



FIRE DETECTION AND FIRE ALARM SYSTEM

ANALOGUE ADDRESSABLE SYSTEM

> CONTROL PANELS MHU 115, MHU 116, MHU 117

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We are the only Czech manufacturer of Fire Detection and Fire Alarm System F.D.F.A.S.) in the Czech Republic and the history of our production started in the early 70s of the 20th century.

New products are developed and tested in our own development department, equipped with the necessary technological background. The company's production centers and resources enable complete production from individual components to the final assembly of all our products. These are mainly a pressing center, forming and metalworking of metals, plastic molding, powder coating line and a mounting, soldering and inspection of printed circuit boards.

Due to the fact that we control our own production from the purchase of individual electronic com-

#### **Company Headquaters:**

LITES Liberec s.r.o. Oblouková 135 463 03 Stráž nad Nisou Manufacturing Plant:

LITES Liberec s.r.o. Kateřinská 235 463 03 Stráž nad Nisou

# Safety is not just a feeling

ponents and other proven materials from trusted suppliers to the packaging of finished products we can guarantee high reliability and durability of our products.

We believe that our systems are the best solution for users and businesses. We will be happy if you choose us as your reliable partner.

### We currently produce Fire detection and fire alarm system for:

- Commercial and non-commercial buildings
- Industrial buildings and halls
- Objects with explosive hazards
- Railway wagons and railway vehicles
- Special equipment (big excavators, diesel generators, etc.)
- Spray booths

# MHU 115

# Analogue addressable system with control panel MHU 115



### **DESCRIPTION:**

- Modular structure
- Graphical display with backlight clearly showing system status
- Structured menu
- 6 multifunction control buttons
- Configuration and diagnostic of a system from PC
- Data import from a file
- Firmware update from PC
- Output for printer connection
- Compatibility with existing detectors and elements of systems LITES

#### **MODULAR STRUCTURE PROVIDES:**

- 2 positions for addressable or conventional loop module
- 1 position for communication module on isolated circle or simple line SL-SR 485 allowing conection of up to 16 SLAVE devices
- 1 position for communication module on isolated circle or simple line RS 485/422 allowing mutual conection of up to 16 MASTER devices - control panels and repeaters
- 3 programmable inputs
- 6 programmable outputs

### ADDRESSABLE LOOP MODULE

- Module of a circle loop with capacity of 128 addresses for connection of interactive detectors and addressable elements
- Circle loop can be divided into two simple lines
- Control panel can be equipped with 2 modules



#### CONVENTIONAL LOOP MODULE

- Module for connection of conventional detectors
- Contains 4 conventional loops
- Connection of up to 25 detectors on a loop
- Control panel can be equipped with 2 modules



## **MODULE SL-RS 485**

A circle or simple line for connection of these elements:

• Repeater panel MHS 815

• Input/output devices

• OPPO - MHY 919

MHY 925

#### COMMUNICATION LINE MODULE RS 485/422

- For networking control panels MHU 115 and
- repeater panels MHS 815 on circle or simple isolated line RS 485/422.
- Units of outputs MHY 918

# Configuration program for control panel MHU 115



- basic menu control panel configuration
- diagnostic • placing of modules program
- import of detector configuration

#1

from a xls file

# • RS 485 MASTER

- control panel • RS 485 SLAVE states setup of inputs
  - special functions
- network address other setup
- possibility of inserting an user text

control panel

# Configuration

- configuration uploading/downloading firmware update
- assign of outputs
   change of a language version

- element type
- user text
- manner of fire signalling
- assign to groups
- assign of outputs
- special element setup



MHG 881 Ex

MHG 186 Ex

# MHU 116

# Modular analogue addressable system



### **DESCRIPTION:**

- Modular structure
- Redundant conception
- Graphical display with backlight clearly showing system status
- Structured menu
- 6 multifunction control buttons
- Configuration and diagnostic of a system from PC
- Data import from a file
- Firmware update from PC
- Compatibility with existing detectors and elements of systems LITES

### **TECHNICAL PARAMETERS:**

- 1 slot for a system module
- 1 slot for a power supply module
- 6 slots for optional modules
- up to 12 addressable loops
- up to 1536 addresses
- up to 72 conventional loops
- option of networking up to 16 MASTER devices - control and repeater panels
- power supply device 1x 24V/5A
- accumulators 12-40Ah
- GSM (LTE) communicator
- remote access via LITES Remote app

## **DESCRIPTION:**

- Modular structure
- Redundant conception
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- Structured menu
- 6 multifunction control buttons
- Configuration and diagnostic of a system from PC
- Data import from a file
- Firmware update from PC
- Compatibility with existing detectors and elements of systems LITES

### **TECHNICAL PARAMETERS:**

- 1 slot for a system module
- 1 slot for a power supply module
- 12 slots for optional modules
- up to 24 addressable loops
- up to 3072 addresses
- up to 144 conventional loops
- option of networking up to 16 MASTER devices - control and repeater panels
- power supply device 2x 24V/5A
- accumulators 40-65Ah
- GSM (LTE) communicator
- remote access via LITES Remote app

# DSY-2 SYSTEM MODULE



- basic control panel equipment
- redundant conception
- USB port for uploading of configuration
- output for printer connection
- 1 micro SD card slot for expansion of event memory and saving diagnostics data
- 1 programmable input
- 3 programmable outputs
- optical indication of input, output and communication states

# **DZD-1 POWER SUPPLY MODULE**



- basic control panel equipment
- 2 inputs for power supply device 24V/5A
- connector for connection of backup accumulators: - MHU 116 – 12-40Ah
- MHU 117 40-65Ah
- button for start from accumulators
- output 24V for power supply of external devices
- optical indication of states of supply voltages

## **DLI-1 ADDRESSABLE LOOP MODULE**

- 2 isolated circle loops
- 128 addresses on a loop
- option of dividing circle loop into 2 simple lines
- allows branches (even multiple)
- optical indication of communication states



# MHU 117

# Modular analogue addressable system



# DSM-1 CONVENTIONAL LOOP MODULE



- for connection of all conventional detectors TESLA and LITES
- 12 conventional loops on the module
- up to 25 detectors on loop
- for reconstruction of control panels MHU 102-108
- optical indication of communication and loop states

# **Optional modules**

Modular analogue addressable system with control panels MHU116/117

## **DMA-1 MASTER MODULE**



- isolated circle or simple line RS 485/422
- for networking of up to 16 MASTER devices - control and repeater panels
- optical indication of communication states



- **DSL-1 SLAVE MODULE** 
  - isolated circle or simple line SL-RS 485 for connection
  - of input/output elements MHY 918 and MHY 925
  - up to 16 SLAVE devices
  - optical indication of communication states

# DPE-1 PERIPHERAL MODULE



- isolated interface USB, RS 232, RS 485 for connection of superstructure
- RS 232 for connection of ZDP
- RS 485 for connection of ZDP and OPPO - MHY 919
- optical indication of individual communication states

## **DPE-2 PERIPHERAL MODULE** GSM (LTE)/LAN



- GSM (LTE) communicator
- 1 SIM card
- sending of events to up to 8 set numbers
- sending of all or selected events
- 3 connectors for LAN connection
- remote access via LITES Remote app



**DVV-1 INPUT/OUTPUT MODULE** 

• 8x input

- monitored

• 6x relay output with

• optical indication

and outputs

of states of inputs

changeover contact

- contact

- isolated

# **DVV-3 INPUT/OUTPUT MODULE**



- monitored - contact
- isolated
- 12x output open collector
- option of configuration for OPPO - MHY 912
- optical indication of outputs and inputs states



# **Optional modules**

Modular analogue addressable system with control panels MHU116/117

## **DVV-2 OUTPUTS MODULE**



- 12x relay output with changeover contact
- optical indication of outputs states

## DVV-4 INPUTS MODULE **DVV-5 INPUT/OUTPUT MODULE**



### DVV-4

- 16x input
- monitored
- contact
- isolated
- optical indication of inputs states

### DVV-5

- 8x input - monitored - contact
- isolated
- 8x monitored relay output
- optical indication of inputs and outputs states

# MHU 116/117



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# Configuration

# Configuration program for control panels MHU116/117



## **DPE-2 PERIPHERAL MODULE** GSM (LTE)/LAN

### **GSM (LTE) communicator**

- 1 SIM card
- Sending of events to up to 8 set numbers
- Sending of all or selected events
- Setting via configuration program

### LAN connection

- 3 connectors for LAN connection
- Remote display and control of the system
- Connection of PC superstructure and other devices

## **REMOTE DISPLAY**



- Full display and control of the system
- Application for PC, smartphones and tablets
- Supports Android and iOS
- Remote connection via LAN or GSM (LTE)
- Connection via Peripheral module DPE-2
- Multilingual menu: CZ, SK, EN, HU
- Events downloading and sorting
- Status screen of saved profiles

App Store:





Google Play



 element type selection

user description

of loop

addresses import of element types

 import of texts import of groups

# and their conditions

#### element type setting of an element address in the system

setting of how to view events setting of other elements

control in the system

• user texts • manner of fire signalling assign to groups

conditions of

timing of outputs

activation

 assign of outputs special setting of an element

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subsystems • assign of outputs

user functions

timers

diagnostic program

# LITES Remote

# Remote access to control panels MHU 116/117



## **GSM COMMUNICATOR**



- Sending events to up to 8 phone numbers
- Set up SMS messages or calls
- Send all or selected events
- System status check SMS
- Option to turn off/on sending events
- Listing of selected events to up to 4 email addresses on set dates or for a specific period of time

# Product Overview



#### **MHU 115**

Analogue addressable control panel with modular structure and a possibility of mounting two addressable or conventional modules and communication modules SL-RS 485 and RS 485/422.



Modular analogue addressable control panel, 6 user slots, up to 12 addressable loops (1536 addresses), up to 72 conventional loops, circle line SL-RS 485, RS 485/422, up to 16 devices in network.

#### **MHU 117**



Modular analogue addressable control panel, 12 user slots, up to 24 addressable loops (3072 addresses), up to 144 conventional loops, circle line SL-RS 485, RS 485/422, up to 16 devices in network.

### **MHS 815**



Repeater panel allowing display and control of MHU 115.



**MHG 162** 



#### Repeater panel allowing display and control of MHU 116 and MHU 117.



Interactive addressable and conventional ionization smoke detector. Its characteristics can be modified programmatically.



### MHG 262, MHG 262i (with isolator)

Interactive addressable optical smoke detector with extended spectrum of detected smokes. Its characteristics can be modified programmatically.

#### **MHG 362**

Interactive addressable combined heat detector. Its characteristics can be modified programmatically.



### MHG 862, MHG 862i (with isolator)

Interactive addressable multisensor detector with extended spectrum of detected smokes. It contains an optical and heat sensor, whose properties can be mutually programmatically set and combined.

#### **MHY 734**



Mounting base for connection of automatic interactive addressable detectors to addressable loop.





Interactive addresable ionization smoke detector with IP increased and mechanical resistence. ATEX certification. Its characteristics can be modified programmatically.

#### MHG 881 Ex, MHG 881

Interactive addresable multisensor detector with IP increased and increased mechanical resistence. ATEX certification. Its characteristics can be modified programmatically.

#### **MHY 713**



Mounting base for connection of fire detectors in the version with increased IP protection. Ussable to adressable loop or conventional loop.

#### **MHY 741 Ex**



The separation unit is an element that allows the

#### **MHY 946 Ex**







Interactive addressable and autonomous beam

smoke detector in reflective variant to the distance

of up to 100 m with motor adjusting of optics and

#### **MHG 664**



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laser sight. Its characteristics can be modified programmatically. MHY 740.286, MHY 740.276 The indicating unit is an accessory of the linear



#### **MHY 538**



Control unit for autonomous use of linear smoke detector MHG 664. Also can be used as adjusting preparation.

#### **MHG 942**





Fourfold input element for monitoring of statuses of external devices.

#### **MHY 923**



Single input/output element for monitoring of states and control of external devices, or for connection and monitoring of special detectors states.

#### **MHY 924**

MHY 925/4, MHY 925/8



Addressable module for connection of sirens, beacons and their combination to an addressable





Input/output element with two monitored inputs and two monitored outputs.

#### **MHY 918**

Unit of 7 outputs for control of connected fire protection devices on the line RS 485 MHY 918/R – changeover relay outputs MHY 918/K - outputs type open collector

#### **MHY 912**



Fire brigade control panel (OPPO) for systems connected to the fire brigade, intended for basic operation and indication of statuses of F.D.F.A.S.

#### **MHY 919**



Fire brigade control panel (OPPO) for systems with MHU 115, MHU 116, MHU 117, intended for basic operation and indication of states of F.D.F.A.S. To be connected to the line RS 485.

#### **MHY 419**



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#### **MHA 142**

Addressable and conventional manual call point for manual reporting of a fire alarm.

# MHA 145, MHA 184 Ex



# **Product Overview**



**MHG 231** Conventional optical smoke detector.



**MHG 331** Conventional combined heat detector.



**MHG 531** Conventional flame detector.



MHY 734.029

Mounting base for connection of automatic conventional detectors to a conventional loop.



#### **MHG 282**

Conventional optical smoke detector with increased IP and increased mechanical resistance, which can be completed by heating.



#### MHG 385, MHG 386

Conventional heat detector with increased IP and increased mechanical resistance.



#### MHG 585.105

Conventional flame detector with increased IP and increased mechanical resistance, which can be completed by heating.



**MHS 409** Remote light indicator with IP 40.



**MHS 408** Remote light indicator with IP 54.



#### **MHY 536**

Addressing preparation for setting of an address, parameters and inspection of detectors and loops. For setting of linear smoke detectors MHG 664. Firmware upgrade via USB.

# ATEX detectors

# Our hazardous area solution



# MHG 186 Ex IONIZATION DETECTOR



- Detector responding to combustion products visible and invisible smoke particles (aerosols)
- Increased IP65
- Ex II 2G Ex ib IIC T4 Gb
- Ex II 2D Ex ib IIIC T135 °C Db
- Mounting base MHY 741 Ex

## MHY 946 Ex SEPARATION UNIT



- Connection up to 32 intrinsically safe detectors
- Blue intrinsically safe cable
  external power supply 22-30Vdc
- {Ex} II (2)G [Ex ib Gb] IIC
- {Ex} II (2)D [Ex ib Db] IIIC

## MHG 881 Ex MULTISENSOR DETECTOR



- Combines two principles - optical and heat
- Increased IP65
- Ex II 2G Ex ib IIC T4 Gb
- Ex II 2D Ex ib IIIC T135 °C Db
- Mounting base MHY 741 Ex

## MHA 184 Ex MANUAL CALL POINT

- manual pushbutton detector
- Increased IP65
- {Ex} II 3G Ex ec ic IIC T5 Gc
- {Ex} II 2D Ex tb IIIC T 80 °C Db







#### **COMPANY HEADQUATERS:**

LITES Liberec s.r.o. Oblouková 135 463 03 Stráž nad Nisou

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