

## MECHANICAL THERMOSTAT, M-SDAF Ex MODEL

### GENERALITIES

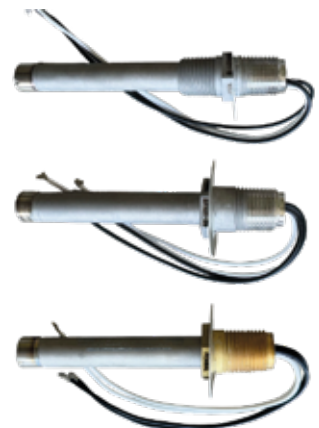
M-SDAF Ex is a thermostatic device composed of: aluminium alloy box, terminal boards, fixing bracket and Fenwal Detect A Fire (DAF) heat sensor.

### OPERATING PRINCIPLE HEAT DETECTOR FENWAL – DETECT A FIRE

DETECT-A-FIRE units are designed with RATE COMPENSATION. DAF unit accurately senses the surrounding air temperature regardless of the fire growth rate. At precisely the predetermined danger point, the system is activated. Fixed temperature sensors must be completely heated to alarm temperature and therefore a disastrous lag in time may occur with a fast rate fire. Rate-of-rise devices, on the other hand, are triggered by the rate of increase in ambient temperature and are subject to false alarm caused by harmless, transient thermal gradients such as rush of warm air from process ovens. The outer shell of DAF is made of a rapidly expanding alloy which closely follows changes in surrounding air temperature. The inner struts are made of a lower expanding alloy. Designed to resist thermal energy absorption and sealed inside the shell, the struts follow temperature changes more slowly. A slow rate fire will heat the shell and struts together. At the "set point", the unit will trigger, actuating the alarm. A transient rush of warm air up to 40 F°/min. may expand the shell, but not enough to trigger the unit. By ignoring transient warm air excursion, the DAF unit virtually eliminates false alarms prevalent with rate-of-rise devices. If a fast rate fire starts, the shell will expand rapidly. The struts will close, actuating the alarm. The faster the fire rate of growth, the sooner the DAF units will react.

### CERTIFICATE

Atex Directive Marking :  II 2 GD  
Atex Directive And IECEx Type of Protection :  
• Ex db IIC T6 Gb-Ex tb IIIC T85°C Db IP66 ( T amb. -20 +70°C )  
• Ex db IIC T5 Gb-Ex tb IIIC T100°C Db IP66 ( T amb. -20°+85°C )  
**Certificato EU di tipo / EU type Certificate N. INERIS03ATEX0119X**  
**CoC Certificate : N. IECEx INE 18.0023X**  
**UK Type Examination Certificate CML 21UKEX1617X**  
**ECAS-Ex**



## GENERAL CHARACTERISTICS

PROTECTION DEGREE	IP66
RELATIVE HUMIDITY	98%
WEIGHT	400g
BIMETAL COMPONENT	NILVAR
SENSOR MATERIAL	STEEL

## JUNCTION BOX CHARACTERISTICS

JUNCTION BOX	<b>STANDARD ST26</b> (on request other models)
J. BOX MATERIAL	ALLUMINIUM ALLOY / STAINLESS STEEL AISI 316 L (on request)
MOUNTING BRACKET	STAINLESS STEEL
HOLES THREAD	2 x 3/4" NPT
EARTH SCREWS	INTERNAL / EXTERNAL
TERMINALS	n°4 da 4mmq (standard) / n° 6 terminals (on request)

## MODELS OF DAF SENSORS (UL, FM CERTIFIED)



**DAF 27121-020**  
Steel mounting head  
Contact NO which closes in alarm



**DAF 27121-000**  
Brass mounting head  
Contact NO which closes in alarm



**DAF 28121-005**  
Steel mounting head  
Contact NO which closes in alarm



**DAF 27120-022**  
Steel mounting head  
Contact NC which opens in alarm



**DAF 27120-000**  
Brass mounting head  
Contact NC which opens in alarm



**DAF 28020-003**  
Steel mounting head  
Contact NC which opens in alarm

## CARATTERISTICHE SENSORE

PROTECTION DEGREE	IP66	RELATIVE HUMIDITY	98%
BIMETAL COMPONENT	NILVAR		
HEAD MATERIAL	STEEL		
THREADED BODY MATERIAL	STEEL / BRASS		
CALIBRATION	°F 140 160 190 225 275 325 360 450 600 725		
WIRES COLOURS	<b>27121 - 000 / 27121 - 020 / 28021 - 005</b> n° 2 black, n° 2 white		
	<b>27120 - 000 / 27120 - 020 / 28020 - 003</b> n° 2 black		
MAXIMUM INTENSITY	2 A		
SUPPLY VOLTAGE	48 V ( DC )		
MAXIMUM POWER DISSIPATED	1 WATT		