

LICO®

www.prevent-a-fire.eu

LICO HDL EN54-5, certified Heat- & Fire-Detectors



Detect Heat and prevent Overheat, Fire & Explosion



Heat detector



Ready to install units



Custom made Alarmpanels



LICO Electronics GmbH
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A-2320 Kledering, Austria
Tel: +43 1 706 43 000
Email: office@lico.at | sales@lico.at

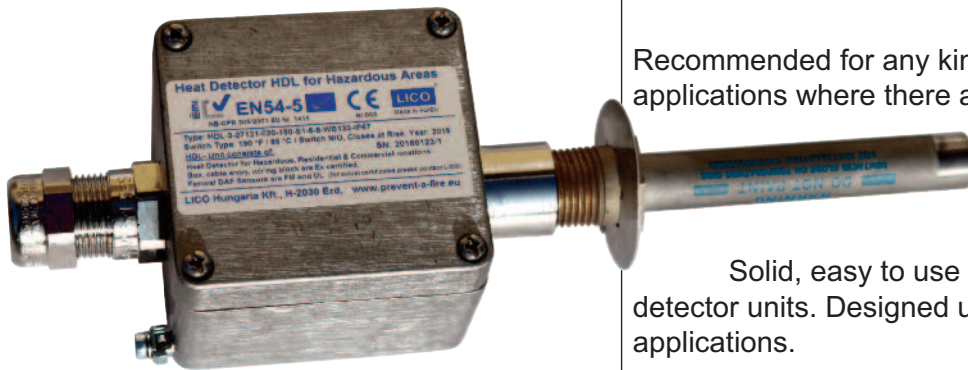


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H-2030 Erd, Hungary
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Mobil: +36 30 259 4157
Email: sales@lico.hu | sales@lico.at



HDL-3 & HDL-3 XL Heat- & Fire-Detector Variations:

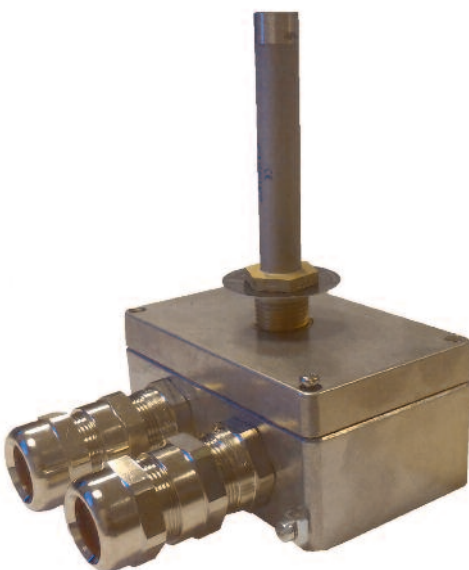
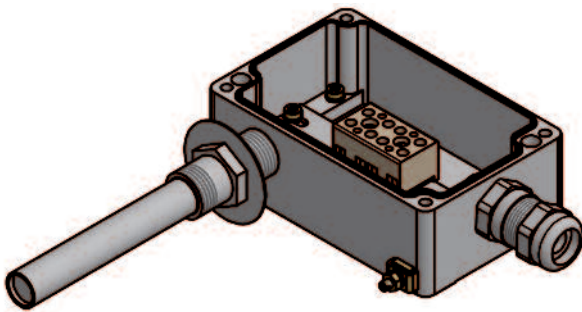
Commercial & Standard Sauna:



Application:

- Saunas, Power plants, Engine rooms,
- Heating rooms, Air-filter / Duct Systems,
- Chemical plants, Production lines
- Transformer stations, Factories, Kitchens,
- Ceilings, Switch board cabinets etc.

Individual HDL-3 XL constructions:



HDL-3 XL with 2 cable glands

HDL-3 / HDL-3-XL EN54-5:

Recommended for any kind of industrial and commercial applications where there are EN54-5 and/or ATEX/Ex-requirements.

Solid, easy to use & very price economic heat detector units. Designed until 150 °C permanent temp. applications.

Sensors are mounted with maximum torque of 27 Nm and sealed with special, high temperature sealant.

Cable glands are mounted & fixed with counter nut and sealed with special, high temperature sealant.

Double thread allows unique through wall installation possibilities using the Detect-A-Fire-Sensor with Coupling Head 28020-003 or 28021-005. The Junction Box may stay at the cooler part of the installation.

*Housing ATEX/IECEx-certified:

- Ex II 2 GD, Ex e/ib IIC Gb, Ex tb IIIC Db IP6X*
- 40°C /+80°C with Neoprene seal,
 - 70°C/+130°C with Silicone-seal,
 - IP67, Internal & external ground-connection
- saltspray-safe, vibration- & shock proven

Wiring Terminal: up to 130°C ATEX/IECEx certification

Standard ATEX/IECEx certified Cable Gland Variations:

- 20 - + 80°C with Neoprene seal, IP66/68
- 40 - +100°C with EPDM-seal, IP66/68
- 70 - +220°C with Silicone-seal, IP66/68

Options/ Accessories:

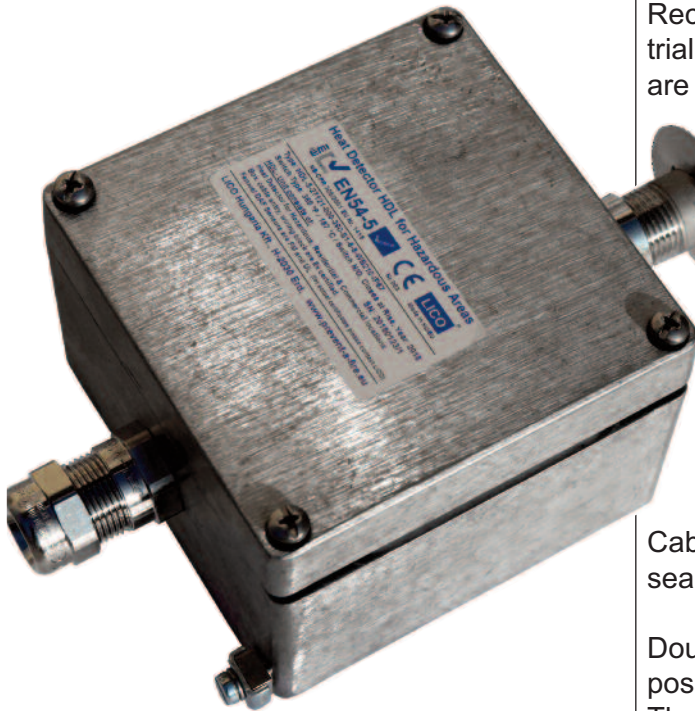
- oil-resistant mounting of Heat Detector and Cable gland
- 2. Cable gland
- Series und EOL – End of Line Resistors
- Very High Temperature Silicone Sealings

HDL-3 Standard Size junction box dimensions:

Unit	Outside L. (mm)	Outside W. (mm)	Inside L. (mm)	Inside W. (mm)	Height (mm)
HDL3	80	75	68	63	57
HDL3-XL	80	125	68	113	57

For bespoken, custom made units please contact LICO

HDL-5-EN54-5 Very High Temperature Heat- & Fire-Detector



EN54-5

HDL-5-EN54-5:

Recommended for any kind of high temperature industrial and commercial applications where there are EN54-5 and or ATEX/ Ex requirements.

Simply easy, very price economic and reliable Heat & Fire Detector unit. Designed until 220 °C ATEX-certified permanent temperature applications. The real max. operational temperature can be higher.

Sensors are mounted with maximum calibrated torque tool of 27 NM and sealed with special, high temperature sealant.

Cable glands are mounted & fixed with counter nut and sealed with special, high temperature sealant.

Double thread allows unique through wall installation possibilities use with Sensor 28020-003 or 28021-005. The Junction Box may stay at the cooler part of the installation Detect-A-Fire-Sensor with Coupling Head.

*Housing ATEX/IECEX-certified:

Ex II 2 GD, Ex e/ib IIC Gb, Ex tb IIIC Db IP6X*
- 70°C/+220°C with Silicone-seal, - IP67

- Ceramic Wiring Terminals: ATEX/IECEX-certified:

ATEX certified until 210°C, max op.temp: >300°C

Standard ATEX/IECEX Cable gland :

ATEX certified -70 - +220°C with Silicone-seal, IP66/68

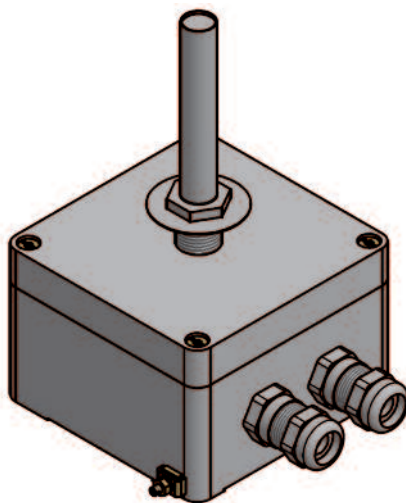
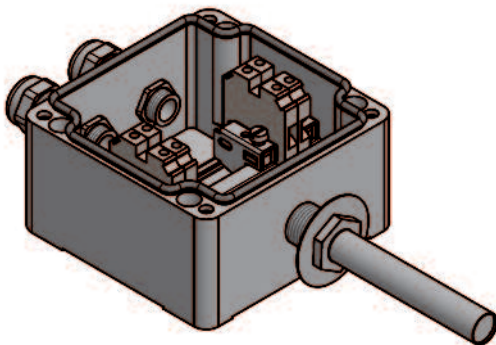
Options/ Accessories:

- oil-resistant mounting of Heat Detector & Cable Gland
- 2. Cable gland
- Cement based ultra high temperature Series and EOL – End of Line Resistors
- Ultra high temperature Silicone Sealings

HDL-3 & HDL 5 Components are Certified according to:



(for further info and actual certificate please contact LICO)



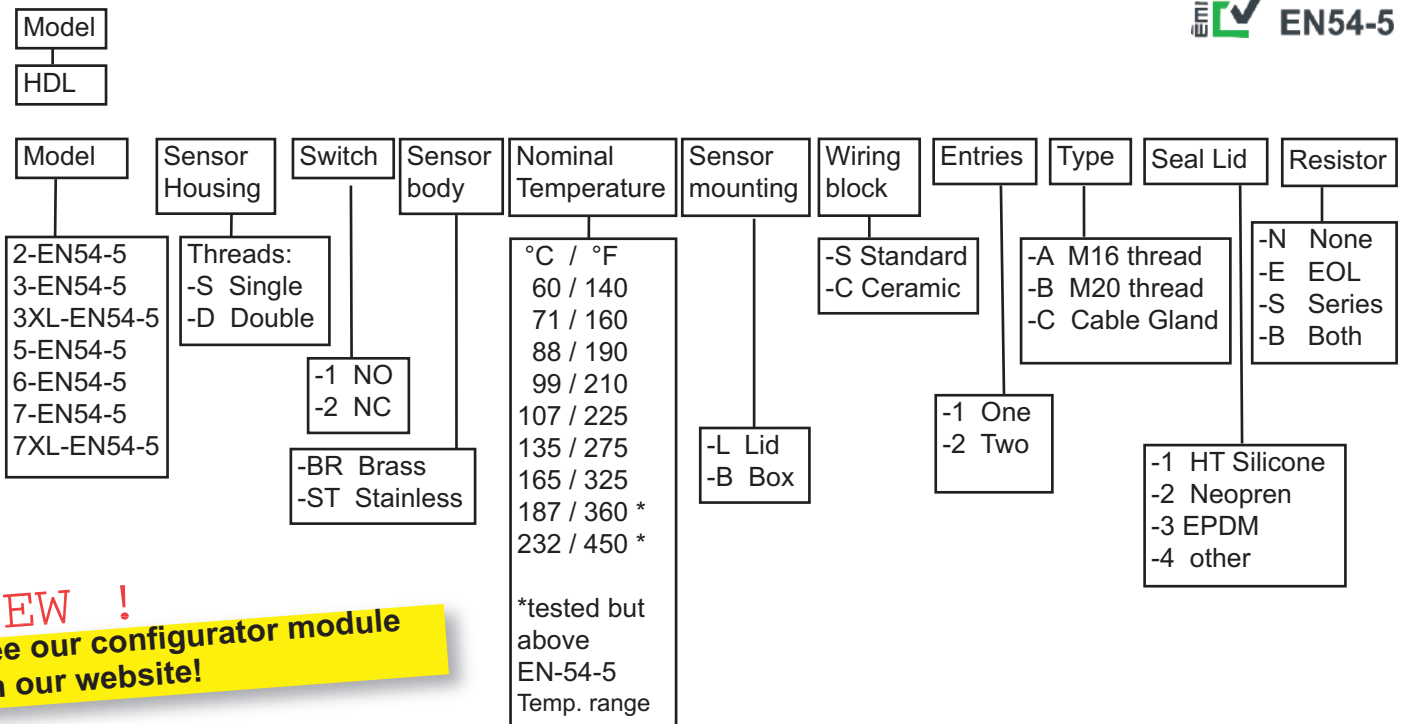
Custom specific HDL-5 constructions

HDL-5 Standard Size junction box dimensions:

HDL-5	Outside L. (mm)	Outside W. (mm)	Inside L. (mm)	Inside W. (mm)	Height (mm)
Standard	120	122	104	88,5	80

For bespoken, custom made boxes please contact LICO

HDL3-EN54-5 & HDL5-EN54-5 part numbers



NEW !
 See our configurator module on our website!

Sample Purchase order number:
 HDL3-EN54-5-S -1 -BR 135 -B -S -1 -C -1 -N

Examples of order numbers:
 for Sauna & Standard Commercial HDL3-EN54-5-S-1-BR135-B-S-1-C-1-N
 for High Temperature: HDL5-EN54-5-S-1-ST165-B-C-2-C-1-B

- Restrictions:**
- 2 or + Entries only in size HDL3XL and HDL5
 - Resistors: only in size HDL3XL and HDL5
 - Double thread Sensor mount: only mount in box, never into lid
 - Nominal max. Operating Temperature:
 Standard wiring block 135°C+, Ceramic wiring block: 220°C+
 - Ceramic wiring block: available only @ HDL5
 - General mounting: if not otherwise specified the sensor would be mounted 180° opposite to the cable-gland

On request:
 Weld-in- and Screw-in-pods (Stainless or PTFE or ...)
 ExD Housings
 Stainless-steel housings
 Stainless-steel cable glands

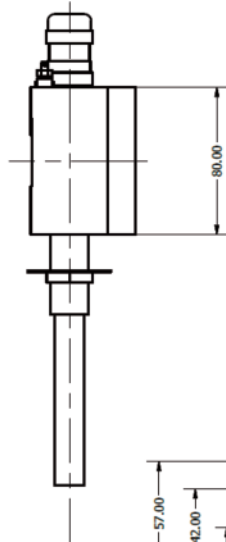
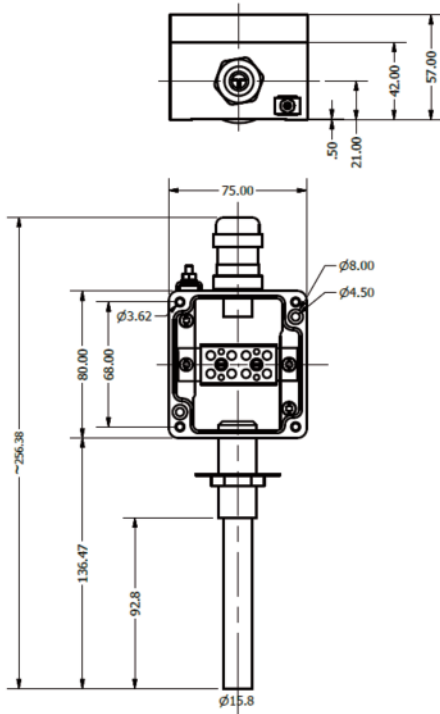
Screw-in-pod:



Dimensions:



HDL3

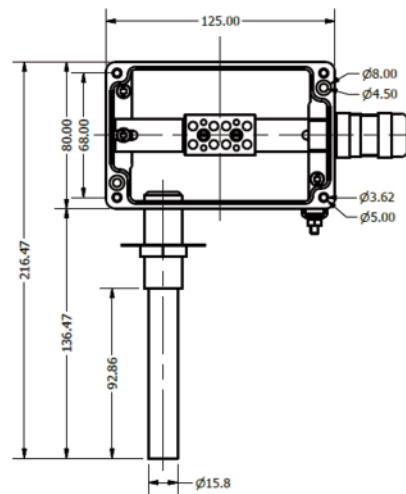
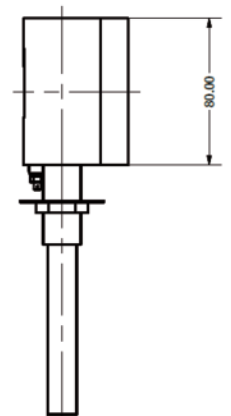
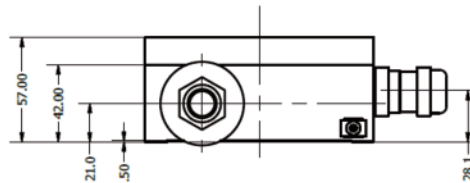


Weight:

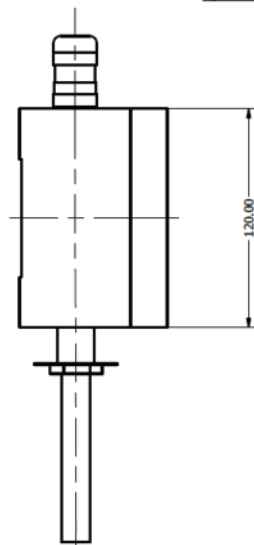
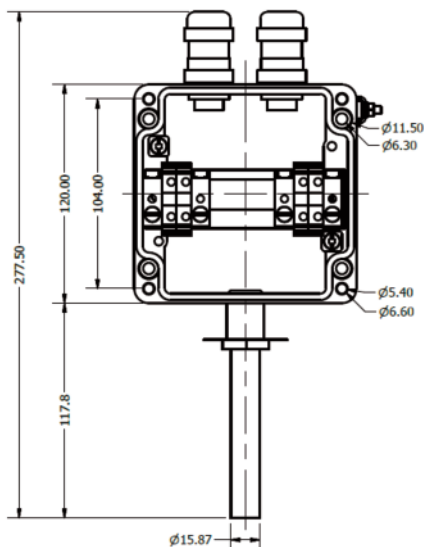
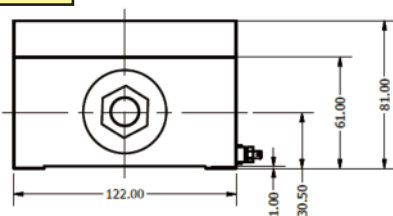
HDL3: 620g net
 HDL3XL: 765g net
 HDL5: 1310 g net

Custom tariff no.:
 8531 1030

HDL3XL



HDL5



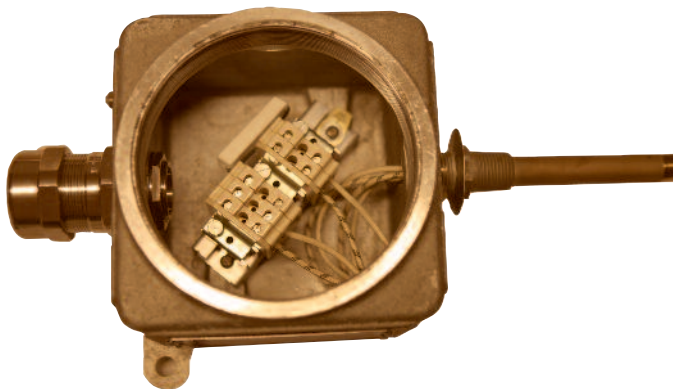
Disclaimer:

All the herein given specifications, dimensions, weights, temperatures and tolerances and other values are nominal (typical) and LICO reserves the right to vary all data without prior notice. No liability is accepted for any consequence of use.

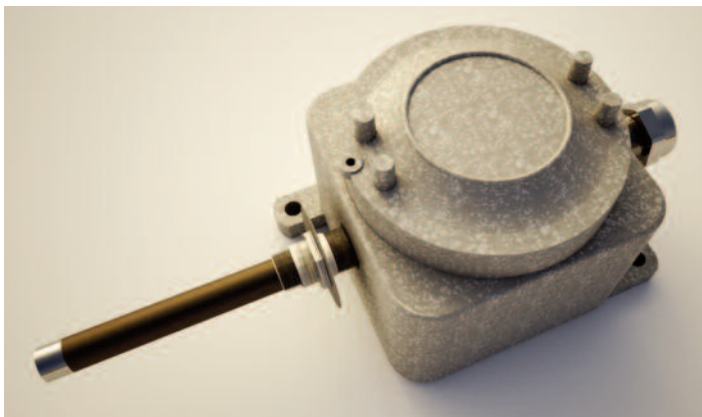
HDL-6 variations and applications:



 EN54-5



- High temperature, unpainted HDL-6 unit.
- High temperature Ceramic wiring blocks,
- Ultra high temp, Cement based, Ceramic EOL - and Serie Line Resistors



Painted HDL-6 boxes are:

Chromate primed and polyester powder coated for added protection against corrosion **until 180 °C**

HDL-6:

Recommended for any kind of high temperature industrial and commercial applications where there harsh enviromental & Ex requirements. Designed until 210°C / 220°C applications.

Junction Box may stay at the cooler part of the installation Detect-A-Fire-Sensor with Coupling Head – double thread allows unique installation possibilities, use with Sensor 28020-003 or 28021-005.

Sensors and Cable glands are mounted & fixed with ultra high temperature Loctite glue.

Housing Ex-certified:

- IP66/67,
- Wiring Terminal: suitable until 210 °C use acc. Ex requirements

Standard Ex Cable gland variations:

–70 - +220°C with Silicone-seal, IP66/68

Options/ Accessories:

- 2. Cable gland (Option KD)
- Cement based ultra high temperature Series and EOL – End of Line Resistors
- Ultra high temperature Silicone Sealings

HDL-6 Enclosures Certified according to:



(for further info and actual certificate please contact LICO)

Dimensions & Material:

Aluminum housing: 165 x 125 x 120 mm,
Material (Body & cover): Aluminum alloy EN AC-42000 (LM25) to BS EN 1706:1998 with less than 0.2% copper content

Locking Screw: Stainless steel (18/8)

Earthing:

All enclosures are supplied with a 6mm stainless steel (18/8) internal and external earth stud as standard. Larger internal earth terminals can be fitted on request.

Protection:

When fitted with a gasket - IP66

Without gasket - IP54

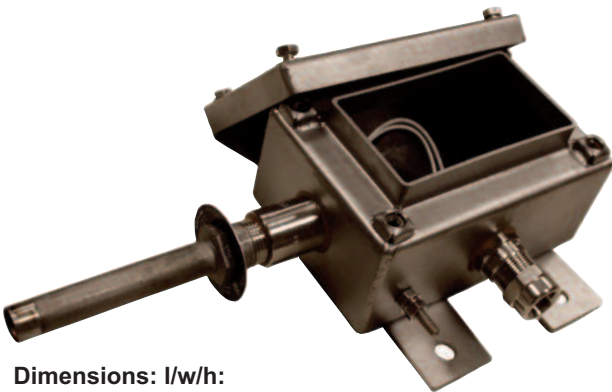
Application of a non hardening grease to flamepaths and entries is recommended.

Applications:

- Ex 'd' flameproof Applications
- Marine- and Offshore platforms
- Gas-turbine- and Turbine housings, etc.

HDL-7 Heat Detector variations and applications:

HDL-7 Housing: Standard



Dimensions: l/w/h:
152 mm, 102 mm, 126 mm
High Temperature-Silicone-sealing,
Appropriate stainless steel box,
Weight: 1500 g
IP66 or IP67,
Material: 316(1.4404) or Mild steel



HDL-7-"FAT BOY" XL Size Housing



Radiation Resistant Stainless Steel HDL-7 Heat Detectors

Stainless Steel "Food Safe" Heat Detector Assembly:

HDL-7: suitable until 210/220 °C max

*Ready to install Heat Detector Unit with Bimetallic, **Rate of Rise**, Temperature Sensor mounted in ATEX & IECEx cert. **Stainless steel Junction box**, with ATEX & IECEx cert. Stainless steel cable gland and ATEX & IECEx cert., wiring block assembly. Fully assembled units according to IEC standards.

In other words: Fenwal DAF Sensors mounted in Ex certified Industrial **Stainless steel Box** with Ex certified **Stainless steel** cable glands and Ex certified, high temperature wiring terminals.

- Fenwal-Switch free of Choice
- Stainless steel: 316 (1.4404) or Mild steel
- Sealing: High temp. Silicone, Neoprene on request
- Ex certified box, until 180°C,
- Internal and external ground terminal
- 1 or 2 pcs of stainless steel cable glands
- Removable lid
- Cabling: up to 190°C:Teflon, over 190°C:TGGT
- IP 67

HDL-7 Enclosures Certified according to:



(for further info and actual certificate please contact LICO)

Food Safe and Radiation Safe HDL-7 Heat Detectors:

HDL-7 units can be made only with special sealings and radiation proof glue from LICO

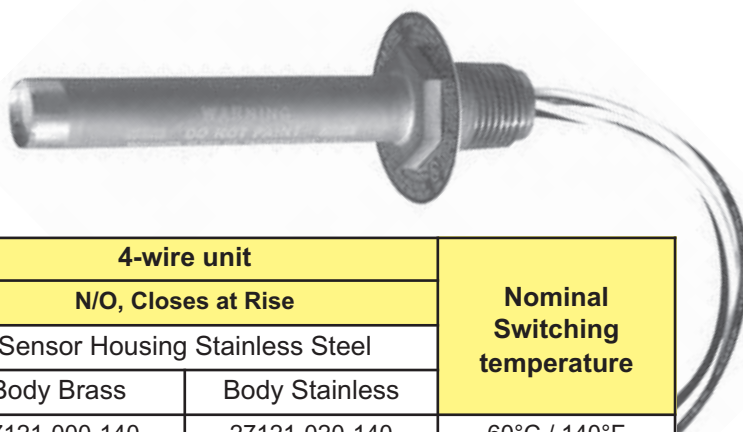
Applications:

- Special areas where aggressive gases and moistures can corrode aluminum or other type of metals
- Food- and Marine Applications
- Highly radiated areas
- Nuclear Power Plants

HDL-7 "FAT BOY" Dimensions: l/w/h:

152 mm, 152 mm, 126 mm
High Temperature-Silicone-sealing,
Appropriate stainless steel box
Weight: 2200 g
IP66 or IP67
Material: 316(1.4404) or Mild steel

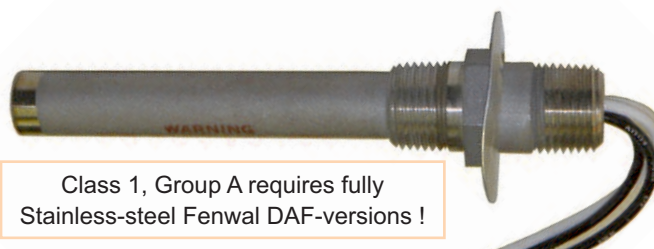
Available Standard Fenwal DAF® Sensor Variations:



2-wire unit		4-wire unit		Nominal Switching temperature
N/C, Opens at Rise		N/O, Closes at Rise		
Sensor Housing Stainless Steel		Sensor Housing Stainless Steel		
Body Brass	Body Stainless	Body Brass	Body Stainless	
27120-000-140	27120-022-140	27121-000-140	27121-020-140	60°C / 140°F
27120-000-160	27120-022-160	27121-000-160	27121-020-160	71°C / 160°F
27120-000-190	27120-022-190	27121-000-190	27121-020-190	88°C / 190°F
27120-000-210	27120-022-210	27121-000-210	27121-020-210	99°C / 210°F
27120-000-225	27120-022-225	27121-000-225	27121-020-225	107°C / 225°F
27120-000-275	27120-022-275	27121-000-275	27121-020-275	135°C / 275°F
27120-000-325	27120-022-325	27121-000-325	27121-020-325	165°C / 325°F
27120-000-360	27120-022-360	27121-000-360	27121-020-360	187°C / 360°F
27120-000-450	27120-022-450	27121-000-450	27121-020-450	232°C / 450°F
		27121-000-500	27121-020-500	260°C / 500°F
		27121-000-600	27121-020-600	315°C / 600°F
		27121-000-725	27121-020-725	385°C / 725°F

Double Thread (Coupling Head) units:

Fully Stainless steel in 2 Versions:
 N/C (2 wire) Opens at temperature rise
 N/C (4-wire) Closes at temperature rise



Class 1, Group A requires fully Stainless-steel Fenwal DAF-versions !

2-wire unit		4-wire unit		Nominal Switching temperature
N/C, Opens at Rise		N/O, Closes at Rise		
Sensor Housing Stainless Steel		Sensor Housing Stainless Steel		
Body Brass	Body Stainless	Body Brass	Body Stainless	
	28020-003-140		28021-005-140	60°C / 140°F
	28020-003-160		28021-005-160	71°C / 160°F
	28020-003-190		28021-005-190	88°C / 190°F
	28020-003-210		28021-005-210	99°C / 210°F
	28020-003-225		28021-005-225	107°C / 225°F
	28020-003-275		28021-005-275	135°C / 275°F
	28020-003-325		28021-005-325	165°C / 325°F
	28020-003-360		28021-005-360	187°C / 360°F
	28020-003-450		28021-005-450	232°C / 450°F
			28021-005-500	260°C / 500°F
			28021-005-600	315°C / 600°F
			28021-005-725	385°C / 725°F

Heat Detector Spacing Reduction Based on Ceiling Height

Table 1: Model Numbers 27121, 28021, 27120, 28020

°F Setting	°F Tolerance	°C Setting	°C Tolerance	Spacing (in feet)			RTI	Color Coding
				UL	ULC	FM		
140	+7/-8	60	+4/-5	50	50	20	V-Fast	Black
160	+7/-8	71	+4/-5	25	25	20	V-Fast	Black
190	+7/-8	88	+4/-5	50	50	25	V-Fast	White
210	+7/-8	99	+4/-5	25	50	25	V-Fast	White
225	+7/-8	107	+4/-5	25	50	25	V-Fast	White
275	±10	135	±6	25	50	25	V-Fast	Blue
325	±10	163	±6	50	50	25	V-Fast	Red
360	±10	182	±8	25	50	30	V-Fast	Red
450	±15	232	±10	25	50	30	V-Fast	Green
500	±15	260	±10	50	50	30	V-Fast	Orange
600	±20	316	±12	N/A	50	30	V-Fast	Orange
725	±20	385	±12	N/A	50	30	V-Fast	Orange

Notes:

- For clean agents or CO2 suppression systems, ceiling spacing is 20ft. apart unless otherwise specified.
- For NFPA Guidelines on ceiling height compensation, see Table 7.
- *27120 and 28020 are normally closed devices and do not meet the requirements of NFPA-72 for use as initiating devices (they are 2-wire devices).
- *27120 and 28020 are not listed by FM with RTI.

Table 2: Vertical D-A-F Specifications

Model Number	Head Material	Contact Operation	Electrical rating (Resistive Only)
27120-0	Brass	Normally Closed (Open on Rise)	5.0 Amps 125 VAC 0.5 Amps 125 VDC
27120-22	Stainless Steel		
27121-0	Brass	Normally Open (Close on Rise)	5.0 Amps 125 VAC 0.5 Amps 125 VDC 2.0 Amps 24 VDC 1.0 Amps 48 VDC
27121-20	Stainless Steel		
28020-3	Stainless Steel	Normally Closed (Open on Rise)	5.0 Amps 125 VAC 0.5 Amps 125 VDC
28021-5	Stainless Steel	Normally Open (Close on Rise)	5.0 Amps 125 VAC 0.5 Amps 125 VDC 2.0 Amps 24 VDC 1.0 Amps 48 VDC
12-200001-00X*			

Approximate weight: 5 oz. All shell material is Stainless Steel. All Stainless Steel is Type 300.

* Specialty product with limited availability

Table 5: D-A-F Response Time Index (RTI) and Spacing

Model No.	Configuration	Contact operation	Temperature (Set Point)	Response Time Index (ft-s) ^{1/2}	RTI Classification	RTI Rated Spacing	Old Rated Spacing
27021-0	Horizontal Flush Mount	Normally Open (Close on Rise)	140°F (60°C) 160°F (71°C)	110	Quick	(20 x 20) ft (6 x 6) m	(25 x 25) ft (8 x 8) m
27021-1	Horizontal Surface Mount						
27021-0	Horizontal Flush Mount	Normally Open (Close on Rise)	190°F (88°C) 210°F (99°C), 225°F (107°C) 275°F (135°C), 325°F (163°C)	140	Fast	(25 x 25) ft (8 x 8) m	(25 x 25) ft (8 x 8) m
27021-1	Horizontal Surface Mount						
27121-0	Vertical Brass Head	Normally Open (Close on Rise)	140°F (60°C), 160°F (71°C), 190°F (88°C), 210°F (99°C), 225°F (107°C), 275°F (135°C), 325°F (163°C), 360°F (182°C), 450°F (232°C), 500°F (260°C), 600°F (316°C), 725°F (385°C)	99 (140°F, 160°F), 148 (190°F, 210°F, 225°F, 275°F, 325°F, 360°F, 450°F, 500°F, 600°F, 725°F)	V-Fast	(30 x 30) ft (9 x 9) m	(25 x 25) ft (8 x 8) m
27121-20	Vertical Stainless Head						
28021-5	Vertical Stainless Coupling Head						

Note: Spaces shown are distances between detectors on smooth ceilings, the distances from partitions or walls would be half that shown. Authority Having Jurisdiction (AHJ) should be consulted before installation.

Above data taken from the original datasheet DETECT-A-FIRE® F-12-0-001 issue June 2020, Vertical & Horizontal Mounting Types on 27.05.2022.





NB-CPR 305/2011 EU
Nr. 1415

Product certification body accredited by NAH
under No NAH-6-0057/2019/K.

ÉMI NON-PROFIT LIMITED LIABILITY COMPANY FOR QUALITY
CONTROL AND INNOVATION IN BUILDING
ENGINEERING SERVICES DIRECTORATE
CONFORMITY ASSESSMENT CENTER
CERTIFICATION OFFICE

H-2000 Szentendre, Dózsa György út 26. Postal address: H-2001 Szentendre, Pf : 180.
Phone: +36 (26) 502 300 E-mail: tanusitas@emi.hu WEB: http://www.emi.hu

EC-CERTIFICATE OF CONSTANCY OF PERFORMANCE

1415-CPR-81-(C-36/2018)

In compliance with Regulation 305/2011/EU of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation or CPR), this certificate applies to the construction product

HDL-2, HDL-3, HDL-3XL, HDL-5, HDL-6, HDL-6XL, HDL-7 and HDL-7 XL heat- fire detectors

with performance shown in the annex as page 3/3 of this certificate
for Fire safety intended use and

produced by

LICO Mechatronic Kft.

2030 Érd, Rába u. 4., Hungary

and produced in the manufacturing plant

LICO Hungária Kft.

2049 Diósd, Balatoni út 4.

This certificate attests that all provisions concerning the assessment and verification of constancy of performance and the performances described in Annex ZA of the standard EN 54-5:2000, EN 54-5:2000/A1:2002 under system (1) are applied and that

the product fulfils all the prescribed requirements set out above.

This certificate was first issued on 18.10.2018 and will remain valid as long as the test methods and/or factory production control requirements included in the harmonized standard, used to assess the performance of the declared characteristics, do not change, and the product, and the manufacturing conditions in the plant are not modified significantly.

This certificate consists of 3 pages!

Issue: 3

Dated at Szentendre, 10.08.2020




Ágnes Molnár
Head of Certification Office

Bizonylat azonosító: KBI-A-IV-1-20190920_EK_TAT_EN



NB-CPR 305/2011 EU
Nr. 1415
A NAH által NAH-6-0057/2019/K számon
akkreditált terméktanúsító szervezet.

ÉMI ÉPÍTÉSÜGYI MINŐSÉGELLENŐRZŐ INNOVÁCIÓS NONPROFIT
KORLÁTOLT FELELŐSÉGŰ TÁRSASÁG
MÉRNÖKI SZOLGÁLTATÁSOK IGAZGATÓSÁG
MEGFELELŐSÉGÉRTÉKELŐ KÖZPONT
TANÚSÍTÁSI IRODA

H-2000 Szentendre, Dózsa György út 26. Levélcím: H-2001 Szentendre, Pf : 180.
Telefon: +36 (26) 502 300 E-mail: tanusitas@emi.hu Honlap: http://www.emi.hu

EG-ZERTIFIKAT DER LEISTUNGSBESTÄNDIGKEIT

1415-CPR-81-(C-36/2018)

Gemäß der Verordnung (EU) Nr. 305/2011 des Europäischen Parlaments und des Rates vom 9. März 2011
(Bauproduktenverordnung – CPR), gilt dieses Zertifikat für das Bauprodukt

**HDL-2, HDL-3, HDL-3XL, HDL-5, HDL-6, HDL-6XL, HDL-7 und HDL-7 XL Wärme- und
Brandmelder**

Produktmerkmale siehe Seite 3/3

Anwendungszweck:
in Brandmeldeanlagen

LICO Mechatronic Kft.

2030 Érd, Rába u. 4., Hungary

in Verkehr gebracht durch

LICO Hungária Kft.

2049 Diósd, Balatoni út 4.

und erzeugt im Herstellerwerk

Dieses Zertifikat bescheinigt, dass alle Vorschriften über die Bewertung und Überprüfung der
Leistungsbständigkeit und die Leistungen beschreiben im Anhang ZA der harmonisierten Norm(en)
EN 54-5:2000, EN 54-5:2000/A1:2002 entsprechend System 1 angewendet

werden und dass das Produkt alle darin vorgeschriebenen Anforderungen erfüllt.

Dieses Zertifikat wurde erstmal an 18.10.2018 ausgestellt und bleibt gültig, solange sich die in der
harmonisierten Norm genannten und zur Bewertung der Leistung der erklärten Merkmale verwendeten
Prüfverfahren und/oder Anforderungen der werkseigenen Produktionskontrolle nicht ändern, und das
Produkt und die Herstellbedingungen im Werk nicht wesentlich geändert werden.

Dieses Zertifikat umfasst 3 nummerierte Seiten!

Ausgabe: 3
Szentendre, den 10.08.2020



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Moinár Ágnes
Büroleiterin für Zertifizierung

Bizonylat azonosító: KBA-IV-1-20190920_EX_TÁT

Custom Made Fire Prevention Solutions from LICO!



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