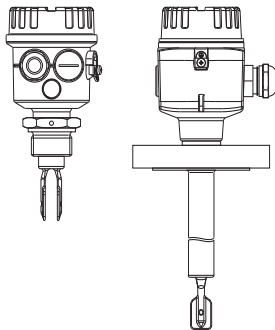


Bruksanvisning **Liquiphant M FTL50, FTL51**

Nivåvakt



SV - Innehåll

Säkerhetsinformation	3
Handhavande	4
Enhetsbeteckning	6
Applikation	12
Mätsystem	13
Montering	17
Installation	26
Lampsymboler	30
Anslutningar	31
Underhåll, Rengöring	52
Teknisk information	53
Tillbehör	55
Felsökning	58
Reservdelar	60
Reparation	61
Tilläggsdokumentation	62



Var försiktig!

= förbjudet:

Leder till felaktig drift
eller förstörelse.

SV - Säkerhetsinformation

Liquiphant M FTL50, FTL51 är utformad för nivådetektering i vätskor.

Om den används på fel sätt är det möjligt att risker relaterade till applikationen uppstår.

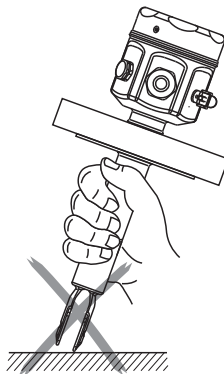
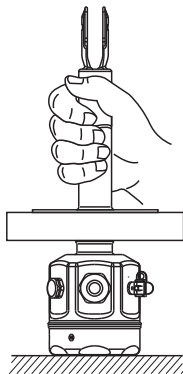
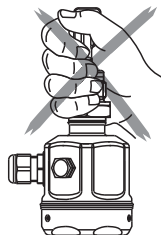
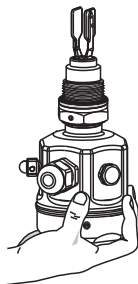
Nivålägesbrytaren Liquiphant M FTL50, FTL51 får bara installeras, anslutas, styras, manövreras och underhållas **av kvalificerad och auktoriserad personal**, och de måste strikt följa bruksanvisningen, eventuella tillämpbara standarder, rättsliga krav, och, när det är tillämpligt, certifikatet.

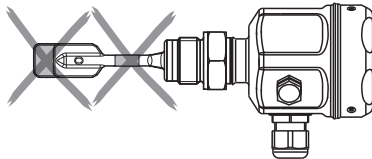
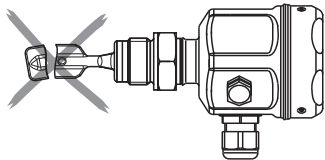
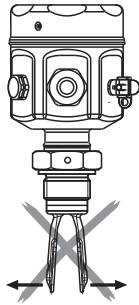
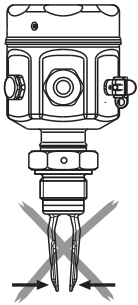
Installera en lättåtkomlig strömbrytare i närheten av enheten.

Markera strömbrytaren som avstängningsmekanism för enheten.

SV - Handhavande

Håll i den vid huset, flänsen eller förlängningstuben.



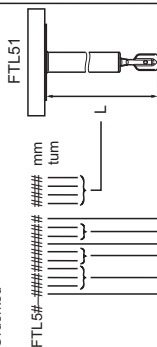


SV - Böj den **inte**
Bryt **inte** av den
Förläng den **inte**



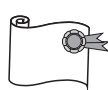
ENDRESS+HAUSER
LIQUIPHANT M

Orderkod



A B C D E F G H I J K L M N P Q R S T U V W X Y

*¹
ATEX II 3 G EEx nC II T6, WHG
ATEX II 3 D T85°C*³
ATEX II 3 G EEx nA II T6, WHG
ATEX II 3 D T85°C*³
*¹, WHG
ATEX II 1/2 G EEx de IIC T6, WHG
ATEX II 1/2 G EEx ia IIC T6, WHG
ATEX II 1/2 D T80°C*³
ATEX II 1/2 G EEx ia IIC T6
ATEX II 1/2 D T80°C*³
ATEX II 1 G EEx ia IIC T6
ATEX II 1/2 G EEx de IIC T6
ATEX II 1 G EEx ia IIC T6, WHG
ATEX II 1/2 G EEx d IIC T6
ATEX II 1/2 G EEx d IIC T6, WHG
NEPSI Ex ia IIC T6
NEPSI Ex d IIC T6
FM IS, Cl. I, II, III, Div. 1, Gr. A-G
FM XP, Cl. I, II, III, Div. 1, Gr. B-G, E5 => Gr. A-G
FM NI, Cl. I, Div. 2, Gr. A-D
CSA IS, Cl. I, II, III, Div. 1, Gr. A-G
CSA XP, Cl. I, II, III, Div. 1, Gr. A-G
CSA General purpose
TIIIS Ex ia IIC T3
TIIIS Ex d IIB T3
TIIIS Ex ia IIC T6
TIIIS Ex d IIC T3
TIIIS Ex d IIC T6
*²



A## B## C## D## F## K## N##	Flänsar	R ¾, DIN 2999, 316L R ¾, DIN 2999, AlloyC4 R ¾, DIN 2999, AlloyC22 R 1, DIN 2999, 316L R 1, DIN 2999, AlloyC4 R 1, DIN 2999, AlloyC22 NPT ¾, ANSI, 316L NPT ¾, ANSI, AlloyC4 NPT ¾, ANSI, AlloyC22 NPT 1, ANSI, 316L NPT 1, ANSI, AlloyC4 NPT 1, ANSI, AlloyC22 ISO 228, 316L ISO 228, AlloyC4 ISO 228, AlloyC22 ISO 228, 316L ISO 228, AlloyC4 ISO 228, AlloyC22	max. 100 bar, 150 °C	
GE2	R ¾,	DIN 2999, 316L	max. 100 bar, 150 °C	
GE5	R ¾,	DIN 2999, AlloyC4		
GE6	R ¾,	DIN 2999, AlloyC22	max. 100 bar, 150 °C	
GF2	R 1,	DIN 2999, 316L		
GF5	R 1,	DIN 2999, AlloyC4	max. 25 bar, 150 °C max. 40 bar, 100 °C	
GF6	R 1,	DIN 2999, AlloyC22		
GM2	NPT ¾, ANSI, 316L		max. 16 bar, 120 °C max. 2 bar, 150 °C	
GM5	NPT ¾, ANSI, AlloyC4			
GM6	NPT ¾, ANSI, AlloyC22			
GN2	NPT 1, ANSI, 316L			
GN5	NPT 1, ANSI, AlloyC4			
GN6	NPT 1, ANSI, AlloyC22			
GQ2	G ¾,	ISO 228, 316L		
GQ5	G ¾,	ISO 228, AlloyC4		
GQ6	G ¾,	ISO 228, AlloyC22		
GR2	G 1,	ISO 228, 316L		
GR5	G 1,	ISO 228, AlloyC4		
GR6	G 1,	ISO 228, AlloyC22		
GW2	G 1,	ISO 228, 316L		
TC2	DN25-38 (1...1½"), ISO 2852, 316L			
TE2	Tri-Clamp DN40-51 (2"), ISO 2852, 316L Tri-Clamp			
YY9	*2			

*1

utan

*2

andra

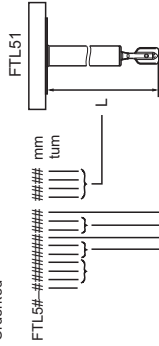
*3

ogiltigt för PBT

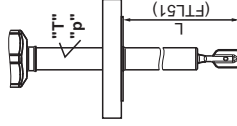


ENDRESS+HAUSER
LIQUIPHANT M

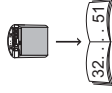
Orderkod

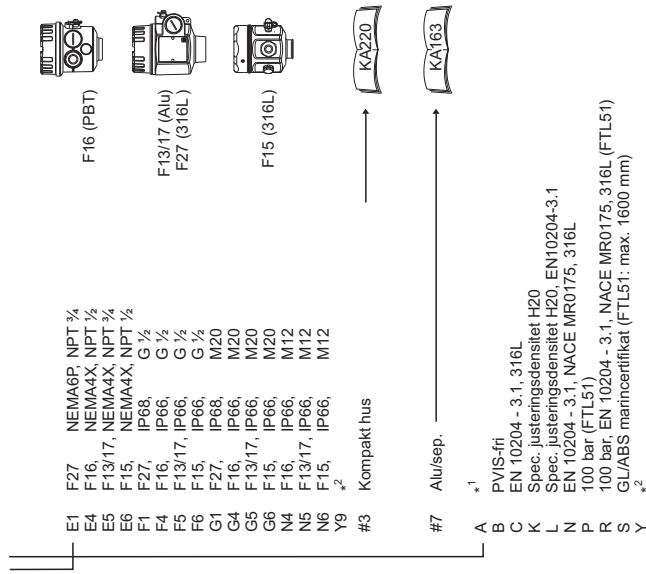


AA	* ²	mm, 316L,	Ra < 3,2 µm/80 korn (FTL50)
BB		 mm, AlloyC4,	Ra < 3,2 µm/80 korn
BE		 mm, AlloyC4,	Ra < 3,2 µm/80 korn
CB		 tum, 316L,	Ra < 3,2 µm/80 korn
CE		 tum, AlloyC4,	Ra < 3,2 µm/80 korn
DB		"L II", 316L,	Ra < 3,2 µm/80 korn
DE		"L II", AlloyC4,	Ra < 3,2 µm/80 korn
IA	* ²	+ "T", (FTL50)	
JB		 mm, 316L	
JE		 mm, AlloyC4	
KB		 tum, 316L	
KE		 tum, AlloyC4	
LB		"L II", 316L	
LE		"L II", AlloyC4	
QA	* ²	+ "p", (FTL50)	
RB		 mm, 316L	
RE		 mm, AlloyC4	
SB		 tum, 316L	
SE		 tum, AlloyC4	
TB		"L II", 316L	
TE		"L II", AlloyC4	
YY	* ²	+ "p"	



A	FEL50A, PROFIBUS PA
1	FEL51, 19-253 V AC
2	FEL52, 10-55 V DC (likström), PNP
4	FEL54, 19-253 V AC, 19..55 V DC, DPDT
5	FEL55, 11-36 V DC (likström), 8/16 mA
6	FEL56, NAMUR, L-H
7	FEL57, PFM
8	FEL58, NAMUR, H-L
9	* ²





*¹ utan

*² andra

"L II" Omkopplingspunkt

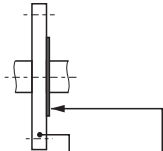
Liquiphant II FTL 360/365, FDL 30/35

"T" Temperaturdistans

"p" Trycktätning

ANSI B 16.5

AA2	1 1/4", 150 lbs, RF, 316/316L
AB2	1 1/2", 300 lbs, RF, 316/316L (FTL51)
AC2	1 1/2", 150 lbs, RF, 316/316L
AD2	1 1/2", 300 lbs, RF, 316/316L (FTL51)
AE2	2", 150 lbs, RF, 316/316L
AE5	2", 150 lbs, RF, Alloy C4 >316/316L
AE6	2", 300 lbs, RF, Alloy C22 >316/316L
AF2	2", 300 lbs, RF, 316/316L
AG2	2", 600 lbs, RF, 316/316L (FTL51)
AJ2	2 1/2", 300 lbs, RF, 316/316L (FTL51)
AL2	3", 150 lbs, RF, 316/316L
AM2	3", 300 lbs, RF, 316/316L (FTL51)
AN2	3", 600 lbs, RF, 316/316L (FTL51)
AP2	4", 150 lbs, RF, 316/316L
AQ2	4", 300 lbs, RF, 316/316L (FTL51)
AR2	4", 600 lbs, RF, 316/316L (FTL51)
AS2	1", 150 lbs, RF, 316/316L



EN 1092-1

BA2	DN32, PN6 A, 316L
BB2	DN32, PN25/40 A, 316L
BC2	DN40, PN6 A, 316L
BD2	DN40, PN25/40 A, 316L
BE2	DN50, PN6 A, 316L
BG2	DN50, PN25/40 A, 316L
BH2	DN65, PN6 A, 316L (FTL51)
BJ2	DN50, PN100 A, 316L
BK2	DN65, PN25/40 A, 316L
BM2	DN80, PN10/16 A, 316L
BN2	DN80, PN25/40 A, 316L
BQ2	DN100, PN10/16 A, 316L
BR2	DN100, PN25/40 A, 316L

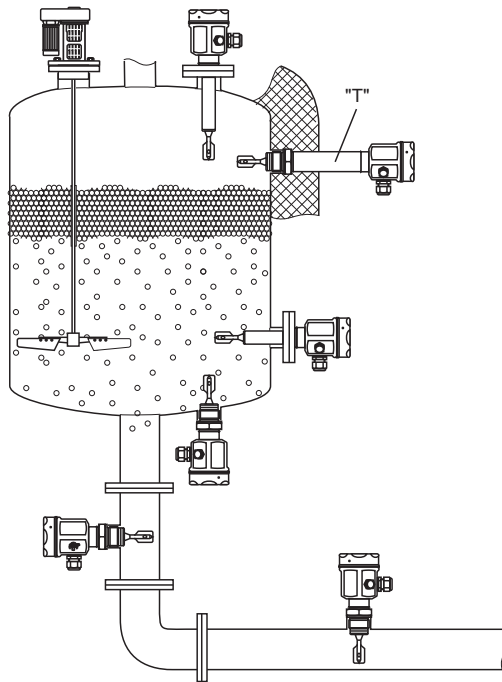
B12	DN80,	PN100 A,	316L (FTL51)
B82	DN25,	PN25/40 A,	316L
CA2	DN32,	PN6 B1,	316L
CA5	DN32,	PN6,	AlloyC4 >316L
CA6	DN32,	PN6,	AlloyC22 >316L
CE2	DN50,	PN6 B1,	316L
CE5	DN50,	PN6,	AlloyC4 >316L
CE6	DN50,	PN6,	AlloyC22 >316L
CG2	DN50,	PN25/40 B1,	316L
CG5	DN50,	PN25/40,	AlloyC4 >316L
CG6	DN50,	PN25/40,	AlloyC22 >316L
CJ2	DN50,	PN100 B2,	316L (FTL51)
CN2	DN80,	PN25/40 B1,	316L
CN5	DN80,	PN25/40,	AlloyC4 >316L
CN6	DN80,	PN25/40,	AlloyC22 >316L
CQ2	DN100,	PN10/16 B1,	316L
CQ5	DN100,	PN10/16,	AlloyC4 >316L
CQ6	DN100,	PN10/16,	AlloyC22 >316L
C12	DN80,	PN100 B2,	316L (FTL51)
C82	DN25,	PN25/40 B1,	316L
C85	DN25,	PN25/40,	AlloyC4 >316L
C86	DN25,	PN25/40,	AlloyC22 >316L
DG2	DN50,	PN40 B1,	316L
DN2	DN80,	PN40 B1,	316L
D82	DN25,	PN40 B1,	316L
FG2	DN50,	PN40 C,	316L
NG2	DN50,	PN40 D,	316L

JIS B2220

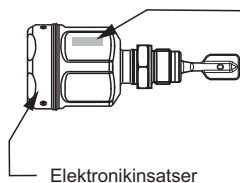
KA2	10K 25,	RF,	316L
KC2	10K 40,	RF,	316L
KE2	10K 50,	RF,	316L
KE5	10K 50,	RF,	AlloyC4 >316L
KE6	10K 50,	RF,	AlloyC22 >316L
KL2	10K 80,	RF,	316L
KP2	10K 100,	RF,	316L

SV - Applikation

Nivådetektering i vätskor

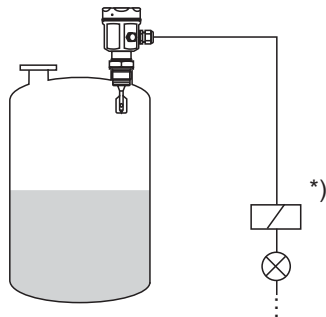


SV - Mätssystem för direktanslutning



Orderkod:
FTL5# - # ### ## # ## #

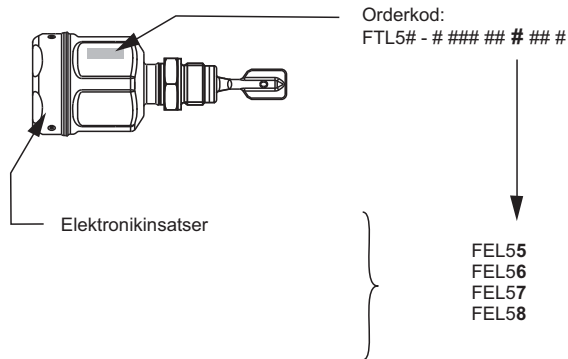
FEL51
FEL52
FEL54

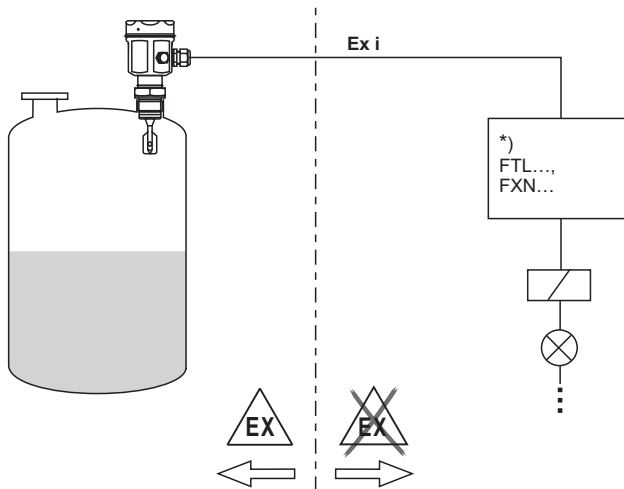


*) Extern last

SV - Mätssystem

för anslutning via
omkomplingsenhet

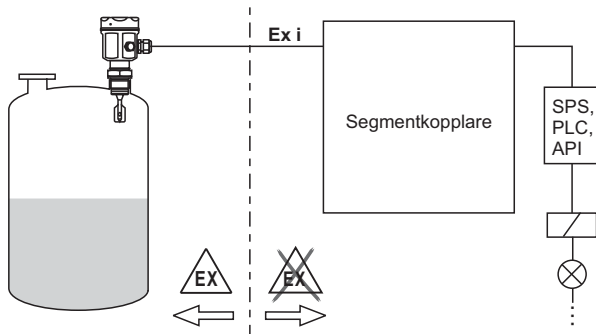
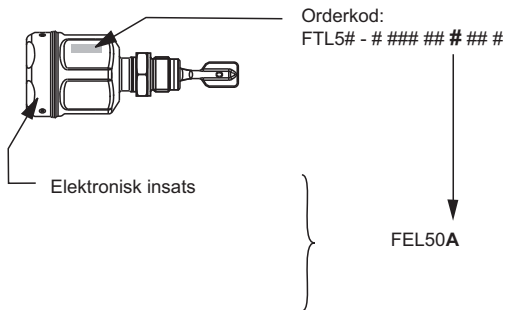


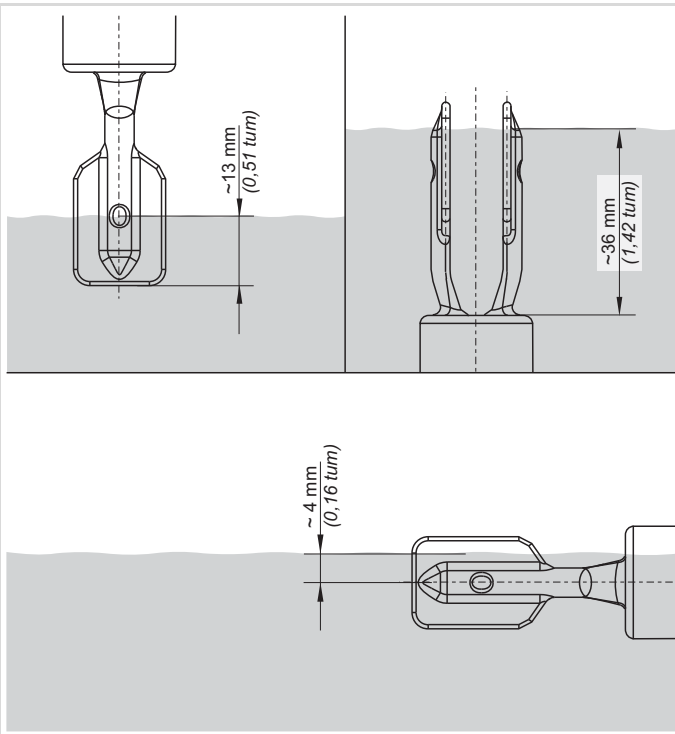


*) Omkopplingsenhet, PLC, isoleringsförstärkare

SV - Mätssystem

för anslutning till PROFIBUS PA



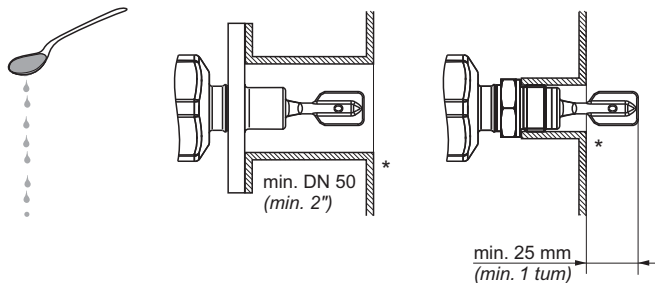


SV - Montering

Omkopplingspunkten beror
på monteringspositionen

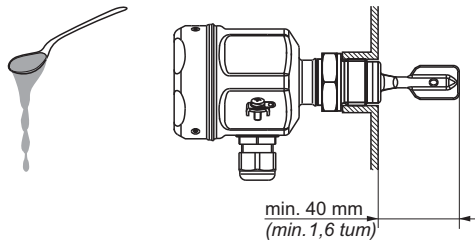
SV - Monteringsexempel
som en funktion av
vätskeviskositetv

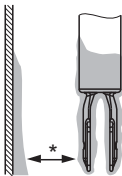
$v = 0 \dots 2000 \text{ mm}^2/\text{s}$
($v = 0 \dots 2000 \text{ cSt}$)



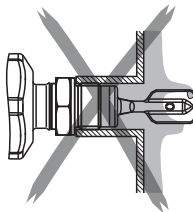
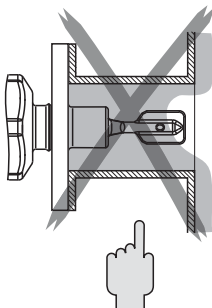
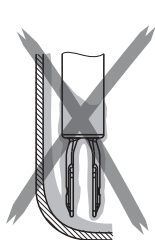
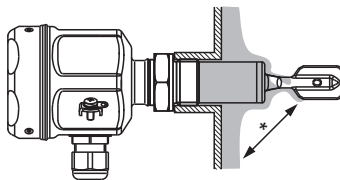
* grada av

$v = 0 \dots 10000 \text{ mm}^2/\text{s}$
($v = 0 \dots 10000 \text{ cSt}$)

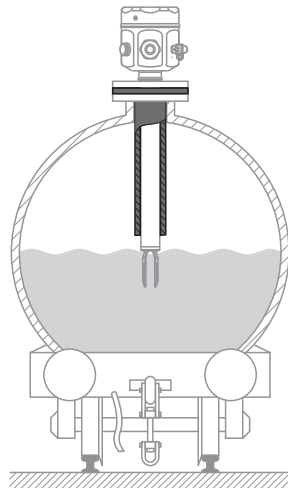
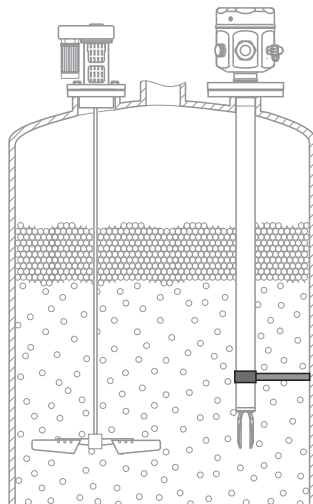




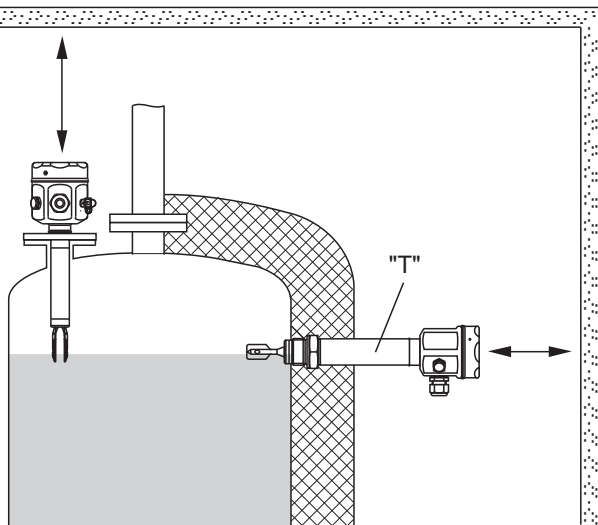
* Avstånd!



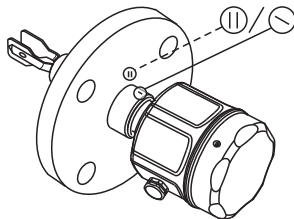
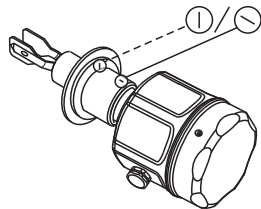
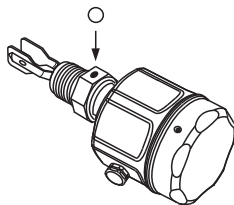
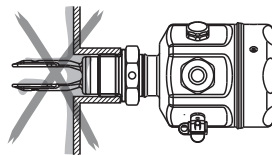
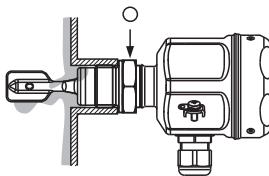
SV - Tänk på avlagringarna.
Gaffeln får inte vara i kontakt
med avlagringarna.



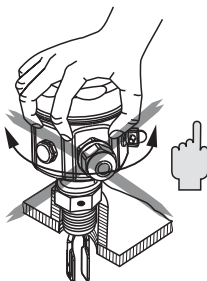
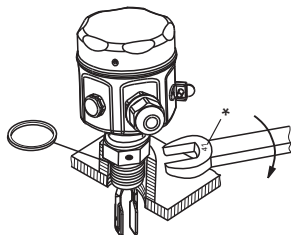
"T" = med temperaturdistans för isolerade tankar



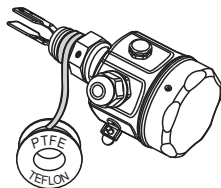
SV - Rikta in gaffelklorna:
Markering ovanpå eller under



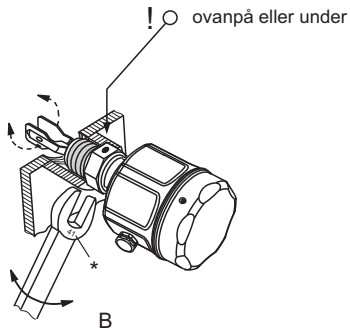
G $\frac{3}{4}$, 32 mm (1 $\frac{1}{4}$ ")*
 G 1, 41 mm (1 $\frac{5}{8}$ ")*



NPT $\frac{3}{4}$, R $\frac{3}{4}$, G $\frac{3}{4}$, 32 mm (1 $\frac{1}{4}$ ")*
 NPT 1, R 1, G 1, 41 mm (1 $\frac{5}{8}$ ")*



A

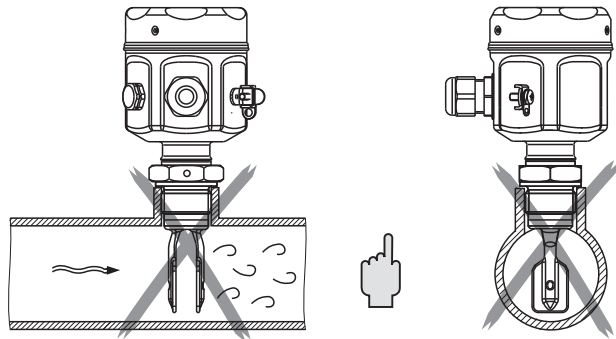
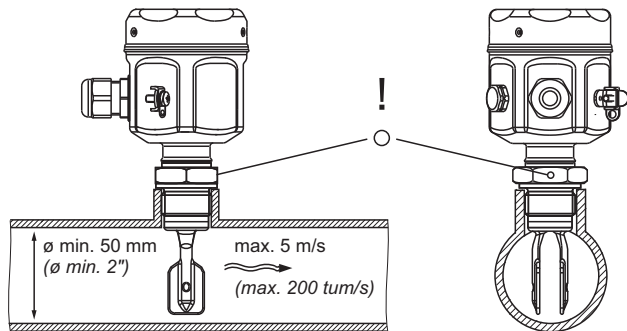


B

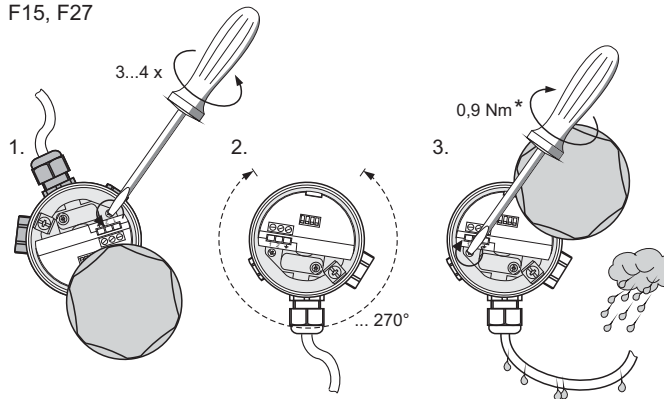
SV - Skruva fast Liquiphant på processanslutningen.

Använd inte huset för att skruva fast den.

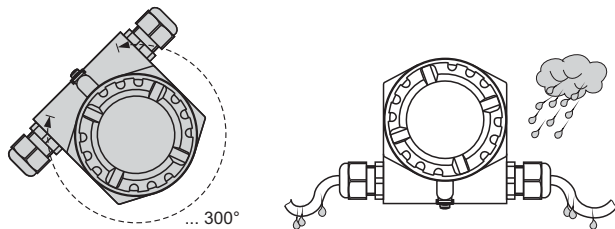
SV - Placering inuti rör:
Markering i flödesriktningen



F15, F27



F16, F13, F17

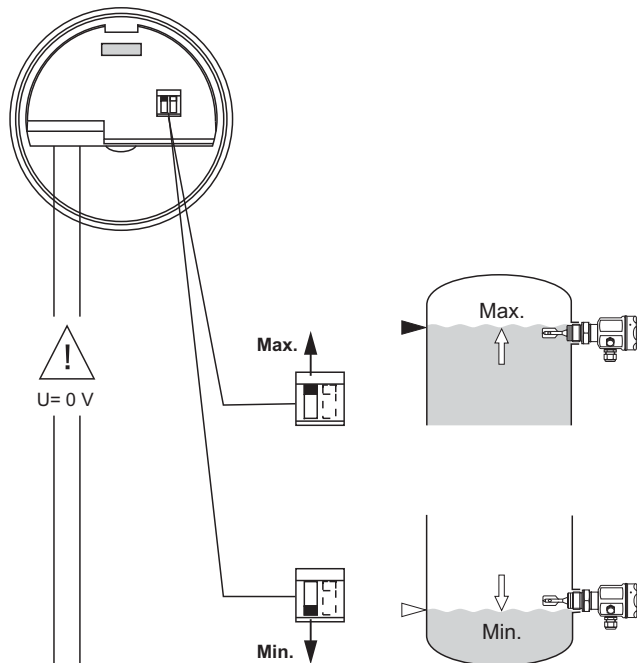


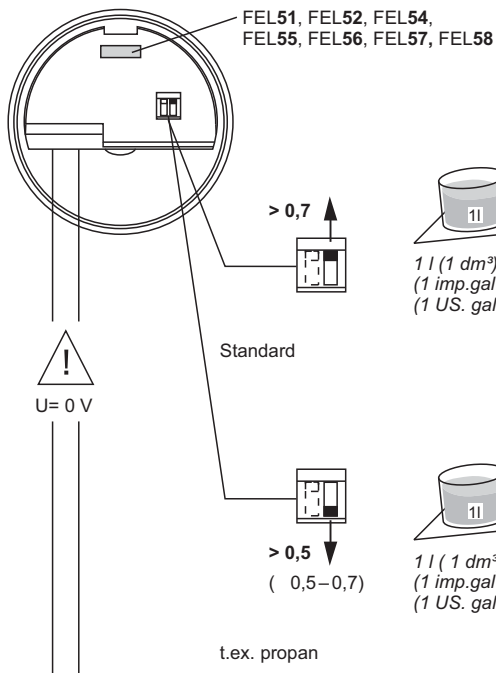
SV - Justera kabelförskruvningen

* Vridmoment

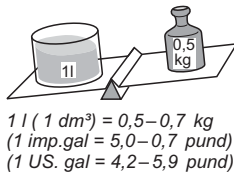
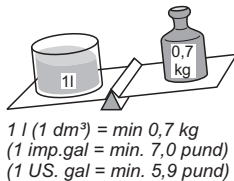
SV - Installation

Minsta/maximala
försäkra läge

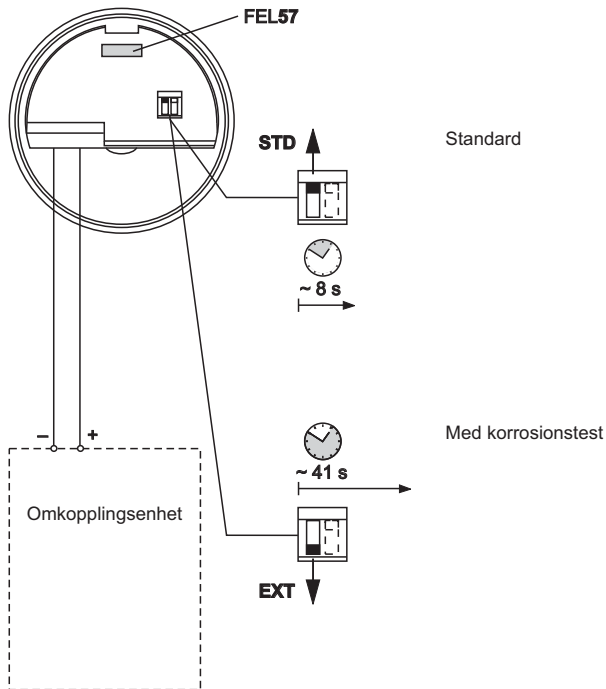


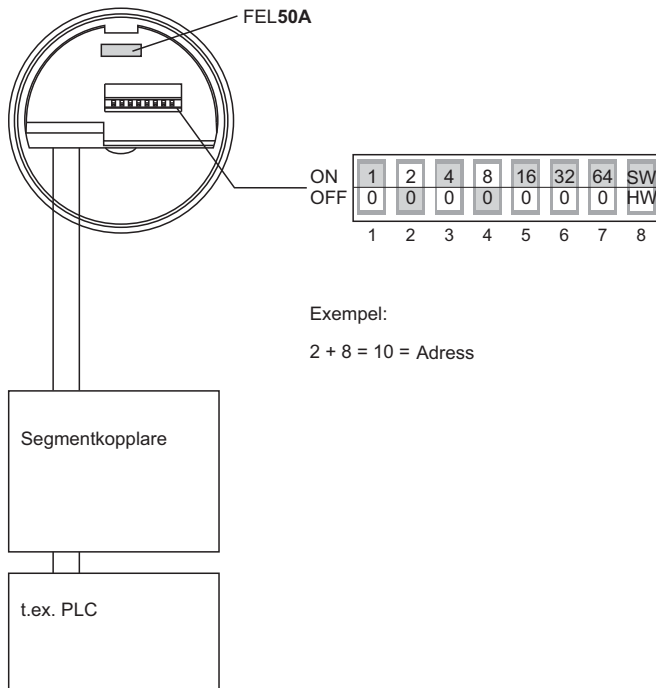


SV – Vätskans densitet.
Densitet ρ mätt i g/cm^3
eller i kg/l .

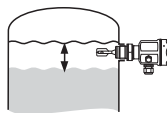


SV - Automatiskt test FEL57
(processen ser du på sida 44, 45
och omkopplingsenheten)

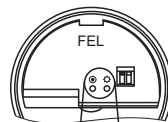




SV - Ange enhetens adress
 (Ange parametrarna,
 se BA141F)



Variera nivå



Variera nivå



Stand-by



Omkopplarens status



FEL57, FEL50A: Täckning



fast sken



blinkar



av



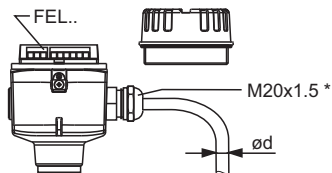
Utgångssignal



Fel

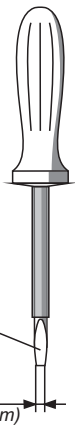
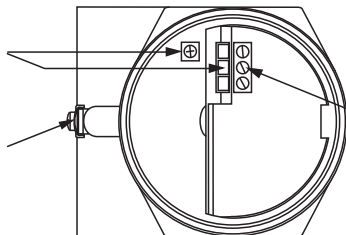


Följ nationella föreskrifter!



max. 2,5 mm²
(max. AWG 14)

max. 4 mm²
(max. AWG 12)



SV - Anslutningar

*Kabelingång

Nickelpläterad mässing:

Ød = 7-10,5 mm (0,28-0,41 tum)

Plast:

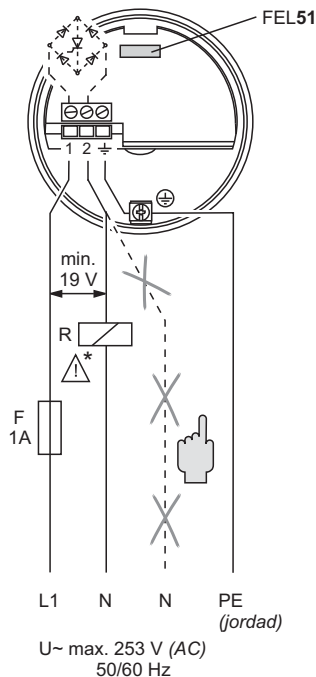
Ød = 5-10 mm (0,2-0,38 tum)

Rostfritt stål:

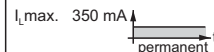
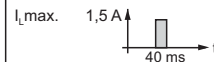
Ød = 7-12 mm (0,28-0,47 tum)

SV - Anslutningar FEL51
Tvåkabelanslutning, AC

 **Förbjudet**



* Extern last R **måste** anslutas

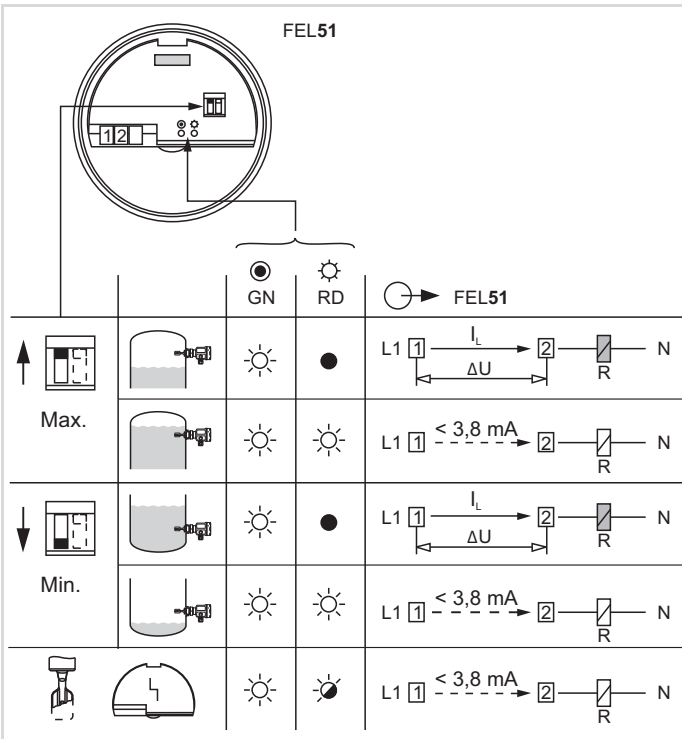


max. 89 VA / 253 V
max. 8,4 VA / 24 V

min. 2,5 VA / 253 V (10 mA)
min. 0,5 VA / 24 V (20 mA)

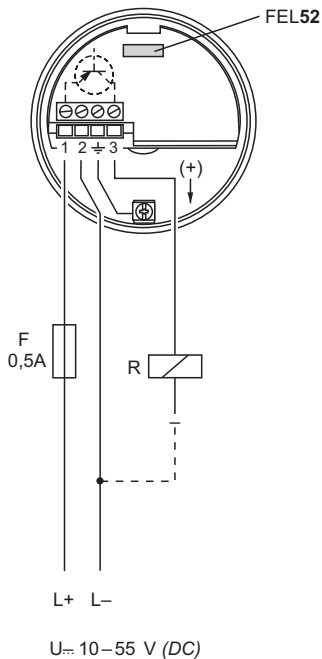
FEL51

SV - Funktion FEL51



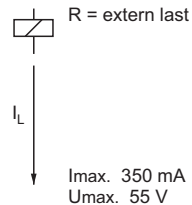
ΔU_{FEL51} max. 12 V

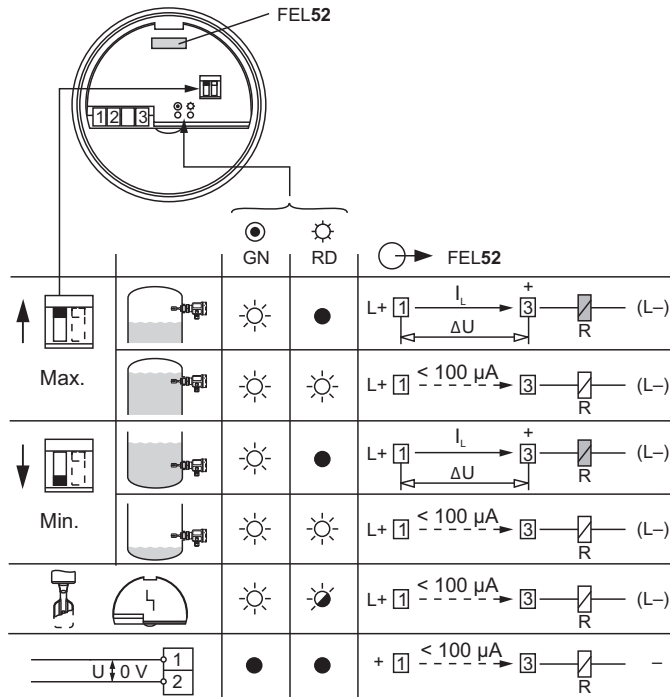
SV - Anslutningar FEL52
Likströmsanslutning (PNP)



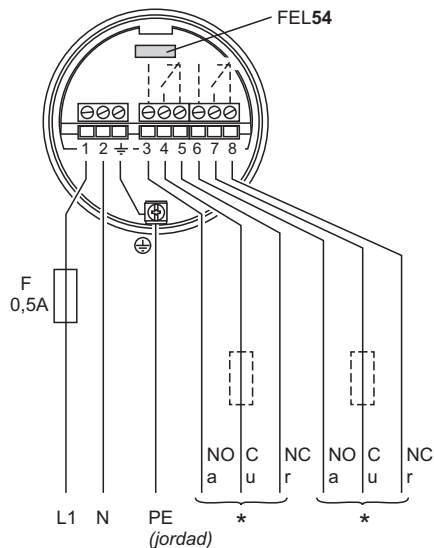
även för DI-moduler

EN 61131-2



 $\Delta U_{FEL52} \text{ max. } 3 \text{ V}$

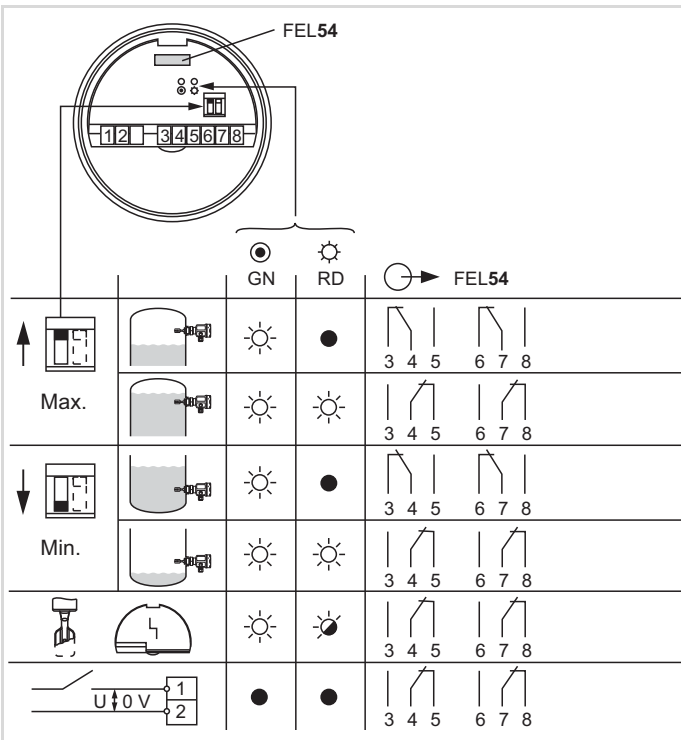
SV - Anslutningar FEL54
 Universalanslutning
 Reläutgång



$U_{\sim}$ 19–253 V (AC)

L+ L–
 U_{-} 19– 55 V (DC)

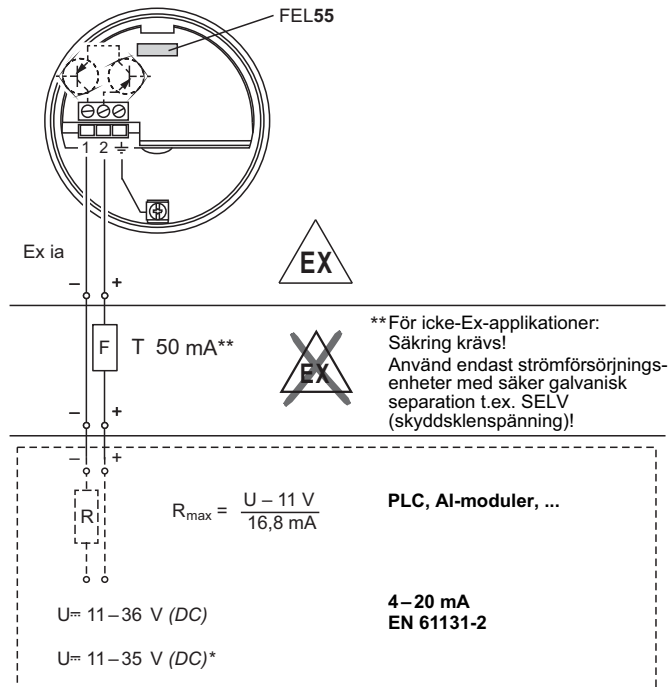
$\left\{ \begin{array}{l} U_{\sim} \text{ max. } 253 \text{ V, } I_{\sim} \text{ max. } 6 \text{ A} \\ P_{\sim} \text{ max. } 1500 \text{ VA, } \cos \varphi = 1 \\ * \quad P_{\sim} \text{ max. } 750 \text{ VA, } \cos \varphi > 0,7 \\ I_{-} \text{ max. } 6 \text{ A, } U_{-} < 30 \text{ V} \\ I_{-} \text{ max. } 0.2 \text{ A, } U_{-} < 125 \text{ V} \end{array} \right.$

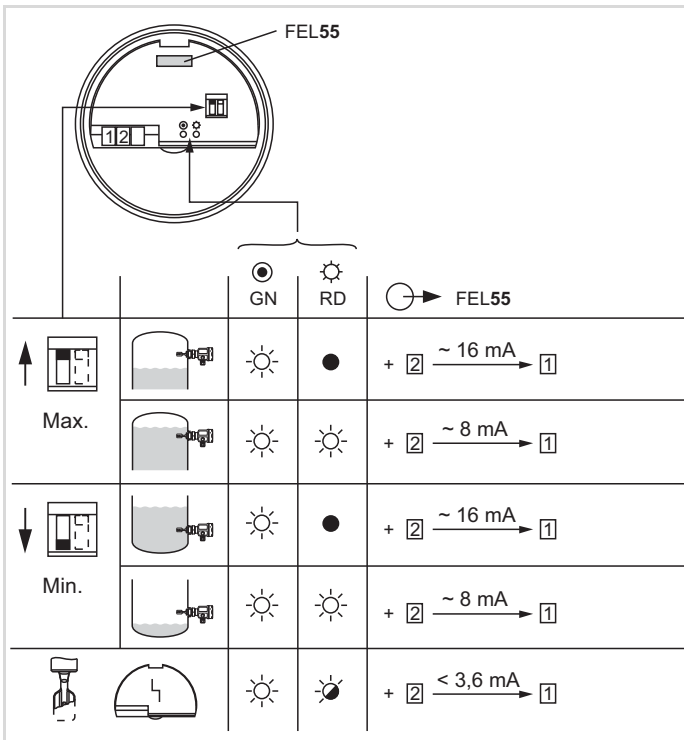


SV - Anslutningar FEL55

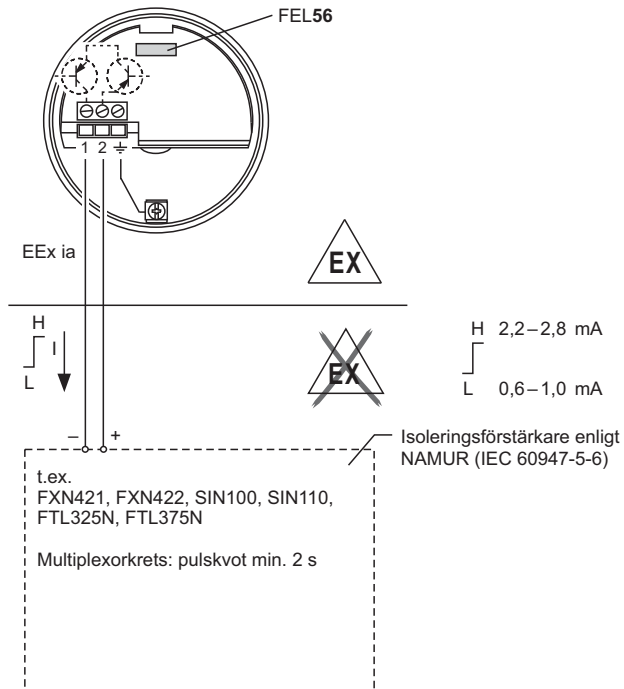
Utgång 8/16 mA

* Våt plats.



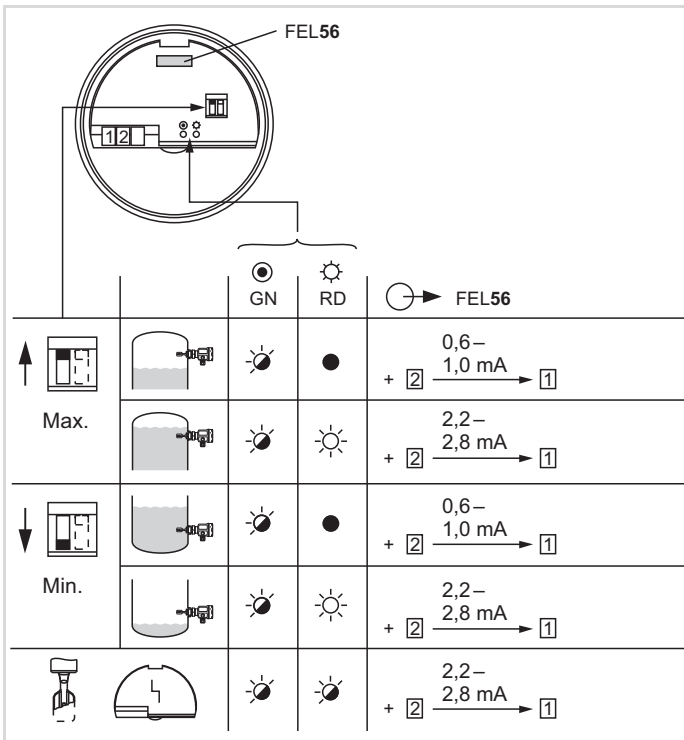


SV - Anslutningar FEL56
 NAMUR utgång L-H
 < 1,0 mA / > 2,2 mA

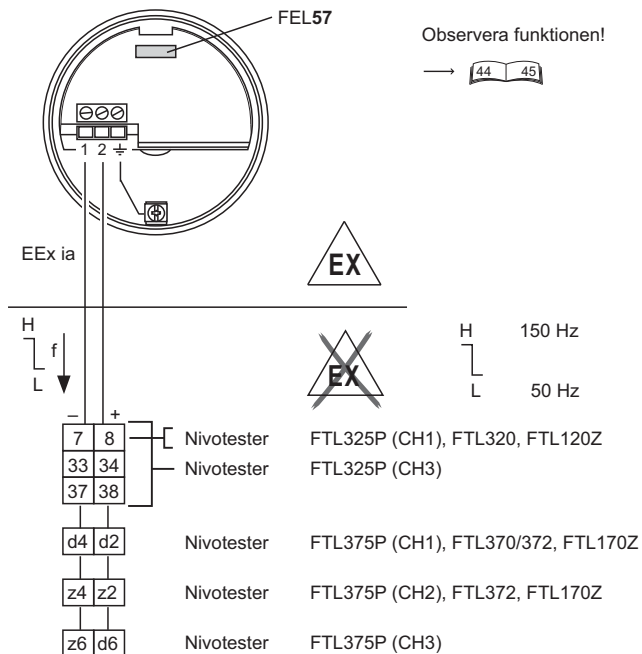


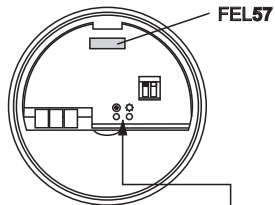
Strömförsörjning

Likström: 8,2 V +/- 20 %



SV - Anslutningar FEL 57
 PFM-utgång
 150 Hz/50 Hz



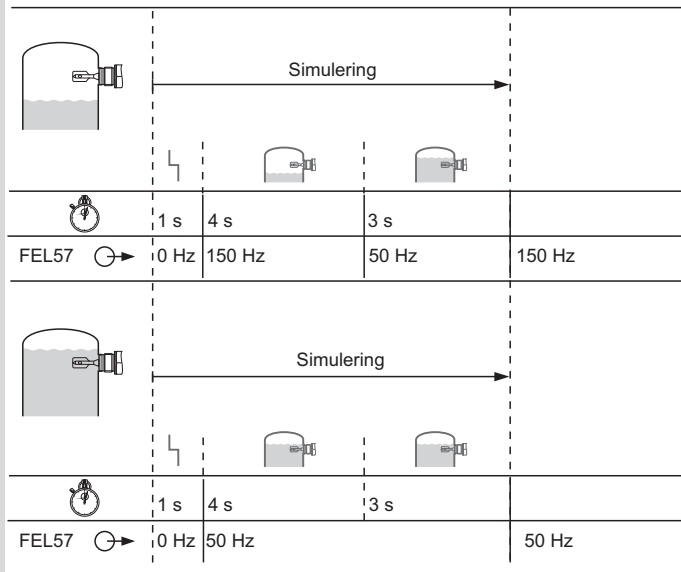
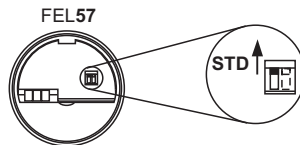


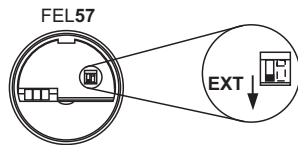
FEL57

		GN	YE	FEL57

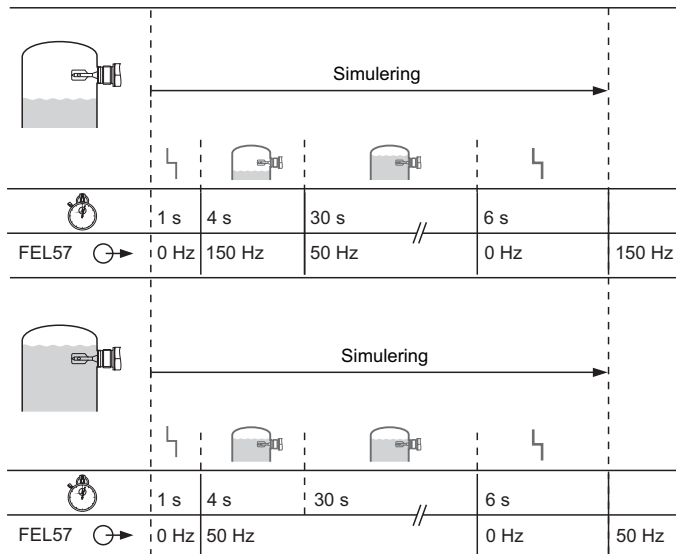
* Omkopplarens betende

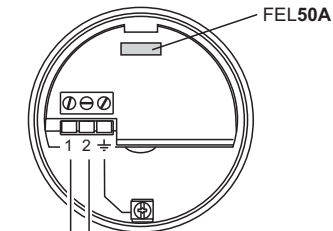
SV - Omkopplarens funktion Automatiskt test (STD)





SV - Omkopplarens funktion Automatiskt test (EXT)



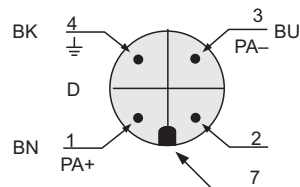


PA- PA+
U_~ 9–32 V (DC)

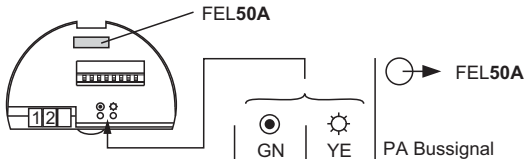
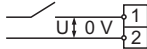
Segmentkopplare

t.ex. PLC

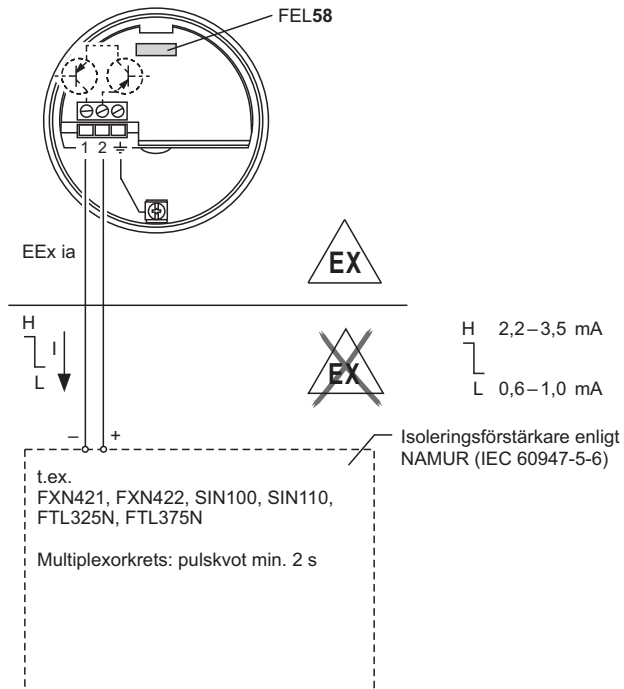
M12-kontakt



Enhetskontakt på hus (hane)

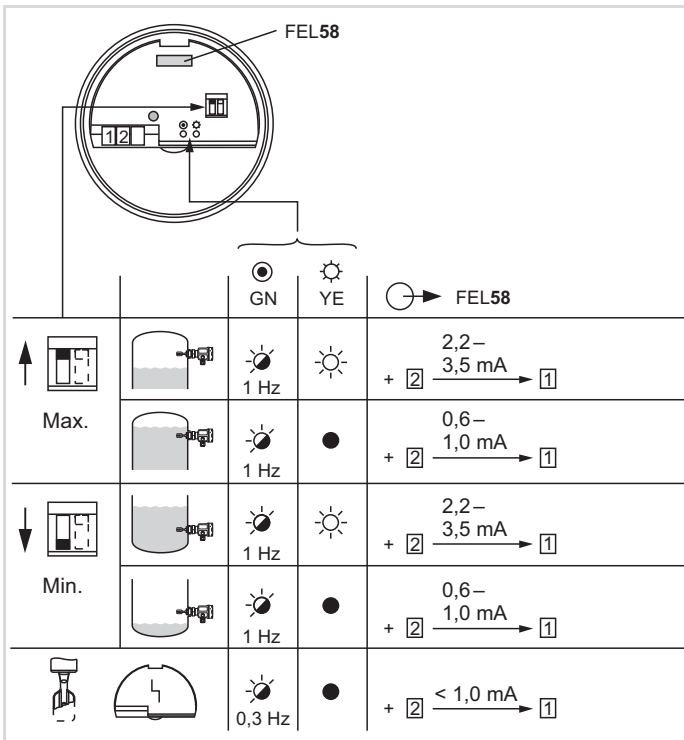
				
ej inverterad				OUT_D = 0
				OUT_D = 1
inverterad				OUT_D = 0
				OUT_D = 1
			—	Kommunikation
		—		Status, se BA141F
				../..

SV - Anslutningar FEL58
NAMUR utgång H-L
 $> 2,2 \text{ mA} / < 1,0 \text{ mA}$

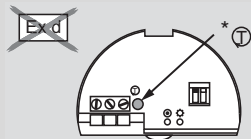


Strömförsörjning

Likström: $8,2 \text{ V} \pm 20 \%$



SV - Funktionstestknapp FEL58
Felsäkert läge MAX.



MAX  + 		
1. Normal drift	GN  YE  1 Hz + $\frac{2,2-3,5 \text{ mA}}{2} \rightarrow 1$	GN  YE  1 Hz + $\frac{0,6-1,0 \text{ mA}}{2} \rightarrow 1$
2. Tryck ner testknappen  >3 s	GN  YE  + $\frac{0 \text{ mA}}{2} \rightarrow 1$	GN  YE  + $\frac{0 \text{ mA}}{2} \rightarrow 1$
3. Släpp testknappen efter ungefär 2 sekunders normal drift 	GN  YE  1 Hz + $\frac{2,2-3,5 \text{ mA}}{2} \rightarrow 1$	GN  YE  1 Hz + $\frac{0,6-1,0 \text{ mA}}{2} \rightarrow 1$



SV - Funktionstestknapp FEL58
Felsäkert läge MIN.

1. Normal drift



1 Hz
+ 2,2 –
3,5 mA → 1



1 Hz
+ 0,6 –
1,0 mA → 1

2. Tryck ner testknappen



+ 0 mA → 1



+ 0 mA → 1

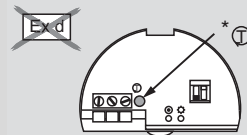
3. Släpp testknappen efter ungefär 2 sekunders normal drift



1 Hz
+ 2,2 –
3,5 mA → 1

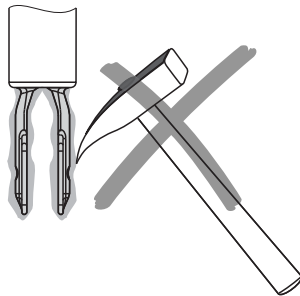
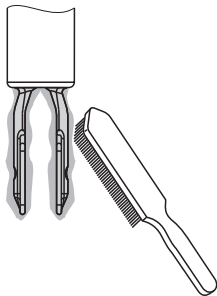


1 Hz
+ 0,6 –
1,0 mA → 1

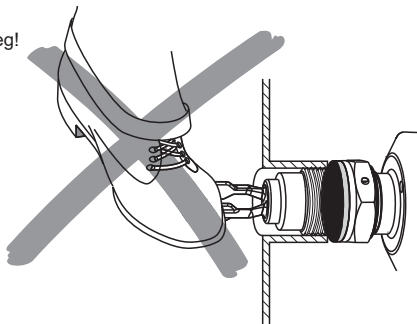


SV - Underhåll, Rengöring

Ta bort avlagringar



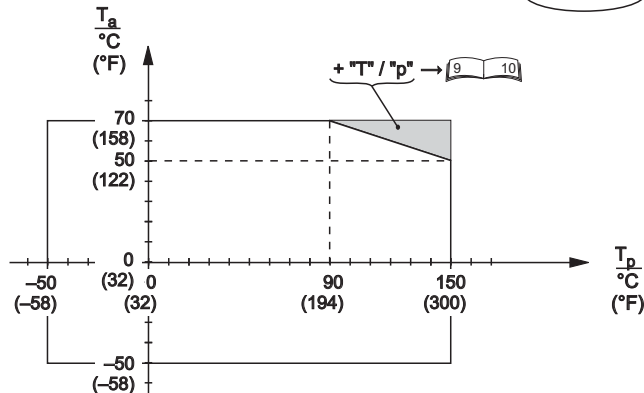
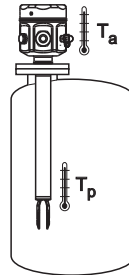
Använd inte som fotsteg!



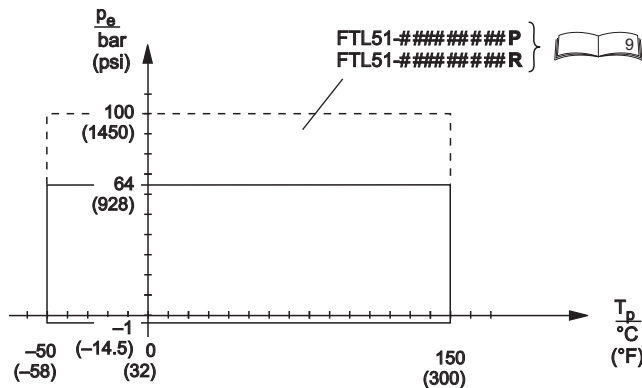
SV - Teknisk information

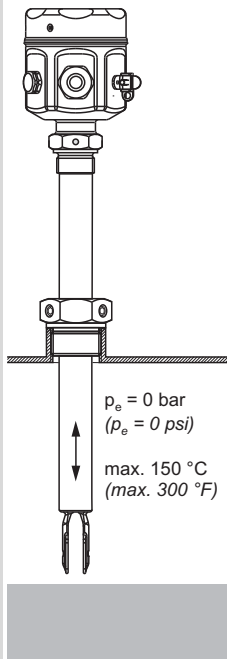
Omgivningstemperatur T_a

Processtemperatur T_p

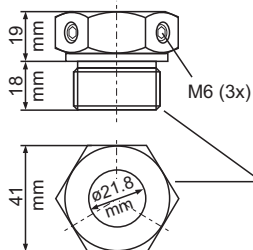


SV - Processtryck p_e
Processtemperatur T_p

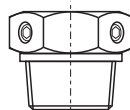




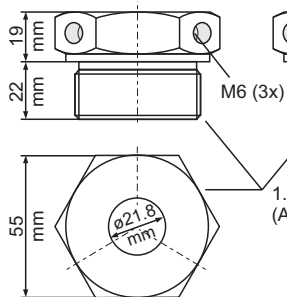
G 1
52003978



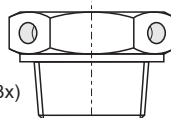
NPT 1 - 11½
52003979



G 1½
52003980



NPT 1½ - 11½
52003981



SV - Tillbehör

Glidbara hylsor för drift utan tryck

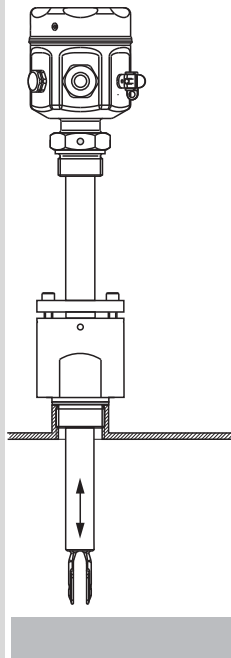
se:

KA00151F (G 1, NPT 1)

KA00152F (G 1½, NPT 1½)

100 mm = 3,94 tum

SV - Glidande hylsor för högt tryck



se:

KA00153F (G 1, NPT 1)

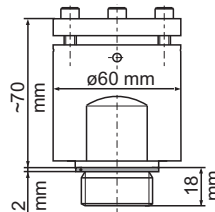
KA00154F (G 1½, NPT 1½)

100 mm = 3,94 tum

G 1

1.4435 (AISI 316L)
52003663

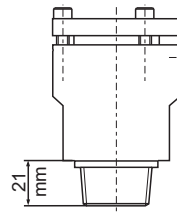
AlloyC4: 52003664
AlloyC22: 71118691



NPT 1 - 11½

1.4435 (AISI 316L)
52003667

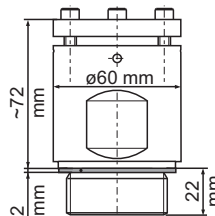
AlloyC4: 52003668
AlloyC22: 71118694



G 1½

1.4435 (AISI 316L)
52003665

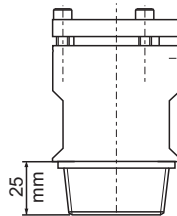
AlloyC4: 52003666
AlloyC22: 71118693



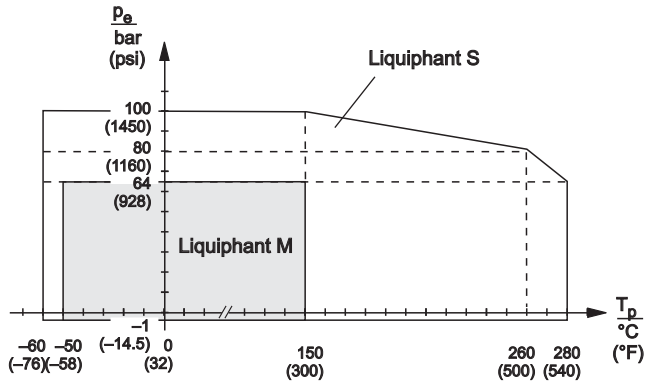
NPT 1½ - 11½

1.4435 (AISI 316L)
52003669

AlloyC4: 52003670
AlloyC22: 71118695



SV - Glidande hylsor för högt tryck:
Processtryck p_e
Processtemperatur T_p



Fel	Orsak	Åtgärd
Omkopplar inte	Ingen ström	Kontrollera strömmen
	Fel på signalledningen	Kontrollera signalledningen
	Trasig elektronikinsats – FEL51 ansluten direkt till L1 och N	Byt – anslut alltid FEL51 via extern last
	Vätskans densitet är för låg	Ange densiteten till > 0,5 på elektronikinsatsen
	Gaffeln har avlagringar	Rengör gaffeln
	Gaffeln har korroderat (Indikation på FEL: Det blinkar rött/gult, FEL58: Det blinkar grönt 0,3 Hz)	Byt gaffel och processanslutning
	FEL51: Internt motstånd hos anslutet relä för stort	Anslut lämpligt relä
	FEL51: Hållströmmen till anslutet relä för låg	Anslut motstånd parallellt med relä
	FEL54: Kontakter har svetsats samman (efter kortslutning)	Byt FEL54: Sätt säkringen i kontaktkretsen
Omkopplar på fel sätt	Min-/Max-felsäkert läge har ställts in fel	Ange korrekt läge på elektronikinsatsen
Sporadiskt felaktig omkoppling	Tjockt, tungt skum, mycket turbulens, skummande vätska	Montera Liquiphant i bypassrör
	Extrem elektromagnetisk störning	Använd skärmad kabel
	Extrem vibration	Koppla ifrån den, dämpa, vrid gaffeln 90°
	Vatten i huset	Skruva åt locket och kabelförskruvningen hårt
	FEL52: Överbelastad utgång	Minska lasten, (kabel-) kapacitansen
Omkopplar på fel sätt efter strömavbrott	FEL57: funktion under test när omkopplaren är på (funktionstest)	Observera hur omkopplaren fungerar vid FEL57. Efter strömavbrott, blockera fabrikskontroll i upp till 45 s

SV – Felsökning – Tillägg

Om gaffeln inte omkopplar normalt kan gaffelns frekvens ställas in till PIN 4 på diagnosuttaget.

Vid elektronikinsatserna

FEL51/52/54/55/56/57/58

uppstår en sinusformad vibration vars amplitud gör det möjligt att avgöra skicket på gaffeln.

Vid FEL50A går det på grund av en rektangulär pulssignal endast att mäta gaffelns frekvens.

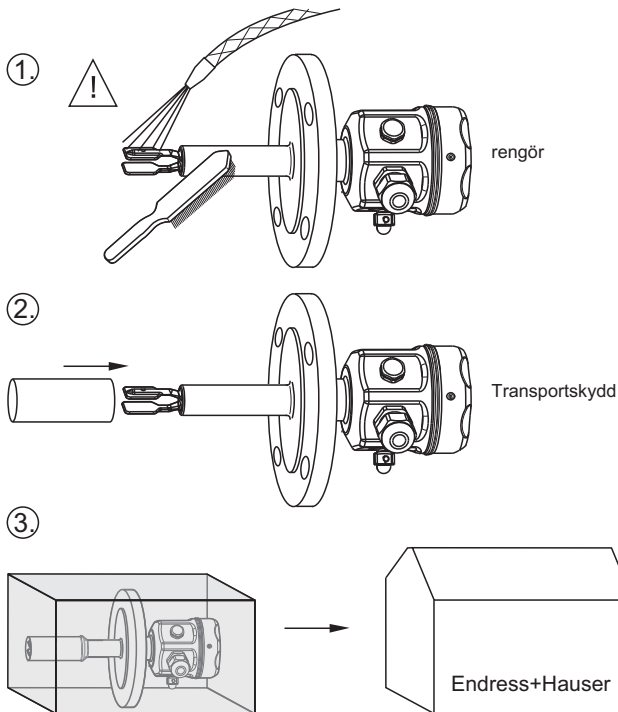
SV - Reservdelar

Elektronikinsatser



FEL51	52002304
FEL52	52002305
FEL54	52002306
FEL55	52002307
FEL56	52002308
FEL57	52002309
FEL58	52006454
FEL50A	52010527

Installationsbeskrivning: Under installationen måste du tänka på att elektriska resurser (elektronikinsatser) som drivs av icke-egensäkra kretsar inte längre kan kopplas till egensäkra kretsar.



Teknisk information

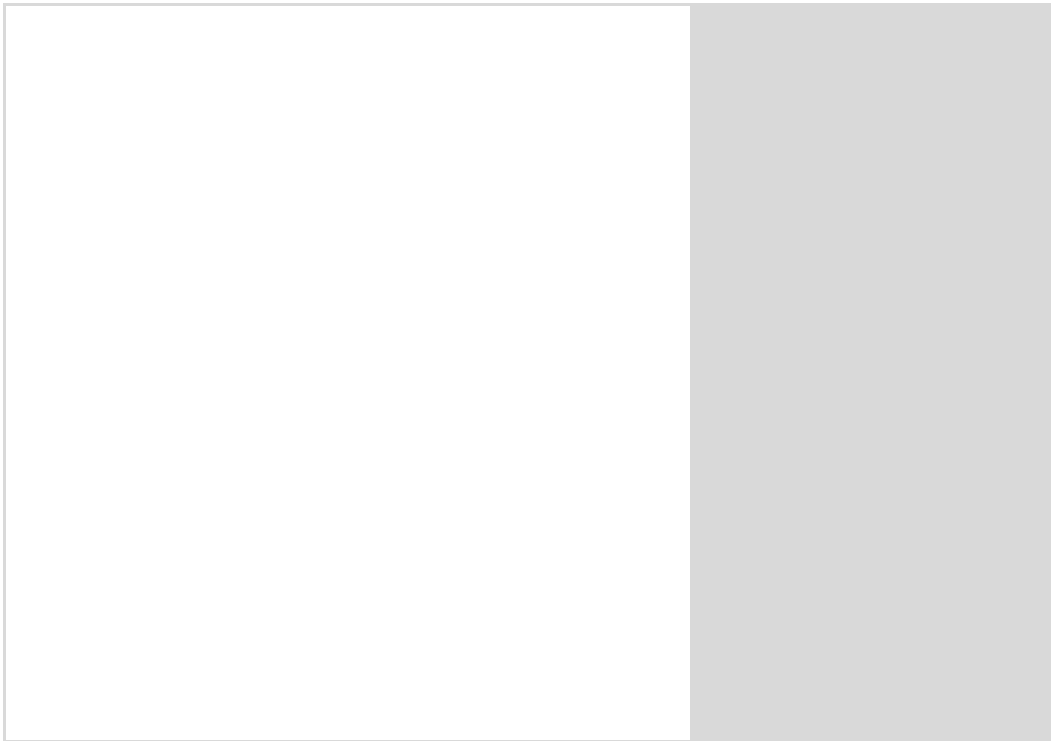
TI328F	Liquiphant FTL50, FTL50H, FTL51, FTL51H
TI426F	Svetsadapter, nivå och tryck

Driftinstruktion

BA00141F FEL50A, PROFIBUS PA

Säkerhetsinformation

XA00031F	 	II 1/2 G,	Ex d	IIC/IIB
XA00063F	 	II 1/2 G, II 1/2 D,	Ex ia/ib	IIC/IIB
XA00064F	 	II 1 G,	Ex ia	IIC/IIB
XA00108F	 	II 1/2 G,	Ex de	IIC/IIB
XA00113F	 	II 1/2 G,	Ex ia/ib	IIC
XA00114F	 	II 1/2 G,	Ex d	IIC
XA00115F	 	II 1/2 G,	Ex de	IIC
XA00154F	 	II 1/2 G, II 1/2 D,	Ex ia/ib	IIC/IIB
XA00158F	 	II 1/2 G,	Ex ia/ib	IIC
XA00159F	 	II 1 G,	Ex ia	IIC/IIB
XA00182F	 	II 3 G, II 3 D,	Ex nA/nC	IIC/IIIC





71431449

www.endress.com/worldwide
