

# Датчики уровня multicar T DC 12 TA multicar T DC 11/16/21/26 TAN/TAS

## Техническая информация

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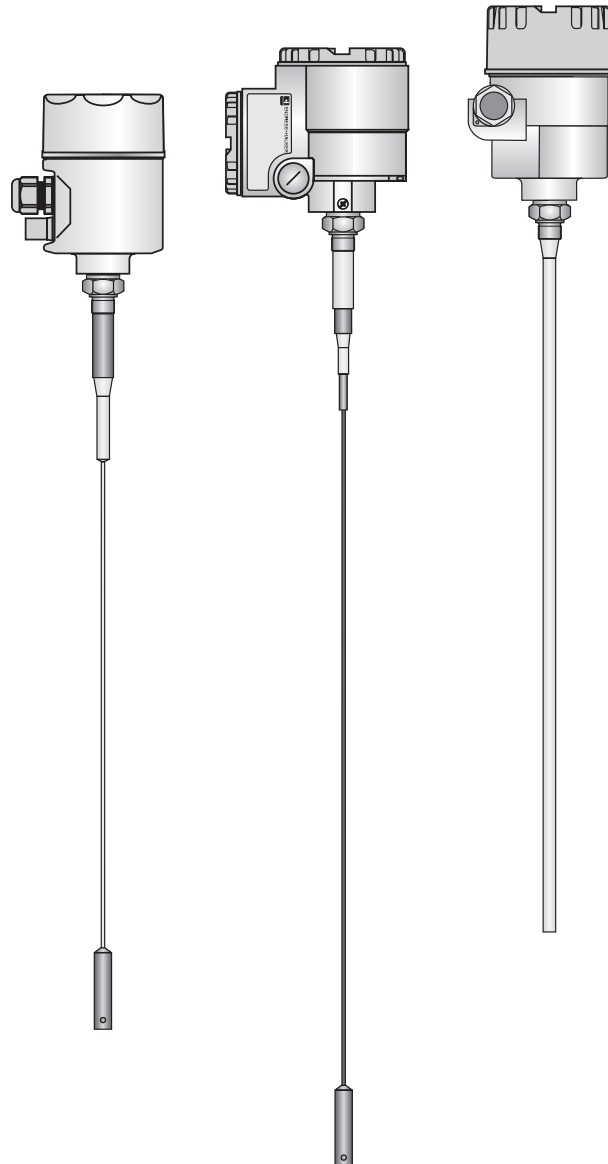
# Level Probes

## *multicap T DC 12 TA*

## *multicap T DC 11/16/21/26 TAN/TAS*

**Compact capacitive level probes  
(with North American certificates).**

**Fully and partially insulated rod and rope probes**



### **Applications**

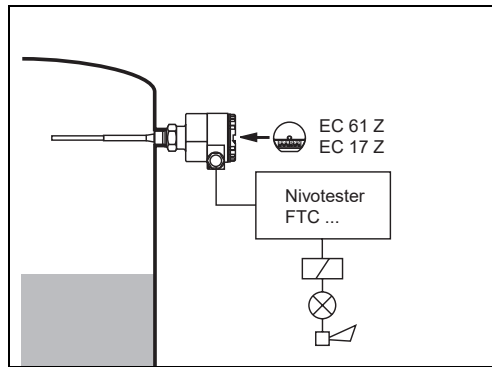
Multicap T probes are designed for continuous level measurement and limit detection, primarily in liquids. The DC 12 T probe with reinforced rod is also suitable for use in light bulk solids.

The probe rod or rope and insulation are made of corrosion-resistant materials able to withstand extremely aggressive products. The tried-and-tested rugged construction is gas-tight for pressures from vacuum to 360 psi. Seal and insulation materials enable probes to be used at operating temperatures in the vessel of  $-110^{\circ}\text{F}$  to  $+390^{\circ}\text{F}$ .

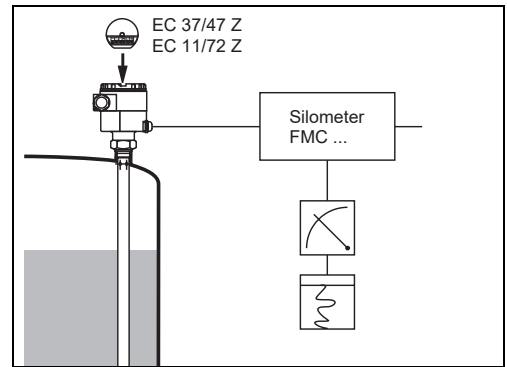
### **Your Benefits**

- Certificates from many North American approval authorities  
= the probes have universal use
- Versions for a wide range of applications  
= ideally adapted to your application at a cost effective price
- Wide range of process connections from  $\frac{3}{4}$  NPT  
= easy mounting in tight spaces
- Screened against condensation in the nozzle  
= reliable function even with condensation
- Active build-up compensation for limit detection  
= steady and accurate switchpoint even with heavy contamination on the probe, no cleaning or recalibration

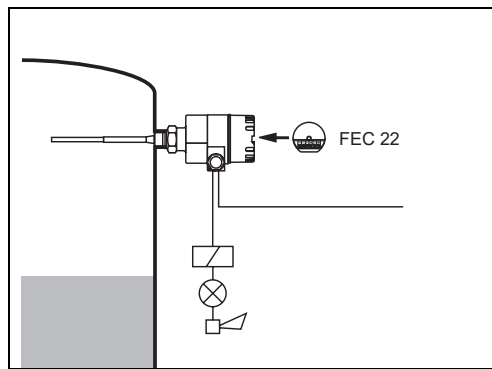
## Measuring System



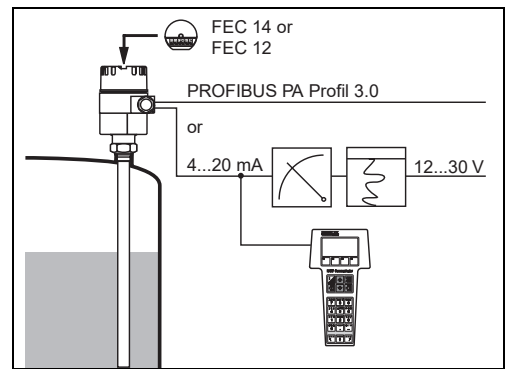
Limit detection with separate Nivotester switching unit



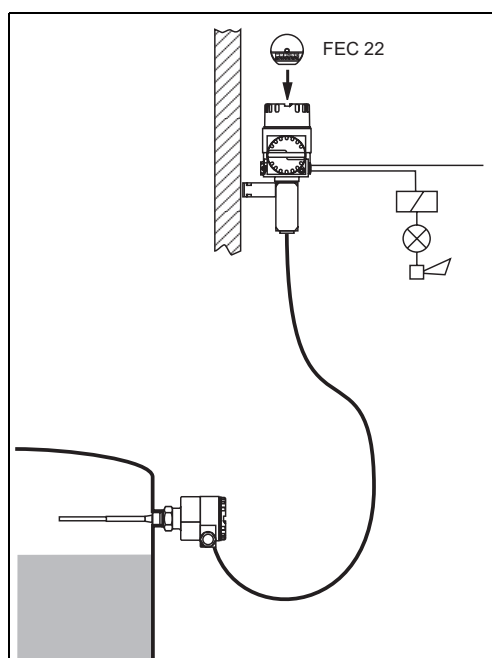
Level measurement with separate Silometer transmitter



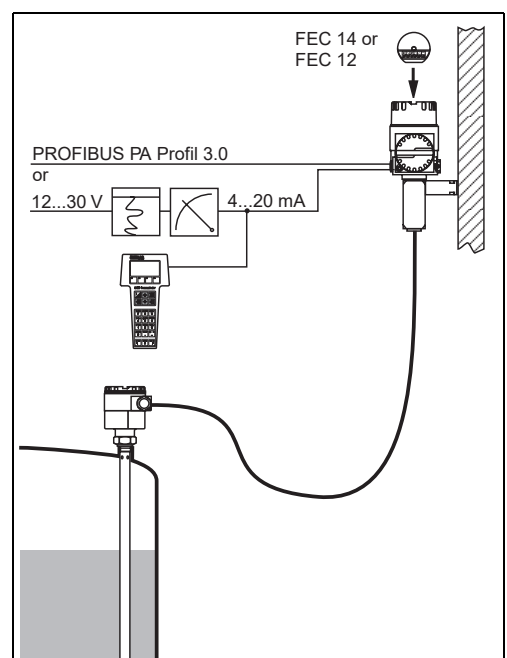
Compact level switch with relay or transistor output



Compact loop-powered level measurement system with standard 4..20 mA current output.  
FEC 12: smart electronic insert which allows remote calibration over the 4..20 mA output (HART protocol)  
FEC 14: communication and commissioning with PROFIBUS PA

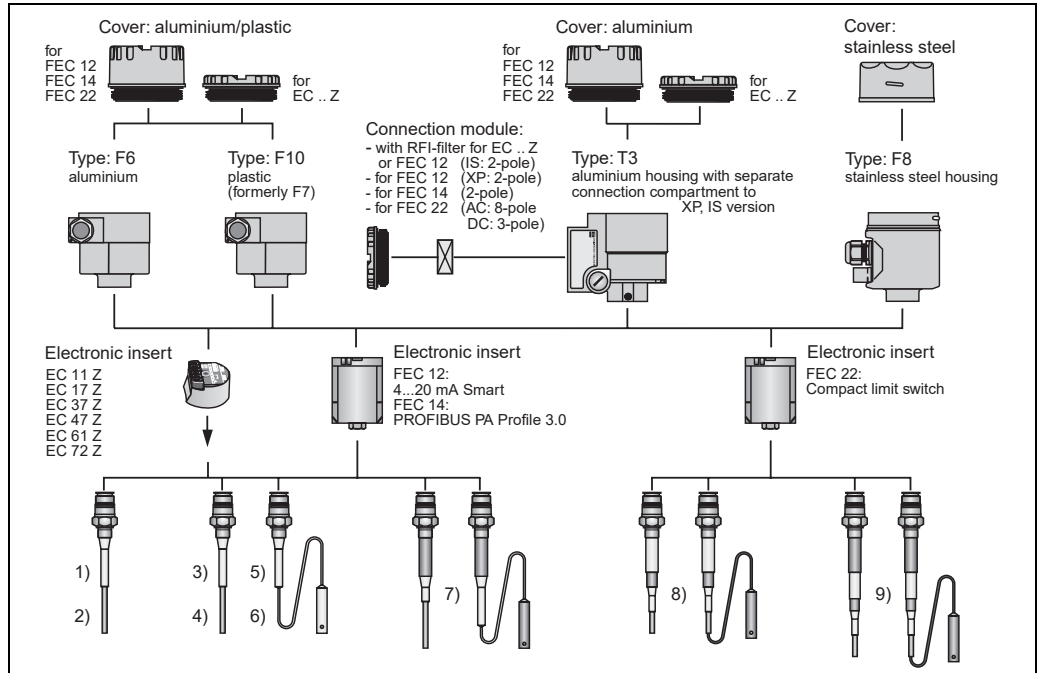


Remote housing with electronic insert FEC 22

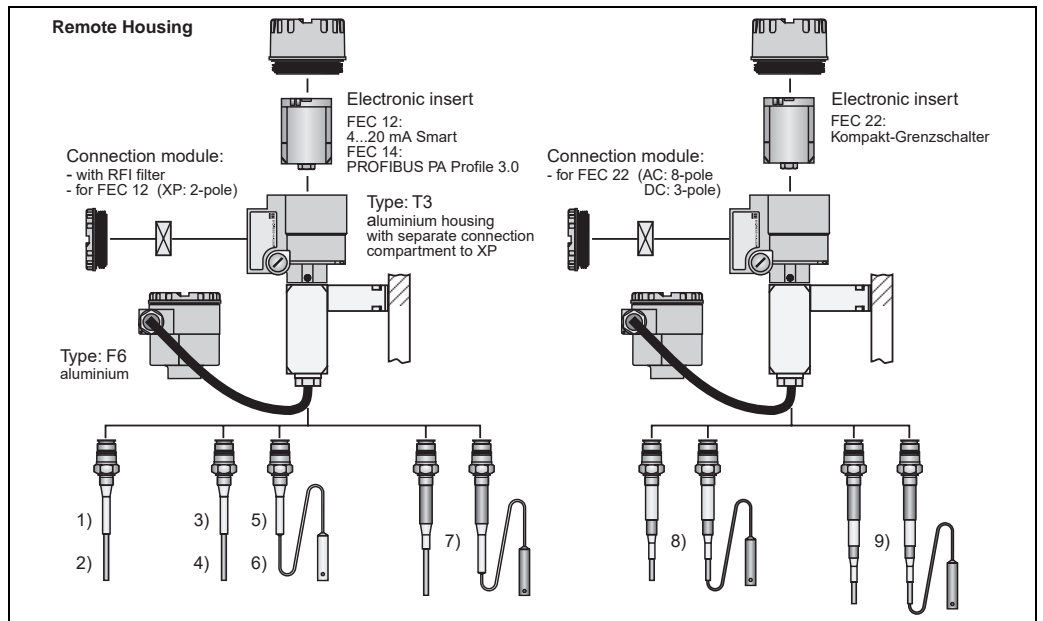


Remote housing with electronic insert FEC 12 or FEC 14

**Probe Selection**



L00-DC12TAxx-03-05-xx-en-000



L00-DC12TAxx-03-05-xx-en-001

- 1) DC 12 TA with reinforced rod, fully insulated
- 2) DC 12 TA with reinforced rod, partially insulated
- 3) DC 11 TAN with fully insulated rod
- 4) DC 16 TAN with partially insulated rod
- 5) DC 21 TAN with fully insulated rope
- 6) DC 26 TAN with partially insulated rope
- 7) DC 11, 16, 21, 26 TAS with screening against condensation and material build-up at the process connection
- 8) DC 11, 16, 21, 26 TAS with active compensation of conductive material build-up at the probe
- 9) DC 11, 16, 21, 26 TAS with screening and active build-up compensation

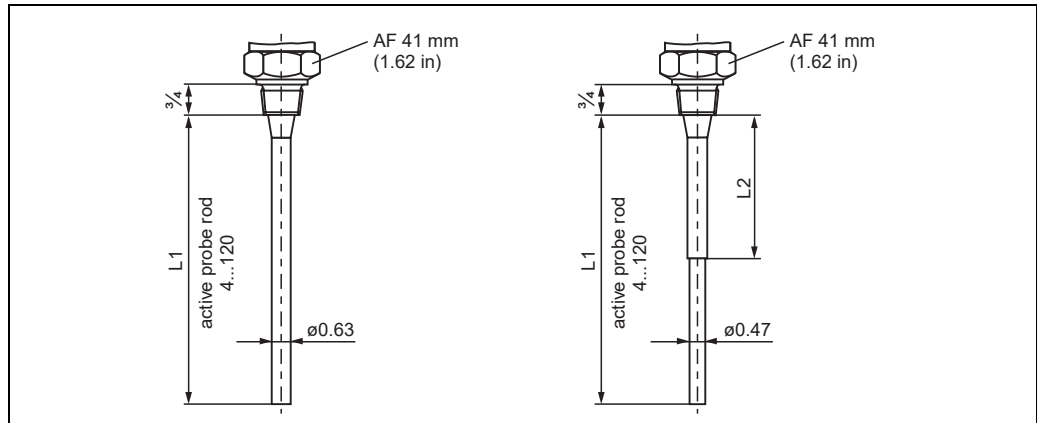
Not shown: rod probes DC 11, 16 TAN/TAS with ground tube;  
not for probes with active build-up compensation

## Dimensions (all dimensions in inches)

### DC 12 TA

L1 = Length of active probe rod  
 L2 = Length of partial insulation  
 minimum: 3 in  
 maximum: length L1 minus 2 in

Thread:  $\frac{3}{4}$  - 14 NPT



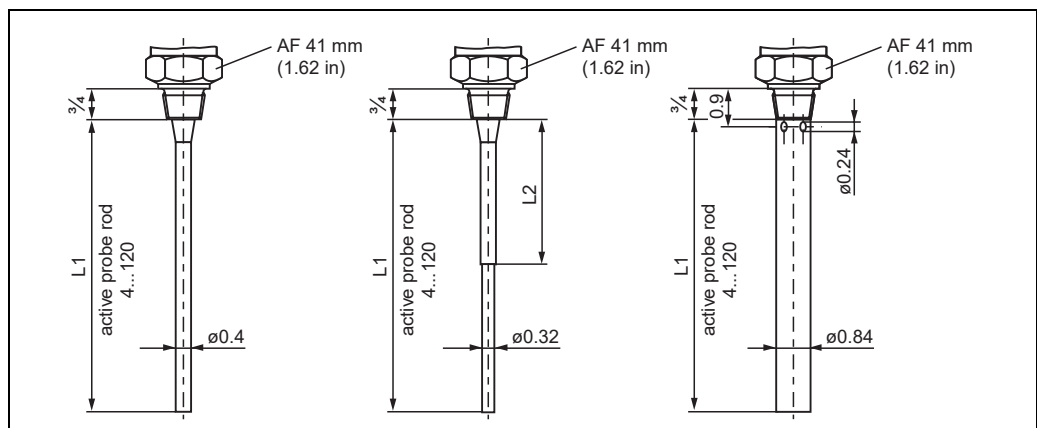
L00-DC12TAxx-06-05-xx-en-001

DC 12 TA rod probe with reinforced rod for high lateral load  
 left: fully insulated  
 right: partially insulated

### DC 11/16/21/26 TAN

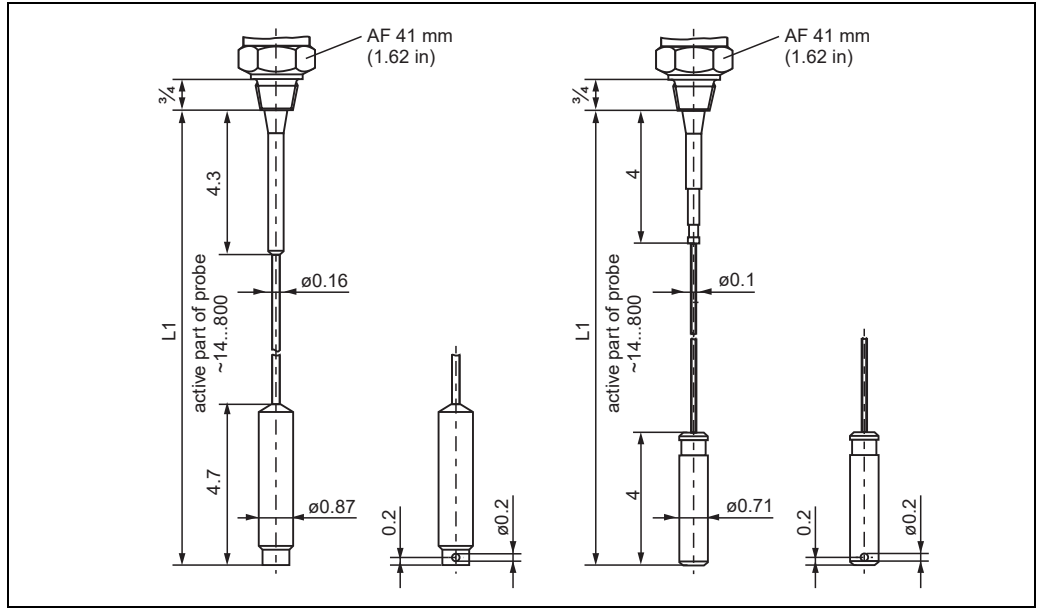
L1 = Length of active probe rod or probe rope  
 L2 = Length of partial insulation  
 minimum: 3 in  
 maximum: length L1 minus 2 in

Thread:  $\frac{3}{4}$  - 14 NPT



L00-DC12TAxx-06-05-xx-en-002

left: DC 11 TAN fully insulated rod probe  
 centre: DC 16 TAN partially insulated rod probe  
 right: DC 11, 16 TAN with ground tube (fully or partially insulated probe rod)



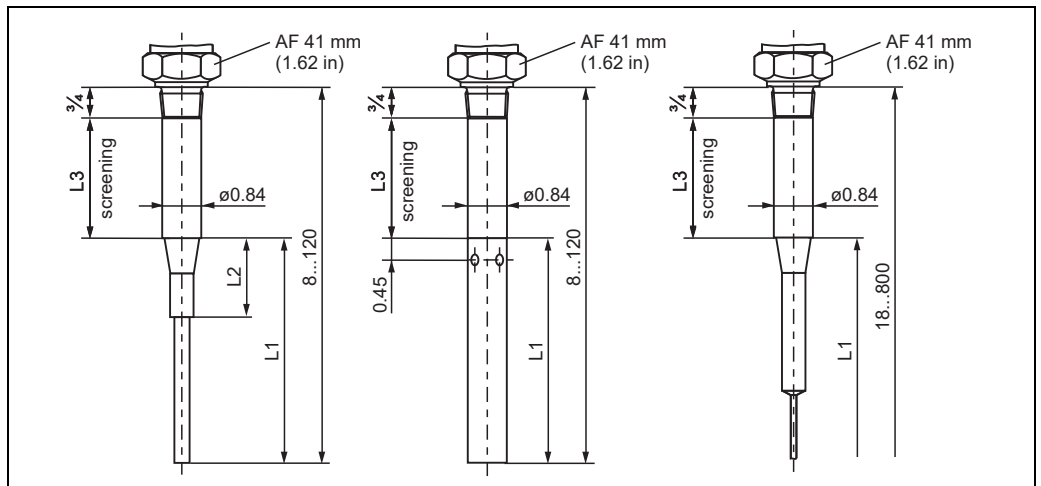
L00-DC12TAxx-06-05-xx-en-003

Tensioning weight with anchor hole  
 left: DC 21 TAN fully insulated rope probe  
 right: DC 26 TAN partially insulated rope probe

**DC 11/16/21/26 TAS**

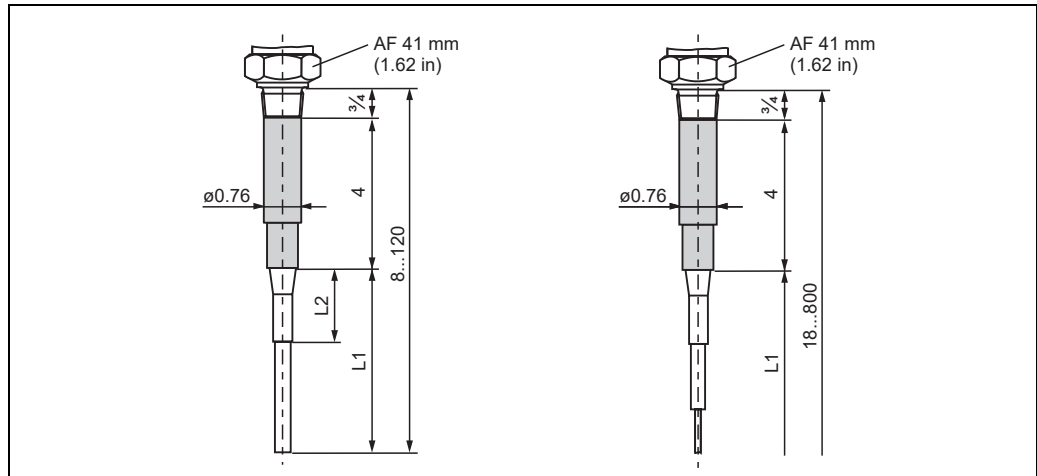
All following probes on page 5 and 6 are shown with partial insulation.  
 All versions are available with full insulation

- L1 = Length of probe rod or probe rope
- L2 = Length of partial insulation see page 3
- Thread: 3/4 - 14 NPT



L00-DC12TAxx-06-05-xx-en-004

Probes with **screening L3** against condensation and material build-up on the process connection  
 left: rod probe DC 11 TAS or DC 16 TAS  
 centre: rod probe DC 11 TAS or DC 16 TAS with ground tube  
 right: rope probe DC 21 TAS or DC 26 TAS

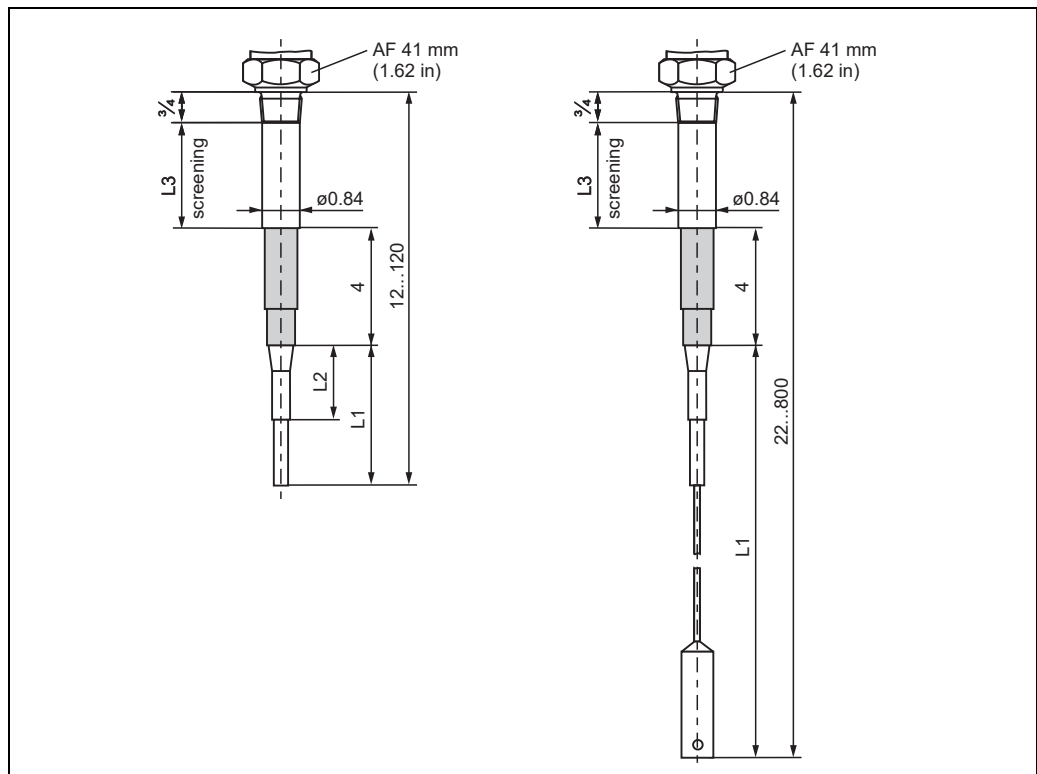


L00-DC12TAcc-06-05-xx-en-005

Probes with **active build-up compensation** (always 4 in)

left: rod probe DC 11 TAS or DC 16 TAS

right: rope probe DC 21 TAS or DC 26 TAS



L00-DC12TAcc-06-05-xx-en-006

Probes with **screening L3** and with **active build-up compensation**

left: rod probe DC 11 TAS or DC 16 TAS

right: rope probe DC 21 TAS or DC 26 TAS

### L3

The screening is available in three standard lengths:

L3 = 6 in

L3 = 9 in

L3 = 20 in

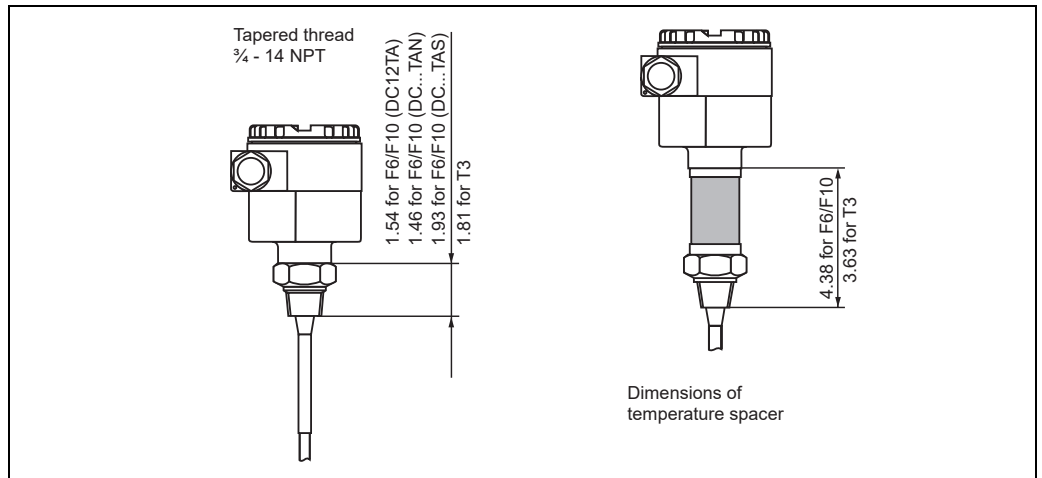
Special lengths on demand

L3 min. 4 in

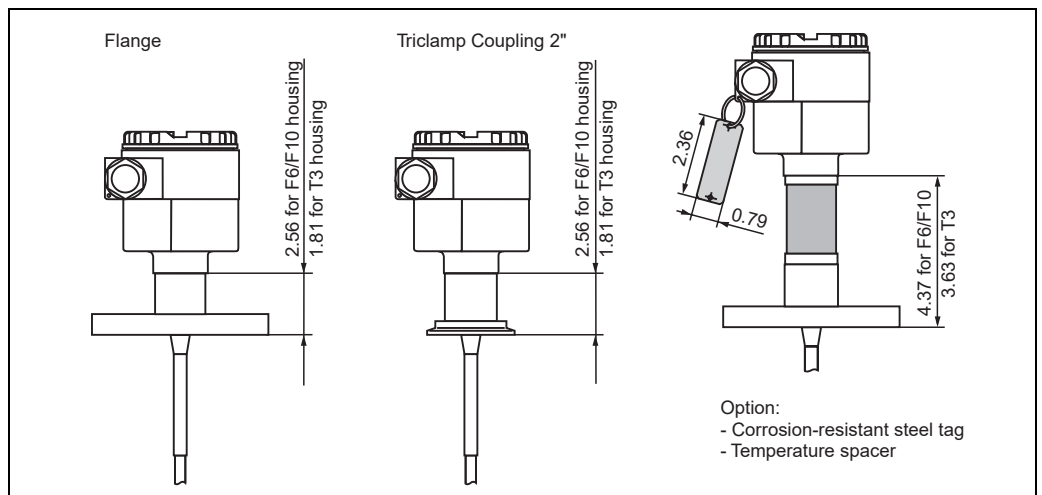
L3 max. 60 in

## Dimensions Continued / Additional Process Connections

All probes shown with type F6/F10 housing (dimensions for type T3 housing are also shown).



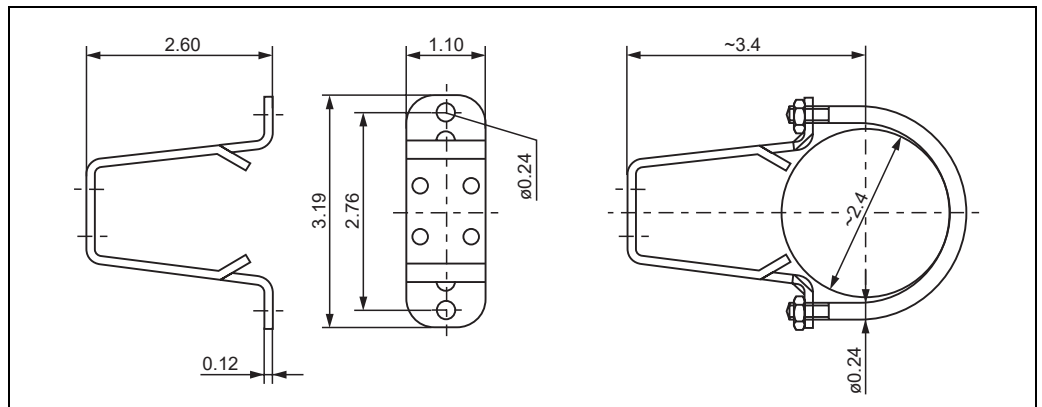
L00-DC12TAxx-06-05-xx-en-007



L00-DC12TAxx-06-05-xx-en-008

## Mounting Accessories

### Mounting accessories for remote housing T3



L00-DC12TAxx-06-05-xx-en-001

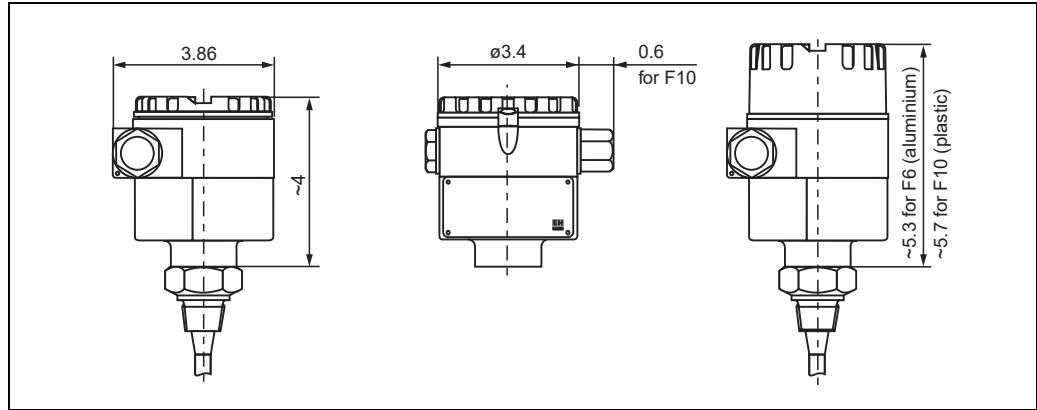
left: bracket for wall mounting  
 right: clamp for mounting on a 2" pipe



## Housing Dimensions

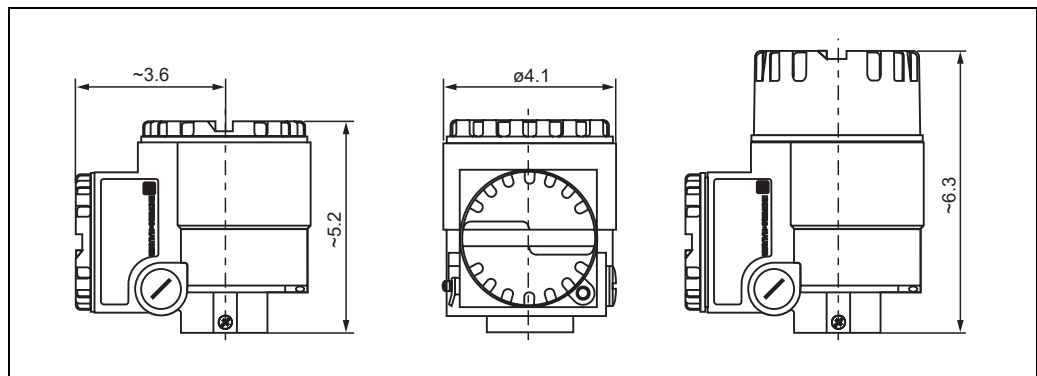
For both housings (F6 and F10):

- with low cover for small electronic inserts EC...Z,
- with raised cover for electronic inserts FEC 12, FEC 14, FEC 22 with two cable entries, one sealed with a blind plug



L00-DC12TAXx-06-05-xx-en-009

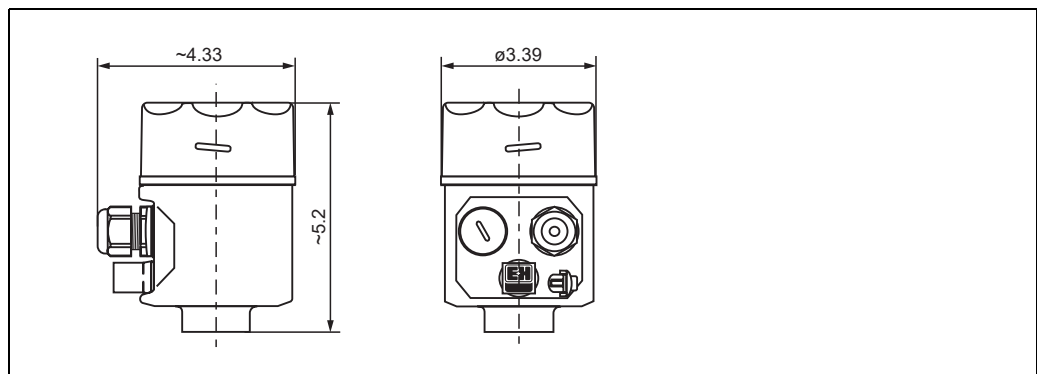
Housings in aluminium (type F6) or plastic (type F10, formerly F7)



L00-DC12TAXx-06-05-xx-en-010

Housings in aluminium (type T3) with separate connection compartment

- with RFI filter for small electronic inserts EC 17 Z, EC 61 Z, EC 37 Z / 47 Z, EC 11 Z / 72 Z
- with RFI filter and terminal connection module for FEC 12 (IS)
- with RFI filter and safety barriers for FEC 12 (XP)
- terminal connection module for FEC 22

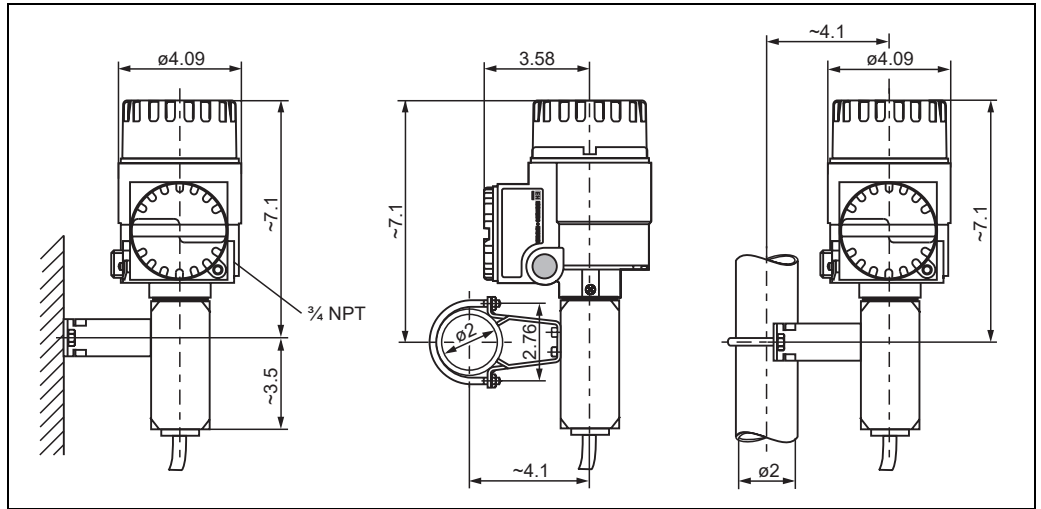


L00-DC12TAXx-06-05-xx-en-011

Stainless steel housing (type F8) for electronic inserts EC...Z/FEC... with two cable entries, one sealed with a blind plug

## Remote Housing

Remote housing T3 for electronic insert FEC 12, FEC 14 or FEC 22 (mounting accessories see Page 7).



L00-DC12TAxx-06-05-xx-en-012

left: wall mounting  
right: pipe mounting

## Technical Data

### General Information

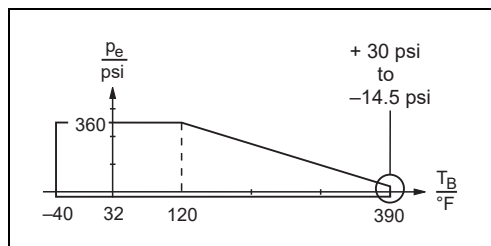
- Instrument family: Multicap T
- Instrument types: DC 12 TA, DC 11, 16, 21, 26 TAN/TAS
- Function: Probes for capacitive level measurement and limit detection

### Operating data

1 NM = 0.74 ft lbs  
1 N = 0.225 lbs

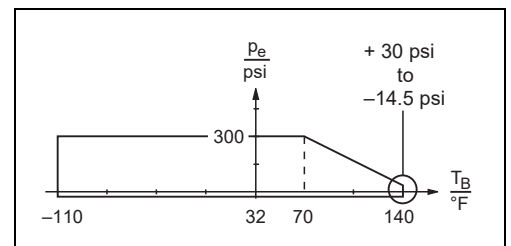
- Operating pressure: max. 360 psi. Depending on material - see below!
- Operating temperature: max. 390 °F. Depending on material - see below!
- Lateral load on probe rod:  
DC 12 TA: 22.2 ft lbs at 70 °F, static  
DC 11, 16: 11.1 ft lbs at 70 °F, static
- Max. tension on probe rope: 45 lbs at 70 °F, static

Permitted operating pressures  $p_e$  and operating temperatures  $T_B$ :



L00-DC12TAxx-05-05-xx-en-001

Insulation PTFE, FEP or PFA



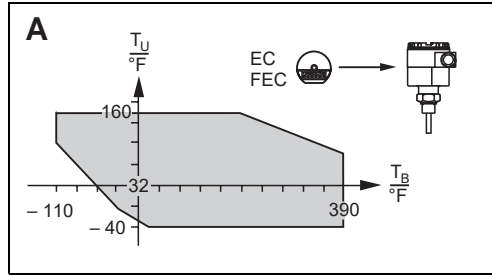
L00-DC12TAxx-05-05-xx-en-002

Insulation PE

**Applications**

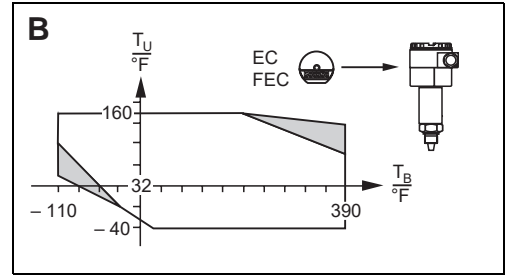
The graphs A and B apply to **all** electronic inserts.  
 The graphs C and D apply to the small electronic inserts EC 17 Z, EC 61 Z, EC 37 Z, EC 47 Z, EC 11 Z, EC 72 Z.

Operating ranges of the various probe types as a function of operating temperature  $T_B$  and ambient temperature  $T_U$ :



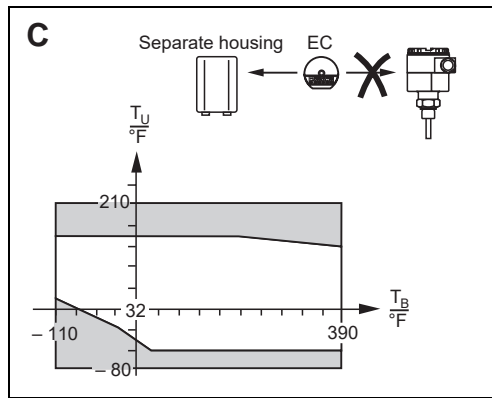
L00-DC12TAxx-05-05-xx-xx-001

Basic probe



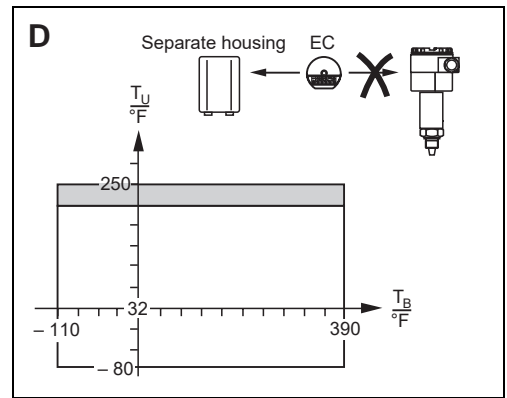
L00-DC12TAxx-05-05-xx-xx-002

Probe with temperature spacer



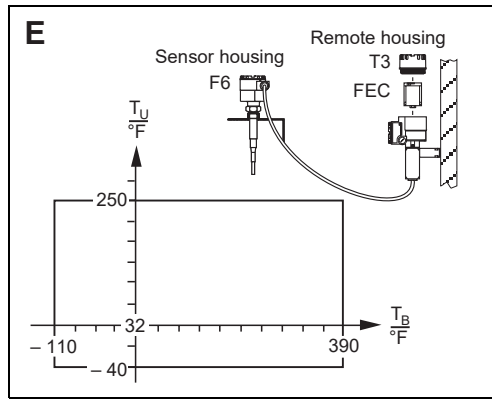
L00-DC12TAxx-05-05-xx-en-003

Electronic insert in separate housing



L00-DC12TAxx-05-05-xx-en-004

Probe with temperature spacer and electronic insert in separate housing



L00-DC12TAxx-05-05-xx-en-005

Basic probe and electronic insert in remote housing

**Probe lengths**

- Total length of rod probe: min. 4 in, max. 120 in, see dimensions
- Total length of rope probe: min. 14 in, max. 800 in, see dimensions

**Capacitance values of the probe**

- Basic capacitance: approx. 30 pF
- Temperature spacer: approx. 5 pF
- Active build-up compensation: < 10 pF

**Additional capacitances**

- Probe 10 in from a conductive vessel wall:  
Probe rod: approx. 0.33 pF/in in air  
Probe rope: approx. 0.25 pF/in in air
- Insulated probe rod in water:  
approx. 10 pF/in DC 12 TA  
approx. 13 pF/in DC 11 TA
- Insulated probe rope in water: approx. 5 pF/in
- Rod probe with ground tube:  
insulated probe rod: in air approx. 1.6 pF/in; in water approx. 12.7 pF/in  
uninsulated probe rod: in air approx. 1.4 pF/in

**Probe lengths for continuous measurement in conducting liquids**

- EC with  $\Delta C_{\max} = 2000$  pF (EC 47 Z, EC 72 Z, FEC 12):  
Rope probe up to 300 in (up to 800 in in non conducting liquids)  
Rod probe up to 120 in
- EC with  $\Delta C_{\max} = 4000$  pF (EC 37 Z, EC 11 Z):  
Rope probe up to 800 in  
Rod probe up to 120 in

**Accuracy**

- Length tolerances:  
up to 40 in: +0 in, -0.2 in rod probe/ -0.4 in rope probe  
up to 120 in: +0 in, -0.4 in rod probe/ -0.8 in rope probe  
up to 240 in: +0 in, -1.2 in  
up to 800 in: +0 in, -1.6 in

The following specifications apply to **fully insulated** probes operating in **conducting** liquids

- Linearity error: < 1 % for 40 in \*\*
- Temperature dependence of the probe rod:  
< 0.1 % per K DC 12 TA \*\*  
< 0.12 % per K DC 11 TA \*\*
- Pressure dependence of the probe rod: 0.8...2.3 % per 100 psi \*\*
- Temperature dependence of the probe rope: < 0.1 % per K \*\*
- Pressure dependence of the probe rope: < 0.7 % per 100 psi \*\*

\*\* Error in non-conducting materials insignificant

**Process connections**

- Tapered thread  $\frac{3}{4}$  - 14 NPT: ANSI B 1.20.1
- ANSI flanges: ANSI B 16.5
- Triclamp coupling: ISO 2852

**Materials**

- Aluminium housing (F6, T3): GD-Al Si 10 Mg, DIN 1725, plastic coated (blue/grey)
- Plastic housing (F10): fibre-glass reinforced polyester (blue/grey)
- Stainless steel housing (F8): stainless steel 1.4301 (AISI 304), unvarnished
- Seal for housing cover:  
F6, T3 housings: O-ring in EPDM (elastomer)  
F10 housing: O-ring in silicone rubber  
F8 housing: profiled O-ring in silicone
- Temperature spacer: Stainless steel AISI 316 or similar
- Probe rod, ground tube, process connection, screening, build-up compensation, tensioning weight for rope probe: AISI 316L
- Probe rope: AISI 316

Further material specifications see product structure on Page 12...16

## Product Structure

**Product Structure**  
**Multicap DC 12 TA**

Design						Basic weight
DC 12 TA	Rod probe for standard applications					2,6 lbs*
<b>10</b>	<b>Certificate</b>					
	A	For non-hazardous areas				
	J	FM IS	Class I, II, III	Div. 1, Groups A-G		
	K	FM XP	Class I	Div. 1, Groups A-D		
	Q	CSA IS	Class I, II, III	Div. 1, Groups A-G		
	R	CSA XP	Class I	Div. 1, Groups B-D		
	Y	Special version				
<b>20</b>	<b>Type of insulation</b>					<b>Additional weight</b>
	1	Fully insulated probe				--
	6	Partial insulated probe				--
<b>30</b>	<b>Length of insulation L2</b>					
	F	..... in (3 in... 118 in)	partially insulated	PTFE	0.09 oz/in	
	G	..... in (3 in... 118 in)	partially insulated	PFA	0.09 oz/in	
	H	..... in (3 in... 118 in)	partially insulated	PE	0.09 oz/in	
	Y	Special version				
	1	Fully insulated probe				--
<b>40</b>	<b>Active length L1, Material</b>					
	F	..... in (4 in... 144 in)	fully insulated	PTFE	0.09 oz/in	
	G	..... in (4 in... 118 in)	fully insulated	PFA	0.09 oz/in	
	H	..... in (4 in... 118 in)	fully insulated	PE	0.09 oz/in	
	Y	Special version				
	2	..... in (4 in... 118 in)	partially insulated		0.08 oz/in	
<b>50</b>	<b>Process connection, Material</b>					
	C	¾" NPT	Thread ANSI	316L	--	
	D	1" NPT	Thread ANSI	316L	--	
	F	DN 40-51 (2")	ISO 2852	316L	1.1 lbs	
		Tri-Clamp connection				
	G	DN 32 (1½")	ISO 2852	316L	--	
		Tri-Clamp connection				
	H	DN 25 (1")	ISO 2852	316L	--	
		Tri-Clamp connection				
	L	DN 38 (1½") removable	ISO 2852	316L, A3	--	
		Tri-Clamp connection				
	Y	Special version				
	5	Flanged process connection			316L	--
<b>60</b>	<b>Flange type, Material</b>					
	1B	without process flange connection				--
	5A	1"	150 lbs	RF	Flange ANSI B16.5 316L	0.5 lbs
	5B	1"	300 lbs	RF	Flange ANSI B16.5 316L	2.6 lbs
	5E	1½"	150 lbs	RF	Flange ANSI B16.5 316L	2.9 lbs
	5F	1½"	300 lbs	RF	Flange ANSI B16.5 316L	5.5 lbs
	5G	2"	150 lbs	RF	Flange ANSI B16.5 316L	4.8 lbs
	5H	2"	300 lbs	RF	Flange ANSI B16.5 316L	6.6 lbs
	5M	3"	150 lbs	RF	Flange ANSI B16.5 316L	--
	5N	3"	300 lbs	RF	Flange ANSI B16.5 316L	--
	5P	4"	150 lbs	RF	Flange ANSI B16.5 316L	--
	5Q	4"	300 lbs	RF	Flange ANSI B16.5 316L	--
	6A	1"	150 lbs	RF	Flange ANSI B16.5 PTFE >316L	1.5 lbs
	6B	1"	300 lbs	RF	Flange ANSI B16.5 PTFE >316L	2.6 lbs
	6E	1½"	150 lbs	RF	Flange ANSI B16.5 PTFE >316L	2.9 lbs
	6F	1½"	300 lbs	RF	Flange ANSI B16.5 PTFE >316L	5.5 lbs
	6G	2"	150 lbs	RF	Flange ANSI B16.5 PTFE >316Ti	4.8 lbs
	6H	2"	300 lbs	RF	Flange ANSI B16.5 PTFE >316L	6.6 lbs
	9Y	Special version				

70										Electronic insert		
										A	Prepared for ECxx electronic insert with low housing cover	--
										B	with EC 61 Z 3-wire insert	0.44 lbs
										C	with EC 11 Z 3-wire Tx, 33 kHz	0.44 lbs
										D	with EC 72 Z 3-wire Tx, 1 MHz	0.44 lbs
										E	with EC 17 Z 2-wire PFM	0.44 lbs
										G	with EC 37 Z 2-wire PFM, 33 kHz	0.44 lbs
										H	with EC 47 Z 2-wire PFM, 1 MHz	0.44 lbs
										K	with FEC 12 2-wire 4-20 mA HART	0.66 lbs** + 0.66 lbs
										M	with FEC 22 90-253 V AC, DPDT relay	0.66 lbs** + 0.66 lbs
										N	with FEC 22 10-55 V DC, 3-wire PNP	0.66 lbs** + 0.66 lbs
										P	with FEC 14 PROFIBUS PA	--
										V	with FEC 14 Local operation FHB 20 and PROFIBUS PA	--
										Y	Special version	--
										2	Prepared for FECxx electronic insert with raised housing cover	0.66 lbs**

80										Housing		
										N	Aluminium T3 Housing PA-plug M12 IP66	--
										O	316L F8 Housing PA-plug M12 IP66	--
										P	Polyester F10 Housing Nema4X NPT 1/2"	--
										R	Aluminium F6 Housing Nema4X NPT 1/2"	--
										S	Aluminium T3 Housing Nema4X NPT 3/4"	2.2 lbs
										Y	Special version	--
										1	316L F8 Housing gland Pg13,5 IP66	--
										2	316L F8 Housing entry G 1/2" IP66	--
										3	316L F8 Housing gland M20x1,5 IP66	--
										4	316L F8 Housing entry NPT 1/2" IP66	--
										5	Polyester Housing PA-plug M12 IP66	--
										6	Aluminium F6 Housing PA-plug M12 IP66	--
										7	80 inch cable, remote T3-electronic housing (NEMA4X), NPT 3/4" F6-housing NEMA4x on probe	--
										8	80 inch conduit, remote T3-electronic housing (NEMA4X), NPT 3/4" F6-housing NEMA4x on probe	--

90										Option		
										1	Basic version	--
										2	TAG number	--
										3	Temperature spacer	0.44 lbs
										4	Temperature spacer and TAG number	0.44 lbs
										9	Special version	--

DC 12 TA-											Complete product designation
-----------	--	--	--	--	--	--	--	--	--	--	------------------------------

\* Basic weight including 3/4" process connection and F10 housing

\*\* Additional weight for raised cover



Note!  
Please don't forget:

Length of

Partial insulation

L2



□ □ □ □ in

Active probe length

L1



□ □ □ □ in

1 lb = 0.45 kg

1 oz = 28.35 g

1 in = 25.4 mm

## Product Structure

### Product Structure

**Multicap DC 11 TAN/TAS**

**Multicap DC 16 TAN/TAS**

**Multicap DC 21 TAN/TAS**

**Multicap DC 26 TAN/TAS**

Design		Basic weight	
DC 11 TAN	Fully insulated rod probe for standard applications		2,6 lbs*
DC 16 TAN	Partially insulated rod probe for standard applications		2,6 lbs*
DC 21 TAN	Fully insulated rope probe for standard applications		3,1 lbs*
DC 26 TAN	Partially insulated rope probe for standard applications		3,1 lbs*
DC 11 TAS	Fully insulated rod probe with protection features		2,6 lbs*
DC 16 TAS	Partially insulated rod probe with protection features		2,6 lbs*
DC 21 TAS	Fully insulated rope probe with protection feature		3,1 lbs*
DC 26 TAS	Partially insulated rope probe with protection features		3,1 lbs*
10	Certificate		
A	For non-hazardous areas		
J	FM IS	Class I, II, III	Div. 1, Groups A-G
K	FM XP	Class I	Div. 1, Groups A-D
Q	CSA IS	Class I, II, III	Div. 1, Groups A-G
Y	Special version		
20	Build-up protection		Additional weight
	DC 11, 16, 21, 26 TAN		
A	Protection feature not selected		--
	DC 11, 16, 21, 26 TAS		
B	4 inch active guard		0.44 lbs
M	6 inch L3 screening		0.44 lbs
N	9 inch L3 screening		0.66 lbs
P	20 inch L3 screening		1.3 lbs
R	... in (4 in...59 in) L3 screening		1.1 oz/in
S	6 inch L3 screening and 4 inch active guard		0.88 lbs
T	9 inch L3 screening and 4 inch active guard		1.1 lbs
U	20 inch L3 screening and 4 inch active guard		2.0 lbs
V	... in (4 in...59 in) L3 screening and 4 inch active guard		1.5 oz/in + 0.44 lbs
Y	Special version		
30	Probe insulation		
	DC 11 TAN/TAS, DC 16 TAN/TAS		
1	Fully insulated probe		--
	DC 16 TAN/TAS		
F	... in (3 in... 118 in)	partially insulated PTFE	0.06 oz/in
	DC 26 TAN/TAS		
C	Rope type 1/10 inch diameter		--
9	Special version		
40	Active length L1		
	DC 11 TAN/TAS		
3	... in (4 in...118 in)	316L + PTFE	0.45 oz/in
4	... in (4 in...118 in) with ground tube	316L + PTFE	1.1 oz/in
	DC 16 TAN/TAS		
3	... in (4 in...118 in)	316L	0.4 oz/in
4	... in (4 in...118 in) with ground tube	316L	1.0 oz/in
	DC 21 TAN/TAS		
3	... in (4 in... 800 in) tensioning weight with anchor hole	316 + FEP	0.04 oz/in

40							Active length L1									
							DC 26 TAN/TAS									
							3	... in (4 in... 800 in)				316				0.03 oz/in
								tensioning weight with anchor hole								
							9	Special version								
50							Process connection, Material									
							C	3/4" NPT		Thread ANSI		316L				--
							F	DN 40-51 (2")		ISO 2852		316L				1.1 lbs
								Tri-Clamp connection								
								only DC 11 TAN/TAS, DC 21 TAN/TAS								
							G	DN 38 (1 1/2")		ISO 2852		316L				--
								Tri-Clamp connection								
							H	DN 25 (1")		ISO 2852		316L				--
								Tri-Clamp connection								
							Y	Special version								
							5	Flanged process connection				316L				--
60							Flange type, Material									
							1B	without process flange connection								--
							5A	1" 150 lbs	RF	Flange ANSI B16.5		316L				1.5 lbs
							5B	1" 300 lbs	RF	Flange ANSI B16.5		316L				2.6 lbs
							5E	1 1/2" 150 lbs	RF	Flange ANSI B16.5		316L				2.9 lbs
							5F	1 1/2" 300 lbs	RF	Flange ANSI B16.5		316L				5.5 lbs
							5G	2" 150 lbs	RF	Flange ANSI B16.5		316L				4.8 lbs
							5H	2" 300 lbs	RF	Flange ANSI B16.5		316L				6.6 lbs
							5M	3" 150 lbs	RF	Flange ANSI B16.5		316L				--
							5N	3" 300 lbs	RF	Flange ANSI B16.5		316L				--
							5P	4" 150 lbs	RF	Flange ANSI B16.5		316L				--
							5Q	4" 300 lbs	RF	Flange ANSI B16.5		316L				--
							6A	1" 150 lbs	RF	Flange ANSI B16.5	PTFE	>316L				1.5 lbs
							6B	1" 300 lbs	RF	Flange ANSI B16.5	PTFE	>316L				2.6 lbs
							6E	1 1/2" 150 lbs	RF	Flange ANSI B16.5	PTFE	>316L				2.9 lbs
							6F	1 1/2" 300 lbs	RF	Flange ANSI B16.5	PTFE	>316L				5.5 lbs
							6G	2" 150 lbs	RF	Flange ANSI B16.5	PTFE	>316Ti				4.8 lbs
							6H	2" 300 lbs	RF	Flange ANSI B16.5	PTFE	>316L				6.6 lbs
							9Y	Special version								
70							Electronic insert									
							A	Prepared for ECxx electronic insert with low housing cover								--
							B	with EC 61 Z	3-wire	insert						0.44 lbs
							C	with EC 11 Z	3-wire	Tx, 33 kHz						0.44 lbs
							D	with EC 72 Z	3-wire	Tx, 1 MHz						0.44 lbs
							E	with EC 17 Z	2-wire	PFM						0.44 lbs
							G	with EC 37 Z	2-wire	PFM, 33 kHz						0.44 lbs
							H	with EC 47 Z	2-wire	PFM, 1 MHz						0.44 lbs
							K	with FEC 12	2-wire	4-20 mA HART						0.66 lbs** + 0.66 lbs
							M	with FEC 22	90-253 V AC,	DPDT relay						0.66 lbs** + 0.66 lbs
							N	with FEC 22	10-55 V DC,	3-wire PNP						0.66 lbs** + 0.66 lbs
							P	with FEC 14	PROFIBUS	PA						--
							V	with FEC 14	Local operation	FHB 20 and PROFIBUS PA						--
							Y	Special version								
							2	Prepared for FECxx electronic insert with raised housing cover								0.66 lbs**
80							Housing									
							N	Aluminium	T3 Housing	PA-plug	M12	IP66				--
							O	316L	F8 Housing	PA-plug	M12	IP66				--
							P	Polyester	F10 Housing	Nema4X	NPT 1/2"				--	
							R	Aluminium	F6 Housing	Nema4X	NPT 1/2"				--	
							S	Aluminium	T3 Housing	Nema4X	NPT 3/4"				2.2 lbs	
							Y	Special version								
							4	316L	F8 Housing	entry	NPT 1/2"	IP66				--
							5	Polyester	Housing	PA-plug	M12	IP66				--



80										Housing	
										6	Aluminium F6 Housing PA-plug M12 IP66 --
										7	80 inch cable, remote T3-electronic housing (NEMA4X), NPT 3/4" F6-housing NEMA4x on probe --
										8	80 inch conduit, remote T3-electronic housing (NEMA4X), NPT 3/4" F6-housing NEMA4x on probe --
90										Option	
										1	Basic version --
										2	TAG number --
										3	Temperature spacer 0.44 lbs
										4	Temperature spacer and TAG number 0.44 lbs
										9	Special version
DC 11 TAx-										Complete product designation	
DC 16 TAx-										Complete product designation	
DC 21 TAx-										Complete product designation	
DC 26 TAx-										Complete product designation	

\* Basic weight including 3/4" process connection and F10 housing for rope probes with tensioning weight

\*\* Additional weight for raised cover



Note!  
Please don't forget:

Length of

Screening  
L3

↓  
    in

Partial insulation  
L2

↓  
    in

Active probe length  
L1

↓  
      in

1 lb = 0.45 kg  
 1 oz = 28.35 g  
 1 in = 25.4 mm

## Accessories

---

- Protective cover for the small probe housing (F6, F10) see Technical Information TI 229F: "Probe accessories"  
The protective cover shields the probe from excessive heat and prevents condensation from forming in the housing when temperatures vary over a wide range
- Slip-on plate for partially insulated probe DC 12 TA for increasing the switching safety for limit detection
- Rope shortening kit for fully insulated probes
- Rope shortening kit for partially insulated probes

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