Panasonic

Fire alarm systems
Analog
multi detector
4400

- Service signal at a fixed level of contamination
- New advanced algorithms and functions and yet compatible with older EBL systems

General

The multi detector contains one photo-electric (optical) smoke detector and one heat detector within the low profile housing. The latest IC technology will secure the highest reliability possible. It has **unleaded soldering**. The **smoke** detection chamber has a high-efficient optical system with an infrared light LED and a photodiode with two lenses. Light reflection is used to detect smoke, which enters the detection chamber through an insect filter and an optical labyrinth.

The **heat** sensing element is a thermistor. The detector is supplied with two red LEDs that will be blinking when the detector has activated alarm. It also has a green polling LED. The detector is plugged in an analog base (3312x / 4313 / 3379). The COM loop is connected to the base, which also can have terminals for an external LED, e.g. 2218. The detector is intended for indoor use in dry premises and in the systems EBL128 / 512 / 512 G3.

Service signal

In case of contamination a service signal will be given when the detector has reached a service level.

Address / Detector mode

An address setting tool 3314 / 4414 is used to set the detector's COM loop address and the detector mode; Advanced, NORMAL, 2330 or 2312. See Planning Instructions for the system respectively for more information about the modes and functions. By delivery the detector is set to address 000 and the NORMAL mode.

- **Advanced** mode (analog): In this mode the fire judgement is done in the detector. Can be used in EBL512 G3 and EBL128 version ≥ 2.0. Address setting tool **4414** is required.
- **NORMAL** mode (analog): In this mode the fire judgement is done in the c.i.e. (one of six smoke algorithms and one of three heat algorithms). Can be used in the systems EBL128, EBL512 version ≥ 2.0 and EBL512 G3. Also as a spare part for the detectors 3316 and 4300 in NORMAL mode.
- **2330** mode (conventional): In this mode the fire judgement is done in the detector. Can be used in older systems and EBL512 as the best substitute for the detectors 2316 & 2317 + base 2330.
- **2312** mode (analog): Not used for 4400.

Advanced mode

Artificial **I**ntelligence uses combined smoke and heat sensing for the fire judgement, as well as variable sensitivity and time delay based on the smoke and temperature changes just before the alarm level is reached. This will secure the real fire alarms and reduce the not wanted nuisance alarms.

A **learning function** will after a **learning period** adapt an **alarm algorithm** suitable for the smoke and temperature conditions where the detector is located, i.e. an alarm algorithm for:

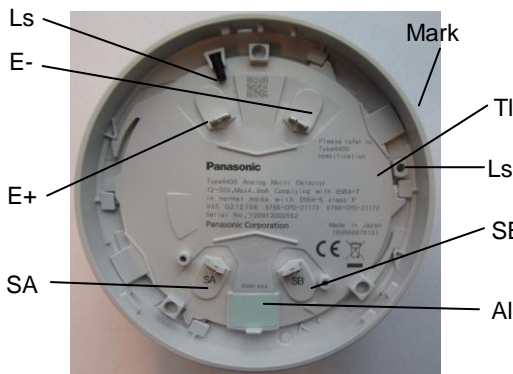**Normal** area (default)
Heater area (no rate-of-rise alarm)
Smoke-steam area (longer delay time)
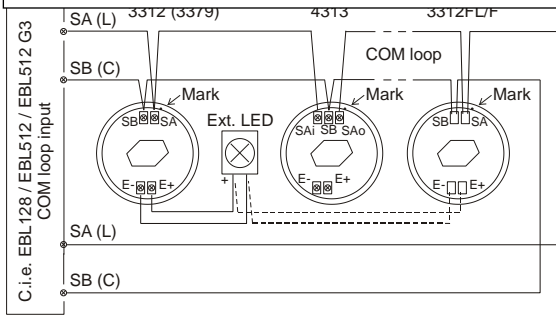**Cooking-welding** area (lower sensitivity & longer delay time)
Clean area (higher sensitivity)

BVQi
ISO 9001

NATIONAL ACCREDITATION OF CERTIFICATION BODIES

Type number	
4400	Analog multi detector

The detector is plugged in the analog base 3312x / 4313.
The COM loop / Ext. LED are connected to the analog base.

In the detector: See also "Engineering Instructions for detectors Type 440x".

SA/SB Contact pins for COM loop / Address setting tool 3314 / 4414.

E+/E- Contact pins for External LED (e.g. 2218).

TI Type number label; Detector type.

AI Address label; For the programmed COM loop address to be written.

Lsh Locking screw hole (prepared for drilling through detector body).

Ls Locking screw.

Prepared for mechanical locking with analog base 3312x / 4313. One hexagon socket screw (Ls) is attached (1.5 mm Hex key to be used). The 2.5-2.7 mm hole (Lsh) has to be drilled.

NOTE! The green polling LED is blinking 20ms / 6s – if this option is programmed.
The green polling LED position is close to the "Mark" on the detector side.

Technical data	
Voltage (V DC)	
rated	28
allowed	12-30
normal (on COM loop)	24
Current consumption at nom. volt. from COM loop (mA)	
quiescent	0.3 (plus 0.025 if green polling LED is used)
active (incl. internal LEDs	1.3 (LEDs are blinking 0.25s / 0.75s)
ext. LED (connected via base)	0.5 (Ext. LED is blinking 0.25s / 0.75s)
Ambient temperature (°C)	
operating	-10 to +50
storage	-25 to +75
Ambient humidity (% RH)	max. 95, non condensing
Ingress Protection rating (estimated)	IP 51
Sensitivity (**S**=obscuration %/m)	Depending on mode.
Advanced mode [1]	**5** / 5 / 5 / 5 / 3.7
NORMAL mode	3.6 / **3.0** / 2.4 (Low / **Normal** / High)
2330 mode	5 or ≥2.5 in combination with temp. rate-of-rise (deltaT) ≥ 1.1°C/min.
Sensitivity (**T**=°C; *deltaT*= °C/min.; 2x**S** ≥ 5 + **deltaT** ≥ 1.1)	Depending on mode.
Advanced mode [1]	57; approx. *6.43 (not Heater area)*; **12** / 12 / 12 / 14 / 10
NORMAL mode	56 / 46 / 60 / 74 (A1; ≤ *4* / A1; > *4* / A2 (S) / B (S))
2330 mode	57; approx. *6.43*; 12
Size ⌀ x h (mm)	102 x 41
Weight (g)	75
Construction / Colour	Polycarbonate Alloy / Grey (N8, Munsell colour code)
Approvals	CE 12 EC Certificate no. 0786-CPD-21172 / -21173; EN54-7:2000 + A1:2002 + A2:2006 (smoke) and EN54-5:2000 + A1:2002 Class P (heat)

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[1] **Normal** area / Heater area / Smoke-steam area / Cocking-welding area / Clean area

All technical features and data are subject to changes without notice, resulting from continuous development and improvement.

Product Leaflet	Date of issue	Revision / Date of revision
MEW01404	2012-10-26	1 / 2012-11-21