Датчики уровня
multicap T DC 12 TE
multicap T DC 11/16/21/26 TEN/TES

Техническая информация

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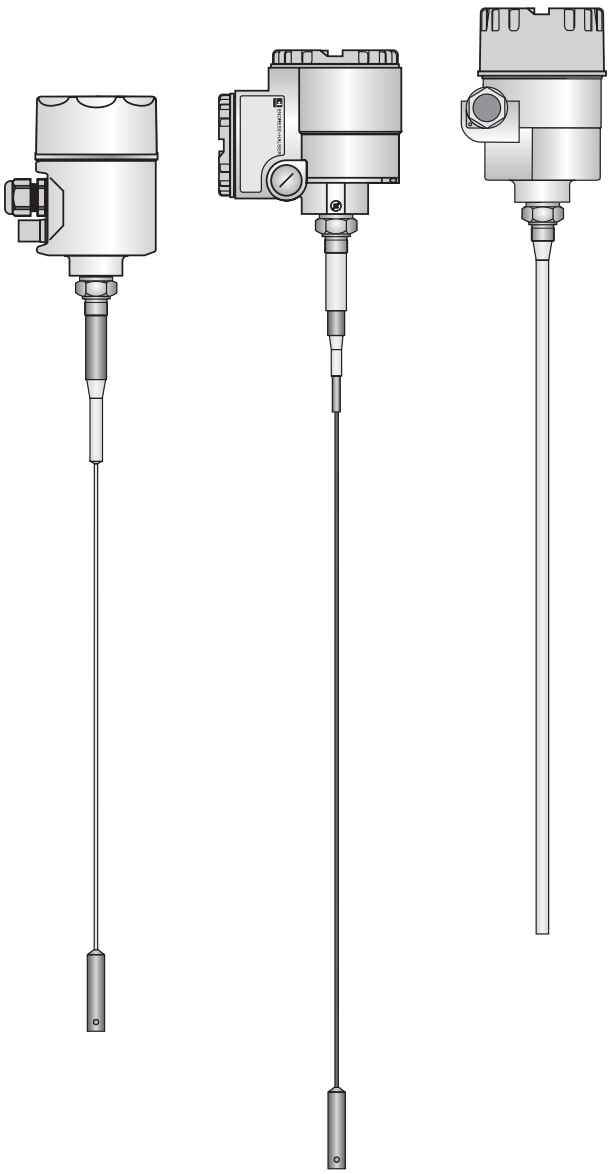
Level Probes
multicap T DC 12 TE
multicap T DC 11/16/21/26 TEN/TES

Compact capacitive level probes (with European certificates). Fully and partially insulated rod and rope probes



Applications

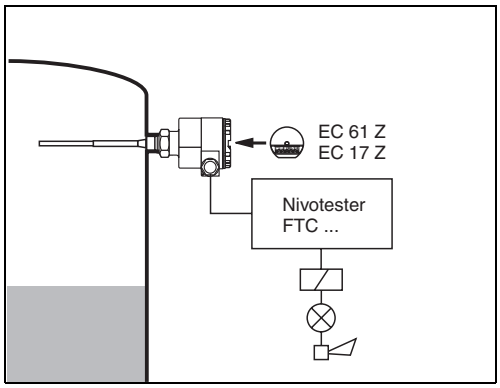
Multicap T probes are designed for continuous level measurement and limit detection, primarily in liquids.
The DC 12 T probe with reinforced rod is also suitable for use in light bulk solids.

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 25 bar. Seal and insulation materials enable probes to be used at operating temperatures in the vessel of –80 °C to +200 °C.

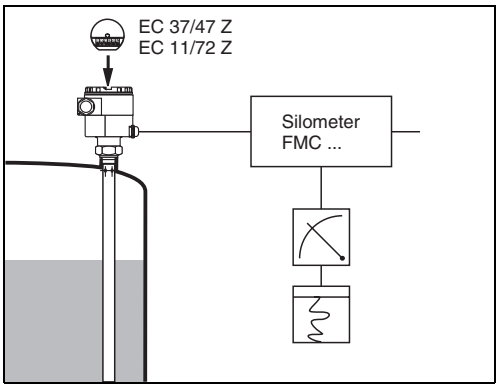
Your Benefits

- Certificates from many European 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 G ¾ A and ¾ 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

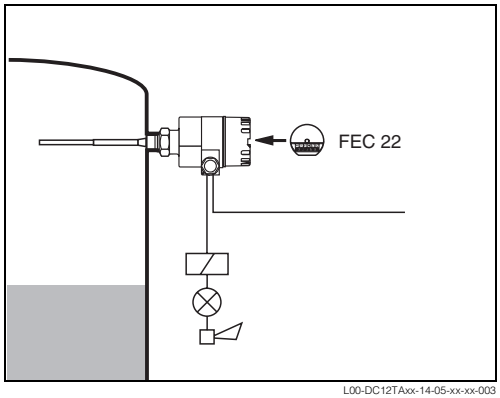
Measuring System



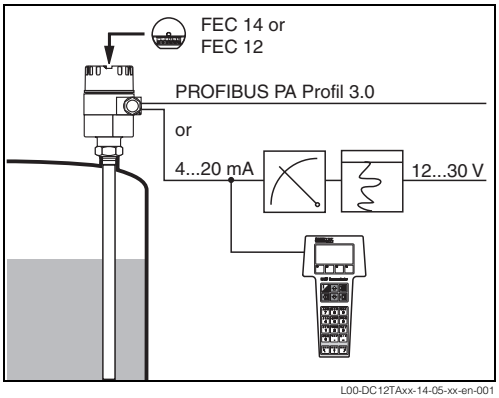
Limit detection with separate Nivotester switching unit



Level measurement with separate Silometer transmitter

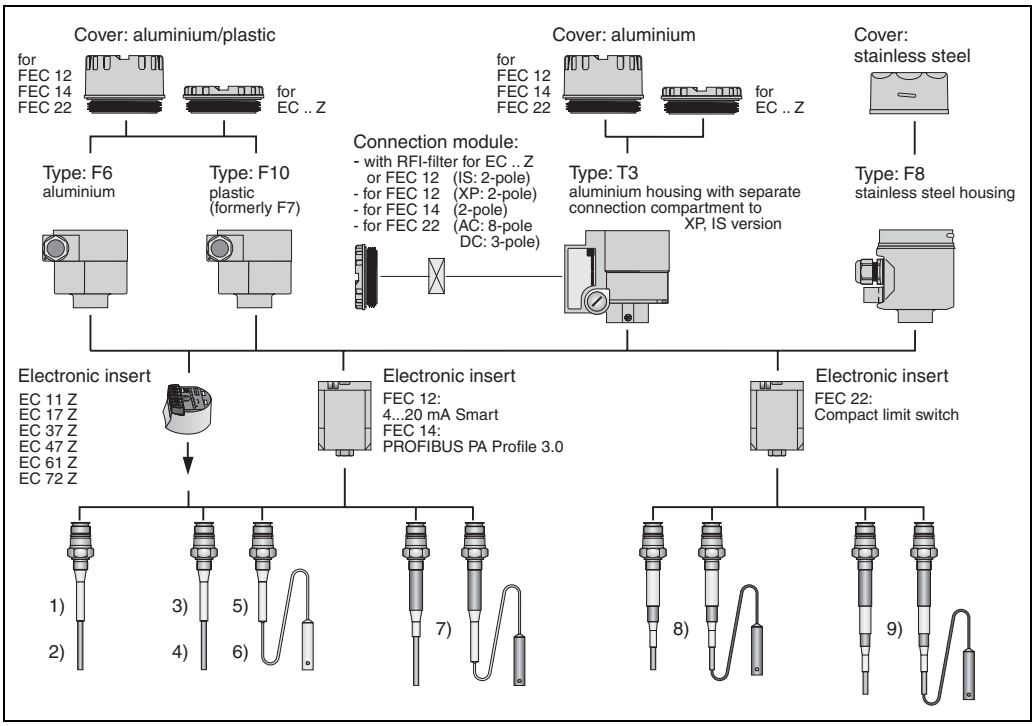


Compact level switch with relay or transistor output



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

Probe Selection



1) DC 12 TE with reinforced rod, fully insulated

2) DC 12 TE with reinforced rod, partially insulated

3) DC 11 TEN with fully insulated rod

4) DC 16 TEN with partially insulated rod

5) DC 21 TEN with fully insulated rope

6) DC 26 TEN with partially insulated rope

7) DC 11, 16, 21, 26 TES with screening against condensation and material build-up at the process connection

8) DC 11, 16, 21, 26 TES with active compensation of conductive material build-up at the probe

9) DC 11, 16, 21, 26 TES with screening and active build-up compensation

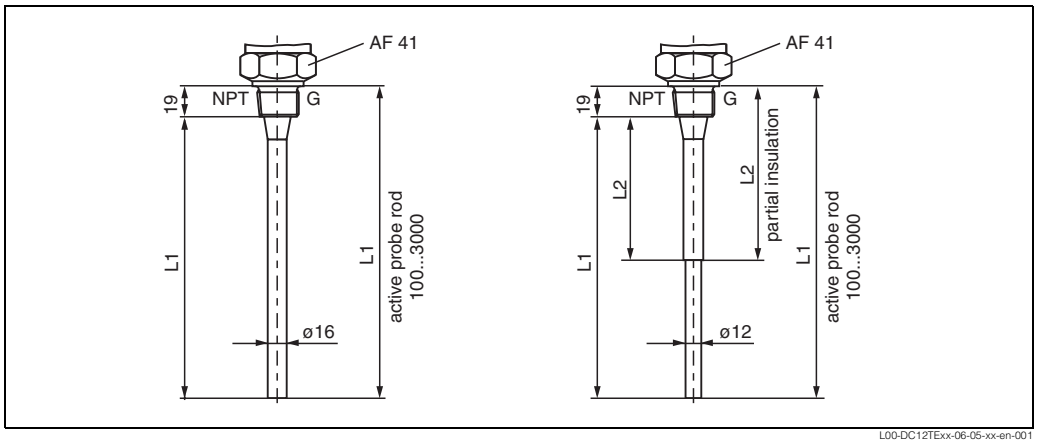
Not shown:
rod probes DC 11, 16 TEN/TES with ground tube;
not for probes with active build-up compensation

Dimensions

DC 12 TE

L1 = Length of active probe rod
L2 = Length of partial insulation
minimum: 75 mm
maximum: length L1 minus 50 mm

Thread options:
G ¾ A, G 1 A
¾ - 14 NPT, 1 - 11½ NPT

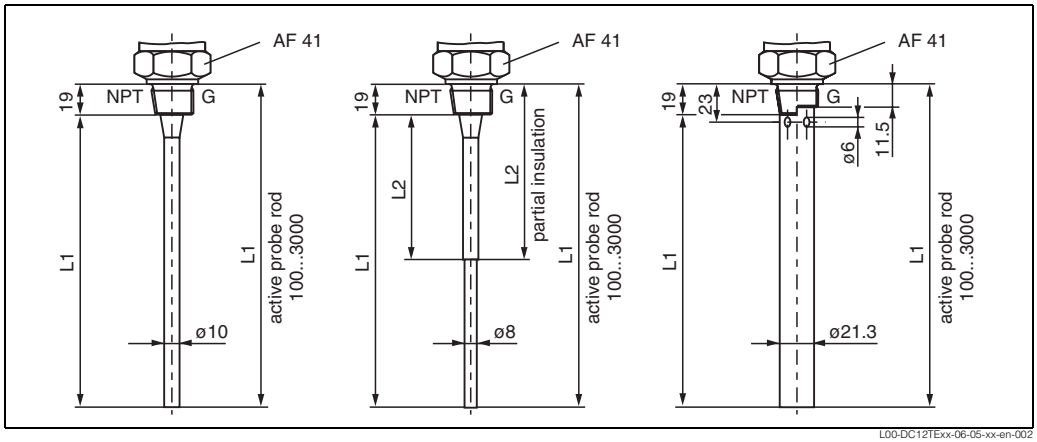


DC 12 TE rod probe with reinforced rod for high lateral load
left: fully insulated
right: partially insulated

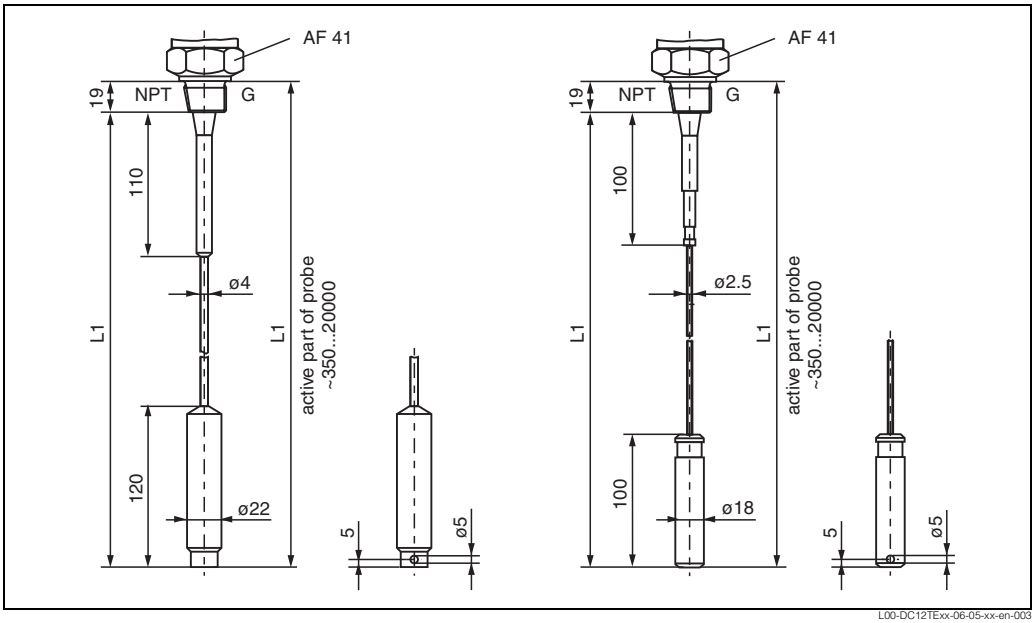
DC 11/16/21/26 TEN

L1 = Length of active probe rod or probe rope
L2 = Length of partial insulation
minimum: 75 mm
maximum: length L1 minus 50 mm

Thread options:
G ¾ A, G 1 A
¾ - 14 NPT, 1 - 11½ NPT



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



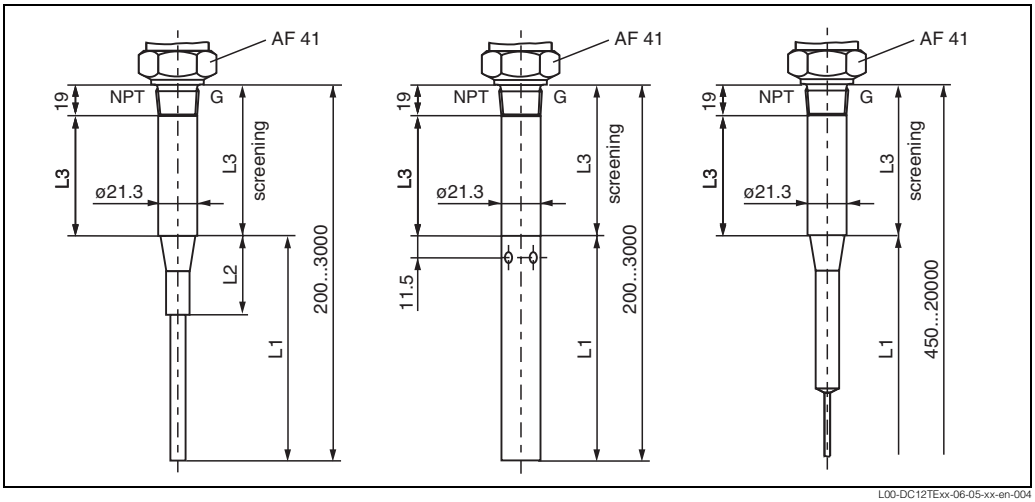
Tensioning weight with anchor hole
left: DC 21 TEN fully insulated rope probe
right: DC 26 TEN partially insulated rope probe

DC 11/16/21/26 TES

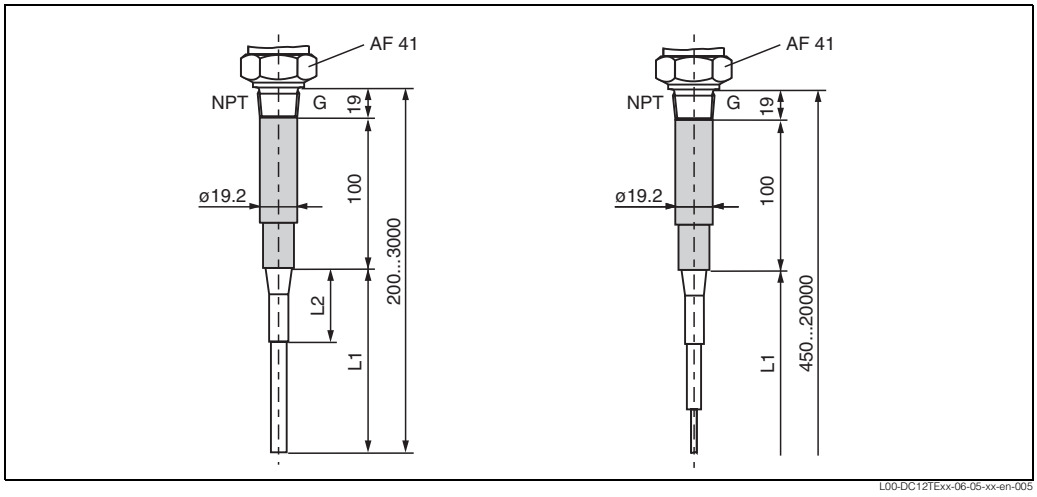
All following probes on page 5 and 6 are shown with partial insulation.
All versions are available with full insulation

L1 = Length of probe rod or probe rope
L2 = Length of partial insulation see page 3

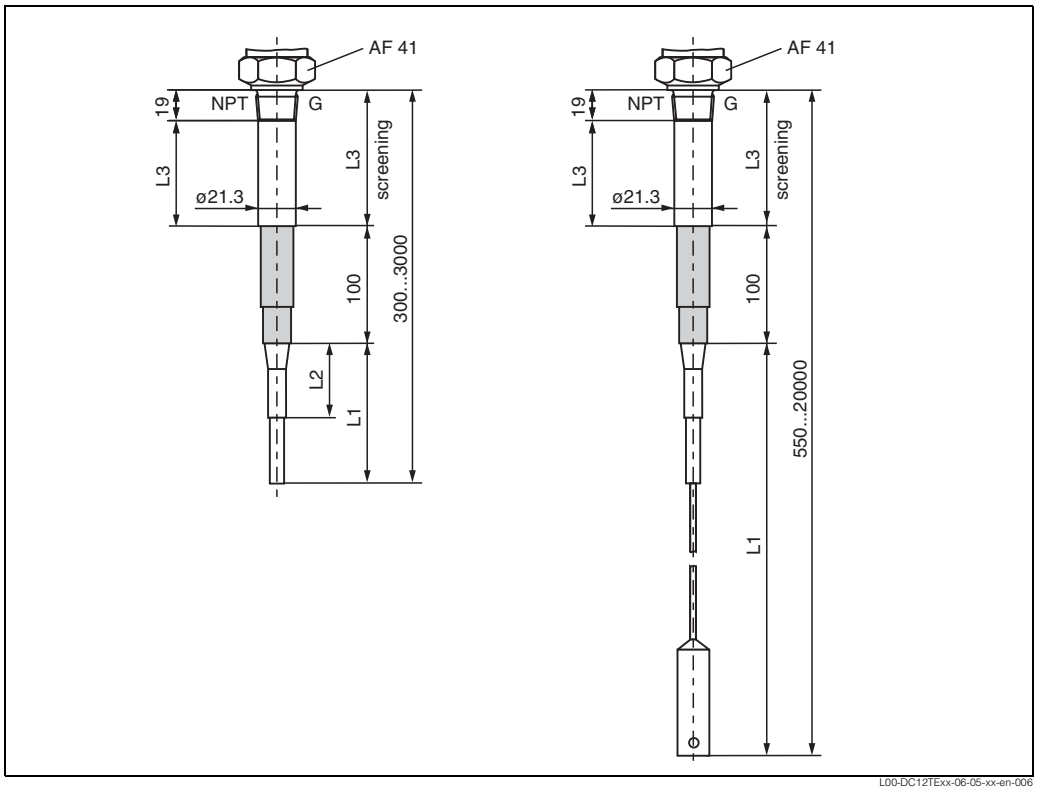
Thread options:
G ¾ A, G 1 A
¾ - 14 NPT, 1 - 11½ NPT



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



*Probes with **active build-up compensation** (always 100 mm)*
left: rod probe DC 11 TES or DC 16 TES
right: rope probe DC 21 TES or DC 26 TES



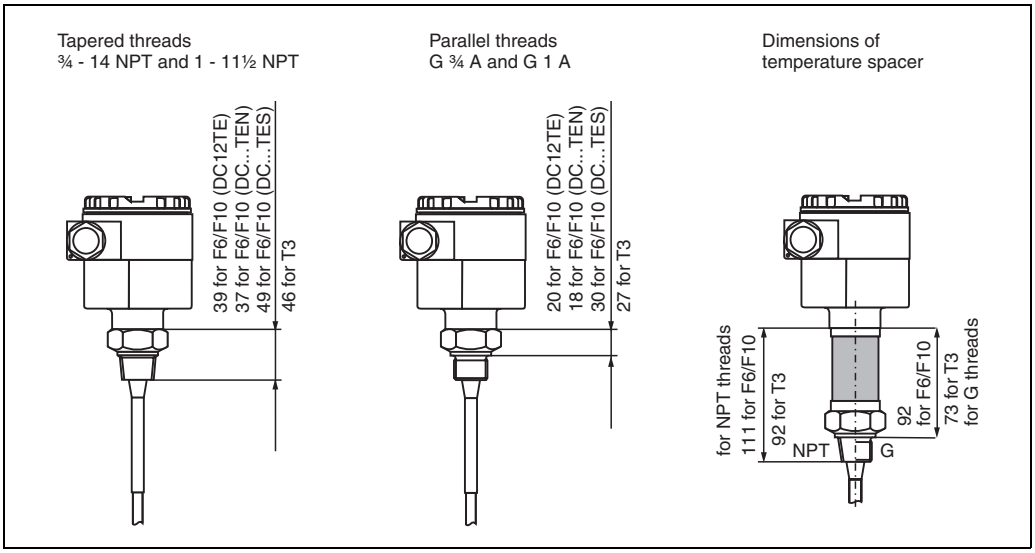
*Probes with **screening L3** and with **active build-up compensation***
left: rod probe DC 11 TES or DC 16 TES
right: rope probe DC 21 TES or DC 26 TES

L3
The screening is available in three standard lengths:
L3 = 150 mm
L3 = 250 mm
L3 = 500 mm

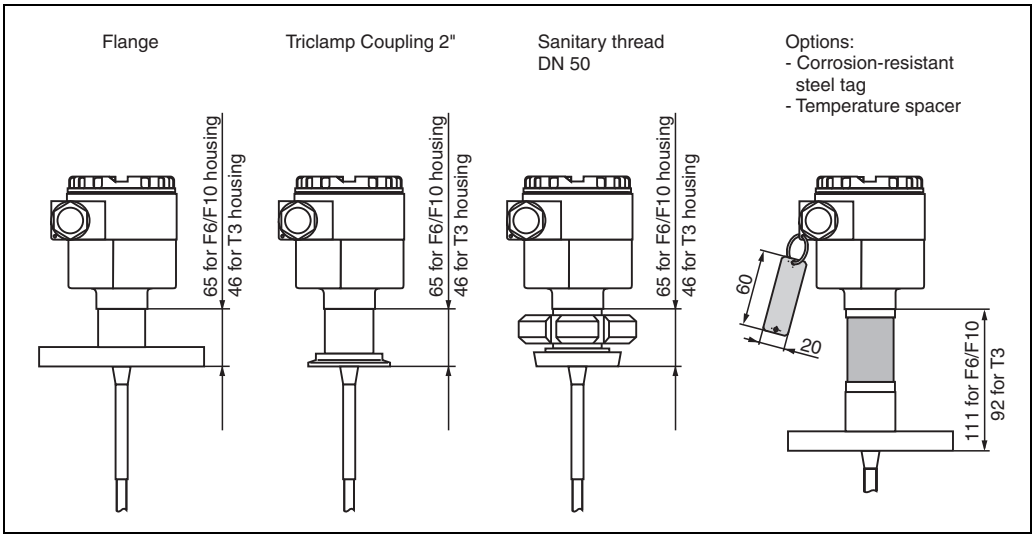
Special lengths on demand
L3 min. 100 mm
L3 max. 1500 mm

Dimensions Continued / Additional Process Connections

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



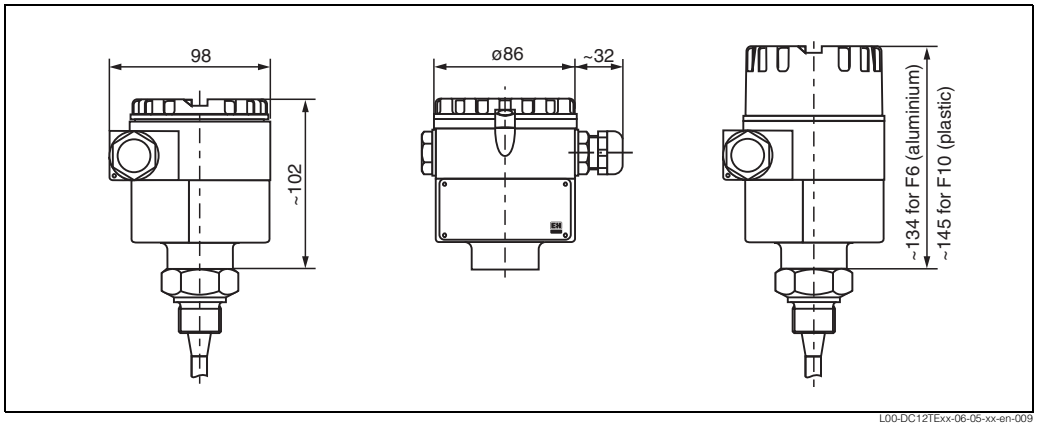
L00-DC12TExx-06-05-xx-en-007



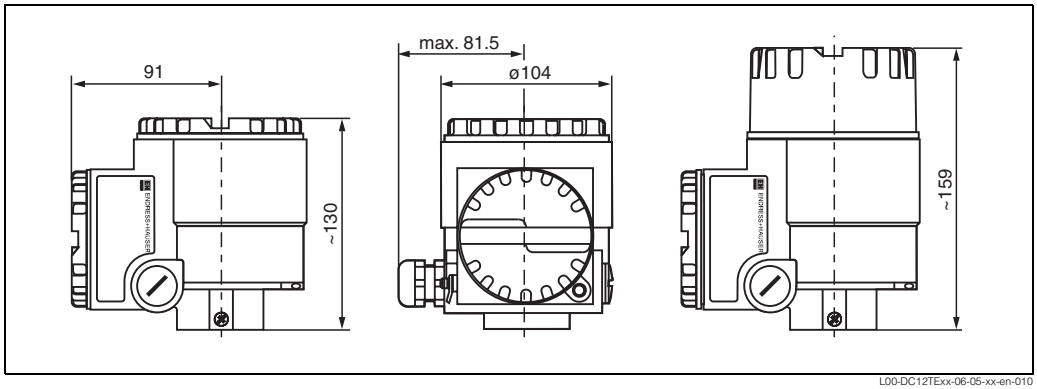
L00-DC12TExx-06-05-xx-en-008

Housing Dimensions

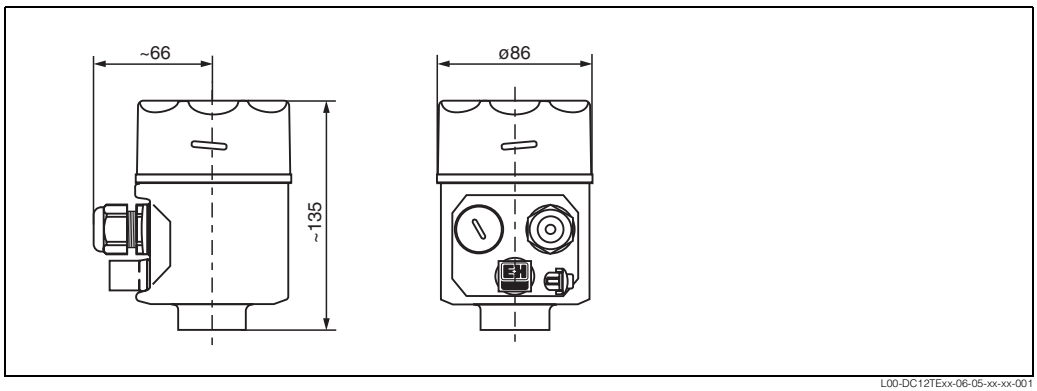
For both housings (F6 and F10):
– with low cover for small electronic inserts EC...Z,
– with raised cover for electronic inserts FEC 12, FEC 14, FEC 22 with two cable entries, one sealed with a blind plug



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



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 (EEx ia / IS)
– with RFI filter and safety barriers for FEC 12 (EEx d / XP)
– terminal connection module for FEC 22



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

Technical Data

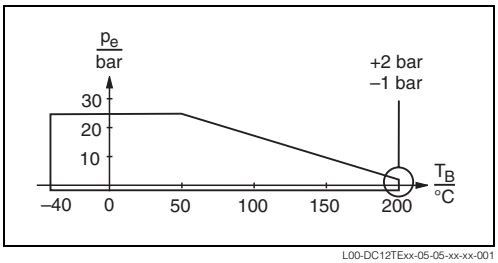
General Information

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

Operating data

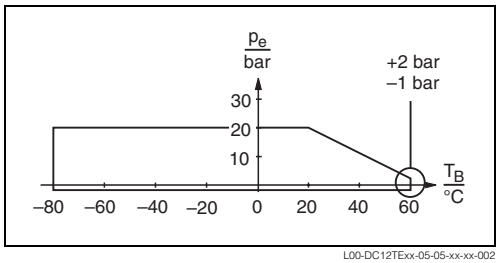
- Operating pressure: max. 25 bar. Depending on material - see below!
- Operating temperature: max. 200 °C. Depending on material - see below!
- Lateral load on probe rod:
  DC 12 TE: 30 Nm at 20 °C, static
  DC 11, 16: 15 Nm at 20 °C, static
- Max. tension on probe rope: 200 N at 20 °F, static

Permitted operating pressures p_e and operating temperatures T_B:



L00-DC12TExx-05-05-xx-xx-001

Insulation PTFE, FEP or PFA



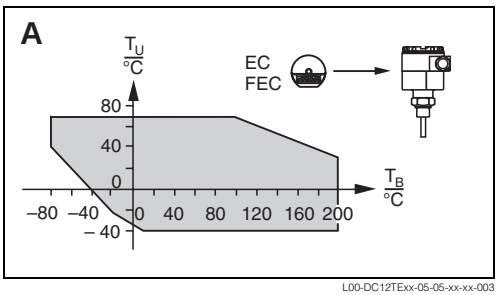
L00-DC12TExx-05-05-xx-xx-002

Insulation PE

Applications

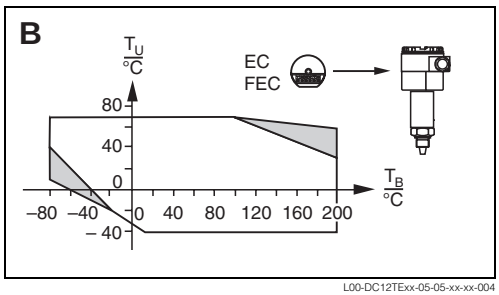
The graphs A and B apply to **all** electronic inserts.
The graphs C and D apply to the small electronic inserts EC 17 Z, EC 61 Z, EC 37 Z, EC 47 Z, EC 11 Z, EC 72 Z.

Mounting of the electronic insert as a function of operating temperature T_B and ambient temperature T_U:



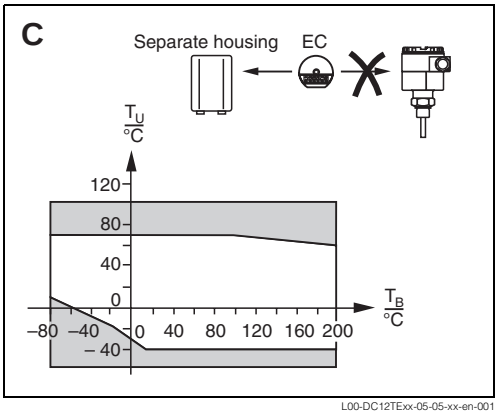
L00-DC12TExx-05-05-xx-xx-003

Basic probe



L00-DC12TExx-05-05-xx-xx-004

Probe with temperature spacer



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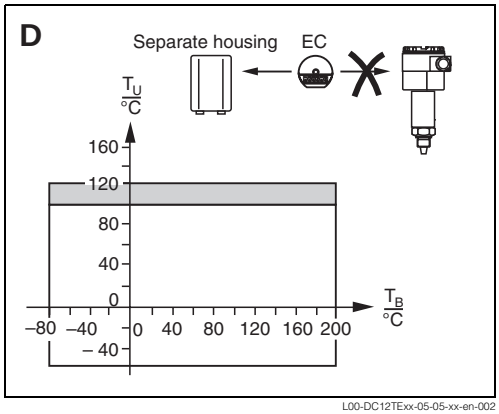
Electronic insert in separate housing



L00-DC12TExx-05-05-xx-en-002

Probe with temperature spacer and electronic insert in separate housing

Probe lengths

- Total length of rod probe: min. 100 mm, max. 3000 mm, see dimensions
- Total length of rope probe: min. 350 mm, max. 20000 mm, 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 250 mm from a conductive vessel wall:
  Probe rod: approx. 1.3 pF/100 mm in air
  Probe rope: approx. 1.0 pF/100 mm in air
- Insulated probe rod in water:
  approx. 38 pF/100 mm DC 12 TE
  approx. 50 pF/100 mm DC 11 TEN/TES
- Insulated probe rope in water: approx. 20 pF/100 mm
- Rod probe with ground tube:
  insulated probe rod: in air approx. 6.4 pF/100 mm; in water approx. 50 pF/100 mm
  uninsulated probe rod: in air approx. 5.6 pF/100 mm

Probe lengths for continuous measurement in conducting liquids

- EC with ΔC_{max} = 2000 pF (EC 47 Z, EC 72 Z, FEC 12):
  Rope probe up to 8000 mm (up to 20000 mm in non conducting liquids)
  Rod probe up to 3000 mm
- EC with ΔC_{max} = 4000 pF (EC 37 Z, EC 11 Z):
  Rope probe up to 20000 mm
  Rod probe up to 3000 mm

Accuracy

- Length tolerances:
  up to 1 m: +0 in, – 5 mm rod probe/ –10 mm rope probe
  up to 3 m: +0 in, –10 mm rod probe/ –20 mm rope probe
  up to 6 m: +0 in, –30 mm
  up to 20 m: +0 in, –40 mm

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

- Linearity error: < 1 % for 1 m **
- Temperature dependence of the probe rod:
  < 0.1 % per K DC 12 TE **
  < 0.12 % per K DC 11 TEN/TES **
- Pressure dependence of the probe rod: 0.12...0.34 % per bar **
- Temperature dependence of the probe rope: < 0.1 % per K **
- Pressure dependence of the probe rope: < 0.1 % per bar **

** Error in non-conducting materials insignificant

Process connections

- Parallel thread G ¾ A or G 1 A: DIN ISO 228/I, with sealing ring 27x32 or 33x39 to DIN 7603
- Tapered thread ¾ - 14 NPT or 1 - 11½ NPT: ANSI B 1.20.1
- DIN flanges without raised face: DIN 2527, Form B
- DIN flanges with tongue: DIN 2512, Form F
- DIN flanges with groove: DIN 2512, Form N
- ANSI flanges: ANSI B 16.5
- Sanitary thread: DIN 11851
- 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
- Sealing ring for process connection G ¾ A or G 1 A: Elastomer-fibre, asbestos-free, resistant to oils, solvents, steam, weak acids and alkalis; up to 300 °C and 100 bar
- Temperature spacer: Stainless steel SS 304 (1.4301) or similar
- Probe rod, ground tube, process connection, screening, build-up compensation, tensioning weight for rope probe: AISI 316L (1.4435)
- Probe rope: AISI 316 (1.4401)

Further material specifications see product structure on Page 11...17

Product Structure

Product Structure
Multicap DC 12 TE

Design					Basic weight
DC 12 TE	Rod probe for standard applications				1,2 kg*

10	Certificate			
	A	For non-hazardous areas		
	B	ATEX II 1/2 G	EEx ia IIC T6	
	D	For non-hazardous areas		Overspill protection to WHG
	E	ATEX II 2 G	EEx d (ia) IIC T6	
	F	ATEX II 1/2 G	EEx ia IIC T6	Overspill protection to WHG
	K	FM XP	Class I	Div. 1, Groups A-D
	R	CSA XP	Class I	Div. 1, Groups B-D
	Y	Special version		
	1	ATEX II 2 G	EEx d (ia) IIB T6	
	2	ATEX II 1/2 G	EEx ia IIB T6	Overspill protection to WHG
	3	ATEX II 1/2 G	EEx ia IIB T6	
	4	ATEX II 2 G	EEx d (ia) IIC T6*	
	5	ATEX II 1/2 G	EEx ia IIC T6*	Overspill protection to WHG
	6	ATEX II 1/2 G	EEx ia IIC T6*	

*) With note: "Avoid electrostatic charge"

20		Type of insulation	Additional weight
	1	Fully insulated probe	- -
	6	Partiall insulated probe	- -

30		Length of insulation L2			
	A	..... mm (75 mm... 3000 mm)	partially insulated	PTFE	0,1 kg/m
	B	..... mm (75 mm... 3000 mm)	partially insulated	PFA	0,1 kg/m
	C	..... mm (75 mm... 3000 mm)	partially insulated	PE	0,1 kg/m
	Y	Special version			
	1	Fully insulated probe			- -

40		Active length L1, Material			
	A	..... mm (100 mm... 3000 mm)	fully insulated	PTFE	1 kg/m
	B	..... mm (100 mm... 3000 mm)	fully insulated	PFA	1 kg/m
	C	..... mm (100 mm... 3000 mm)	fully insulated	PE	1 kg/m
	Y	Special version			
	2	..... mm (100 mm... 3000 mm)	partially insulated		0,9 kg/m

50		Process connection, Material			
	A	G ¾ A	Thread ISO 228	316L	- -
	B	G 1 A	Thread ISO 228	316L	0,1 kg
	C	¾" NPT	Thread ANSI	316L	- -
	D	1" NPT	Thread ANSI	316L	0,1 kg
	E	DN 50 PN40 Hygienic connection	DIN 11851	316L	0,5 kg
	F	DN 40-51 (2") Tri-Clamp connection	ISO 2852	316L	0,5 kg
	G	DN 38 (1½") Tri-Clamp connection	ISO 2852	316L	- -
	H	DN 25 (1") Tri-Clamp connection	ISO 2852	316L	- -
	L	DN 38 (1½") removable Tri-Clamp connection	ISO 2852	316L, A3	- -
	Y	Special version			
	5	Flanged process connection		316L	- -

60		Flange type, Material			
	1B	Without process flange connection			- -
	1C	DN 25 PN 6 B	Flange DIN 2527	316L	0,6 kg

60	Flange type, Material						
	1D	DN 25	PN 25/40 B	Flange DIN 2527	316L		1,2 kg
	1E	DN 32	PN 6 B	Flange DIN 2527	316L		1,0 kg
	1F	DN 32	PN 25/40 B	Flange DIN 2527	316L		1,8 kg
	1G	DN 40	PN 6 B	Flange DIN 2527	316L		1,2 kg
	1H	DN 40	PN 25/40 B	Flange DIN 2527	316L		2,2 kg
	1K	DN 50	PN 6 B	Flange DIN 2527	316L		1,4 kg
	1L	DN 50	PN 25/40 B	Flange DIN 2527	316L		3,0 kg
	2D	DN 25	PN 25/40	Flange DIN 2527	PTFE	>316L	1,2 kg
	2F	DN 32	PN 25/40	Flange DIN 2527	PTFE	>316L	1,8 kg
	2H	DN 40	PN 25/40	Flange DIN 2527	PTFE	>316L	2,2 kg
	2K	DN 50	PN 6	Flange DIN 2527	PTFE	>316L	1,4 kg
	2L	DN 50	PN 25/40	Flange DIN 2527	PTFE	>316L	3,0 kg
	3F	DN 32	PN 40 F	Flange DIN 2512	316L		1,8 kg
	3H	DN 40	PN 40 F	Flange DIN 2512	316L		2,2 kg
	3L	DN 50	PN 40 F	Flange DIN 2512	316L		3,0 kg
	4F	DN 32	PN 40 N	Flange DIN 2512	316L		1,8 kg
	4H	DN 40	PN 40 N	Flange DIN 2512	316L		2,2 kg
	4L	DN 50	PN 40 N	Flange DIN 2512	316L		3,0 kg
	5A	1"	150 lbs RF	Flange ANSI B16.5	316L		0,7 kg
	5B	1"	300 lbs RF	Flange ANSI B16.5	316L		1,2 kg
	5E	1½"	150 lbs RF	Flange ANSI B16.5	316L		1,3 kg
	5F	1½"	300 lbs RF	Flange ANSI B16.5	316L		2,5 kg
	5G	2"	150 lbs RF	Flange ANSI B16.5	316L		2,2 kg
	5H	2"	300 lbs RF	Flange ANSI B16.5	316L		3,0 kg
	6A	1"	150 lbs RF	Flange ANSI B16.5	PTFE	>316L	0,7 kg
	6B	1"	300 lbs RF	Flange ANSI B16.5	PTFE	>316L	1,2 kg
	6E	1½"	150 lbs RF	Flange ANSI B16.5	PTFE	>316L	1,3 kg
	6F	1½"	300 lbs RF	Flange ANSI B16.5	PTFE	>316L	2,5 kg
	6G	2"	150 lbs RF	Flange ANSI B16.5	PTFE	>316Ti	2,2 kg
	6H	2"	300 lbs RF	Flange ANSI B16.5	PTFE	>316L	3,0 kg
	9Y	Special version					

70	Electronic insert			
	A	Prepared for ECxx electronic insert with low housing cover		- -
	B	with EC 61 Z	3-wire insert	0,2 kg
	C	with EC 11 Z	3-wire Tx, 33 kHz	0,2 kg
	D	with EC 72 Z	3-wire Tx, 1 MHz	0,2 kg
	E	with EC 17 Z	2-wire PFM	0,2 kg
	G	with EC 37 Z	2-wire PFM, 33 kHz	0,2 kg
	H	with EC 47 Z	2-wire PFM, 1 MHz	0,2 kg
	K	with FEC 12	2-wire 4-20 mA HART	0,3 kg** + 0,3 kg
	M	with FEC 22	90-253 V AC, DPDT relay	0,3 kg** + 0,3 kg
	N	with FEC 22	10-55 V DC, 3-wire PNP	0,3 kg** + 0,3 kg
	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		0,3 kg**

80	Housing						
	A	Polyester	F10 Housing	gland	Pg16	IP66	- -
	E	Polyester	F10 Housing	HNA24x1,5		IP66	- -
	F	Aluminium	F6 Housing	HNA24x1,5		IP66	- -
	G	Aluminium	T3 Housing	HNA24x1,5		IP66	- -
	K	Polyester	F10 Housing	gland	M20x1,5	IP66	- -
	L	Aluminium	F6 Housing	gland	M20x1,5	IP66	- -
	M	Aluminium	T3 Housing	gland	M20x1,5	IP66	1,0 kg
	N	Aluminium	T3 Housing	PA-plug	M12	IP66	1,0 kg
	O	316L	F8 Housing	PA-plug	M12	IP66	1,0 kg
	P	Polyester	F10 Housing	Nema4X	NPT ½"		- -
	R	Aluminium	F6 Housing	Nema4X	NPT ½"		- -
	S	Aluminium	T3 Housing	Nema4X	NPT ¾"		- -
	T	Aluminium	T3 Housing	entry	G ½ A	IP66	- -
	Y	Special version					
	1	316L	F8 Housing	gland	Pg13,5	IP66	- -

80								Housing						
								2	316L	F8 Housing	entry	G ½"	IP66	- -
								3	316L	F8 Housing	gland	M20x1,5	IP66	- -
								4	316L	F8 Housing	entry	NPT ½"	IP66	- -
								5	Polyester	F10 Housing	PA-plug	M12	IP66	- -
								6	Aluminium	F6 Housing	PA-plug	M12	IP66	- -

90									Option	
								1	Basic version	- -
								2	TAG number	- -
								3	Temperature spacer	0,2 kg
								4	Temperature spacer and TAG number	0,2 kg
								9	Special version	

DC 12 TE-									Complete product designation

* Basic weight including ¾" process connection and F10 housing

** Additional weight for raised cover

Note!
Please don't forget:

Length of

Partial insulation L2 ↓ ☐☐☐☐ mm

Active probe length L1 ↓ ☐☐☐☐ mm

Product Structure

Product Structure
Multicap DC 11 TEN/TES
Multicap DC 16 TEN/TES
Multicap DC 21 TEN/TES
Multicap DC 26 TEN/TES

Design		Basic weight
DC 11 TEN	Fully insulated rod probe for standard applications	1,2 kg*
DC 16 TEN	Partially insulated rod probe for standard applications	1,2 kg*
DC 21 TEN	Fully insulated rope probe for standard applications	1,4 kg*
DC 26 TEN	Partially insulated rope probe for standard applications	1,4 kg*
DC 11 TES	Fully insulated rod probe with protection features	1,2 kg*
DC 16 TES	Partially insulated rod probe with protection features	1,2 kg*
DC 21 TES	Fully insulated rope probe with protection feature	1,4 kg*
DC 26 TES	Partially insulated rope probe with protection features	1,4 kg*

10	Certificate	
A	For non-hazardous areas	
B	ATEX II 1/2 G EEx ia IIC T6	
D	For non-hazardous areas	Overspill protection to WHG
E	ATEX II 2 G EEx d (ia) IIC T6	
Y	Special version	
1	ATEX II 2 G EEx d (ia) IIB T6	
3	ATEX II 1/2 G EEx ia IIB T6	
4	ATEX II 2 G EEx d (ia) IIC T6*	
6	ATEX II 1/2 G EEx ia IIC T6*	

*) With note: "Avoid electrostatic charge"

20		Build-up protection	Additional weight
		DC 11, 16, 21, 26 TEN	
	A	Protection feature not selected	- -
		DC 11, 16, 21, 26 TES	
	B	100 mm active guard	0,2 kg
	C	150 mm L3 screening	0,2 kg
	D	250 mm L3 screening	0,3 kg
	E	500 mm L3 screening	0,6 kg
	F	... mm (100 mm...1500 mm) L3 screening	1,2 kg/m
	G	150 mm L3 screening and 100 mm active guard	0,4 kg
	H	250 mm L3 screening and 100 mm active guard	0,5 kg
	K	500 mm L3 screening and 100 mm active guard	0,9 kg
	L	... mm (100 mm...1500 mm) L3 screening and 100 mm active guard	1,7 kg/m + 0,2 kg
	Y	Special version	

30			Probe insulation			
			DC 11 TEN/TES, DC 21 TEN/TES			
		1	Fully insulated probe			- -
			DC 16 TEN/TES			
		A	... mm (75 mm... 3000 mm)	partially insulated	PTFE	0,06 kg/m
			DC 26 TEN/TES			
		D	rope type; 2,5 mm			- -
		9	Special version			

40	Active length L1, Material		
	DC 11 TEN/TES		
1	... mm (100 mm...3000 mm)	316L + PTFE	0,5 kg/m
2	... mm (100 mm...3000 mm) with ground tube	316L + PTFE	1,2 kg/m
	DC 16 TEN/TES		
1	... mm (100 mm...3000 mm)	Stab 316L	0,4 kg/m
2	... mm (100 mm...3000 mm) with ground tube	Stab 316L	1,1 kg/m
	DC 21 TEN/TES		
1	... mm (100 mm... 20000 mm) tensioning weight with anchor hole	316 + FEP	0,04 kg/m
	DC 26 TEN/TES		
1	... mm (100 mm... 20000 mm)	316 + FEP	0,03 kg/m
9	Special version		

50	Process connection, Material			
A	G ¾ A	Thread ISO 228	316L	- -
B	G 1 A	Thread ISO 228	316L	0,1 kg
C	¾" NPT	Thread ANSI	316L	- -
D	1" NPT	Thread ANSI	316L	0,1 kg
E	DN 50 PN 40 Hygienic connection	DIN 11851	316L	0,5 kg
F	DN 40-51 (2") Tri-Clamp connection	ISO 2852	316L	0,5 kg
Y	Special version			
5	Flanged process connection		316L	- -

60	Flange type, Material						
1B	Without process flange connection						- -
1C	DN 25	PN 6 B		Flange DIN 2527	316L		0,6 kg
1D	DN 25	PN 25/40 B		Flange DIN 2527	316L		1,2 kg
1E	DN 32	PN 6 B		Flange DIN 2527	316L		1,0 kg
1F	DN 32	PN 25/40 B		Flange DIN 2527	316L		1,8 kg
1G	DN 40	PN 6 B		Flange DIN 2527	316L		1,2 kg
1H	DN 40	PN 25/40 B		Flange DIN 2527	316L		2,2 kg
1K	DN 50	PN 6 B		Flange DIN 2527	316L		1,4 kg
1L	DN 50	PN 25/40 B		Flange DIN 2527	316L		3,0 kg
2D	DN 25	PN 25/40		Flange DIN 2527	PTFE	>316L	1,2 kg
2F	DN 32	PN 25/40		Flange DIN 2527	PTFE	>316L	1,8 kg
2H	DN 40	PN 25/40		Flange DIN 2527	PTFE	>316L	2,2 kg
2K	DN 50	PN 6		Flange DIN 2527	PTFE	>316L	1,4 kg
2L	DN 50	PN 25/40		Flange DIN 2527	PTFE	>316L	3,0 kg
3F	DN 32	PN 40 F		Flange DIN 2512	316L		1,8 kg
3H	DN 40	PN 40 F		Flange DIN 2512	316L		2,2 kg
3L	DN 50	PN 40 F		Flange DIN 2512	316L		3,0 kg
4F	DN 32	PN 40 N		Flange DIN 2512	316L		1,8 kg
4H	DN 40	PN 40 N		Flange DIN 2512	316L		2,2 kg
4L	DN 50	PN 40 N		Flange DIN 2512	316L		3,0 kg
5A	1"	150 lbs	RF	Flange ANSI B16.5	316L		0,7 kg
5B	1"	300 lbs	RF	Flange ANSI B16.5	316L		1,2 kg
5E	1½"	150 lbs	RF	Flange ANSI B16.5	316L		1,3 kg
5F	1½"	300 lbs	RF	Flange ANSI B16.5	316L		2,5 kg
5G	2"	150 lbs	RF	Flange ANSI B16.5	316L		2,2 kg
5H	2"	300 lbs	RF	Flange ANSI B16.5	316L		3,0 kg
6A	1"	150 lbs	RF	Flange ANSI B16.5	PTFE	>316L	0,7 kg
6B	1"	300 lbs	RF	Flange ANSI B16.5	PTFE	>316L	1,2 kg
6E	1½"	150 lbs	RF	Flange ANSI B16.5	PTFE	>316L	1,3 kg
6F	1½"	300 lbs	RF	Flange ANSI B16.5	PTFE	>316L	2,5 kg
6G	2"	150 lbs	RF	Flange ANSI B16.5	PTFE	>316Ti	2,2 kg
6H	2"	300 lbs	RF	Flange ANSI B16.5	PTFE	>316L	3,0 kg

60 Flange type, Material

only DC 11, 16 TEN/TES and DC 21 TEN

7A	10 K 25 A	RF	Flange JIS B2210	316L			- -
7B	10 K 40 A	RF	Flange JIS B2210	316L			- -
7C	10 K 50 A	RF	Flange JIS B2210	316L			- -
7D	10 K 80 A	RF	Flange JIS B2210	316L			- -
7L	10 K 100 A	RF	Flange JIS B2210	316L			- -
8A	10 K 25 A	RF	Flange JIS B2210	PTFE	>316L		- -
8B	10 K 40 A	RF	Flange JIS B2210	PTFE	>316L		- -
8C	10 K 50 A	RF	Flange JIS B2210	PTFE	>316L		- -
8D	10 K 80 A	RF	Flange JIS B2210	PTFE	>316L		- -
8L	10 K 100 A	RF	Flange JIS B2210	PTFE	>316L		- -

DC 21 TES

7C	10 K 50 A	RF	Flange JIS B2210	316L			- -
8A	10 K 25 A	RF	Flange JIS B2210	PTFE	>316L		- -

DC 26 TEN/TES

7A	10 K 25 A	RF	Flange JIS B2210	316L			- -
7C	10 K 50 A	RF	Flange JIS B2210	316L			- -
8A	10 K 25 A	RF	Flange JIS B2210	PTFE	>316L		- -

9Y	Special version

70 Electronic insert

A	Prepared for ECxx electronic insert with low housing cover				- -
B	with EC 61 Z	3-wire insert			0,2 kg
C	with EC 11 Z	3-wire Tx, 33 kHz			0,2 kg
D	with EC 72 Z	3-wire Tx, 1 MHz			0,2 kg
E	with EC 17 Z	2-wire PFM			0,2 kg
G	with EC 37 Z	2-wire PFM, 33 kHz			0,2 kg
H	with EC 47 Z	2-wire PFM, 1 MHz			0,2 kg
K	with FEC 12	2-wire 4-20 mA HART	0,3 kg** +		0,3 kg
M	with FEC 22	90-253 V AC, DPDT relay	0,3 kg** +		0,3 kg
N	with FEC 22	10-55 V DC, 3-wire PNP	0,3 kg** +		0,3 kg
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		0,3 kg**		

80 Housing

A	Polyester	Housing	gland	Pg16	IP66	- -
E	Polyester	Housing	HNA24x1,5		IP66	- -
F	Aluminium	F6 Housing	HNA24x1,5		IP66	- -
G	Aluminium	T3 Housing	HNA24x1,5		IP66	- -
K	Polyester	Housing	gland	M20x1,5	IP66	- -
L	Aluminium	F6 Housing	gland	M20x1,5	IP66	- -
M	Aluminium	T3 Housing	gland	M20x1,5	IP66	1,0 kg
N	Aluminium	T3 Housing	PA-plug	M12	IP66	1,0 kg
O	316L	F8 Housing	PA-plug	M12	IP66	1,0 kg
P	Polyester	Housing	Nema4X	NPT ½"		- -
S	Aluminium	T3 Housing	Nema4X	NPT ¾"		- -
T	Aluminium	T3 Housing	entry	G ½ A	IP66	- -
Y	Special version					
1	316L	F8 Housing	gland	Pg13,5	IP66	- -
2	316L	F8 Housing	entry	G ½"	IP66	- -
3	316L	F8 Housing	gland	M20x1,5	IP66	- -
4	316L	F8 Housing	entry	NPT ½"	IP66	- -
5	Polyester	Housing	PA-plug	M12	IP66	- -
6	Aluminium	F6 Housing	PA-plug	M12	IP66	- -

90									Option		
									1	Basic version	- -
									2	TAG number	- -
									3	Temperature spacer	0,2 kg
									4	Temperature spacer and TAG number	0,2 kg
									9	Special version	

DC 11 TEx-										Complete product designation
DC 16 TEx-										Complete product designation
DC 21 TEx-										Complete product designation
DC 26 TEx-										Complete product designation

* Basic weight including ¾" 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 ↓	Partial insulation L2 ↓	Active probe length L1 ↓
mm	mm	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 TE 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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