

Product Information FLEXadapt ESF

FOOD

Build-In System G3/8" FLEXadapt ESF



Application / Specified Usage

- Safe temperature measuring in pipes and vessels without opening the process in connection with temperature sensor **TFP-59, -179, -199**
- Possibility of demounting the temperature sensor without opening the process and without electrical disconnection > avoiding downtime of the equipment at calibration and maintenance!
- Perfectly suitable at small pipe diameters

Application Examples

- Flexible applicable for nearly every temperature measuring task in pipes and vessels
- Safe temperature measuring in hotsteam- and pressure pipes (enclosed process)
- Monitoring of CIP-/SIP-cleaning

Hygienic Design / Process Connection

- Hygienic and easy sterilizable installation by using Negele build-in system ESF
- CIP-/SIP-cleaning up to 140 °C
- Product contacting materials are compliant to FDA

Features

- Short reaction time, very compact measure point
- Threaded thermowells ESF-G1/2" for CLEANadapt can be combined with many other standard adapters. Therefore they are suitable for each application and process connection (e.g. Tri-Clamp, dairy flange (DIN 11851), DRD, Varivent, APV, BioControl...)
- Quick and easy to install with an orbital welding machine
- Temperature sensors and build-in systems with pre-defined, concerted standard lengths, reducing the variety, economize costs for storage and simplify the maintenance.

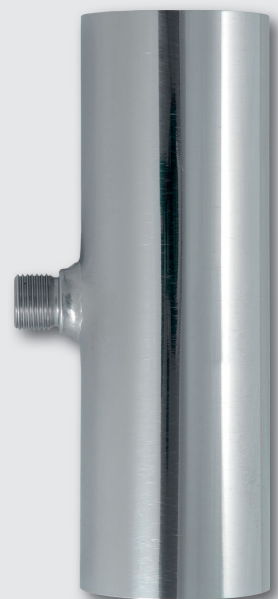
Authorisations



ESF-G1/2", ESF-EH, ESF-KM



ESF-G-DIN2-50



Specification of Measure Point and Adapter		
Pipe Style	DIN 2 ISO ASME	DIN 11866 series A DIN 11866 series B, ISO 1127 DIN 11866 series C, OD-Tube
Material	pipe and thermowell	stainless steel 1.4404 (316L)
Surface	wetted parts optional	$R_a \leq 0,8 \mu\text{m}$ (not in welded areas) electro polished $R_a \leq 0,6 \mu\text{m}$, $R_a \leq 0,4 \mu\text{m}$
Diameter		see tables
Tolerances	DN25...DN40 DN50...DN100	DN: $\pm 0,3 \text{ mm}$, length: $\pm 1,0 \text{ mm}$ DN: $\pm 0,5 \text{ mm}$, length: $\pm 1,0 \text{ mm}$
Sensor Connection	thread	G3/8"
Sealing Principle		weld-in thermowell
Operating Pressure		50 bar max. (for ESF-G please consider also pipe specification)

Advice



The technical specification of pipes is according to DIN 11866 if no other is defined.
Custom specific versions on request.

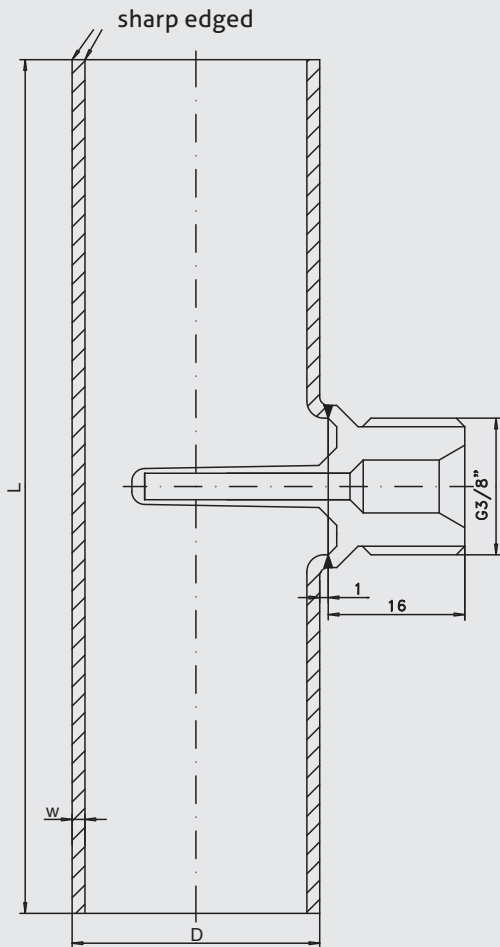
Table Reaction Time for build-in Temperature Sensor	ESF-G-DIN2-25	ESF-G1/2"-40	ESF-EH-125	ESF-KM-125
Medium temperature 90 °C				
t_{50}	5,8 s	7,8 s	8,0 s	8,0 s
t_{90}	19,0 s	21,1 s	24,0 s	24,0 s

Reaction Time



We recommend the use of heat-conductive paste to reduce the reaction times about 50 % as mentioned above!

Dimensional Drawing ESF-G-...



Order Code build-in system

ESF-G (build-in system straight series)

Pipe style

DIN2 (see specification of pipes)

ISO (see specification of pipes)

ASME (see specification of pipes)

Diameter

25...100 (DIN2)

20...80 (ISO)

1"...4" (ASME)

Surface

0,8 ($R_a \leq 0,8 \mu\text{m}$)0,6 ($R_a \leq 0,6 \mu\text{m}$)0,4 ($R_a \leq 0,4 \mu\text{m}$)

ESF-G / DIN2 / 40 / 0,8

DIN 11866 series A

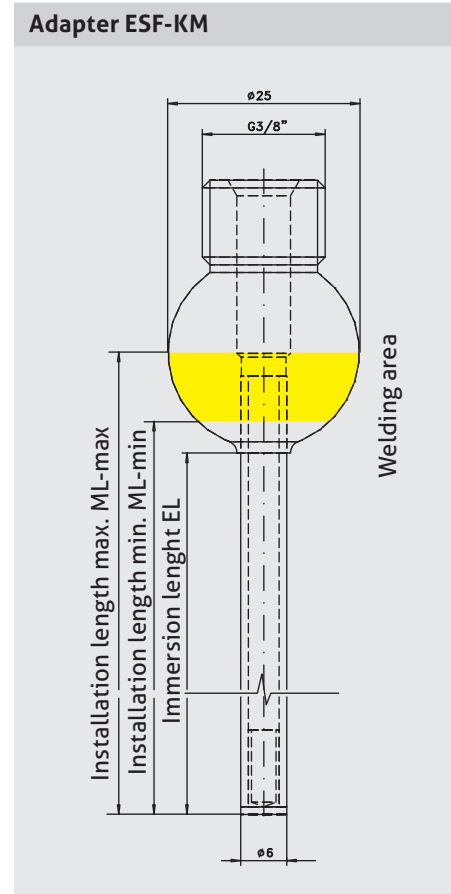
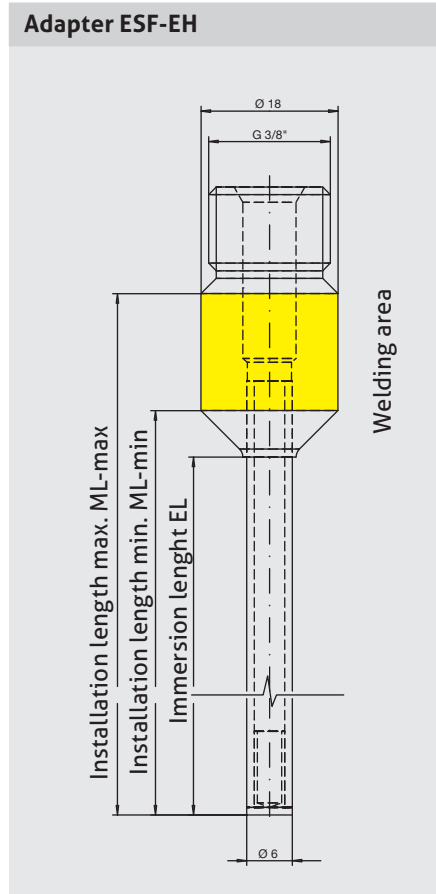
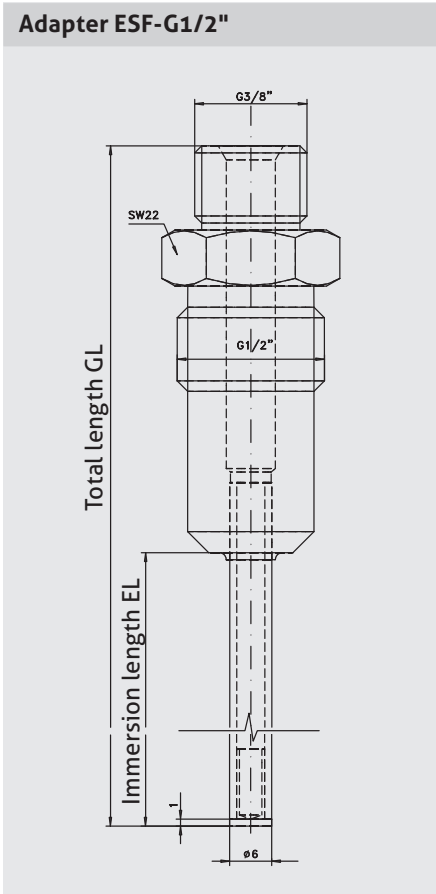
Type	DN	L [mm]	pipe D x w	for insertion length
ESF-G-DIN2-25	25	100	29 x 1,5	TFP-... /037
ESF-G-DIN2-40	40	120	41 x 1,5	TFP-... /037
ESF-G-DIN2-50	50	140	53 x 1,5	TFP-... /037
ESF-G-DIN2-65	65	160	70 x 2,0	TFP-... /037
ESF-G-DIN2-80	80	180	85 x 2,0	TFP-... /037
ESF-G-DIN2-100	100	200	104 x 2,0	TFP-... /037

DIN 11866 series B / ISO 1127

Type	DN	L [mm]	pipe D x w	for insertion length
ESF-G-ISO-20	20	110	26,9 x 1,6	TFP-... /037
ESF-G-ISO-25	25	120	33,7 x 2,0	TFP-... /037
ESF-G-ISO-32	32	130	42,4 x 2,0	TFP-... /037
ESF-G-ISO-40	40	130	48,3 x 2,0	TFP-... /037
ESF-G-ISO-50	50	190	60,3 x 2,0	TFP-... /037
ESF-G-ISO-65	65	220	76,1 x 2,0	TFP-... /037
ESF-G-ISO-80	80	260	88,9 x 2,3	TFP-... /037

DIN 11866 series C / OD-Tube

Type	DN	L [mm]	pipe D x w	for insertion length
ESF-G-ASME-1"	1"	108	25,4 x 1,65	TFP-... /037
ESF-G-ASME-1½"	1½"	120,5	38,1 x 1,65	TFP-... /037
ESF-G-ASME-2"	2"	146	50,8 x 1,65	TFP-... /037
ESF-G-ASME-2½"	2½"	160	63,5 x 1,65	TFP-... /037
ESF-G-ASME-3"	3"	170	76,2 x 1,65	TFP-... /037
ESF-G-ASME-4"	4"	210	101,6 x 2,11	TFP-... /037



Adapter ESF-G1/2"				
Type / Order Code		Immersion length EL	Total length GL	For insertion length TFP
ESF-G1/2"-25	Threaded thermowell for installation into existing G1/2" CLEANadapt measure point	27 mm	85 mm	TFP-... / 083
ESF-G1/2"-40		41 mm	99 mm	TFP-... / 097
ESF-G1/2"-100		104 mm	162 mm	TFP-... / 160

Adapter ESF-EH				
Type / Order Code		Immersion length EL	Installation length ML	For insertion length TFP
ESF-EH-50	Weld-in thermowell for retrofit mounting of clamp connection (Type: EMK-25/76 or KEV-25/76) or for mounting into pipes and vessels	50 mm	56 ... 71 mm	TFP-... / 083
ESF-EH-125		127 mm	133 ... 148 mm	TFP-... / 160

Adapter ESF-KM				
Type / Order Code		Immersion length EL	Installation length ML	For insertion length TFP
ESF-KM-50	Weld-in thermowell with weld-in ball for mounting into pipe elbows or vessels	50 mm	56 ... 63 mm	TFP-... / 083
ESF-KM-125		127 mm	133 ... 140 mm	TFP-... / 160