

- Replace Tfx-144 and TFX-171 sensor
- New: options
- Conductive type HDFS®
- Operating temperature 250 °C
- No opening in cavity (blind mount)
- Total height 42mm
- Internal temperature measurement
- Fast deployment
- Robust model







## DESCRIPTION

TFX-191 heat flux sensors are especially well suited for monitoring anisothermal processes (cooling of molten materials or curing of reactive materials).

One of their main advantage is indirect measurement, without direct contact with the part or the material to be transformed. They can be dismantled at ambient temperature and no peculiar precision is required for implementation.

These sensors deliver a mV signal proportional to the heat flux. It may be positive or negative according to heat flux direction. Calibration is performed in steady-state conditions.

## CONNECTOR

	E	F	N	P	
Tfx-191-S	 3p	 3p			

Technical information available in product note n°TFX-002-B-en

## PRODUCT NUMBER

Product

191. 

	S	.				
--	---	---	--	--	--	--

Housing	Stainless steel	R
	Aluminium	A

S	Spring mount + M12 bayonet fitting	Options
C	Short nut	

Connector	LEMO 3p straight plug	E
	LEMO 3p fixed socket	F
	Dual Standard male	N
	Porcelain terminal 4p	P

A	Fine heat flux	Cable type
E	Standard sensor	

010	1m	Cable length
xxx	Other on demand, in dm	

## IDENTITY STICKER

Product	Front side	Rear side
Sensitivity	±xx nV/W/m <sup>2</sup>	<b>HT</b>
Type - S/N	191-yyywww	

## THERMAL CHARACTERISTICS

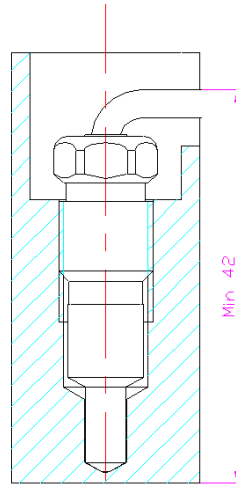
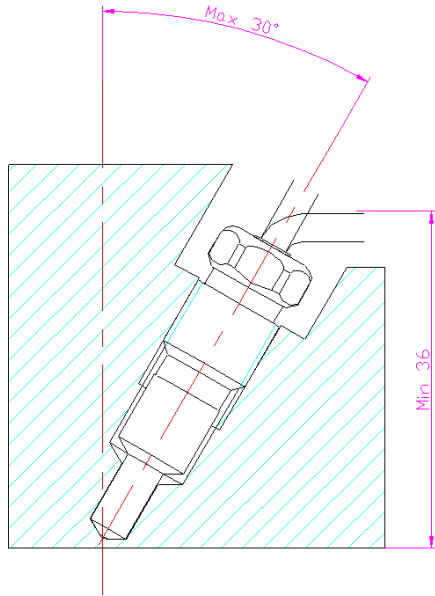
Symbol	Parameter	Min	Typ	Max	Units
T <sub>nom</sub>	Operating temperature		250		°C
T <sub>pulse</sub>	Maximum temperature		300		°C
φ	Heat flow level	±10		±100k	W/m <sup>2</sup>

**ELECTRICAL CHARACTERISTICS**

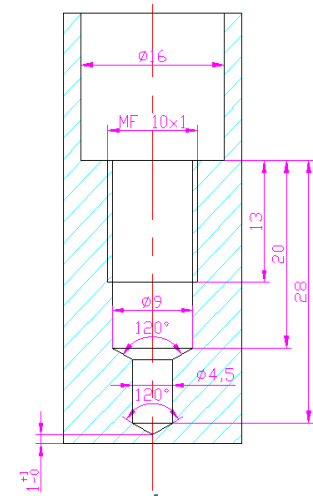
Symbol	Parameter	Min	Typ	Max	Units
$R_{in}$	Differential input resistance		3		$\Omega$
$V_{noise}$	RMS measurement noise		0.1		$\mu V_{RMS}$
Sens.	Sensitivity		+10		nV/W/m <sup>2</sup>
BW	Bandwidth		1		Hz
$V_{isol}$	Output voltage		500		Vac
$V_{nom}$	Breakdown voltage		$\pm 20$		mV

Thermocouple type: T

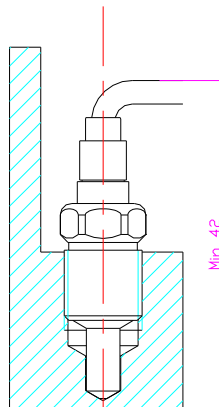
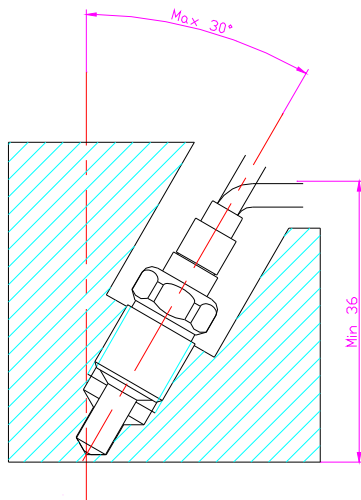
**DESIGN (LONG NUT)**



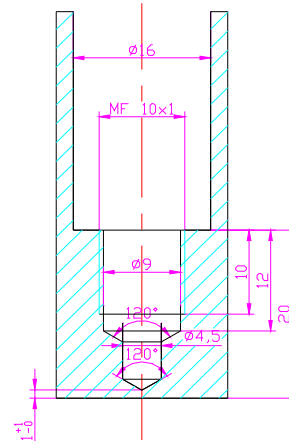
**MACHINING (LONG NUT)**



**DESIGN (SHORT NUT)**

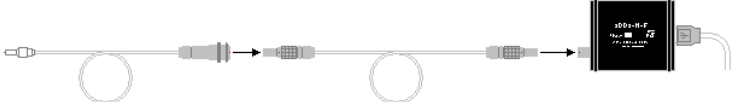


**MACHINING (SHORT NUT)**



Mounting with a 10/11mm tube spanner.  
Sensor axis can make a maximal angle of 30° with cavity face's normal.

## SENSOR CABLING

Industry, large mould	Mould	Extension cable	Electric cab
<ul style="list-style-type: none"> <li>- Sensor with fixed socket</li> <li>- Extension M/M</li> </ul>			

- Extension length: 4m, other length on demand (max. 10m)
- Order accessories separately

## CONTENTS

- 1 sensor

TFX SA reserves the right to change the circuitry and specifications without notice at any time.