

# HDI heat detector range

Ex d, Ex em & Ex ia



## Overview

The Eaton heat detector has been designed for use in hazardous environments. These units are suitable for fire alarm and/or suppression systems in offshore and onshore applications including paint spray booths, flammable material stores, turbine rooms, extract ductwork and other hazardous areas throughout the oil & gas, petrochemical and process industries.

Comprising a Fenwal rate-compensated detector with all-stainless steel external construction, mounted to either a type SM87 marine grade alloy enclosure (Exd version) or JB10 corrosion-free GRP enclosure (Ex ia, Ex em/UL versions). The contact in the detector CLOSSES at alarm temperature.

To select appropriate temperature setting see specification on reverse.

## Features

- Zone 0, Zone 1 and Zone 2 use
- ATEX certified
  - EExd IIB T3/T6
  - Exd IIC T6
  - EExem IIT4/T6
  - Ex ia IIC T4/T6
- IECEx certified
  - Ex ia IIC T4/T6 Ga
- UL listed for USA and Canada:
  - Class I, Div 2, Groups A, B, C D
- TR CU certified
- CQST certified
- CCOE certified
- SIL 2 certified
- IP66 & IP67
- Certified temperature:
  - -20°C to +125°C (Exd)\*
  - -20°C to +55°C (Exem/UL)
  - -55°C to +55°C (Exia)
- Stainless steel probe
- Detector temperature settings: 60°C to 385°C, (140°F to 725°F)
- Marine grade alloy or GRP enclosure
- Optional stainless steel guard

\*Model dependent



## Certifications

<b>ATEX EEx d IIB</b>	Cert. no. Baseefa03ATEX0447 Certified to: EN50014, EN50018, EN50281-1-1 Ex II 2 GD, EEx d IIB T6 (T3 @ 125°C)
<b>ATEX Ex d IIC</b>	Cert. no. Baseefa08ATEX0320 Certified to: EN60079-0, EN60079-1, EN61241-0, EN61241-1 Ex II 2 GD, Ex d IIC T6, Ex tD A21 T85°C (-20°C to + 55°C)
<b>ATEX EEx em</b>	Cert. no. Baseefa03ATEX0428 Certified to: EN50014, EN50019, EN50028 Ex II 2G, EEx em II T6 (-20°C to + 55°C)
<b>ATEX Ex ia</b>	Cert. no. Baseefa03ATEX0427 Certified to: EN60079-0, EN60079-11 Ex II 1G, Ex ia IIC T6 Ga (-55°C to + 55°C). (T4 with diodes/resistors)
<b>IECEX Ex ia</b>	Cert. no. IECEX BAS 13.0010 Certified to: IEC60079-0, IEC60079-11 Ex ia IIC T6 Ga (-55°C to + 55°C). (T4 with diodes/resistors)
<b>UL</b>	Listing no. E252920 – versions up to 450°F Listing no. E254077 – versions from 600°F to 725°F UL for USA and Canada, listed to Class 1, Div 2. Groups A, B, C, D
<b>TR CU</b>	1Ex d IIB T3/T6 1Ex d IIC T4/T6 2Ex de IIC T4/T6 0Ex ia IIC T4/T6 Russian Fire Approved
<b>CQST</b>	Certified Ex ia
<b>ABS</b>	American Bureau of Shipping type approval for HD1BBD & HD1BI only
<b>SIL</b>	SIL2 certified. Cert no. Sira FSP 12007/02

## Specifications

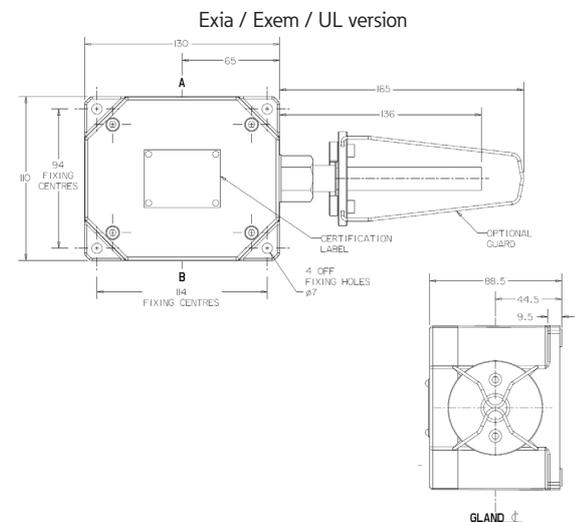
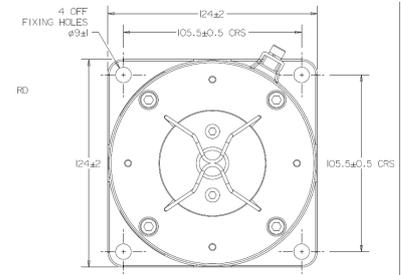
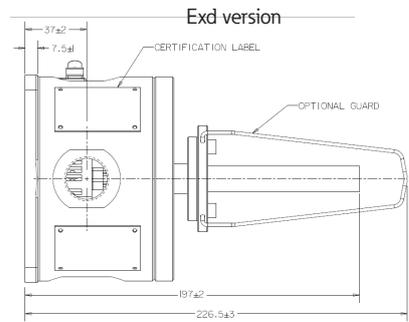
<b>Material</b>	Detector: Stainless steel Enclosures: Ex d – LM25 marine grade alloy Ex ia/Ex em/UL – GRP (anti-static) Cover screws: Stainless steel Optional guard: 316 stainless steel
<b>Finish</b>	Detector: Sand blasted. Enclosures: Ex d painted to customers specification Ex ia/Ex em/UL - Natural black or painted to customer's specification
<b>Certified temp</b>	Ex em, UL, Ex d IIC, CQST Ex d IIB: -20°C to 55°C (T6) -20°C to 90°C (T4) Ex d IIB (Not CQST): -20°C to 55°C (T6) -20°C to 125°C (T3) Ex ia: -55°C to 55°C (T6)
<b>Weight</b>	Ex d, 2kg Ex ia/Ex em/UL, 1.1kg
<b>Ingress protection</b>	IP66 & IP67
<b>Operation</b>	The detector contact is normally open and CLOSES at alarm temperature
<b>Contact rating</b>	Ex d IIB, Ex em, UL: 125Vac - 5A, 125Vdc - 0.5A, 48Vdc - 1A, 24Vdc - 2A Ex d IIC: 24V - 0.1A Ex ia: 30V - 300mA
<b>Entries</b>	2 x M20 (Ex d/Ex em/Ex ia versions) 2 x 1/2" NPT via adaptors (UL version)
<b>Terminals</b>	6 x 4mm <sup>2</sup> (BK6)
<b>Resistor</b>	Series & EOL resistor (maximum total 2) minimum value (each) 470Ω
<b>Diodes</b>	Up to 2 off available in Ex d IIB and Ex ia versions - contact sales office

## Ordering requirements

The following code is designed to help in selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box

Model	Certification	Type	Temp settings	Options	Finish																																																																																						
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## General arrangement drawing (all dimensions in mm)



**Listed temperature settings:** To select appropriate temperature settings, choose detector at 100°F (38°C) above maximum ambient temperature

Temperature setting		Tolerance		Colour code of text on probe
(°F)	(°C)	(°F)	(°C)	
140	60	+7/-8	±4	Black
160	71	+7/-8	±4	Black
190	88	+7/-8	±4	White
210	99	+7/-8	±4	White
225	107	+7/-8	±4	White
275	135	±10	±6	Blue
325	163	±10	±6	Red
360	182	±10	±6	Red
450	323	±15	±8	Green
500	260	±15	±8	Orange
600	316	±20	±11	Orange
725	385	±25	±14	Orange