INSTALLATION MANUAL

MX EMERGENCY AND EXIT LIGHTS

PRODUCT DESCRIPTION

MX 25, MX 40 and MX Light emergency and exit lights are fully compatible with Panasonic addressable fire alarm system, while fulfilling all the emergency light standards, EN 60598-2-22, EN 1838, EN 62034, EN ISO 7010.

MX units are IP41 rated and can be used in indoor environments, such as offices, hotels, shopping malls and other public areas. MX 25 and MX 40 exit lights have an option for RX model, a red cross panel to indicate forbidden exit direction. Red cross can be controlled with Panasonic system in normal operating and emergency modes.

Please note these:

- This product may only be used for purposes specified by the manufacturer

- When the battery is connected to the device, the device must be turned on and perform commissioning test within a week

INDICATOR LIGHT

The state of the MX unit is indicated with indicator light as described in table 1.

Table 1, State of the unit indicated by the indicator light

Indicator light status:	State of the unit:
Solid green	Operating normally
Blinking green	Performing commissioning test
Solid red	Faulty LED luminaire
Blinking red	Faulty battery or failed duration test
No indicator light	Unit in emergency mode or turned off

LUMINAIRE CLASSIFICATION LABEL

Emex MX emergency luminaires are classified and labeled (according to standard EN60598-2-22) as to their construction as follows.

The designation consists of a rectangle divided in three or four segments each containing one or more positions. Relevant to the construction a position will obtain a letter or a figure, or a point if no indication has to be given.

The shape of the emergency lighting luminaire designation is as follows:

*	*	****	***

The segments and positions have to be completed by letters and figures indicating the intended constructions.

a) First segment containing one position: TYPE

X	self-contained
Z	central supply

b) Second segment containing one position: MODE OF OPERATION

0	non-maintained
1	maintained
2	combined non-maintained
3	combined maintained
4	compound non-maintained
5	compound maintained
6	satellite

c) Third segment containing four positions: FACILITIES.

A	including test device
B	including remote rest mode
C	including inhibiting mode
D	high-risk task-area luminaire
E	with non-replaceable lamp(s) and/or battery.

d) Fourth segment containing three positions: FOR SELF-CONTAINED LUMINAIRES to indicate the minimum DURATION of the emergency mode expressed in minutes;

*10	to indicate 10 min duration
*60	1 h duration
120	2 h duration
180	3 h duration

Example of marking:

X	0	A***	*60

WIRING

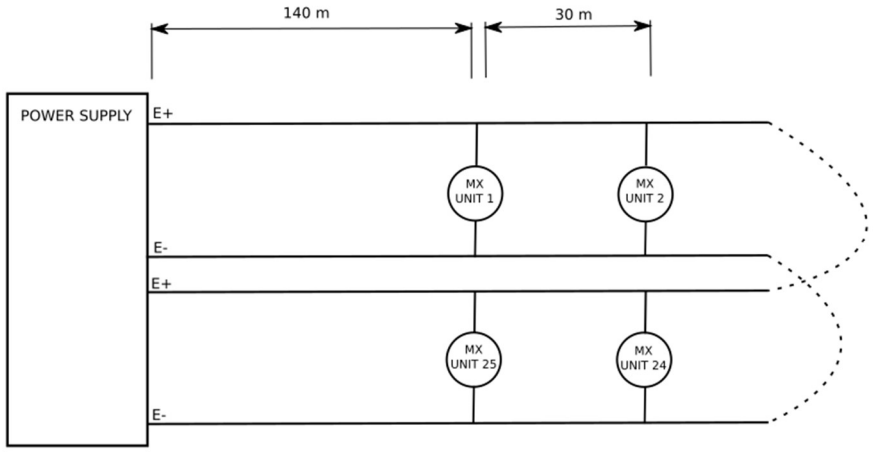
Table 2 shows tested examples of maximum loop cable length. Loops are terminated to power supply module from both ends as in picture 1.

Table 2, Example of tested maximum loop cable lengths

Copper wire diameter	Total power consumption of loop units	Minimum loop supply voltage	Cable length from system to loop units	Cable length between units	Total cable length
0.8 mm [1)]	20 W (25 pcs. MX 25)	30 V	280 m (2x140m)	30 m	1 km
0.8 mm [1)]	23 W (23 pcs. MX 40)	32 V	340 m [2)] (140m+200m)	30 m	1 km

1) Cable used: Berica Cavi S.P.A. J-HH BMK LSZH 2x2x0,80

2) Unit places 24 and 25 were left empty, hence outgoing loop length 140 m and returning loop length 200m.



Picture 1, Test loop

Table 3 shows calculated examples of maximum loop cable length. All calculated examples are rough estimations and real case maximum cable length can vary depending on cable length from system to units. In table 3 calculations it is assumed that distance from system to units is same as the distance between units.

Table 3, Example of calculated maximum loop cable lengths

Copper wire diameter	Total power consumption of loop units	Minimum loop supply voltage	Distance between units and system to first unit	Maximum loop cable length
0.8 mm [1)]	40 W (50 pcs. MX 25)	31 V	8 m	400 m
1.0 mm [2)]	40 W (50 pcs. MX 25)	31 V	13 m	650 m
0.8 mm [1)]	32 W (40 pcs. MX 25)	31 V	12 m	480 m
1.0 mm [2)]	32 W (40 pcs. MX 25)	31 V	17.5 m	700 m
0.8 mm [1)]	24 W (30 pcs. MX 25)	31 V	20 m	600 m
1.0 mm [2)]	24 W (30 pcs. MX 25)	31 V	31.5 m	945 m
0.8 mm [1)]	50 W (50 pcs. MX 40)	31 V	5 m	250 m
1.0 mm [2)]	50 W (50 pcs. MX 40)	31 V	8 m	400 m
0.8 mm [1)]	40 W (40 pcs. MX 40)	31 V	8 m	320 m
1.0 mm [2)]	40 W (40 pcs. MX 40)	31 V	11.5 m	460 m
0.8 mm [1)]	30 W (30 pcs. MX 40)	31 V	16 m	480 m
1.0 mm [2)]	30 W (30 pcs. MX 40)	31 V	24 m	720 m

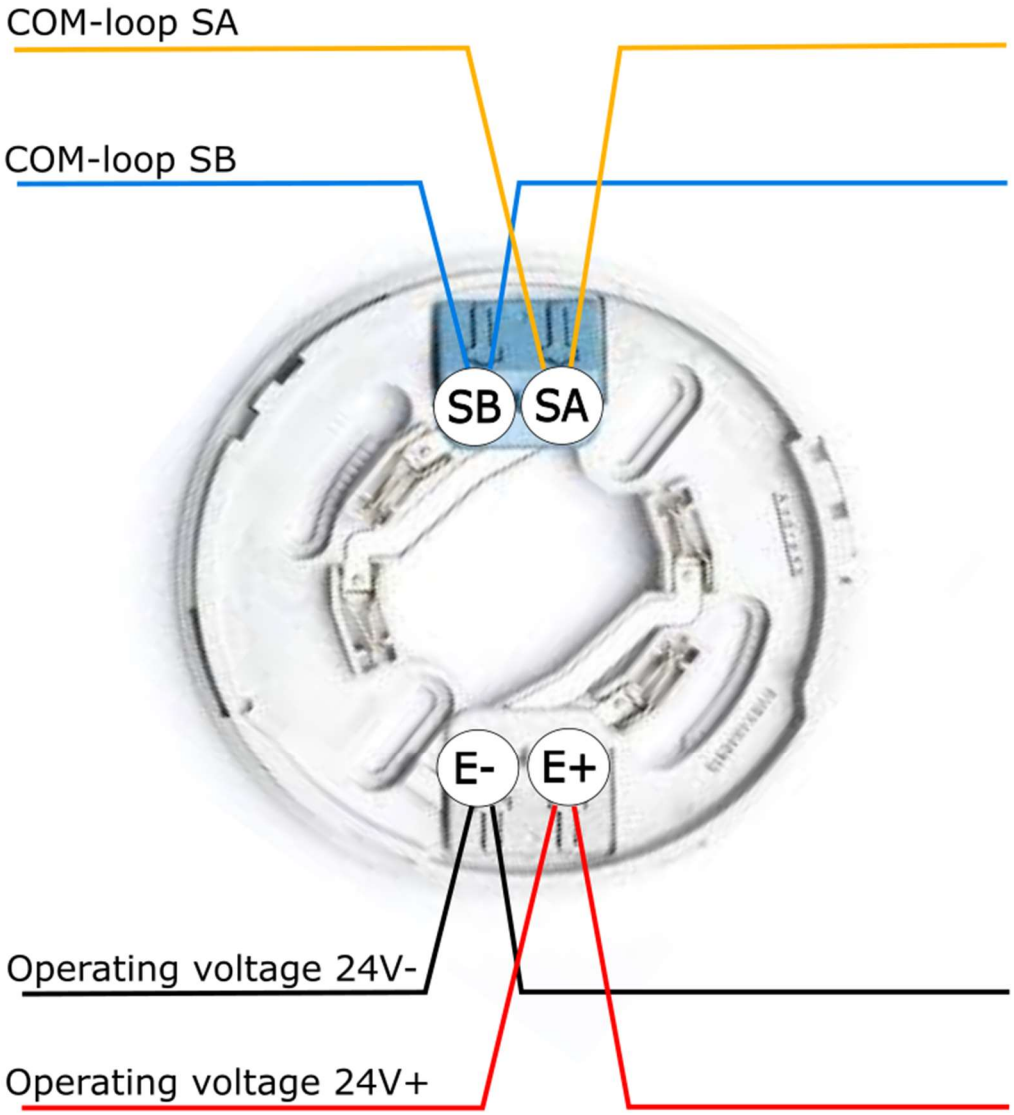
1) Wire resistance approx. 34.0 Ω/km

2) Wire resistance approx. 21.5 Ω/km

Recommended solid copper wire diameter for following Panasonic Analog bases is 0.6 – 1.2 mm. Recommended wire strip length is 10 – 12 mm.

ANALOG BASE 3312FL

Connect COM loop wires (in yellow and blue in picture 2) to analog base terminals SA and SB according to picture 2. Connect operating voltage loop wires (in red and black in picture 2) to base terminals E+ and E-.



Picture 2, Wiring for Panasonic Analog bases 3312FL

SET THE COM LOOP ADDRESS

Each COM loop unit must have a unique COM loop address in range 1-253. Set the address to each MX unit with the Address Setting Tool (4414). Use the connection cable with crocodile clips or directly connect the tool's terminal SA and SB terminals to the SA and SB terminals of MX unit.

SET THE MODE

Set the mode with the Address Setting Tool (4414) according to the table 3 below.

Table 4, Compatibility table for setting the mode to MX units

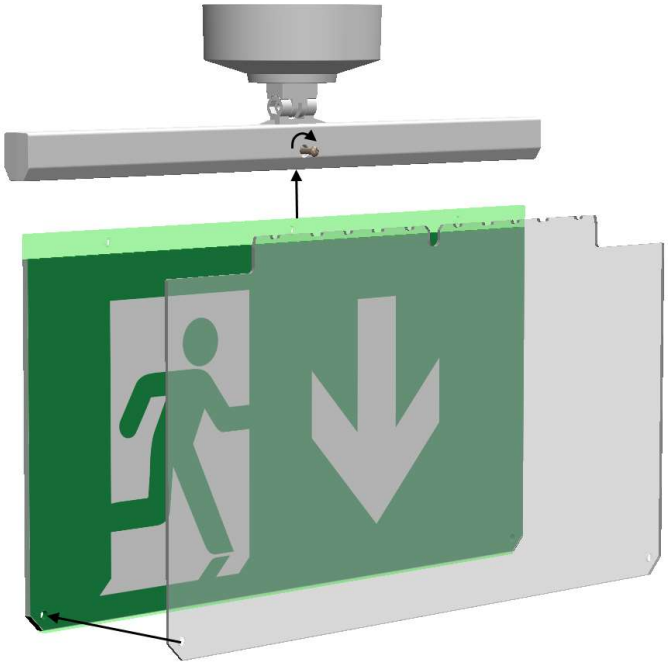
System model	Advanced mode	NORMAL mode	2330 mode	2312 mode
EBL512 G3	Not used	Yes	Not used	Not used

MOUNTING OF PICTOGRAM

Mounting of pictogram to MX 25 and 40 units is done by sliding the pictogram to the exit light case and pushing the pictogram until you feel the pictogram to click in place. Lastly fix the pictogram securely with the mounting screw.

Picture 3, Mounting of pictogram for MX 25 and MX 40 units

RX red cross panel for MX 25 and MX 40 units is installed after installing the pictogram to the exit light case. **Note that** RX red cross panel must be installed to only single sided pictograms and on top of the pictogram figure as in picture 4. Slide the red cross panel on top of exit light pictogram and fix the red cross panel to place with included plastic buttons.



Picture 4, Installing the RX model on top of exit light pictogram

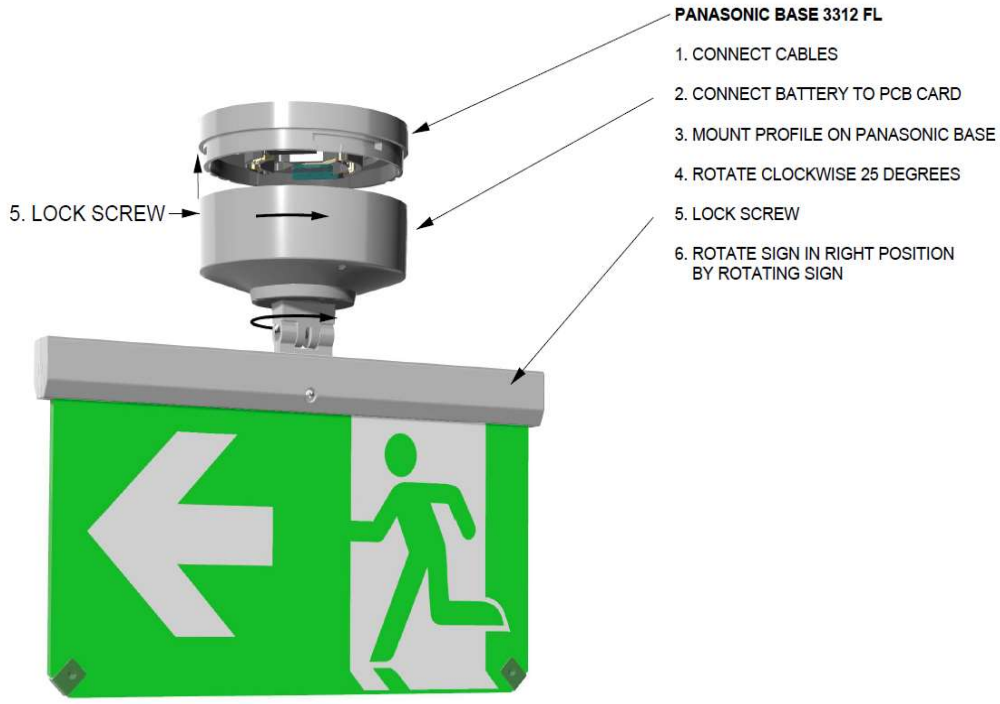
INSTALLATION

ANALOG BASE

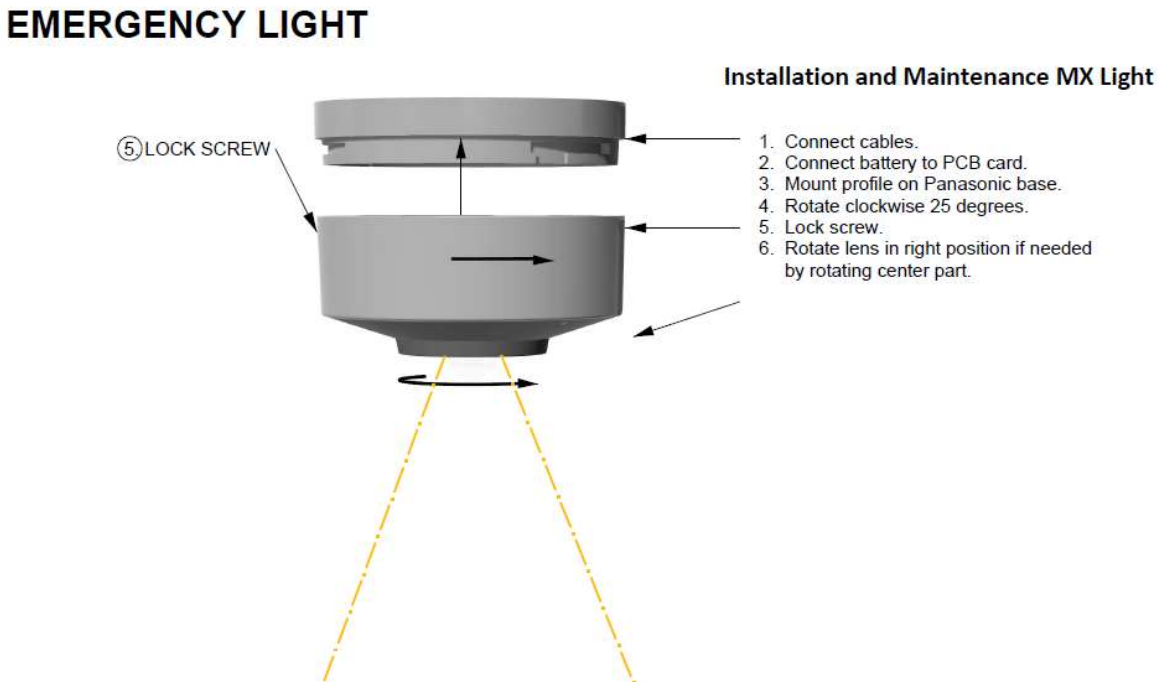
MX units are installed to Panasonic analog bases. Bases for MX units can be mounted on the ceiling and wall.

MX UNIT

MX Light, MX 25 and MX 40 units are installed to Panasonic Analog bases by placing MX unit to the base and twisting the MX unit clockwise 25 degrees. After installing the MX unit to the base, fix the unit with locking screw locating on the side of the MX unit and rotate the sign to right position.



Picture 5, Installation of MX 25 and 40 units to Panasonic base



Picture 6, Installation of MX Light unit to Panasonic base

TECHNICAL DATA

Note that all current consumptions are valid by nominal voltage and at temperature of 25 °C.

Table 5, Technical data

Voltage:	
Allowed	12-32 V DC
Nominal	24 V DC
Current:	
Quiescent	4 mA
Active:	
MX 25	31 mA
MX 40	42 mA
MX Light	24 mA
Power consumption:	
MX 25	0.8 W
MX 40	1.0 W
MX Light	0.6 W
Operating time in emergency mode:	
MX 25	1 h
MX 40	1 h
MX Light	1 h
Address range	1-253
Address setting	With address setting tool
Internal battery	NiMH, 2050 mAh
Material	PC (polycarbonate)
Ambient temperature:	
Operating	0 to +45 °C
Storage	0 to +45 °C
Ambient humidity	Maximum 95 % RH (no condensation)
Ingress protection rating	IP41
Dimensions (LxWxH):	
MX 25	102x261x225 mm
MX 40	102x411x300 mm
MX Light	102x102x55-61 mm
Weight:	
MX 25	390 g
MX 25 with RX	470 g
MX 40	680 g
MX 40 with RX	880 g
MX Light	130 g
Colour	White