

STExH1 Heat Detector

The E2S STExH1 globally certified heat detector provides a comprehensive solution suitable for the harshest of environments. Featuring the D-A-F rate compensated heat detector elements with stainless steel casing and hermetically sealed contacts. The STExH1 is available in explosion proof and increased safety versions certified for Zone 1 & 21, Class I Zone 1 & 21, Class I/II Div 2 with a high temperature version rated to 125°C. Global approvals include IECEx, ATEX, UL, ULC and cUL.

The robust IP66/67, Type 4/4X corrosion proof junction box enclosure is manufactured from marine grade, 316L stainless steel. The E2S STExH1 heat detector offers a robust and reliable source for alarm initiation in the most hazardous and demanding of applications.

Features

- Robust corrosion proof 316L marine grade stainless steel enclosure
- Ingress protection IP66/67 Type: 4/4X
- Threaded flame path simplifies installation and inspection
- Multiple cable entries
- Stopping plugs supplied
- UL521 and CAN/ULC-S530 approved
- EN54-5 compliant
- D-A-F rate compensated heat detector elements
- Versatile: various temperature settings available
- Durable: long lasting stainless steel element shell
- Reliable: hermetically sealed internal contact area
- Economical: wide installation spacing reduces installation costs
- Factory set temperature
- Available with a wide range of addressable modules
- Globally approved to IECEx, ATEX, UL, cUL and ULC standards
- Version A: Ex db Zone 1/21, Class I/II Div 2
- Version H: Ex db High temp Zone 1/21, Class I/II Div 2
- Version E: Ex db eb Zone 1/21, Class I/II Div 2



Approvals

- UL/cUL/ULC - File ref: E245313
- IECEx Certificate: IECEx ULD 16.0017X
- ATEX Certificate: DEMKO 16 ATEX 1466X
- UKCA certificate: UL21UKEX2019X
- PESO CCOE certified: P622994
- SIL2 compliant to IEC61508 (2010)



Specification

| | |
|---------------------|---|
| Enclosure: | Marine grade 316L stainless steel |
| Enclosure colour: | Red |
| Enclosure finish: | Chromate & powder coated finish – anti-corrosion |
| Ingress protection: | IP66/67 EN50029, Type 4/4X UL50E |
| Cable entries: | M20x1.5 – Stopping plug(s) included |
| Cable spec: | Solid core: 0.5-2.5mm ² AWG20-12 Stranded core: 0.5-2.5mm ² AWG24-14 |
| Terminals: | DIN Rail AKZ 2.5 × 6 |
| Max Input | 24Vdc: 2A, 48Vdc: 1A, 125Vdc: 0.5A, 125Vac @ 50/60Hz: 5.0A – version A & H |
| Max Power | 5W – version A, 1.25W – version H |
| Max Input | 32Vdc: 1A, 24Vdc: 2A, 32Vac 50/60Hz: 5A – version E |
| Stopping plugs: | Stainless Steel |
| Grounding stud: | M5 |
| Installation temp: | -50 to +70/125°C (-58° to +158/257°F) |
| Storage temp: | -50 to +70/125°C (-58° to +158/257°F) |
| Weight: | 5.0kg/11.02lbs |

Temperature and spacing data

| °F Setting | °F Tolerance | °C Setting | °C Tolerance | Spacing UL (ft) | Spacing ULC (ft) |
|------------|--------------|------------|--------------|-----------------|------------------|
| 140 | +7/-8 | 60 | +4/-5 | 50 | 50 |
| 160 | +7/-8 | 71 | +4/-5 | 25 | 25 |
| 190 | +7/-8 | 88 | +4/-5 | 50 | 50 |
| 210 | +7/-8 | 99 | +4/-5 | 25 | 50 |
| 225 | +7/-8 | 107 | +4/-5 | 25 | 50 |
| 275 | ±10 | 135 | ±6 | 25 | 50 |
| 325 | ±10 | 163 | ±6 | 50 | 50 |
| 360 | ±10 | 182 | ±8 | 25 | 50 |
| 450 | ±15 | 232 | ±10 | 25 | 50 |
| 500 | ±15 | 260 | ±10 | 50 | 50 |
| 600 | ±20 | 316 | ±12 | N/A | 50 |
| 725 | ±20 | 385 | ±12 | N/A | 50 |

Derating Factor for Ceiling Height – based on NFPA guidelines

| Ceiling Height Above | | Up to and Including | | Derating Factor |
|----------------------|----|---------------------|----|-----------------|
| m | ft | m | ft | |
| 0 | 0 | 3.05 | 10 | 1.00 |
| 3.05 | 10 | 3.66 | 12 | 0.91 |
| 3.66 | 12 | 4.27 | 14 | 0.84 |
| 4.27 | 14 | 4.88 | 16 | 0.77 |
| 4.88 | 16 | 5.49 | 18 | 0.71 |
| 5.49 | 18 | 6.10 | 20 | 0.64 |
| 6.10 | 20 | 6.71 | 22 | 0.58 |
| 6.71 | 22 | 7.32 | 24 | 0.52 |
| 7.32 | 24 | 7.93 | 26 | 0.46 |
| 7.93 | 26 | 8.54 | 28 | 0.40 |
| 8.54 | 28 | 9.14 | 30 | 0.34 |

Part Codes

| Part Code: | Identifier: | Description: |
|---|--------------|---|
| Product type: | STExH1 | Heat Detector |
| Element guard:[g] | N | No guard |
| | G | With guard |
| Temperature code: | 01 | 140°F / 60°C |
| [t] | 02 | 160°F / 71°C |
| | 03 | 190°F / 88°C |
| | 04 | 210°F / 99°C |
| | 05 | 225°F / 107°C |
| | 06 | 275°F / 135°C |
| | 07 | 325°F / 163°C |
| | 08 | 360°F / 182°C |
| | 09 | 450°F / 232°C |
| | 10 | 500°F / 260°C |
| | 11 | 600°F / 316°C |
| | 12 | 725°F / 385°C |
| Cable entries:[e] | A | 3 x M20 |
| | B | 2 × 1/2" NPT – adaptors |
| | C | 2 × 3/4" NPT – adaptors |
| | D | 2 x M25 – adaptors |
| | E | 1 × 1/2" NPT – adaptor |
| | F | 1 × 3/4" NPT – adaptor |
| | G | 1 x M25 – adaptor |
| | H | 3 × 1/2" NPT – adaptors |
| | I | 3 × 3/4" NPT – adaptors |
| | J | 3 x M25 – adaptors |
| | Note: | Option A reduced to 2 entries with LED Options H, I & J not available with LED |
| Stopping plug /adaptor matl: [m] | S | Stainless Steel |
| Equipment tag: [s] | 1 | No Duty label, no Equip. tag |
| | 2 | Duty label |
| | 3 | Duty label + Equip. tag |
| | 6 | Equip. tag only |
| | 7 | Special label requirement |
| Product version: [v] | A | Zone 1/21, Class I/II Div 2 |
| | H | High temp Zone 1/21, Class I/II Div 2 |
| | E | Zone 1/21, Class I/II Div 2 |
| | Note: | Versions A, H & E: IECEx, ATEX, UL, cUL, ULC Honeywell TC809B1008 module IECEx, ATEX Ziton A45E-2 module IECEx, ATEX Johnson Controls MIM800 module IECEx, ATEX Hochiki CHQCP2 monitor IECEx, ATEX Apollo XP95 mini module IECEx, ATEX Consilium IC10 module IECEx, ATEX Siemens XTRI-M module IECEx, ATEX Securiton SDI 82X-I module IECEx, ATEX Simplex 4090-9051 Supervised IAM IECEx, ATEX |
| Product option: [o] | 1 | Standard product |
| | W | Alternate EOL & series wiring |
| | X | Custom configuration – contact E2S |
| Enclosure colour: [x] | R | Red |
| | S | Special – contact E2S for alternative colours |
| LED indicator: [u]: | N | No LED |
| | L | LED with 1.5K ballast resistor |
| | C | LED without ballast resistor <20mA |
| | Note: | LED only available with Product version A |
| For product version A & H only, suffix the part code with required EOL and series devices as follows for factory installation. See manual for details: | | |
| E.O.L. and/or Series Module: | ExxxR SxxxR | Resistor in Ohms e.g. E470R or S1K5R |
| | ED1 SD1 | Diode IN5401 = ED1 or SD1 |
| [e] / [s] | ExxxZ SxxxZ | Zener diode e.g. E5V1Z or S5V1Z = 5.1V |

Coding

STExH 1-A: Product version: A

IECEX / ATEX

Ex db IIC T5 Gb Ta -50°C to +70°C (T6:+65°C)

Ex tb IIIC T85°C Db Ta -50°C to +70°C

NEC Class Zone

Class I Zone 1 AEx db IIC T5 Gb Ta -50°C to +70°C (T6:+65°C)

Zone 21 AEx tb IIIC T75°C Db Ta -50°C to +70°C

CEC Class Zone

Ex db IIC T5 Gb Ta -50°C to +70°C (T6:+65°C)

Ex tb IIIC T75°C Db Ta -50°C to +70°C

NEC / CEC Class Division

Class I Div 2 ABCD T5 Ta -50°C to +70°C (T6:+65°C)

Class II Div 2 FG T6 Ta -50°C to +70°C

STExH 1-H: Product version: H

IECEX / ATEX

Ex db IIC T4 Gb Ta -50°C to +125°C (T5:+90°C, T6:+75°C)

Ex tb IIIC T130°C Db Ta -50°C to +125°C (T75°C:+70°C)

NEC Class Zone

Class I Zone 1 AEx db IIC T4 Gb Ta -50°C to +125°C (T5:+90°C, T6:+75°C)

Zone 21 AEx tb IIIC T130°C Db Ta -50°C to +125°C (T75°C:+70°C)

CEC Class Zone

Ex db IIC T4 Gb Ta -50°C to +125°C (T5:+90°C, T6:+75°C)

Ex tb IIIC T130°C Db Ta -50°C to +125°C (T75°C:+70°C)

NEC / CEC Class Division

Class I Div 2 ABCD T4 Ta -50°C to +125°C

Class I Div 2 ABCD T4A Ta -50°C to +110°C (T5:+95°C, T6:+75°C)

Class II Div 2 FG T4 Ta -50°C to +125°C (T6:+70°C)

STExH 1-E: Product version: E

IECEX / ATEX

Ex db eb IIC T6 Gb Ta -50°C to +70°C

Ex tb IIIC T75°C Db Ta -50°C to +70°C

NEC Class Zone

Class I Zone 1 AEx db eb IIC T6 Gb Ta -50°C to +70°C

Zone 21 AEx tb IIIC T75°C Db Ta -50°C to +70°C

CEC Class Zone

Ex db eb IIC T6 Gb Ta -50°C to +70°C

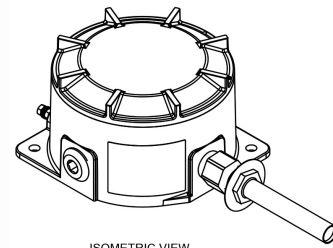
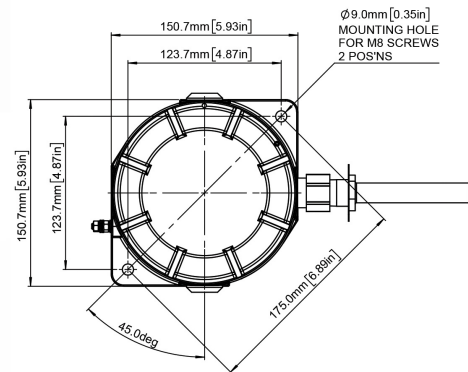
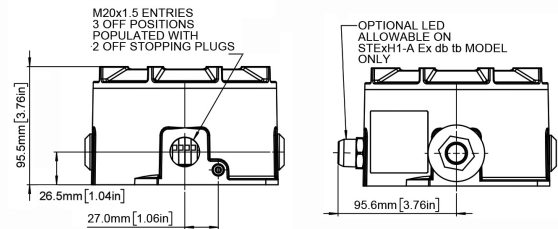
Ex tb IIIC T75°C Db Ta -50°C to +70°C

NEC / CEC Class Division

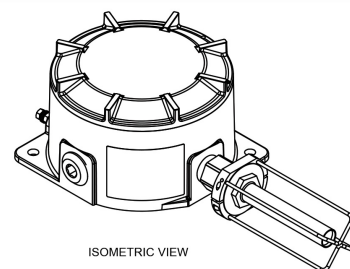
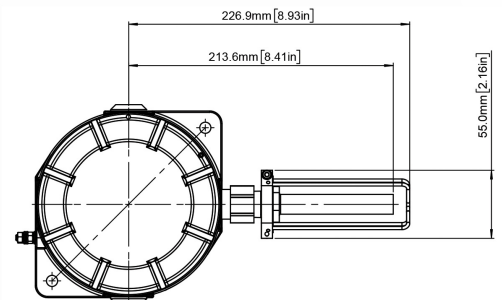
Class I Div 2 ABCD T6 Ta -50°C to +70°C

Class II Div 2 FG T6 Ta -50°C to +70°C

See installation manuals for full coding



ISOMETRIC VIEW



ISOMETRIC VIEW

Note

- E2S H1 detector temperature is factory set.
- Per UL521 requirements - low temperature exposure test is - 22°F (-30°C)
- E2S H1 detectors are designed for long life expectancy, however due to various field conditions it is required that the detectors be tested annually per NFPA guidelines or local fire codes.
- Replace the detector after any fire or heat related event, any mechanical damage, or after 10 years of continuous service.
- To avoid nuisance activations, select a temperature setting a minimum of 100°F above the maximum ambient expected temperature.