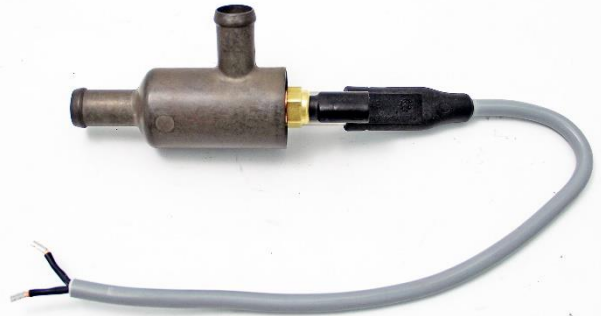


Technical Data LVHH 1224 & 2448.

Calix P/N 2407855, 2407916, 2408899 & 2408900

Function: Hose installed heater, designed to pre-heat applications such as coolant circuits. 240W @ 12 VDC or 480W @ 24V DC. The heaters are equipped with a NTC thermistor for temperature monitoring.



1. General technical data			
	LVHH 1224	LVHH 2448	
Main supply	12 VDC	24 VDC	
Coolant pressure	3 bar max		Calix TM 01-127
Power	240 W	480 W	+5 / -10%

2. Electrical			
Voltage, nom.	@12 VDC	@24 VDC	
Power	240 W	480 W	+5 / -10%
Overvoltage	@15 VDC	@30 VDC	
Power	375 W	560 W	+5 / -10 %
Under voltage	@6 VDC	@12 VDC	
Power	60 W	120 W	+5 / -10%
Connector	Open ends		2 x 2,5mm ² with end splices
Temperature sensor	NTC, Delphi NME15425529		Suggested mating connector: AMP 1-967644-1

3. Temperature range		
Operating temperature	-40°C to +90°C	
Storage temperature	-40°C to +125°C	

4. Degree of protection (IEC 60529)		
Heater assembly	IP 6K7	ISO 20653:2013
NTC interface	IP 69K	IEC 60529

5. Dimensions		
Diam. x Length	Ø35 x 130	
Hose connector diam.	Ø16 or Ø19	

6. Climate environments test		
Damp heat	30°C, 93% RH, 504 hours	ISO 16750-4 Chapter 5.7.2
Low temperature	-45°C, 24 hours	ISO 16750-4 Chapter 5.1.1
High temperature	85°C, 48 hours	ISO 16750-4 Chapter 5.1.2
Temperature steps	-40°C to 85°C	ISO 16750-4 Chapter 5.2
Temperature cycling	-40°C to 85°C	ISO 16750-4 Chapter 5.3.1.2
Humid heat, cycling	25°C to 55°C, 93% RH	ISO 16750-4 Chapter 5.6.2

7. Vibration

Vibration	Amplitude ± 2 mm, 25Hz	SS 433 07 90
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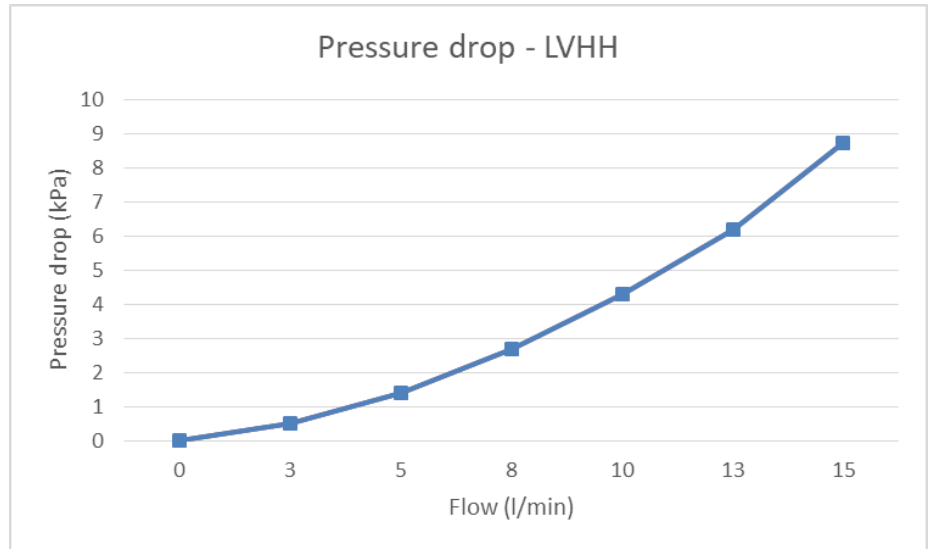
8. Certification

Electrical safety	EN 60 335-1:2012	
Engine preheater	SS 433 07 90	

13. Pressure drop

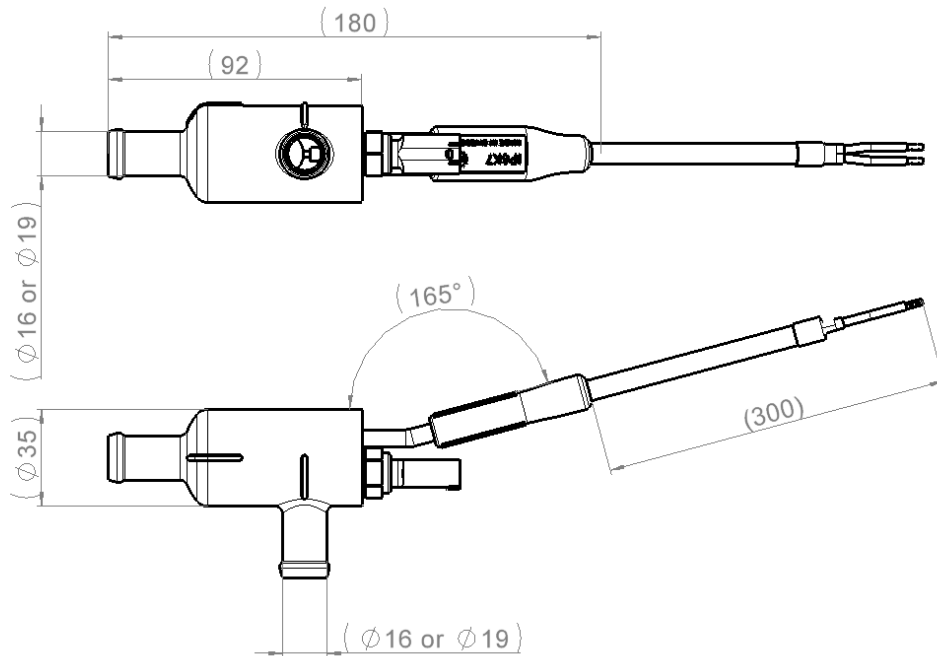
Pressure drop in LVHH Heater	See table and curve below	All measurements were performed with glycol/water-mix 50/50%, at an ambient temperature of 25°C.
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Flow q (L/min)	Pressure drop p (kPa)
0,0	0
2,5	0,5
5,0	1,4
7,5	2,7
10,0	4,3
12,5	6,2
15,0	8,7

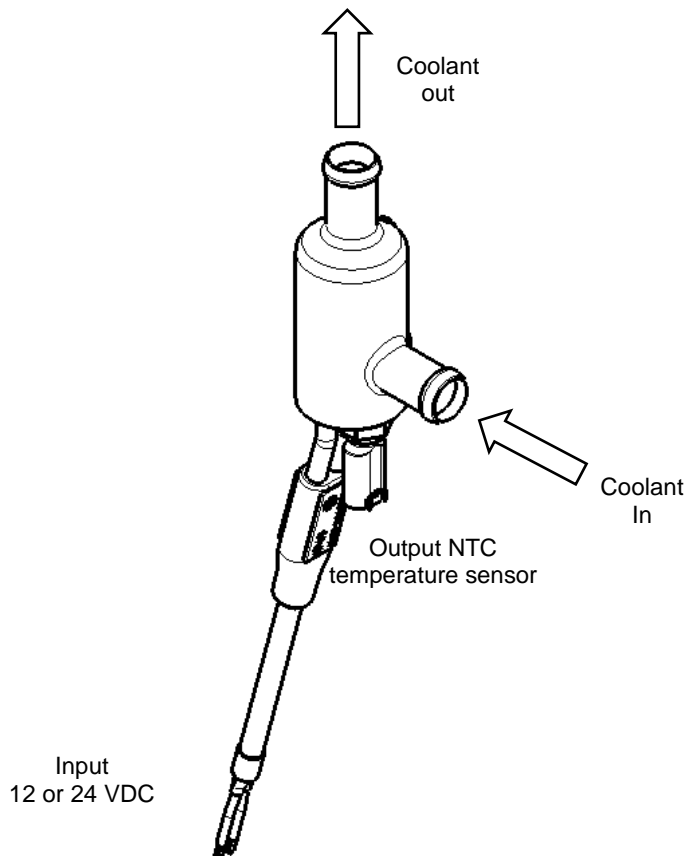


9. Dimensional data

Dimensions.



10. Function description





Issued by
JC

Date
2022-11-11

Approved
PB

Revision
S2

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12. Doc. change record

Date	Change description	Sign	Rev
2022-01-19	Document released.	LL	P1
2022-05-02	4. IP Class updated to IP6K7	JC	P2
2022-06-22	Document released S1	JC	S1
2022-11-11	9. Dimensional data updated, Ø19 verision added.	JC	S2

We reserve the right to change technical data without prior notice.