Clear indication:** Easy and clear indication of function, position and status with LEDs.
- **Easy testing:** Independent functional control through test key at any time. The UFC24-230 offers 'Full Auto Test' function. Can be controlled through the Modbus or BACnet controller.



## Technical data

|                               |                                     |
|-------------------------------|-------------------------------------|
| Nominal voltage FSC-UFC24-230 | 24 V AC / DC                        |
| Nominal voltage actuator      | 110-230 V AC                        |
| Dimensioning                  | 2 VA + actuator (max. 24 VA)        |
| Power consumption             | 2W + actuator                       |
| Connections                   | Quick connections (terminals)       |
| Communication                 | Modbus RTU (RS-485), BACnet (Ms/Tp) |

For more details see technical data sheet

## Application

The FSC-UFC24-230 allows the control one motorized fire damper with 230V AC actuator. It is also possible to connect one smoke detector and one thermoelectric tripping device to the communication module. It offers Modbus, BACnet or an analog connection to the superior system, control modes can be selected using the DIP switch.

# Communication module UFC230-2 MANDÍK®

Universal controller for 2 motorized fire dampers with 230V AC actuators. Communication with the superior system is via RS-485 line (protocols Modbus RTU or BACnet MS/TP) or analogue connection.

- **New flexibility:** Universal System Link between motorized fire damper and any Modbus or BACnet system or analog control.
- **Compatibility:** The Universal Field Controller is compatible for standard actuators on 230 V such as Belimo, Gruner etc.
- **Easy to install:** Thanks to the new mounting bracket, the UFC230-2 can easily be snapped-on any time during the project. AMP plug-in and quick connections (terminals) for high flexibility, when connecting fire or smoke extraction damper actuators. Clamping connections for additional safety devices e.g. smoke detectors and thermoelectric tripping devices.
- **Easy configuration:** All changes to configuration and control modes are made using dip switches. No further programming skills are required.
- **Safety function:** Application dedicated safety function for fire and smoke extraction. Analog application for override safety function (Fire Alarm System).
- **Clear indication:** Easy and clear indication of function, position and status with LEDs.
- **Easy testing:** Independent functional control through test key at any time. The UFC230-2 offers 'Full Auto Test' function. Can be controlled through the Modbus or BACnet controller.



## Technical data

|                       |                                     |
|-----------------------|-------------------------------------|
| Nominal voltage       | 230 V AC                            |
| Nominal voltage Range | -20%... + 20%                       |
| Dimensioning          | 2 VA + actuator (max. 24 VA)        |
| Power consumption     | 2W + actuator                       |
| Connections           | Quick connections (terminals)       |
| Communication         | Modbus RTU (RS-485), BACnet (Ms/Tp) |

For more details see technical data sheet

## Application

The FSC-UFC230-2 allows the control two motorized fire dampers with 230V AC actuators. The two connected fire dampers are controlled individually, so it is possible to indicate their faults separately. It offers Modbus or BACnet connection to the superior system, control modes can be selected using the DIP switch.





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