

ULFX6000 range - UL intelligent addressable control panels



The Eaton ULFX6000 is a high specification intelligent addressable, wall or rack mounted, UL Listed control panel available in various loop configurations. It combines sophisticated functionality with simple operation and aesthetically pleasing design.

The control panel has the ability to support complex cause and effect programming (via site installer) and a wide range of user controllable functions that make the panel ideal for a diverse range of projects from industrial applications through to large multi site commercial developments.

The ULFX6000 uses soft addressing to minimise installation time and remove the potential for error associated with manual addressing. It can operate as a stand alone panel or as part of a networked system, and has powerful programming options that allow configurable control over whether messages from specific panels are transmitted around the network or remain local.

Features and benefits

- Large versatile touch-screen user interface
- 2 or 4 Class A Style 7 SLC loops
- Event history buffer (9,999 events) with date/time stamp
- 4 Notification appliance circuit (NAC's) outputs
- Dedicated alarm, trouble, AC trouble relays
- Integral short circuit isolators
- Up to 200 addresses per loop
- Full network capability up to 126 panels
- Supports a comprehensive range of soft addressing modules and devices for greater flexibility in design
- Menu driven graphical user interface for ease of operation
- Reduced commissioning time through soft addressing and auto learn functions
- Programming and trouble shooting time minimised by using a range of features such as auto config, walk test, system details menus

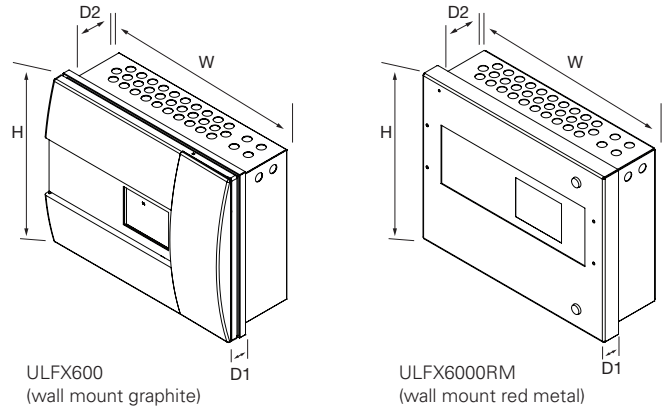
UL Addressable fire products

ULFX6000 range

Technical specification

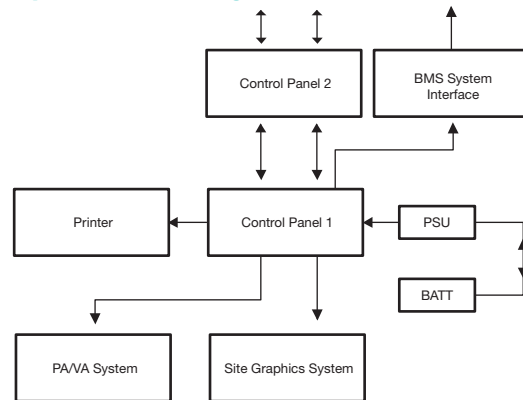
Code	ULFX6000 / ULFX6000RM
Description	UL intelligent addressable control panel
Standards	UL864 9th edition
Primary operating supply	120V ac / 240V ac, 60Hz, 2.0A supervised
Secondary operating supply	
Battery voltage	24V dc
Battery charge current	1.0A (max)
Battery derating factor	0.1
Battery capacity supervised	12Ah (max)
Notification appliance circuits Class B, Style Y, Sounder Group 1, Sounder 1, Sounder Group 1, Sounder 2, Sounder Group 2	
Output voltage	24V dc
Output current	0.75A (max)
Line impedance	50Ω When powered by 240V ac, the maximum current of 3.0A is shared between these circuits When powered by 120V ac, the maximum current of 2.25A is shared between these circuits Circuits are supervised, power limited and regulated.
Notification appliance circuits Class B, Style Y, SYNC MODULE. NAC1, NAC2	
Output voltage	24V dc
Output current	0.5A (max)
Line impedance	50Ω (max) The maximum current of 0.5A is shared between these circuits Circuits are supervised, power limited and regulated.
Alarm, trouble contacts. Relay expansion	
Unity power factor	30V dc For connection to power limited sources only
Aux relay (AC Trouble) contacts	
Unity power factor	30V dc, 1A For connection to power limited sources only
Signaling line circuit Style [7] Class [A] – (Addressable Loop)	
Rated voltage	24V dc
Maximum current	500mA
Line impedance	50Ω (max) Supervised, power limited
Network SLC	
Voltage	5V dc
Current	100mA (max)
Line impedance	50Ω (max) Power limited Limited to same enclosure installations
Physical	
IP Rating	IP30
Compatibility	
Suitable for use with	Eaton UL fire systems

Dimensions



Description	H (mm)	W (mm)	D1 (mm)	D2 (mm)
ULFX6000	397	497	75	130
ULFX6000RM	398	505	48	118

System block diagram



Catalogue numbers

Description	Code
2 loop panel	ULFX60002G
4 loop panel	ULFX60004G
2 loop panel, integral printer	ULFX60002GP
4 loop panel, integral printer	ULFX60004GP
2 loop panel, network card	ULFX60002GNC
4 loop panel, network card	ULFX60004GNC
2 loop panel, integral printer, network card	ULFX60002GPNC
4 loop panel, integral printer, network card	ULFX60004GPNC
2 loop panel, network card, red metal box	ULFX60002NCRM
4 loop panel, network card, red metal box	ULFX60004NCRM
Rack mounted 2 loop panel	ULFXR6000L2
Rack mounted 4 loop panel	ULFXR6000L4
Rack mounted 2 loop panel c/w network card	ULFXR6000L2NC
Rack mounted 4 loop panel c/w network card	ULFXR6000L4NC
Loop connected repeater panel	ULFX6000PR
Touchscreen network repeater panel	ULFPTR6000

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Powering Business Worldwide

ULCAP320, ULCAPT340, ULCAH330

Intelligent addressable sensor



Left to right: Photoelectric smoke sensor, opto-heat sensor, heat sensor

Our UL range has multiple options for intelligent addressable sensors. All sensors are designed for optimum functionality in mid-large sized builds. They are all soft addressed and have integral short circuit isolators.

All UL addressable sensors are specifically designed for compatibility with the UL addressable sensor base (UCAB300).

Details of the three sensors are included over the page.

Features and benefits

- Built-in short circuit isolators
- Stylish low profile design
- 360° viewable LED design
- Removable detector chamber
- Drift compensation
- Plug and play, no hard addressing required
- 'Clean me' feature means sensor can be cleaned on site using the Eaton manual cleaning procedure
- The programmable heat sensor reduces the number of parts required in the system

Optical smoke sensor (ULCAP320)

Suitable for most applications. Fastest response to slow burning or smouldering fires which give rise to large visible smoke particles.

Opto-heat sensor (ULCAPT340)

Responds quickly to fast clean burning fires. Maintains the advantage of optical sensors when detecting smouldering fires. The thermal enhancement of this sensor allows a higher alarm threshold, providing greater rejection of false alarms. The sensor will also give an alarm at temperatures above 135°F.

For opto-heat and photoelectric operation the sensor automatically compensates for gradual increase in the scatter signal due to contamination e.g. dust build up.

Heat sensor (ULCAH330)

Rate of rise with fixed heat sensor settings will detect a rapid increase in temperature or temperatures above 135°F, and should be used in environments where the ambient conditions might cause false alarms if smoke detection were to be used, for example where there is a high level of dust, fumes, steam or smoke under normal conditions.

Fixed heat sensor settings will detect temperatures above 135°F or 194°F and should be used in environments where the ambient conditions might cause false alarms if smoke detection were to be used, for example where there is a high level of dust, fumes, steam or smoke under normal conditions.



Powering Business Worldwide

Technical specification

Code	ULCAP320	ULCAPT340	ULCAH330
Description	Addressable sensor, photoelectric	Addressable sensor, opto-heat	Addressable sensor, multi-mode heat
Standards	UL268	UL268, UL521	UL521
Supply ratings			
Working voltage	18 V dc to 30 V dc	18 V dc to 30 V dc	18 V dc to 30 V dc
Voltage waveform	Filtered dc +/- 1 V (max), ripple @120Hz	Filtered dc +/- 1 V (max), ripple @120Hz	Filtered dc +/- 1 V (max), ripple @120Hz
Standby current	220 µA (average)	220 µA (average)	220 µA (average)
Alarm current	5 mA (max)	5 mA (max)	5 mA (max)
Timings			
Start-up time	2 seconds	2 seconds	2 seconds
Reset time	2 seconds (max)	2 seconds (max)	2 seconds (max)
Sensitivity			
Sensitivity	2.55+/- 0.33%/ft	2.55+/- 0.33%/ft	N/A
Sensitivity checker	Use No-Climb, TRUTEST, UL Listing 77TL	Use No-Climb, TRUTEST, UL Listing 77TL	Use No-Climb, TRUTEST, UL Listing 77TL
Heat class			
Heat element rating	N/A	135°F	135°F ROR + Fixed, + Fixed 135°F Fixed, 194°F Fixed
Heat detector spacing	N/A	50ft (heat alone operation)	50ft
Physical			
Mounting position	Ceiling in open areas	Ceiling in open areas	Ceiling in open areas
IP rating	IP40	IP40	IP40
Environmental			
Operating temp. range	14° to 140° F (-10° to 60° C)	14° to 122° F (-10° to 50° C)	14° to 140° F (-10° to 60° C)
UL listed temp. range	32° to 100° F (0° to 38° C)	32° to 100° F (0° to 38° C)	32° to 100° F/150° F (0° to 38° C/65° C)
Humidity (non condensing)	0% to 93% RH	0% to 93% RH	0% to 93% RH
Compatibility			
Compatibility identifier	W002	W002	W002
Compatible bases	UCAB300	UCAB300	UCAB300
Suitable for use with	Eaton UL fire systems	Eaton UL fire systems	Eaton UL fire systems
Dimensions			
Diameter (mm) (incl base)	104	104	104
Depth - D1 (mm) (incl base)	45	55	55
Depth - D2 (mm) (excl base)	33	43	43
Performance			
Heat class	ULCAP320	ULCAPT340	ULCAH330
Heat element rating	N/A	135°F	ROR + Fixed 135°F, Fixed 135°, Fixed 194°F
Heat detector spacing	N/A	50ft (heat alone operation)	50ft
Heat class	N/A	A2S	A2R

LEDs

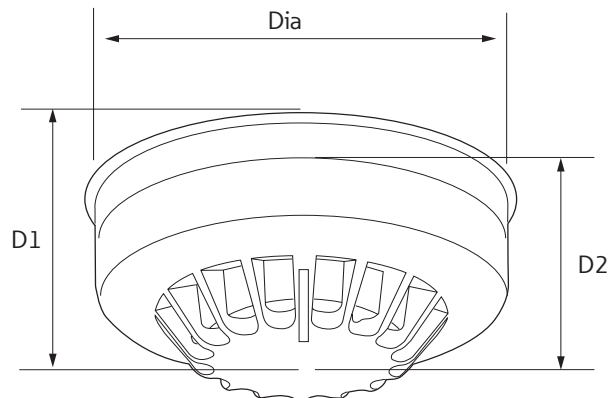
LED state	LED state behaviour	System event
Off	LED is not illuminated.	Global flash is disabled**.
Slow flash	Momentary flash approximately once every 30 seconds*.	Global flash enabled. Detector is in quiescent state.
Fast flash	Momentary flash approximately 25 times per minute*.	>24 detectors are in fire state.
On	LED is constantly illuminated.	Detector is in fire state.

*Timing can vary depending on loop address quantities.

**Detector flash in quiescent state can be disabled via control panel menu (ULCF3000).

Catalogue numbers

Description	Code
ULCAP320 Optical smoke sensor	400005FIRE-0011X
ULCAPT340 Opto-heat sensor	400006FIRE-0012X
ULCAH330 Heat sensor	400007FIRE-0013X
Addressable sensor base	UCAB300



MBG813/817

Eaton callpoints



Two versions of intelligent addressable callpoints are available in this range, the (MBG813) which can be either surface or flush mounted and the (MBG817) which is a weatherproof version.

Both the (MBG813) and the (MBG817) are compatible with the Eaton range of intelligent addressable fire systems.

These intelligent addressable callpoints are attractively designed, simple to install and are supplied as standard with a frangible glass element and a test key for ease of maintenance.

A comprehensive range of accessories are available to maximise the functionality of the callpoint for particular applications.

Features

- Soft addressed
- Integral short circuit isolator
- Single address
- Fast fit clip on front cover
- High visibility status LED
- Wide range of accessories
- Heavy duty terminals
- Two models available:
 - Internal
 - Weatherproof

Benefits

- Quick and simple to install
- Single tool for test and access
- Robust construction
- IP65 version available
- Easy to maintain/service

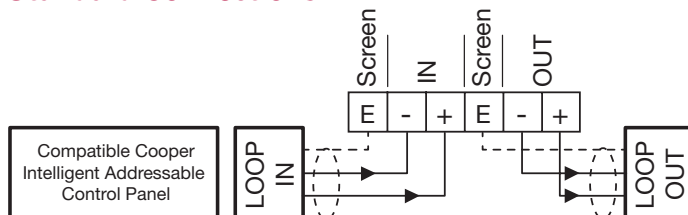
Technical Specification

Code	MGB813	MGB817
Description	Surface / Flush Mounting Callpoint	Weatherproof Callpoint
Standards	EN54 Pt11	EN54 Pt11
Specification		
Operating Voltage	17V dc to 32V dc	17V dc to 32V dc
Quiescent Current	< 250µA	< 250µA
Environmental		
Operating Temperature	-10°C to +55°C	-10°C to +55°C
Humidity (Non Condensing)	0 to 93% RH	0 to 93% RH
Physical		
Construction	PC/ABS	PC/ABS
Colour	Red	Red
Dimensions (H x W x D)	87mm x 87mm x 57mm (36mm flush)	87mm x 87mm x 59mm
Weight	0.2kg	0.2kg
Ingress Protection	IP42	IP65
Compatibility		
Suitable for use with	Eaton Intelligent Addressable Fire Systems	Eaton Intelligent Addressable Fire Systems

Installation

1. Surface callpoint has standard rear BESA fixing facilities. In addition, back box can accept top or bottom surface entry cables. Surface callpoint can also be flush mounted.
2. Callpoint has test facility via special test key to prevent unauthorised operation.
3. Insertion of test key for test purposes and for cover removal is at bottom of callpoint to facilitate ease of access when mounted next to door architrave.
4. Test key is dual function, used to test callpoint operation by simulating activation and also to allow removal of clip on cover to gain access to element.
5. Element is held in place by clip on self locking cover which can only be removed by use of a special tool (callpoint test key).
6. Separate loop in and loop out terminals are provided for all connections including screen continuity on intelligent addressable callpoints.
7. Surface/flush callpoints are IP42, weatherproof is IP65.

Standard Connections

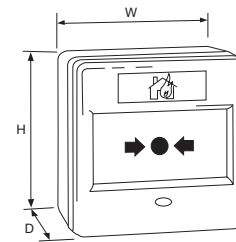


WARNING:

Do NOT use high voltage testers if ANY equipment is connected to the system.

Screen (Earth) must be continuous along entire length of loop.

Dimensions



Description	H (mm)	W (mm)	D (mm)
Flush Mounted	87	87	36
Surface Mounted	87	87	57
Weatherproof	87	87	59

User Interface

1. To enable quick and simple installation, callpoints use a fast fit self locking clip on front cover which is very simple to fit, but once in place, can only be removed by use of a special key (supplied).
2. Callpoint is triggered by pressing against the element.

Catalogue numbers

Description	Code
Surface/Flush Callpoint	MBG813
Waterproof Callpoint	MBG817
Protective Hinged Cover	CXPC
Spacer Plates (pack of 10)	MBGSP
Recessing Bezels (pack of 10)	4990005FUL-0194
Resettable Element Kit (pack of 10)	MBGREKIT
Spare Break Glasses (pack of 5)	516200FULL-5017
Callpoint keys (pack of 10)	MFBGKEY3

Eaton FL-RL-R-D

Catalog Number: FL-RL-R-D

Eaton Conventional xenon sounder beacon, Conventional, Alarms and Beacons, Sounder Beacon, EN54 Systems, Wall Mounted, Red Plastic, Red Flash, Deep Base, Fulleon

General specifications

Product Name	Catalog Number
Eaton Conventional xenon sounder beacon	FL-RL-R-D
	EAN
	5021621406151
Product Length/Depth	Product Height
121 mm	93 mm
Product Width	Product Weight
93 mm	0.33 kg
Compliances	
Contact Manufacturer	

Appearance

Lens color

Red

Color housing

Red

Light color

Red

Product branding

Eaton Cooper

Conformance / Certification

EN Certification Standards

EN54 Pt3 (Fire Alarm Sounders)

Environmental

Degree of protection

IP65

Installation

Construction material

ABS

Mounting Method

Surface mounting

Cable entry

Rear

Suitable for

Wall Mounting

Operating Conditions

System typology

Conventional (Non-addressable)

Type of current

DC

Performance

Lamp type

Xenon

Type of acoustic signal

Programmable

Type of acoustic signal device

Sound generator

Type of optical signal

Flash light

Tones

32

Voice tones

No

Resources

Product specification guides

Eaton Specification Sheet - FL-RL-R-D



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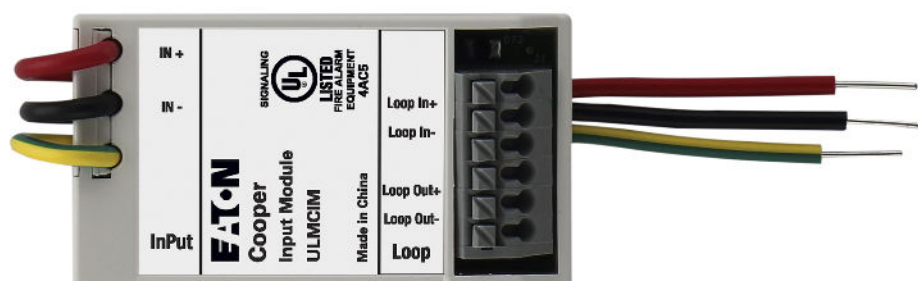
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ULMCIM - UL micro single channel input unit



An extensive range of interfaces are available to support the Eaton range of UL intelligent addressable control panels, providing solutions for most design requirements.

The UL micro single channel input unit (ULMCIM) is a single input, soft addressed micro interface, incorporating integral short circuit isolators. It is extremely compact and therefore ideal for incorporation into other equipment.

It is designed for applications requiring the monitoring of a set of normally open, volt free contacts such as sprinkler system flow switches, auxiliary panel fire/fault signals as well as non fire input signals such as flow valve open contacts, generator start up, fire door closed etc.

Features and benefits

- Soft addressed
- Integral short circuit isolator
- Single address
- Suitable for monitoring:
flow switches / non fire inputs / auxillary panels
- Optional variant: ULMCIM-C
- Quick and simple to install
- No hard addressing required (plug and play)
- Compact size

Optional variant

The ULMCIM-C is designed for use with Eaton's pull stations and is identified by the panel as a pull station. Therefore, up to 200 can be connected to the loop (ULMCIM maximum is 200 per loop).

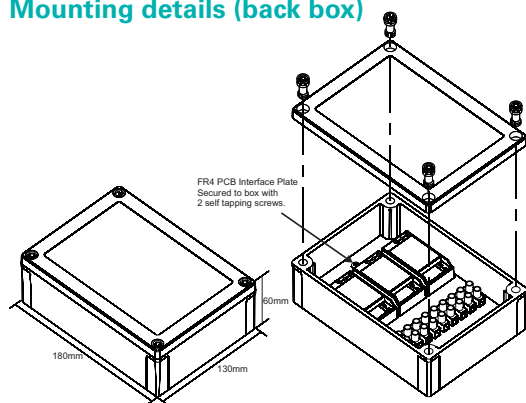
Technical specification

Code	ULMCIM / ULMCIM-C
Description	Single channel input units
Standards	UL864 9th edition
Signalling line circuit (Style 7, Class A, Supervised, Power Limited)	
Current	332µA
Operating voltage	24V dc
Input (Initiating Circuit Class B, Style C, Supervised, Power Limited)	
Voltage	8.4Vpp (pulsed every 1 sec)
Current 1	.2mA
Trigger resistance	5.6kΩ
End of line resistor	22kΩ
Line impedance 1	6 (max)
Environmental	
Operating temperature	0°C to 49°C
Humidity (non condensing)	0 to 93 %RH
Physical	
Dimensions (H x W x D)	65mm x 35mm x 18.5mm
Weight	0.05kg
Ingress protection	IP40
Compatibility	
Suitable for use with	Eaton UL fire systems

Notes:

No addressing of the interface is required (see control panel operation for details).
ULMCIM-C needs to be programmed as a pull station on site installer software.

Mounting details (back box)



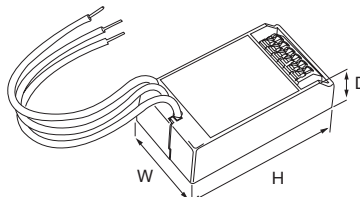
Installation

1. Fit the unit in position in accordance to the mounting details.
2. Connect the unit according to standard connections.
3. Up to 3 units can be fitted inside a micro module box unit.

Operation

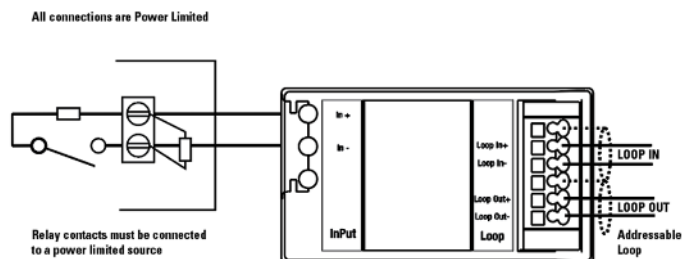
Normal Standby / Alarm / NAC Silence / Alarm Reset / Trouble / Supervisory / Drill

Dimensions



H (mm)	W (mm)	D (mm)
65	35	18.5

Standard connections



Notes:

1. The end of line resistor provided must always be fitted, even if the input is unused.
2. Monitored inputs can detect open or short circuit faults.
3. Recommended loop cable type: FIRETUF, FP200, MICC.

Description	SLC field wiring (input)	Single channel input
Wiring gauge	12 Max AWG	12 Max AWG
Wiring class	Class A, Style 7	Class B, Style C
Ground fault impedance	0.1Ω	0.1Ω
Supervised, power limited	Yes	Yes

Catalogue numbers

Description	Reference	Code
Micro single channel input unit (recognised as input unit)	ULMCIM	400013FIRE-0049X
Micro single channel input unit (recognised as pull station)	ULMCIM-C	400014FIRE-0055X
Micro module box unit (empty box)	ULB	ULBU

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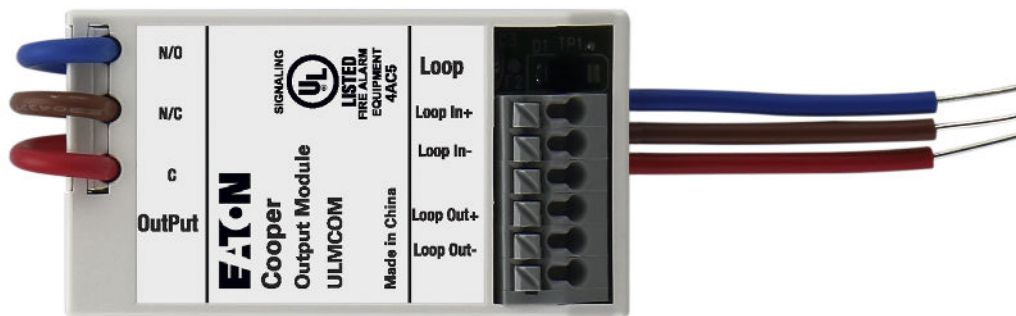
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ULMCOM - UL micro single channel output unit



An extensive range of interfaces are available to support the Eaton range of UL intelligent addressable control panels, providing solutions for most design requirements.

The UL single channel output unit (ULMCOM) is an extremely compact unit ideal for incorporation in to external equipment and suitable for switching low voltages (24V dc at 1A maximum).

This unit incorporates a set of non latching relay contacts and is suitable for switching HVAC control circuits, plant shutdown control circuits, fire door closure etc.

The ULMCOM is identified by the panel as an input / output unit, with a maximum of 20 units permitted per loop.

Features and benefits

- Soft addressed
- Integral short circuit isolator
- Single address
- Non latching changeover relay contacts
- Suitable for switching low volts control gear
- Optional variant: ULMCOM-S
- Quick and simple to install
- No hard addressing required (plug and play)
- Compact size

Optional variant

The ULMCOM-S is identified by the panel as a sounder, that resets on both silence and panel reset. The maximum number of ULMCOM-S units per loop is 60, and is counted towards the total number of sounders on the loop.

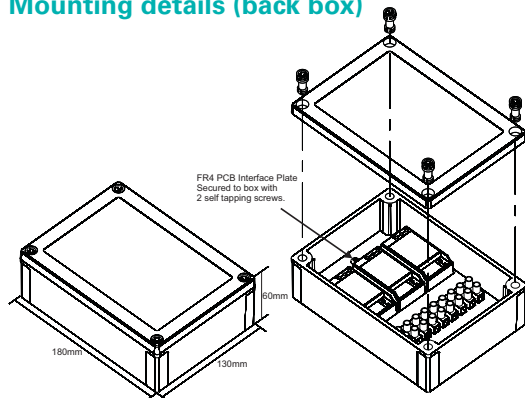
Technical specification

Code	ULMCOM and ULMCOM-S
Description	Single channel output units
Standards	UL864 9th edition
Signalling line circuit (Style 7, Class A, Supervised, Power Limited)	
Current	0.322mA (max)
Output relay (supervisory programmable)	
Switching voltage	24V dc to 30V dc
Contact rating	1A Resistive, pf=1 (max)
Max line impedance	16Ω
Power factor	1
Environmental	
Operating temperature	0°C to 49°C
Humidity (non condensing)	0 to 93 %RH
Physical	
Dimensions (H x W x D)	65mm x 35mm x 18.5mm
Weight	0.05kg
Ingress protection	IP40
Compatibility	
Suitable for use with	Eaton UL fire systems

Notes:

No addressing of the interface is required (see control panel operation for details).

Mounting details (back box)



Installation

1. Fit the unit in position in accordance to the mounting details.
2. Connect the unit according to standard connections.
3. Up to 3 units can be fitted inside a micro module box unit.

Operation

Normal standby / alarm

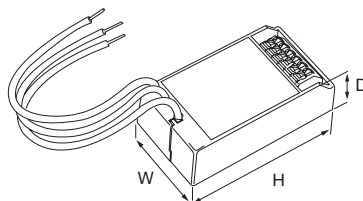
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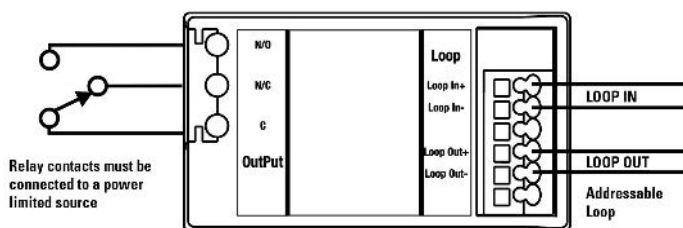
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Dimensions



H (mm)	W (mm)	D (mm)
65	35	18.5

Standard connections



Notes:

1. Output relay are volt-free contacts and are not monitored.
2. Recommended cable type FPLP (plenum cable), type FPLR (riser cable), or type FPL.

Description	SLC field wiring (input)	Single channel output
Wiring gauge	12 Max AWG	12 Max AWG
Wiring class	Class A, Style 7	-
Ground fault impedance	0.1Ω	-
Supervised, power limited	Yes	Yes

Catalogue numbers

Description	Reference	Code
Micro single channel output unit (recognised as output unit)	ULMCOM	400015FIRE-0058X
Micro single channel output unit (recognised as sounder)	ULMCOM-S	400016FIRE-0061X
Micro module box unit (empty box)	ULBU	ULBU

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