



6295-6298

ENCLOSED HEAT DETECTOR

Fire alarm solutions
technical description

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1. INTRODUCTION

This document describes the enclosed heat detectors, type number 6295-6298.

The document contains information about the product and instructions on how to mount and connect it.

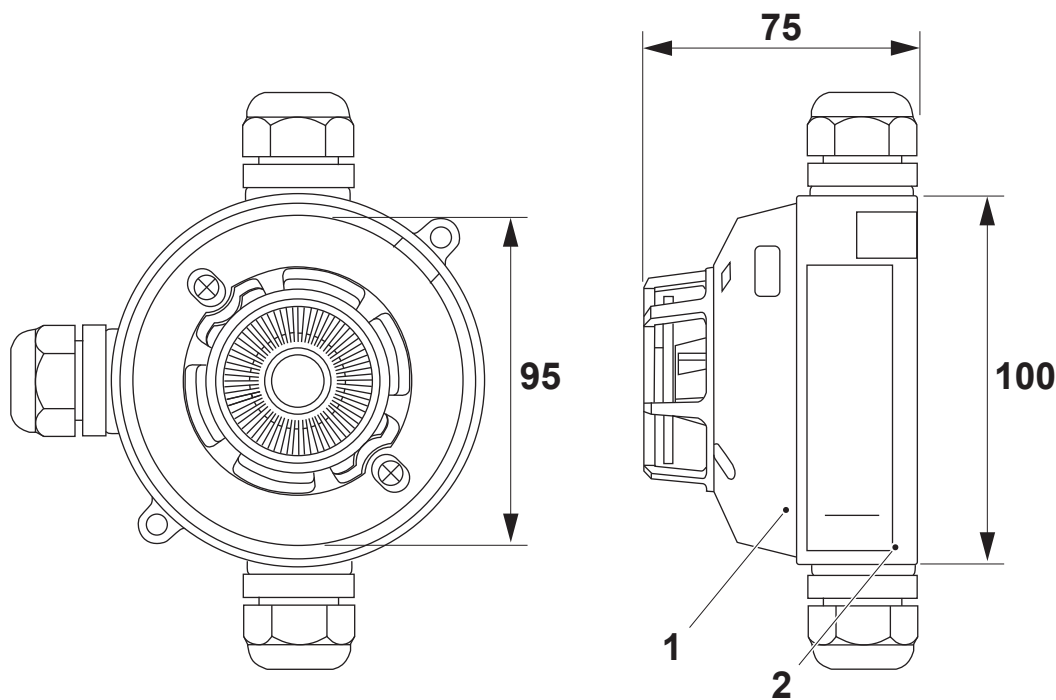
2. ABBREVIATIONS

CIE	Control and indicating equipment	= control unit
LED	Light Emitting Diode	

3. GENERAL DESCRIPTION

The heat detectors are conventional fixed temperature heat detectors. The detectors will give an alarm at a certain fixed temperature (57 °C / 72 °C / 87 °C / 117 °C).

The detector is intended for outdoor use or indoor use in high humidity premises.



(Measure in mm)

- 1. Detector
- 2. Connection box

3.1. DETECTOR

The sensing element is a heat pick-up shield and a bimetal switch.
The detectors will give an alarm within a response temperature range in accordance with EN54-5, see table below.

Type	Static response temperature	Category
6295	57 °C	A2 S
6296	72 °C	B S
6297	87 °C	C S
9298	117 °C	E S

3.1.1. LATCHING

The detector is latching. The detector will not be automatically reset if the temperature, after the alarm, falls below the detector's static response temperature. The detector's LED and a connected external LED will be lit until the detector is reset via the CIE.

3.1.2. EXTERNAL LED

One External Indicator (LED) can be connected to the screw terminals E+ and E-:

- E+ Ext. LED, for example Ext. indicator 2218; J2:2 (+)
- E- Ext. LED, for example Ext. indicator 2218; J2:3 (-)

Do not connect an external indicator (LED) to terminals (E+, E-) when the detector is used as intrinsically safe detector in hazardous (Ex) areas, see 5.2. INTRINSICALLY SAFE INSTALLATION (6295-6296) on page 9.

3.2. CONNECTION BOX

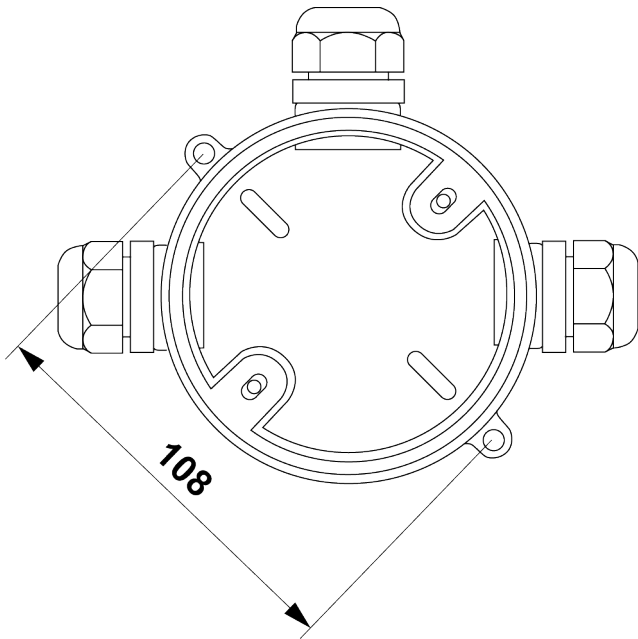
The connection box is prepared for required number of compression glands, one, two, or three.

3.3. ZONE LINE INPUT

The conventional detector is connected to a zone line input (for conventional detectors) in the CIE. The last unit on the zone line has an End-of-line device to be connected. The type of end-of-line device is depending on the CIE and the type of zone line input.

4. MOUNTING

The connection box must be mounted in the ceiling. Screws are not supplied.



(Measure in mm)

- a) Cut out the required number of knockouts and apply the compression glands. Tighten the compression glands firmly.
- b) Mount the connection box in the ceiling.
- c) Insert the cables in the compression glands.

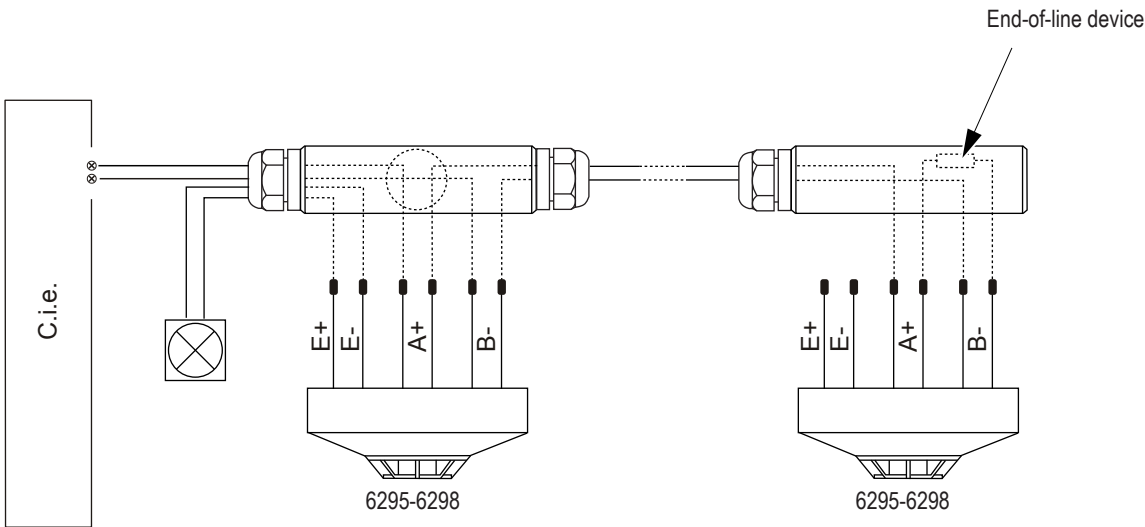
If the outer cable diameter is < 6 mm, insert the enclosed rubber tube before installation of the cable. If the outer cable diameter is ≥ 6 mm, do not use the enclosed rubber tube.

- d) Tighten all compression glands with 4 Nm or more.
- e) Connect the wires from the CIE to the A and B push-on connectors.
- f) Connect the next unit or the end-of-line device to the other pair of A and B push-on connectors.
- g) Mount the detector on the connection box with the two enclosed screws. Tighten the screws firmly with 1.4 Nm or more.

5. INSTALLATION AND WIRING

5.1. COMMON INSTALLATION (6295-6298)

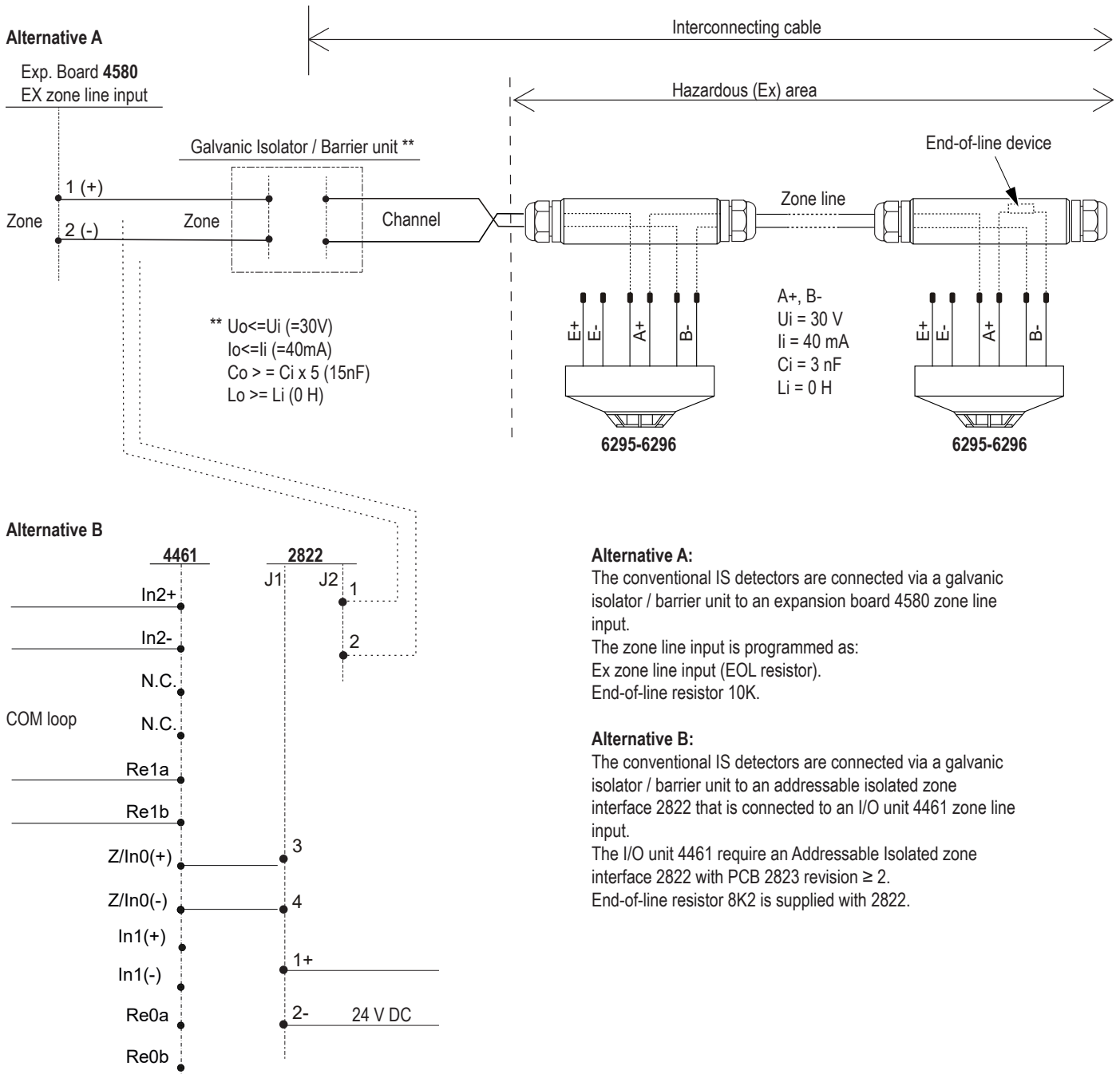
Screen wire termination is not provided.



Wire size (Min)	Ø 0.6 mm (0.3 mm²)
Wire size (Max)	Ø 1.2 mm (1.13 mm²)

5.2. INTRINSICALLY SAFE INSTALLATION (6295-6296)

Screen wire termination is not provided.



If cable screen is used, it should be connected to the closest earth point (protective earth) outside the hazardous (Ex) area and should be capable of withstanding a test voltage (500 V AC) for one minute.

*Do not clean by rubbing or with solvents to avoid electrostatic hazard.
 Do not install in a continuous dust flow to avoid propagating brush discharges.*

Channel: Maximum 5 units on the Zone line (Channel), Cable FKAR-PG 2x0.5 mm², blue (with aluminum polyester foil shield + tinned copper drain wire 1 mm² is normally not used/connected)

Zone: EKKR / ELQRB 2x0.6 mm (0.3 mm²) Connection of alarm points is not allowed on this line.

The interconnecting cable should have the following maximum parameters:

Group	Capacitance	Inductance	Inductance to resistance ratio
	μF	mH or	μH / ohm
IIC	0.13	4.2	55

Maximum total cable resistance is 40 ohm. The zone line cable in the Ex area + the zone line cable in the safe area should be ≤ 40 ohm.

** Please use appropriate galvanic isolator / barrier unit when using is as ATEX ic detector.

It must be compliant with EN60079-11:2012:

$U_o \leq U_i$ (=30V)

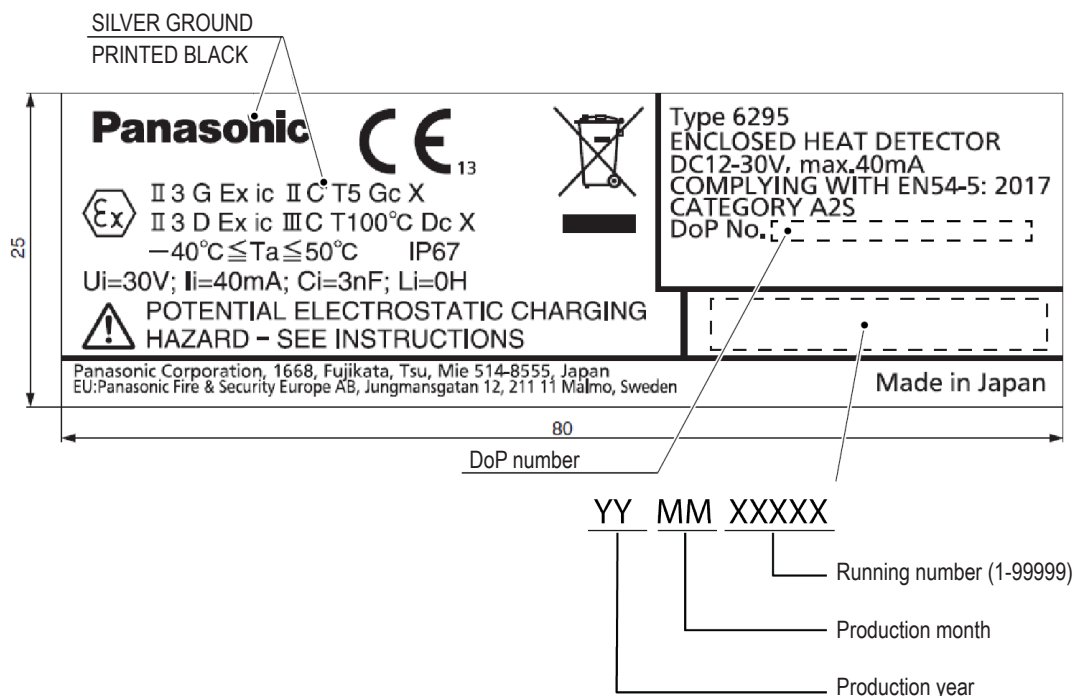
$I_o \leq I_i$ (=40mA)

$C_o \geq C_i \times 5$ (15nF)

$L_o \geq L_i$ (0 H)

5.2.1. RATING LABEL

Serial Number of type 6295/6296 is indicated on the rating label.



5.2.2. CABLE GLAND

Specification for included cable gland: PA6, Marking: "bimed" "PF1/2"

Wire size min-max, circular cable : Ø 4.0 - 8.0 mm

6. TEST MODE

For information about how to set a zone in test mode, see Planning Instructions or Operating Instructions. It is possible to use test equipment for testing, for example “SOLO” or “Testfire”.

7. TECHNICAL DATA 6295

All current consumptions are valid by nominal voltage and by 25 °C.

Voltage: Allowed Normal	12 – 30 V DC 24V DC (Zone line voltage)
Current: Quiescent Active	0 mA 35 mA
Current limitation required when active	Must be minimum 6 and maximum 40 mA
Alarm resistance	400 Ω
Internal capacitance Internal inductance	3 nF 0 nF
Short circuit isolator	No
Internal battery	No
Material	FR ABS and polycarbonate
Ambient temperature: Operating Storage	-40 to +50 °C -45 to +70 °C
Static response temperature	57 °C
Ambient humidity	Maximum 95 % RH (Non condensing)
Ingress protection rating	IP67
ATEX classification	II 3 G Ex ic IIC T5 Gc X, II 3 D Ex ic IIIC T100°C Dc X -40°C ≤ Ta ≤ 50°C / EN IEC 60079-0:2018, EN 60079-11:2012
Size: Ø x H	100 x 75 mm
Weight:	82 g
Colour	Grey (N8, Munsell colour code)

8. TECHNICAL DATA 6296

All current consumptions are valid by nominal voltage and by 25 °C.

Voltage: Allowed Normal	12 – 30 V DC 24V DC (Zone line voltage)
Current: Quiescent Active	0 mA 35 mA
Current limitation required when active	Must be minimum 6 and maximum 40 mA
Alarm resistance	400 Ω
Internal capacitance Internal inductance	3 nF 0 nF
Short circuit isolator	No
Internal battery	No
Material	FR ABS and polycarbonate
Ambient temperature: Operating Storage	-40 to +65 °C -45 to +70 °C
Static response temperature	72 °C
Ambient humidity	Maximum 95 % RH (Non condensing)
Ingress protection rating	IP67
ATEX classification	II 3 G Ex ic IIC T5 Gc X, II 3 D Ex ic IIIC T100°C Dc X -40°C ≤ Ta ≤ 65°C / EN IEC 60079-0 :2018, EN 60079-11 :2012
Size: Ø x H	100 x 75 mm
Weight:	82 g
Colour	Grey (N8, Munsell colour code)

9. TECHNICAL DATA 6297

All current consumptions are valid by nominal voltage and by 25 °C.

Voltage: Allowed Normal	12 – 30 V DC 24V DC (Zone line voltage)
Current: Quiescent Active	0 mA 35 mA
Current limitation required when active	Must be minimum 6 and maximum 40 mA
Alarm resistance	400 Ω
Short circuit isolator	No
Internal battery	No
Material	FR ABS and polycarbonate
Ambient temperature: Operating Storage	-40 to +80 °C -45 to +70 °C
Static response temperature	87 °C
Ambient humidity	Maximum 95 % RH (Non condensing)
Ingress protection rating	IP67
Size: Ø x H	100 x 75 mm
Weight:	82 g
Colour	Grey (N8, Munsell colour code)

10. TECHNICAL DATA 6298

All current consumptions are valid by nominal voltage and by 25 °C.

Voltage: Allowed Normal	12 – 30 V DC 24V DC (Zone line voltage)
Current: Quiescent Active	0 mA 25 mA
Current limitation required when active	Must be minimum 6 and maximum 30 mA
Alarm resistance	680 Ω
Short circuit isolator	No
Internal battery	No
Material	FR ABS and polycarbonate
Ambient temperature: Operating Storage	-40 to +110 °C -45 to +70 °C
Static response temperature	117 °C
Ambient humidity	Maximum 95 % RH (Non condensing)
Ingress protection rating	IP67
Size: Ø x H	100 x 75 mm
Weight:	82 g
Colour	Grey (N8, Munsell colour code)

11. APPROVALS

ENCLOSED HEAT DETECTOR 6295

Applicable directive/ Approval	Applicable standards	Notified body
CPR	EN54-5	VdS No. 0786-CPR-21786
VdS	EN54-5 VdS 2344	VdS No. G223021
EMC	EN61000-6-3 (Emission) EN50130-4 (Immunity)	Self declaration
RoHS	EN IEC 63000	Self declaration
ATEX	EN IEC 60079-0 EN 60079-11	Self declaration

ENCLOSED HEAT DETECTOR 6296

Applicable directive/ Approval	Applicable standards	Notified body
CPR	EN54-5	VdS No. 0786-CPR-21787
VdS	EN54-5 VdS 2344	VdS No. G223022
EMC	EN61000-6-3 (Emission) EN50130-4 (Immunity)	Self declaration
RoHS	EN IEC 63000	Self declaration
ATEX	EN IEC 60079-0 EN 60079-11	Self declaration

ENCLOSED HEAT DETECTOR 6297

Applicable directive/ Approval	Applicable standards	Notified body
CPR	EN54-5	VdS No. 0786-CPR-21788
VdS	EN54-5 VdS 2344	VdS No. G223023
EMC	EN61000-6-3 (Emission) EN50130-4 (Immunity)	Self declaration
RoHS	EN IEC 63000	Self declaration



ENCLOSED HEAT DETECTOR 6298

Applicable directive/ Approval	Applicable standards	Notified body
CPR	EN54-5	VdS No. 0786-CPR-21789
VdS	EN54-5 VdS 2344	VdS No. G223024
EMC	EN61000-6-3 (Emission) EN50130-4 (Immunity)	Self declaration
RoHS	EN IEC 63000	Self declaration

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