

Compatible Devices Manual



μ-FEP

FIRE DETECTION EXTINGUISHING CONTROL PANEL



FC CE

TABLE OF CONTENTS

1	DOCUMENT REVISION DETAILS	3
2	IMPORTANT NOTE	3
3	WARRANTY	3
4	INTRODUCTION	4
5	RESERVATION	4
6	DETECTION ZONES	4
7	LOW CURRENT	5
8	FIRE DETECTION DEVICES SUPPORTED BY THE μ -FEP.	5
9	ALARM ZONES VALUES	5
	9.1 INPUT VOLTAGE	5
	9.2 FIRE ALARM STATE	5
	9.3 ZONE QUIESCENT STATE	6
10	SOUNDER/BEACON DEVICE SUPPORTED BY THE μ -FEP	6
	10.1 SOUNDER/BEACON CURRENT	6
11	COMPATIBLE DEVICES	6
	11.1 COMPATIBLE SOUNDER/BEACONS	6
	11.2 FIRE DETECTORS	7
	11.3 CONTINUED FIRE DETECTORS	8

1 DOCUMENT REVISION DETAILS

Issue	Modification Detail	Author	Date
1	1 st publication document	CvT	01 / 12 / 2020
2	Fire zone voltage increased, compatible detector list expand	CvT	01 / 02 / 2021

2 IMPORTANT NOTE

This compatibility manual is an integral part of the μ -FEP user manual version 1.10 of February 1, 2021. This document should be thoroughly read and understood before installation and/or commissioning of the system is undertaken. The μ -FEP system is not to be regarded as properly used when it is used without regard to any relevant information or advice relating to its use that has been made available by the supplier. The μ -FEP system and the associated connections must be installed, commissioned, and maintained by a skilled, knowledgeable, and competent person or organization that is appropriately qualified to perform this work and is familiar with the objective of the equipment and the associated technical terminology. This equipment is not guaranteed unless the complete installation is installed and commissioned in accordance with the laid down local and/or national standards by an approved and competent person or organization.

3 WARRANTY

K&G Groep BV represents the μ -FEP system and is free from material defects in materials and workmanship. Our warranty does not cover a μ -FEP system which is damaged, misused, and/or used contrary to the supplied operating manuals or which has been repaired or altered by others. The liability of K&G Groep BV is at all times limited to repair or, at K&G Groep BV's discretion, replacement of the μ -FEP system. K&G Groep BV shall not under any circumstances be liable for any indirect, special or consequential damages such as, but not limited to, damage or loss of property or equipment, cost of de-installation or reinstallation, cost of transport or storage, loss of profits or revenue, cost of capital, cost of purchased or replacement goods, or any claims by customers of the original purchaser or third parties or any other similar loss or damage, whether incurred directly or indirectly. Remedies set forth herein to the original purchaser and all others shall not exceed the price of the μ -FEP system supplied. This warranty is exclusive and expressly in lieu of all other warranties, whether expressed or implied, including, without limitation, any warranties of merchantability or fitness for a particular purpose.

Reservations

No part of this manual may be reproduced, stored in an automated database or made public in any form or by any means either electronically, mechanically or by photocopying, recording, or in any other way, without prior written permission from K&G Groep BV. The policy of the K&G Groep BV is one of continuous improvement, and as such, we reserve the right to make changes to product specifications at any time and without prior notice.

Errors and omissions excepted.



4 INTRODUCTION

The μ -FEP is designed as a stand-alone fire detection and extinguishant release panel to be used in systems for e.g. electrical cabinets, CNC machines, engine rooms, small areas, or with other equipment. The μ -FEP control panel is designed to meet the requirements of the European standard EN54-2 Fire Detection and Fire Alarm systems - Control and Indicating Equipment, EN12094-1 Fixed Firefighting Systems Part 1: requirements and test methods for electrical automatic control and NEN-EN 15276-2 Aerosol Fire Extinguishing Systems.






The μ -FEP is a combined fire alarm control panel and extinguishing release system and has two detection zones, whereby any, or all detection zones can contribute to the extinguishant release decision. Despite the fact that the current power consumption of many conventional automatic fire detectors allows more than 4 fire detectors to be connected to a single fire zone, this number should be limited to a maximum of 4.

5 RESERVATION

The μ -FEP panel has been assessed using conventional (non-addressable) fire detectors, as mentioned in chapter 15 of the μ -FEP User Manual version 1.10 February 1, 2021. A comparison was made between these widely used conventional fire detectors and generally well-known conventional (non-addressable) fire detectors from other manufacturers. Based on underlying data, a list has been compiled of the fire detectors deemed compatible with the fire detectors used during the assessment. It is important to acknowledge that this observation was made on November 1, 2020, and that, unknowingly, the technical specifications of the compatible conventional (non-addressable) fire detectors may have changed or may even have been removed from the delivery program of the relevant manufacturer since this date. We cannot be held responsible for faults, errors or malfunctioning of a fire alarm/extinguishing system caused by fire detectors other than those used during the assessment. Always test the alternative fire detector of your choice for proper functioning on a μ -FEP panel before application or installation.

6 DETECTION ZONES

The μ -FEP is equipped with two detection zone inputs. The loop inputs are continuously scanned for fire or fault detection. The loops are set to the following values:

-  RESISTANCE value of less than 100 Ω : FAULT
-  RESISTANCE value higher than 100 Ω and less than 1.5 k Ω : FIRE
-  RESISTANCE value higher than 1.5 k Ω and less than 8 k Ω : FAULT
-  RESISTANCE value higher than 8 k Ω and less than 12 k Ω : NORMAL
-  RESISTANCE value higher than 12 k Ω : FAULT

The commissioning engineer should ensure that the detectors have corresponding specifications, the correct input voltage and alarm resistance values, and are suitable for application on the μ -FEP. All monitored inputs are protected against short circuit and cable malfunction. The voltage of all monitored detection inputs is controlled by the μ -FEP itself and are independent of the main power supply voltage. The automatic fire detectors must have a working voltage of at least 15 VDC.

7 LOW CURRENT

During the development of the μ -FEP, low power consumption was given high priority. The μ -FEP is designed to operate on a small battery. As a result, measures were taken to minimize power consumption without causing performance degradation. Components that can be connected to the μ -FEP, therefore, have to be able to deliver high performance with a low power consumption level. The reason being is that the μ -FEP must be able to perform, even in the event of a complete power shutdown. The reason, cause or effect of a fire can be related to a complete power shutdown. The objective of the μ -FEP's emergency power supply is to be able to permanently detect and extinguish a fire through its own emergency power supply in the event of a complete power failure.

8 FIRE DETECTION DEVICES SUPPORTED BY THE μ -FEP.

The conventional fire detector types listed below have been tested by Kiwa on the μ -FEP system and are approved for such.

The detector types below have been tested on the μ -FEP and are approved for such		
Part no	Type	Manufacturer
ORB-OP-42001-MAR ¹	smoke	Apollo
ORB-OH-43001-MAR ¹	smoke/heat	Apollo
ORB-HT-41002-MAR ¹	heat 61°C	Apollo
ORB-HT-41004-MAR ¹	heat 73°C	Apollo
ORB-HT-41006-MAR ¹	heat 90°C	Apollo
ORB-OP-02032-APO	optical (non-latching)	Apollo
KG/601CH ¹	CO/HT Carbon Monoxide/Heat	FireClass

9 ALARM ZONES VALUES

Any automatic fire detector of another brand that works within the mentioned limitations is capable of operating and functioning on the μ -FEP system. Automatic fire detectors other than those listed in chapter 4 must meet the following requirements to function reliably on the μ -FEP panel. Always check the specification of the fire detector of your choice before installation.

9.1 INPUT VOLTAGE

The fire detector must operate within the voltage range of 15-22 Volt, specified by us. The μ -FEP alarm zones 1 and 2 operate in the quiescent state with a voltage of 15 VDC. In the event of a fire alarm, the alarm zone voltage increases to 22 VDC.

9.2 FIRE ALARM STATE

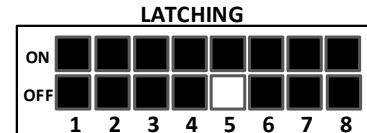
When an automatic fire detector is connected to the μ -FEP fire zone input, the μ -FEP calculates the alarm load resistance based on the alarm zone voltage and alarm current. The alarm current is limited to 60 mA. The alarm load resistance of the automatic fire detectors, in combination with the end of line resistor of 10 K Ω , must not be less than a total value of 130 Ohm.

9.3 ZONE QUIESCENT STATE

The quiescent current is another aspect. The end line resistance lies between 8 and 12 KΩ. A lower resistance on the line creates an increase in the current; a higher resistance creates a decrease in the current. The quiescent current of the most well-known automatic conventional fire alarms varies from 20 to 130 μA. Considering the requirements of sections 5.1 and 5.2, detectors within these limits are deemed applicable to the μ-FEP without exception.

WARNING! READ THIS CAREFULLY

The conventional (non-addressable) automatic fire detectors listed in Section 7 of this manual are **only applicable** in the **LATCHING** mode of the μ-FEP panel. DIP switch 5 must be switched to the **OFF** position.



10 SOUNDER/BEACON DEVICE SUPPORTED BY THE μ-FEP

The conventional sounder beacon type listed below has been tested by Kiwa on the μ-FEP system and is approved for such.

The sounder/beacon type below has been tested on the μ-FEP and is approved for such		
Part no	Type	Manufacturer
VTB-32EM-DB-RB/RL VTB	sounder beacon	Cranford

10.1 SOUNDER/BEACON CURRENT

Until recently, the highest power consumption of a sounder/beacon combination was initiated by the beacon component. But with the introduction of high-level LED technology, this is no longer the case. Within the framework of low power consumption, only a sounder/beacon combination that uses LED technology is recommended for connecting to the μ-FEP. Always check the specification of the alarm devices before installing them on the μ-FEP.

11 COMPATIBLE DEVICES

11.1 COMPATIBLE SOUNDER/BEACONS

Manufacturer	Model	Type	Approved
Hosiden	Banshee Excel Lite	CHX/CHL	EN
Fulleon	Symphoni	LX Wall	EN
Fulleon	RoLP	LX Wall	EN
Fulleon	RoLP	Solista	EN
Fulleon	RoLP	Max Solista	EN
Klaxon	Sonos	PSC-00**	EN
Klaxon	Nexus 110	PNC-00**	EN
KAC	Enscape	CWSS-WR-W4	EN

11.2 FIRE DETECTORS

Manufacturer	Model	Type	Applicable	Approved
Apollo	65 series	OP 55000-317	4	EN
Apollo	66 series	HEAT 55000-1**	4	EN
Apollo	Orbis	OP-12001-APO	4	EN
Apollo	Orbis	OH-13001-APO	4	EN
Apollo	Orbis	OP-11001-APO	4	EN
Tyco/First Class	600 series	601 P	4	EN/UL
Tyco/First Class	601 series	601 PH	4	EN/UL
Tyco/First Class	602 series	601 CH	4	EN/UL
Tyco/First Class	602 series	601 H-R	4	EN/UL
Tyco/First Class	603 series	601 H-F	4	EN/UL
Tyco/First Class	602 series	631 H-F	4	EN/UL
Tyco/First Class	603 series	611 H-F	4	EN/UL
Siemens	110 series	OH110	4	EN
Siemens	110 series	OP110	4	EN
Siemens	110 series	HI110	4	EN
Siemens	110 series	HI112	4	EN
Siemens	120 series	OH121	4	UL
Siemens	120 series	OP121	4	UL
Siemens	120 series	HI121	4	UL
Nittan	Evolution series	EVC-P	4	EN
Nittan	Evolution series	EVC-DP	4	EN
Nittan	Evolution series	EVC-H	4	EN
Nittan	Evolution series	EVC-IR	4	EN
Nittan	EVCA series	EVCA-P	4	UL
Nittan	EVCA series	EVCA-P-Z	4	UL
Hochiki	SLR Series	SLR 835	4	UL
Hochiki	SLR Series	SLR 835H	4	UL
Hochiki	SLR Series	SLR E3N	4	EN
Hochiki	DCD series	SOC-E3N	4	EN
Hochiki	DCD series	DCD-AE3	4	EN
Hochiki	DCD series	DFJ-AE3	4	EN
Hochiki	DCD series	DCD-CE3	4	EN
Hochiki	DCD series	DFJ-CE3	4	EN
Cooper	UCP series	UCPD-2W	2	UL
Cooper	UCP series	UCPT-2W	2	UL
Cooper	UCP series	UCHT-2W	2	UL
Cooper	UCP series	UCHTI-2W	2	UL
Cooper	UCP series	UCHR-2W	2	UL
Cooper	UCP series	UCHRI-2W	2	UL
Eaton	EFXN* series	EFXN533	2	EN
Eaton	EFXN* series	EFXN525	2	EN
Eaton	EFXN* series	EFXN524	2	EN
Eaton	EFXN* series	EFXN526	2	EN
Eaton	EFXN* series	EFXN632	2	EN
Eaton	EFXN* series	FXN922	2	EN

11.3 CONTINUED FIRE DETECTORS

Manufacturer	Model	Type	Applicable	Approved
Bosch	FCP 320-R820	FCP-O320	4	EN
Bosch	FCP 320-R820	FCP-OC320	4	EN
Bosch	FCP 320-R820	FCP-OT320	4	EN
Bosch	FCP 320-R820	FCH-T320	4	EN
Bosch	FCP 320-R820	FCH-T320-FSA	4	EN
Bosch	F220 series	F220-P + B6	4	UL
Bosch	F220 series	F220-PTH + B6	4	UL
Bosch	F220 series	F220-PTHC + B6	4	UL
Bosch	F220 series	F220-135+ B6	4	UL
Bosch	F220 series	F220-135F + B6	4	UL
Bosch	F220 series	F220-190F + B6	4	UL
Ravel	316 Series	RE-316S	4	UL
Ravel	316 Series	RE-316H	4	UL
Ravel	316 Series	RE-316SH	4	UL
Simplex	True alarm 4098*	4098-9601/9788	2	UL
Simplex	True alarm 4098*	4098-9605/9788	2	UL
Simplex	True alarm 4098*	4098-9612/9789	2	UL
Simplex	True alarm 4098*	4098-9613/9789	2	UL
Simplex	True alarm 4098*	4098-9614/9789	2	UL
Simplex	True alarm 4098*	4098-9615/9789	2	UL
System Sensor	i ³ series	2151 / B110 LP	2	UL
System Sensor	i ³ series	2151T / B110 LP	2	UL
System Sensor	i ³ series	5151 / B110 LP	2	UL
System Sensor	i ³ series	2W-B / B110 LP	2	UL
System Sensor	i ³ series	2WT-B / B110 LP	2	UL
System Sensor	Series 300	2351E / B401	2	EN
System Sensor	Series 300	2351TEM / B401	2	EN
System Sensor	Series 300	4351EA / B401	2	EN
System Sensor	Series 300	5351EA / B401	2	EN
System Sensor	Series 300	5351TE / B401	2	EN
Notifier/Honeywell	ECO1000 series	ECO 1003/1000B	4	EN
Notifier/Honeywell	ECO1000 series	ECO 1002/1000B	4	EN
Notifier/Honeywell	ECO1000 series	ECO 1004T/1000B	4	EN
Notifier/Honeywell	ECO1000 series	ECO 1005/1000B	4	EN
Notifier/Honeywell	ECO1000 series	ECO 1005T/1000B	4	EN
Kidde	500 series	521B	4	UL
Kidde	500 series	521BXT	4	UL
Kidde	700 series	711U / 701U	4	UL
Kidde	700 series	721UT / 701U	4	UL

Outdated or replaced computers and electronics are valuable sources for secondary raw materials if recycled. Dealers of the μ -FEP system must comply with local regulations for waste separation applicable in the country where the supplier is located.

Questions concerning the information presented in this manual may be addressed to your dealer. For technical questions or support contact your dealer for further assistance.

