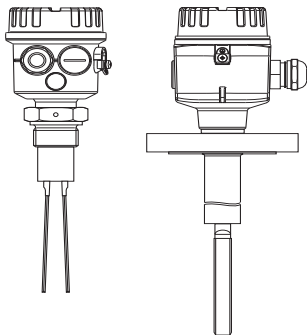


Upute za uporabu **Soliphant M FTM50, FTM51**

HR - Prekidač razine točke



hr - Sadržaji

Sigurnosne napomene	3
Rukovanje	4
Identifikacija uređaja FTM50	6
Identifikacija uređaja FTM51	10
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Opres!

= zabranjeno;

dovodi do nepravilnog rada ili uništenja.

hr - Sigurnosne napomene

Soliphant M FTM50, FTM51 dizajniran je za otkrivanje granične razine u sirovim krutinama.

Ako se koristi pogrešno, moguće je da se mogu pojaviti opasnosti vezane uz primjenu.

Prekidač granične razine može se ugraditi, spojiti, pustiti u pogon, upravljati i održavati **samo**

kvalificiranim i ovlaštenim

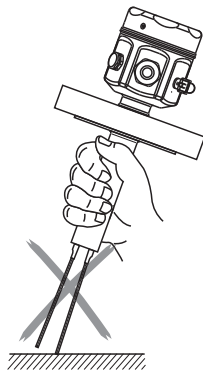
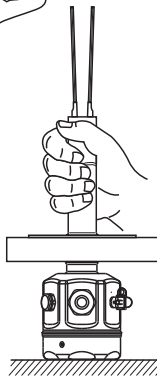
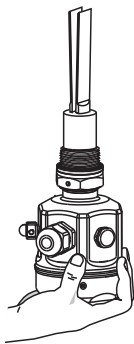
osobljem, uz strogo pridržavanje ovih uputa za uporabu, svih relevantnih standarda, zakonskih zahtjeva i, prema potrebi, certifikata.

Ugradite lako dostupan prekidač za napajanje u blizini uređaja.

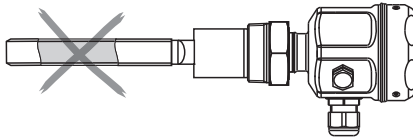
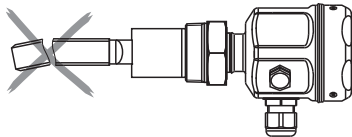
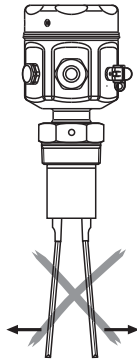
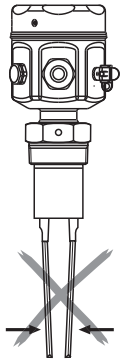
Prekidač je potrebno označiti kao diskonektor za uređaj.

hr - Rukovanje

Držati za kućište, prirubnicu ili produžnu cijev.



hr - Nemojte savijati
Nemojte skraćivati
Nemojte produljivati

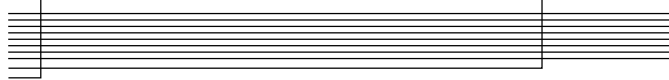




ENDRESS+HAUSER
SOLIPHANT M

Kod narudžbe

FTM50-#####



A	*1	CSA Opća namjena, CSA CUS
C		FM DIP-AIS Cl. II, III, Div. 1, Gr. E-G +
D		CSA DIP Cl. II, III, Div. 1+2, Gr. E-G
E		IEC Ex Iad A20
F		FM IS Cl. I, II, III, Div. 1, Gr. A-G + NI +
G		CSA IS Cl. I, II, III, Div. 1+2, Gr. A-G
H		IEC Ex ID [Iad] A21
K		FM XP-AIS Cl. I, Div. 1, Gr. A-D +
L		CSA XP Cl. I, Div. 1+2, Gr. A-D
M		IEC Ex d IIC T6 Ga/Gb
N		INMETRO Ex tb IIIC Da/Db
O		INMETRO Ex d IIC T6-T2 Ga/Gb, Ex ta/tb IIIC Da/Db
P		INMETRO Ex de IIC T6-T2 Ga/Gb, Ex ta/tb IIIC Da/Db
Q		EAC Ex de IIC T6 Ga/Gb, Ex t IIIC Da/Db
R		TIIS Ex d IIC T3
S		TIIS Ex ia IIC T3
T		Neopasno područje + EAC oznaka
U		EAC Ex d IIC T6 Ga/Gb, Ex t IIIC Da
V		EAC Ex ia IIC Da/Db, Ex ia IIC T6 Ga/Gb
W		NEPSI Ex ia IIC T6
X		NEPSI Ex d [Ia] IIC T6
Y		NEPSI DIP
Z		*2
1		ATEX II 1 D, 1/2 GD, 1/3 GD Ex ia IIC T6
2		ATEX II 1/2 D Ex ID
3		ATEX II 3 D, ATEX II 3 G EEx nA/nL/nC
4		ATEX II 1/3 D Ex ID
5		ATEX II 1 D, ATEX II 1/2 G Ex de [Ia] IIC T6
6		ATEX II 1 D, ATEX II 1/2 G Ex d [Ia] IIC T6
7		ATEX II 1 D, II 1 G Ex ia T6 (XA)
AF		2", 150 lbs, RF, ANSI B16.5
AG		3", 150 lbs, RF, ANSI B16.5
AH		4", 150 lbs, RF, ANSI B16.5
B3		DN50, PN25/40 A, EN1092-1 (DIN2527 B)
BS		DN80, PN10/16 A, EN1092-1 (DIN2527 B)
BT		DN100, PN10/16 A, EN1092-1 (DIN2527 B)
GG		EN10226, R 1/2
GJ		ANSI, NPT 1/4, d = 1.67"
GK		ANSI, NPT 1/4, d = 1.38"

GX	ANSI, NPT 1½, d = 1.38"	--> ISA
KF	10K 50, RF, JIS B2220	
KG	10K 80, RF, JIS B2220	
KH	10K 100, RF, JIS B2220	
TD	Tri-Clamp ISO2852, DN40-51 (Zr")	
YY	*2	
A	PTFE>316L; Vilica premazana	
B	PTFE>316L; Potpuno premazana	
C	ETFE>316L; Potpuno premazana	
2	316L; Ra ≤ 3.2 µm/80 grit, *1	
5	316L; Ra ≤ 0.8 µm/180 grit; Vilica polirana	
7	316L; Ra ≤ 0.8 µm/180 grit; Vilica + cijev polirane	
9	*2	
A	155 mm/6 in; min. 10 g/l (0.7 lbs)	
K	100 mm/4 in; min. 50 g/l (3 lbs)	
Y	*2	
1	FEM51; 19...253 V AC	
2	FEM52; PNP 10... 55 V DC	
4	FEM54; DPDT, 19...253 V AC / 55 V DC	
5	FEM55; 8/16 mA, 11... 36 V DC	
7	FEM57; PFM	
8	FEM58; NAMUR + Test gumb	
9	*2	
A	Kompaktno	
D	6 m > *3	
E	20 ft > *3	
G	6 m, Ojačano > *3	

H

20 ft,
Ojačano > *₃

Y

₂
*

H

T13, Aluminij, IP66/68 NEMA4X,
Odstojeni odjeljak za priključivanje

Y

₂

1

†16, Poliester, IP66/67 NEMA4X +
Providni poklopac

3

F17, Aluminij, IP66/67 NEMA4X

5

F13, Aluminij, IP66/68 NEMA4X

7

F15, 316L, IP66/67 NEMA4X

1

M12 utikač

2

M20

3

NPT ½

4

G ½

7

NPT ¾

9

₂
*

A

₁

G

*Stakleni poklopac

R

SIL, *₄,

S

Stakleni poklopac

S

SIL, *₄

Y

₂
*

A

₁

C

†EN10204-3.1, *₅

D

Temperaturni odstožnik

≤ 150 °C (≤ 300 °F)

E

Temperaturni odstožnik

≤ 150 °C (≤ 300 °F), EN10204-3.1, *₅

F

Visoka temperatura

≤ 280 °C (≤ 540 °F)

H	Visoka temperatura ≤ 280 °C (≤ 540 °F), EN10204-3.1, *5
J	Visoka temperatura ≤ 230 °C (≤ 450 °F)
K	Visoka temperatura ≤ 230 °C (≤ 450 °F), EN10204-3.1, *5
Y	*2

*1 Bez

*2 Drugo

*3 Odvojeno kućište

*4 Izjava o sukladnosti

*5 Materijal (vlaženi dijelovi), inspekcijski certifikat



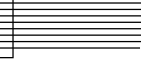
ENDRESS+HAUSER
SOLIPHANT M

Kod narudžbe

FTM51-#####



A	*1	CSA Opća namjena, CSA C US
C		FM DIP-AIS Cl. II, III, Div. 1, Gr. E-G +
D		CSA DIP Cl. II, III, Div. 1+2, Gr. E-G
E		IEC Ex IAd AZO
F		FM IS Cl. I, II, III, Div. 1, Gr. A-G + NI +
G		CSA IS Cl. I, II, III, Div. 1+2, Gr. A-G
H		IEC Ex ID [IaD] A21
I		FM XP-AIS Cl. I, Div. 1, Gr. A-D +
K		CSA XP Cl. I, Div. 1+2, Gr. A-D
L		IEC Ex d IIC T6 Ga/Gb
K		IEC Ex de IIC T6 Ga/Gb
M		INMETRO Ex tb IIIC Da/Db
P		INMETRO Ex d IIC T6-T2 Ga/Gb, Ex Ia/tb IIIC Da/Db
Q		INMETRO Ex de IIC T6-T2 Ga/Gb, Ex Ia/tb IIIC Da/Db
R		EAC Ex de IIC T6 Ga/Gb, Ex t IIIC Da/Db
S		TIIS Ex d IIC T3
T		TIIS Ex ia IIC T3
U		Neoplasno područje + EAC oznaka
V		EAC Ex d IIC T6 Ga/Gb, Ex t IIIC Da
W		EAC Ex ia IIIC Da/Db, Ex ia IIC T6 Ga/Gb
X		NEPSI Ex ia IIC T6
Z		NEPSI Ex d [Ia] IIC T6
8		NEPSI DIP
*2		
Y		ATEX II 1 D, 1/2 GD, 1/3 GD Ex ia IIC T6
1		ATEX II 1/2 D Ex ID
2		ATEX II 3 D, ATEX II 3 G EEx nA/nL/nC
3		ATEX II 1/3 D Ex ID
4		ATEX II 1 D, ATEX II 1/2 G Ex de [Ia] IIC T6
5		ATEX II 1 D, ATEX II 1/2 G Ex d [Ia] IIC T6
6		ATEX II 1 D, II 1 G Ex ia T6 (XA)
7		



AF	2", 150 lbs, RF, ANSI B16.5
AG	3", 150 lbs, RF, ANSI B16.5
AH	4", 150 lbs, RF, ANSI B16.5
B3	DN50, PN25/40 A, EN1092-1 (DIN2527 B)
BS	DN80, PN10/16 A, EN1092-1 (DIN2527 B)
BT	DN100, PN10/16 A, EN1092-1 (DIN2527 B)
GG	EN10226, R 1/2
GJ	ANSI, NPT 1 1/2, d = 1.67"
GK	ANSI, NPT 1 1/4, d = 1.38"

GX	ANSI, NPT 1½, d = 1,38" --> ISA
KF	10K 50, RF, JIS B2220
KG	10K 80, RF, JIS B2220
KH	10K 100, RF, JIS B2220
TD	Tri-Clamp ISO2852, DN40-51 (2")
YY	*2
A	PTFE>316L; Vilica premazana
B	PTFE>316L; Potpuno premazana
C	ETFE>316L; Potpuno premazana
2	316L; Ra ≤ 3.2 µm/80 grit, *1
5	316L; Ra ≤ 0.8 µm/180 grit; Vilica polirana
7	316L; Ra ≤ 0.8 µm/180 grit; Vilica + cijev polirane
9	*2
L mm; min. 10 g/l (0.7 lbs)
M mm; min. 50 g/l (3 lbs)
P in; min. 10 g/l (0.7 lbs)
Q in; min. 50 g/l (3 lbs)
S mm; min. 10 g/l (0.7 lbs),*6
T mm; min. 50 g/l (3 lbs),*6
U in; min. 10 g/l (0.7 lbs),*6
V in; min. 50 g/l (3 lbs),*6
Y	*2
1	FEM51; 19...253 V AC
2	FEM52; PNP, 10... 55 V DC
4	FEM54; DPDT, 19...253 V AC / 55 V DC
5	FEM55; 8/16 mA, 11... 36 V DC
7	FEM57; PFM
8	FEM58; NAMUR + Test gumb
9	*2

A	Kompaktno
D	6 m > ³
E	20 ft > ³ *
G	6 m, Ojačano > ³ *
H	20 ft, Ojačano > ³ *
Y	² Ojačano > ³ *
H	T13, Aluminij, IP66/68 NEMA4X, Odvojeni odjeljak za priključivanje
Y	²
1	Ā16, Poliester, IP66/67 NEMA4X + Providni poklopac
3	F17, Aluminij, IP66/67 NEMA4X
5	F13, Aluminij, IP66/68 NEMA4X
7	F15, 316L, IP66/67 NEMA4X
1	M12 utikač
2	M20
3	NPT ½
4	G ½
7	NPT ¾
9	² *
A	¹
G	Štakleni poklopac
R	SIL, ⁴ , Štakleni poklopac
S	SIL, ⁴
Y	² , [*]
A	¹
C	ĀN10204-3-1, ⁵
D	Temperaturni odstožnik ≤ 150 °C (≤ 300 °F)
E	Temperaturni odstožnik ≤ 150 °C (≤ 300 °F), EN10204-3-1, ⁵

- F Visoka temperatura
≤ 280 °C (≤ 540 °F)
- H Visoka temperatura
≤ 280 °C (≤ 540 °F), EN10204-3.1, *5
- J Visoka temperatura
≤ 230 °C (≤ 450 °F)
- K Visoka temperatura
≤ 230 °C (≤ 450 °F), EN10204-3.1, *5
- Y *2

*1 Bez

*2 Drugo

*3 Odvojeno kućište

*4 Izjava o sukladnosti

*5 Materijal (vlaženi dijelovi), inspeksijski certifikat

*6 Poboljšanje površine

hr - Montažne napomene

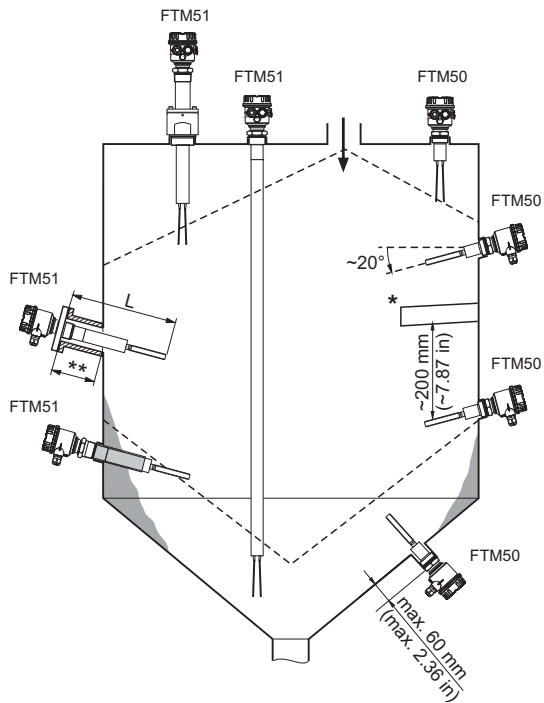
* Zaštitni krov

** Duljina mlaznice

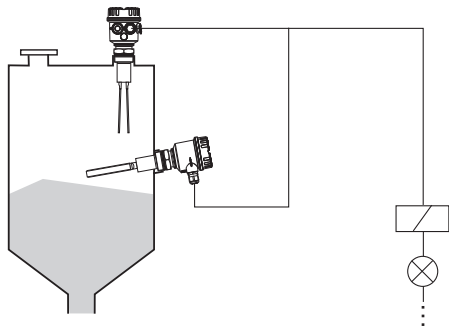
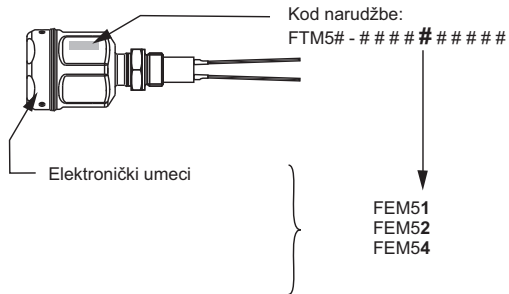
L Duljina senzora

L = 200 mm (7,87 in)
Standardne vilice

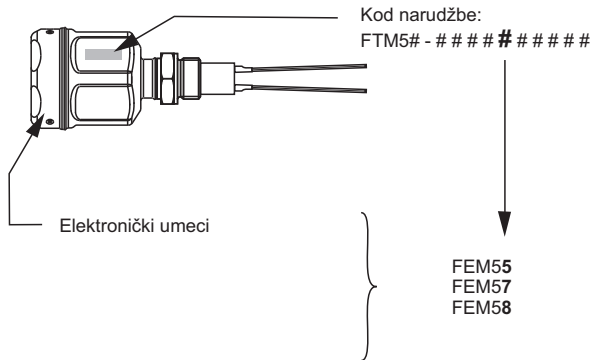
L = 145 mm (5,71 in)
Kratke vilice



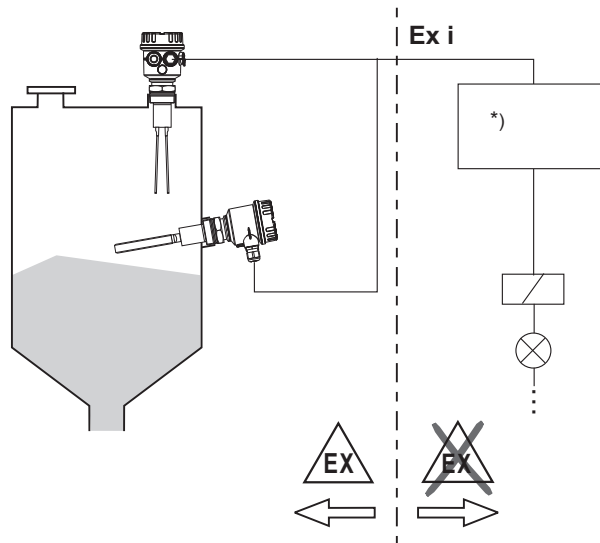
hr - Sustav za mjerenje
za direktno spajanje



hr - Sustav za mjerenje
za spajanje putem jedinice
prekidača



hr - Sustav za mjerenje
za spajanje putem jedinice
prekidača

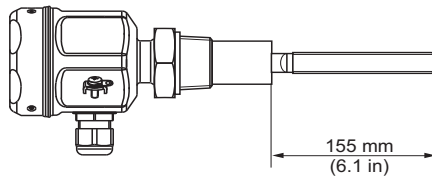


*) Spínací jednotka, PLC, izolaci ní zesilovač, segmentový slučovač

hr - Odabir duljine vilica
ovisno o gustoći tovara

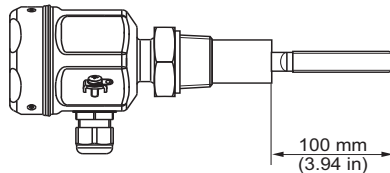
Gustoća tovara za standardnu vilicu

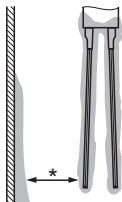
$\geq 10 \text{ g/l}$ ($\geq 0.7 \text{ lbs}$)



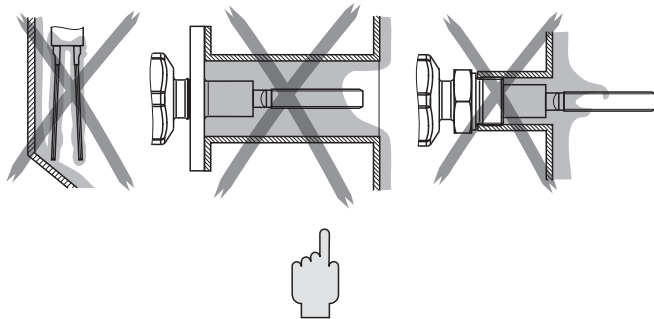
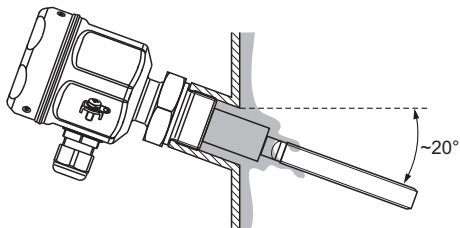
Gustoća tovara za kratku vilicu

$\geq 50 \text{ g/l}$ ($\geq 3 \text{ lbs}$)



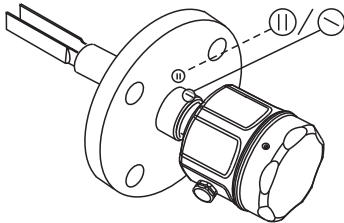
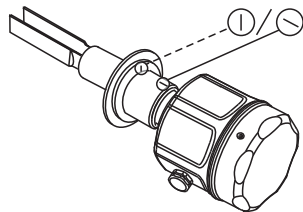
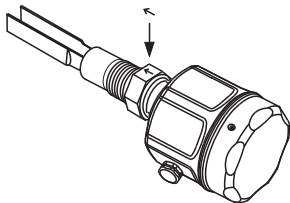
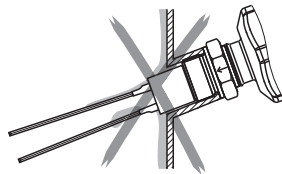
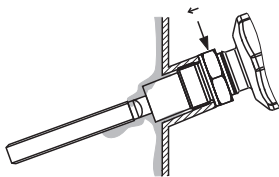


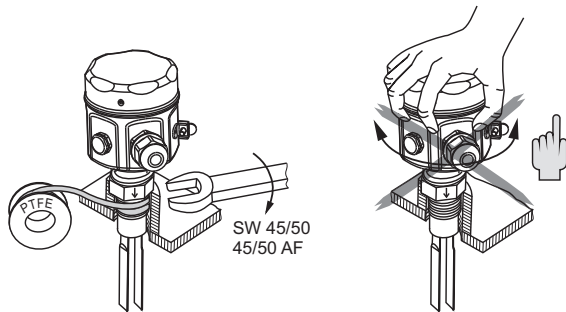
* Udaljenost!



hr - Uzmite u obzir nakupljanje.
Vilice možda neće doći u kontakt s
nakupljanjem spremnika.

hr - Orijentacija zubaca vilice:
Označavanje iznad ili ispod





hr - Zavijte Soliphant u priključak procesa.

Nemojte koristiti kućište za okretanje.

SW 45, 45 AF:

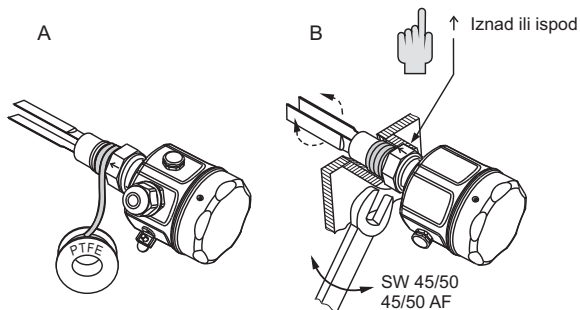
1½ NPT, ø 36 mm (1,42 in)

1¼ NPT, ø 36 mm (1,42 in)

SW 50, 50 AF:

1½ NPT, ø 43 mm (1,69 in)

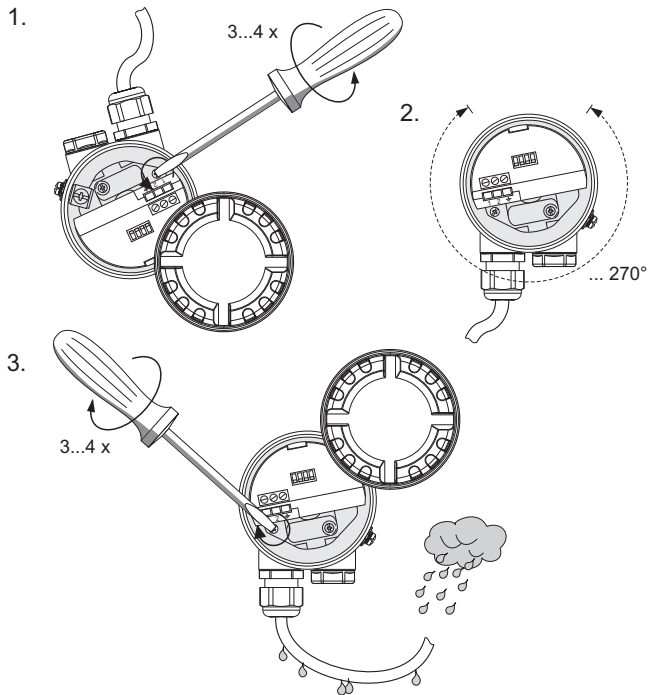
R 1½, ø 43 mm (1,69 in)

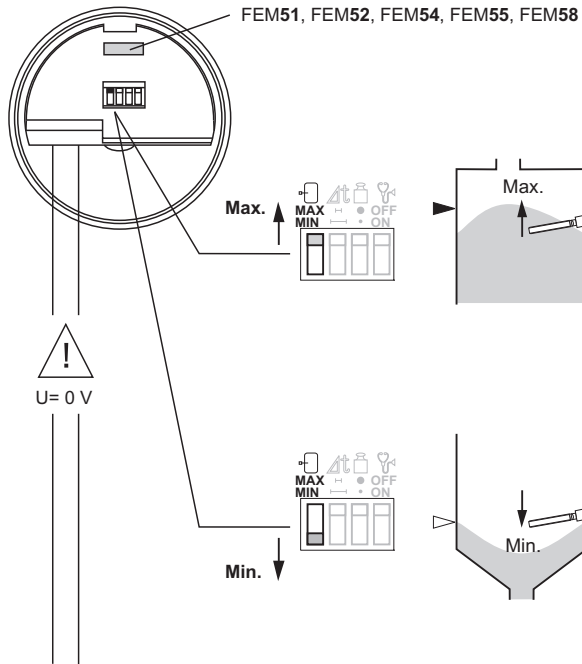


Zakretni moment

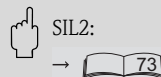
F16:
0,6 Nm (0,4425 lbf ft)

F15, F17, F13, T13:
0,9 Nm (0,6638 lbf ft)

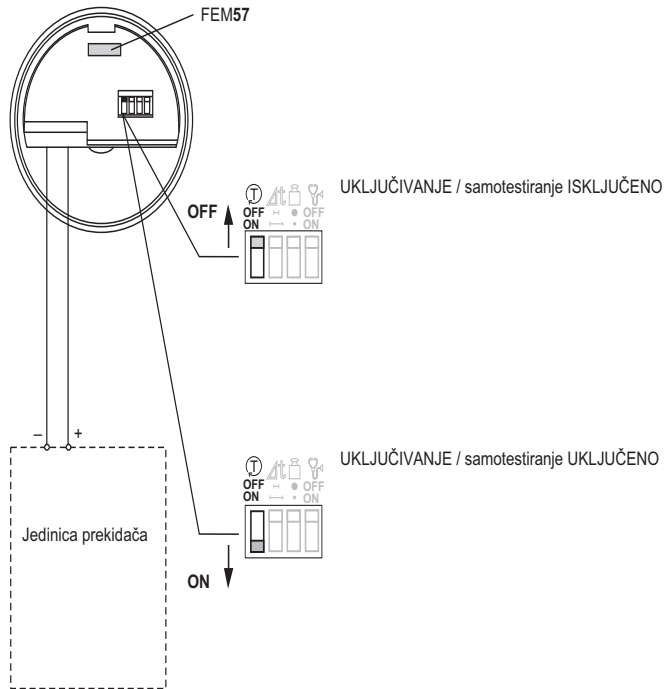


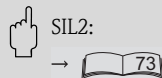
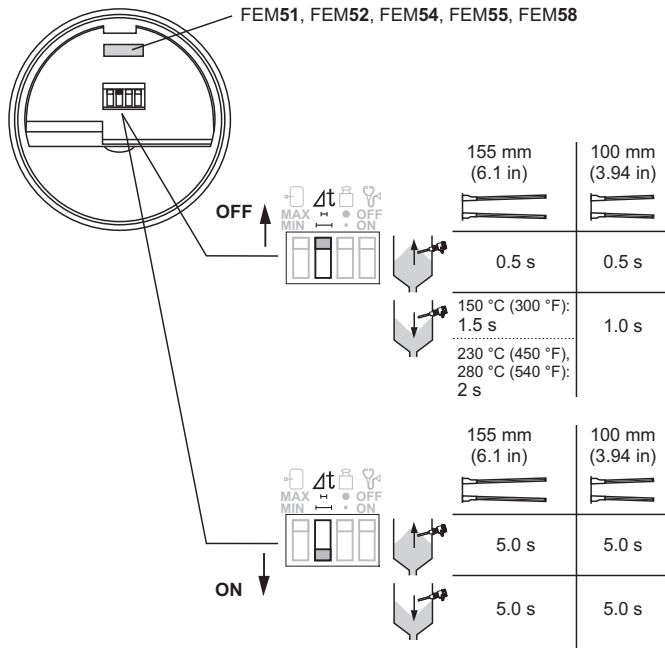


hr - Sigurnosni način rada
MIN/MAKS



hr - Samotestiranje FEM57
(pogledajte stranice 47, 48 i
jedinicu prekidača za niz)



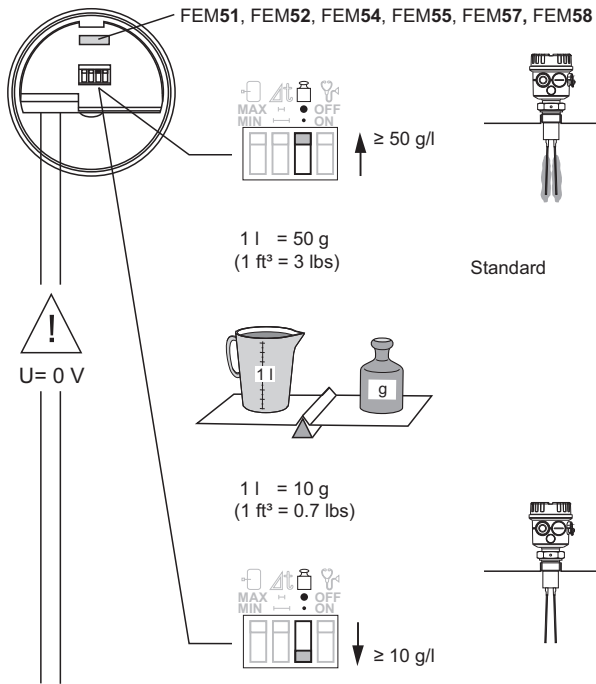


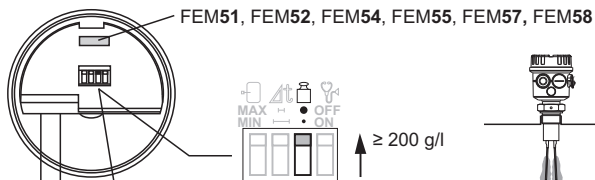
hr - Gustoća čvrstih tvari.

Gustoća tovara mjerena u g/l.

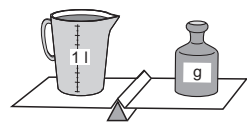
Za **standardne vilice**.

Sedimentacija

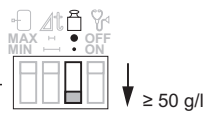




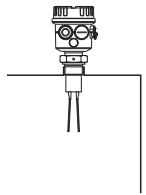
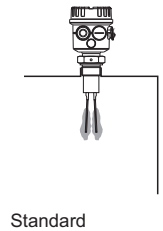
1 l = 200 g
(1 ft³ = 12 lbs)



1 l = 50 g
(1 ft³ = 3 lbs)



!
U = 0 V





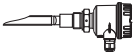























hr - Gustoća čvrstih tvari.
Gustoća tovara mjerena u g/l.
Za **kratke vilice**.

Sedimentacija



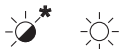
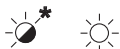
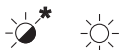
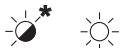
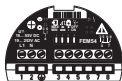
Upućivanje na simboliku



	Naslage 	Abrazija 
		
		
		
		
		  
		
		 
		



Elektronička greška



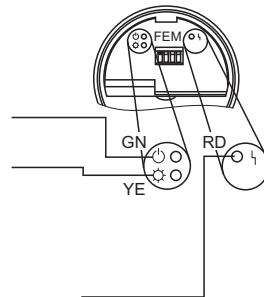
LED dioda crvene boje (pogreška)



Elektronički umetak FEL58
(NAMUR)

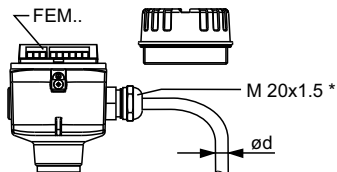
LED diode

-  Čekanje
-  Status prekidača (FEM57, pokriva)
-  Greška, alarm
-  Uključeno
-  Bljeska
-  Isključeno
-  Razina
-  Izlazni signal
- I_L Struja opterećenja (je uključena)
- I_R Diferencijalna struja (blokirana)



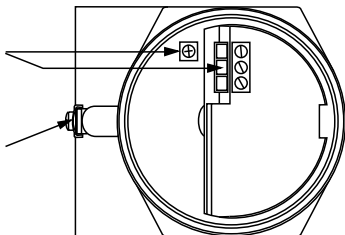


Pridržavajte se nacionalnih propisa!

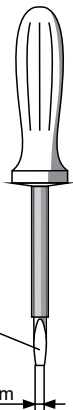


max. 2,5 mm²
(max. AWG 14)

max. 4 mm²
(max. AWG 12)



3 mm



hr - Priključci

*Ulaz kabela

Mesing obložen niklom:

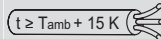
$\varnothing = 7 \dots 10,5 \text{ mm}$ (0,28...0,41 in)

Plastika:

$\varnothing = 5 \dots 10 \text{ mm}$ (0,2...0,38 in)

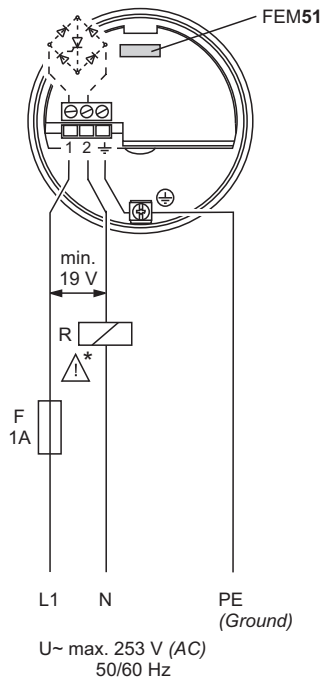
Nehrđajući čelik:

$\varnothing = 7 \dots 12 \text{ mm}$ (0,28...0,47 in)

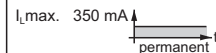
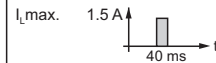


hr - Priklučci FEM51

Dvožični priključak naizmjenične struje



* Vanjsko opterećenje R mora biti priključeno



max. 89 VA / 253 V
max. 8.4 VA / 24 V

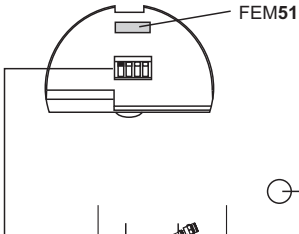
min. 2.5 VA / 253 V (10 mA)
min. 0.5 VA / 24 V (20 mA)


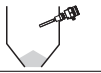























hr - Funkcija FEM51

*1 Potrebno je održavanje

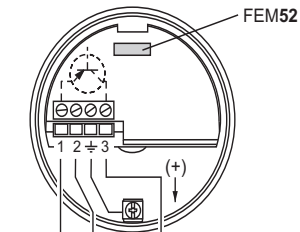
*2 Kvar instrumenta

$$\Delta U_{\text{FEM51}} = \text{maks. } 12 \text{ V}$$



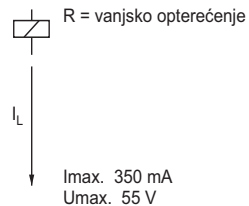
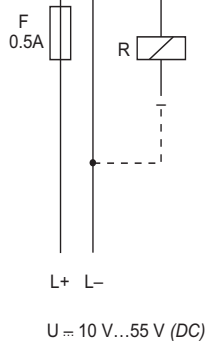
		 FEM51	GN	YE	RD
MAX		1 $\xrightarrow{I_L}$ 2 ΔU			
		1 $\xrightarrow{I_R}$ 2			
MIN		1 $\xrightarrow{I_L}$ 2 ΔU			
		1 $\xrightarrow{I_R}$ 2			
*1		1 $\xrightarrow{I_L / I_R}$ 2			
*2		1 $\xrightarrow{I_R}$ 2			

hr - Priklučci FEM52
Kabelska uvodnica

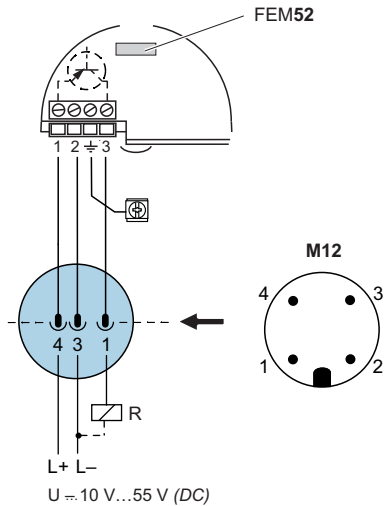


Također za DI module

EN 61131-2



hr - Priključci FEM52
M12 utikač

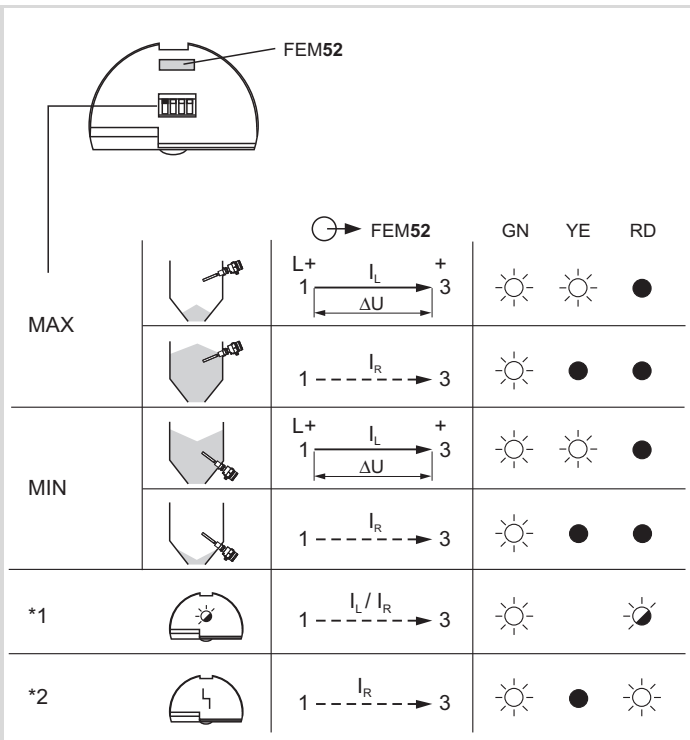


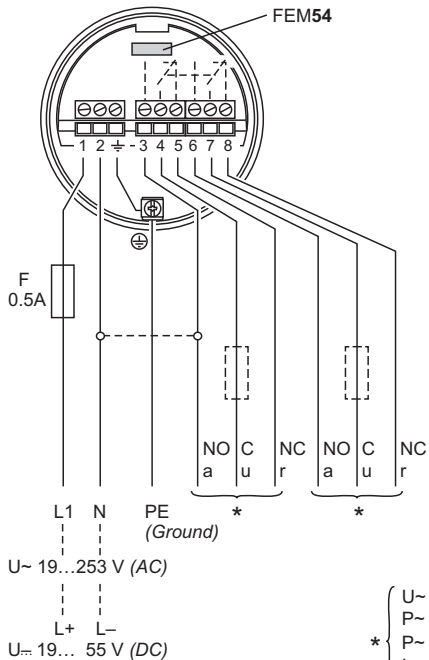
hr - Funkcija FEM52

*1 Potrebno je održavanje

*2 Kvar instrumenta

$$\Delta U_{FEM52} = \text{maks. } 3 \text{ V}$$





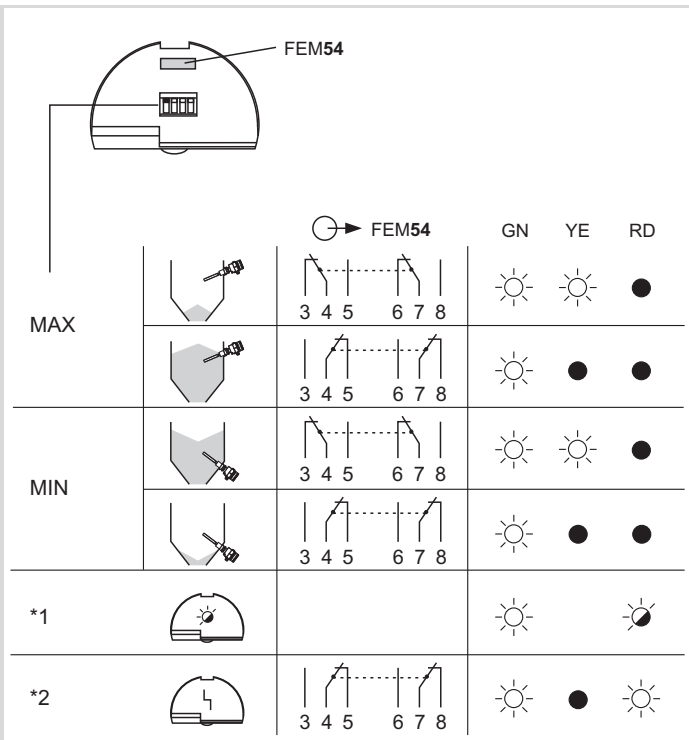
$\left\{ \begin{array}{l} U_{\sim} \text{ max. } 253 \text{ V, } I_{\sim} \text{ max. } 6 \text{ A} \\ P_{\sim} \text{ max. } 1500 \text{ VA, } \cos \varphi = 1 \\ * P_{\sim} \text{ max. } 750 \text{ VA, } \cos \varphi > 0.7 \\ I_{\sim} \text{ max. } 6 \text{ A, } U_{\sim} < 30 \text{ V} \\ I_{=} \text{ max. } 0.2 \text{ A, } U_{=} < 125 \text{ V} \end{array} \right.$

hr - Priključci FEM54
Kabelska uvodnica
Univerzalni priključak
Izlaz releja

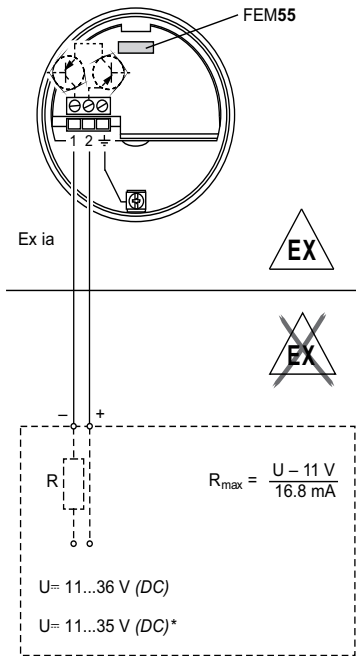
hr - Funkcija FEM54

*1 Potrebno je održavanje

*2 Kvar instrumenta



hr - Priključci FEM55
Kabelska uvednica
Izlaz 8/16 mA



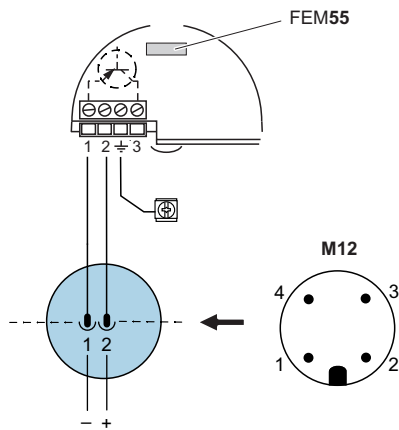
Koristite samo jedinice napajanja
sa sigurnim galvanskim odvajanjem
(npr. SELV)!

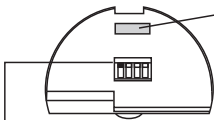
npr. PLC, AI moduli

4...20 mA
EN 61131-2


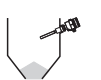



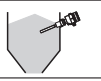



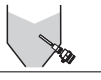



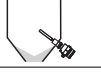
















* Mokra lokacija.

hr - Priključci FEM55
M12 utikač






FEM55

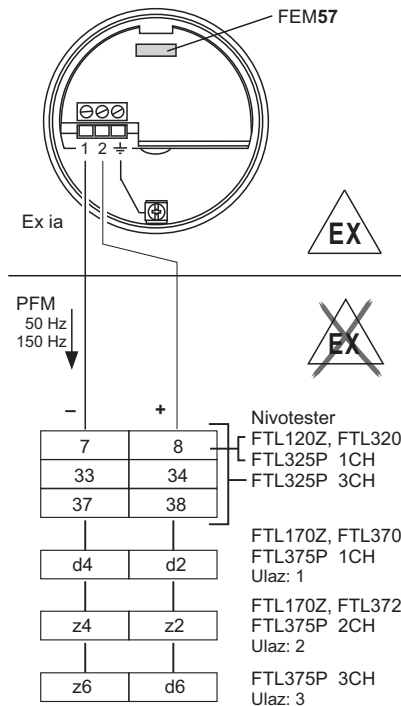
		 FEM55	GN	YE	RD
MAX		$\begin{matrix} + \\ 2 \end{matrix} \xrightarrow{\sim 16 \text{ mA}} 1$			
		$\begin{matrix} + \\ 2 \end{matrix} \xrightarrow{\sim 8 \text{ mA}} 1$			
MIN		$\begin{matrix} + \\ 2 \end{matrix} \xrightarrow{\sim 16 \text{ mA}} 1$			
		$\begin{matrix} + \\ 2 \end{matrix} \xrightarrow{\sim 8 \text{ mA}} 1$			
*1		$\begin{matrix} + \\ 2 \end{matrix} \xrightarrow{8/16 \text{ mA}} 1$			
		 *3 3.6 mA			
*2		$\begin{matrix} + \\ 2 \end{matrix} \xrightarrow{3.6 \text{ mA}} 1$			

*1 Potrebno je održavanje

*2 Kvar instrumenta

*3 → 

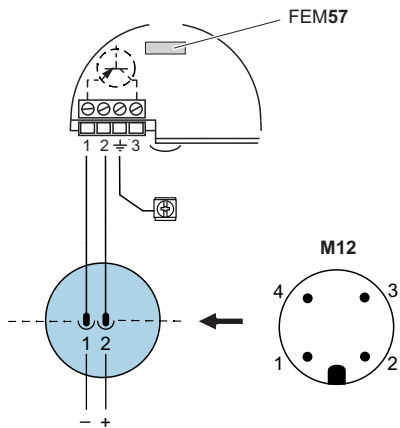
hr - Priklučci FEM57
Kabelska uvodnica
PFM izlaz



Napomena funkcije!



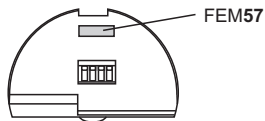
hr - Priključci FEM57
M12 utikač








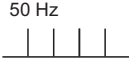














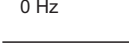





*1 Potrebno je održavanje

*2 Kvar instrumenta

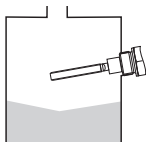
*3 → 



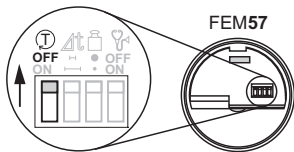
		 FEM57	GN	YE	RD
		150 Hz 			
		50 Hz 			
*1		150 Hz 			
		 0 Hz			
*2		0 Hz 			

Ponašanje paljenja

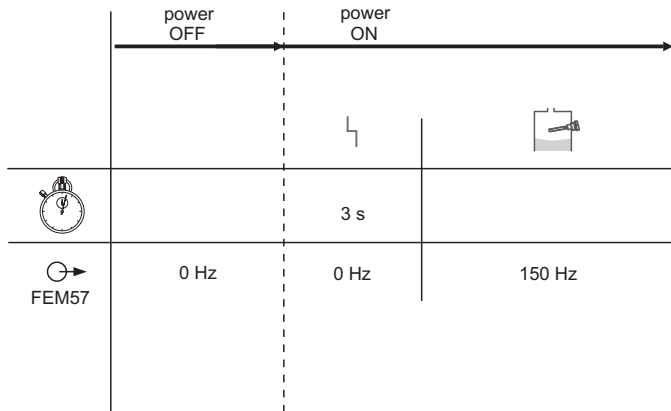
→ 



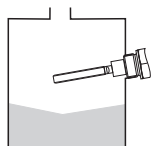
+



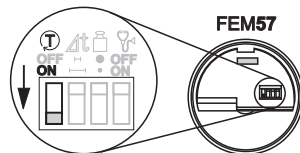
hr - Ponašanje paljenja
Samotestiranje (ISKLJUČENO)



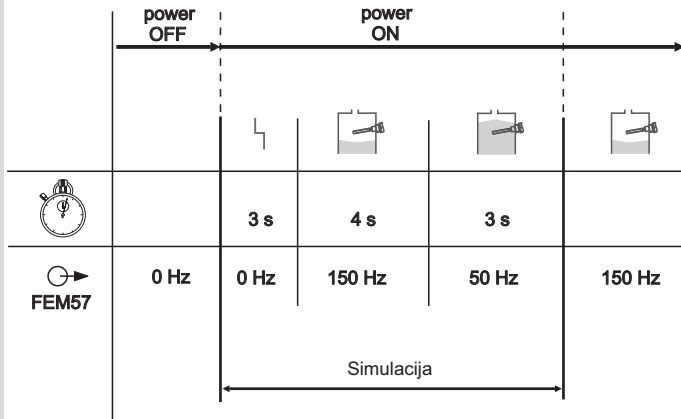
hr - Ponašanje paljenja
Samotestiranje (UKLJUČENO)

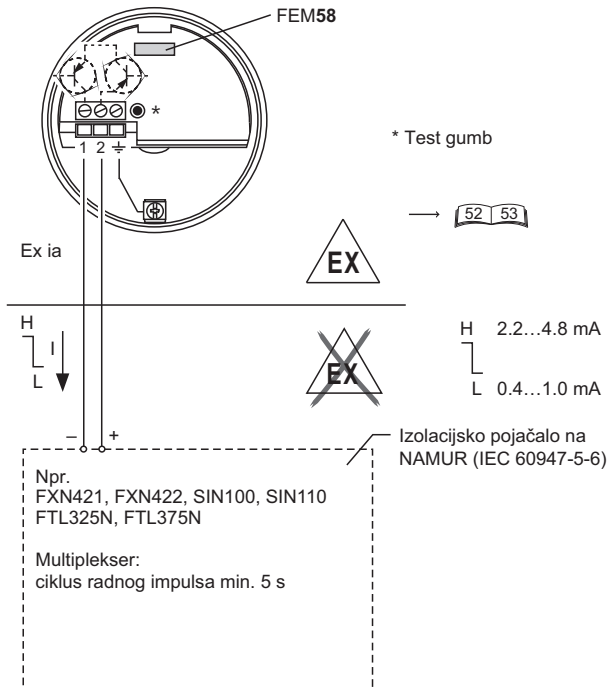


+



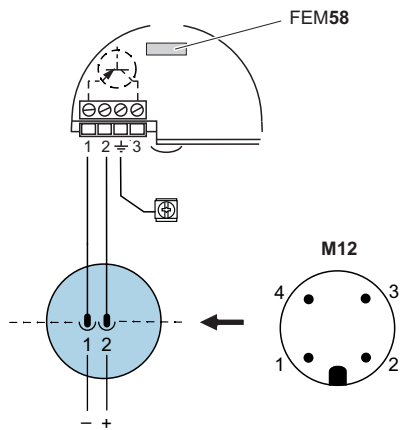
→ 26





hr - Priključci FEM58
Kabelska uvednica
NAMUR izlaz H-L
> 2,2 mA / < 1,0 mA

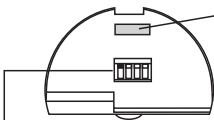
hr - Priključci FEM58
M12 utikač




























hr - Funkcija FEM58

*1 Potrebno je održavanje

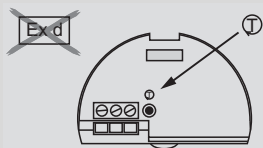
*2 Kvar instrumenta



The diagram shows a dome-shaped instrument housing with a sensor assembly labeled FEM58. A cable is connected to the side of the housing.

		 FEM58	GN	YE	RD
MAX		+ 2.2 ... 4.8 mA → 1			
		+ 0.4 ... 1.0 mA → 1			
MIN		+ 2.2 ... 4.8 mA → 1			
		+ 0.4 ... 1.0 mA → 1			
*1		+ 0.4 ... 4.8 mA → 1			
*2		+ 0.4 ... 1.0 mA → 1			

hr - Test gumb funkcije FEM58
Sigurnosni način rada MAKS



1. Normalan rad

GN	YE	RD
1 Hz		
+ 2.2... 4.8 mA		
2	→ 1	

GN	YE	RD
1 Hz		
+ 0.4... 1.0 mA		
2	→ 1	

2. Pritisnite test gumb



GN	YE	RD
0 mA		
2	→ 1	

GN	YE	RD
0 mA		
2	→ 1	

3. Otpustite test gumb,
nakon ~3 s normalnog
rada









GN	YE	RD
1 Hz		
+ 2.2... 4.8 mA		
2	→ 1	

GN	YE	RD
1 Hz		
+ 0.4... 1.0 mA		
2	→ 1	






1. Normalan rad




GN YE RD
  
 1 Hz
 + 2.2...
 + 4.8 mA → 1

GN YE RD
  
 1 Hz
 + 0.4...
 + 1.0 mA → 1

2. Pritisnite test gumb









GN YE RD
  
 + 2 0 mA → 1

GN YE RD
  
 + 2 0 mA → 1

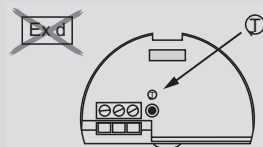
3. Otпустите test gumb,
 nakon ~3 s normalnog
 rada



GN YE RD
  
 1 Hz
 + 2.2...
 + 4.8 mA → 1

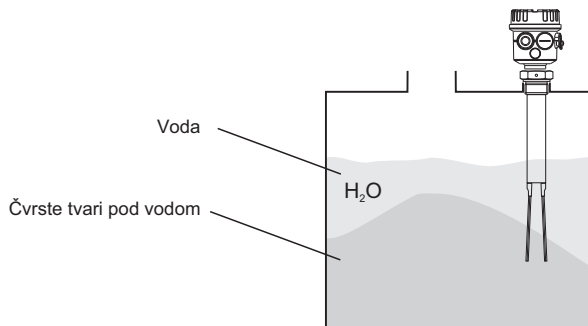
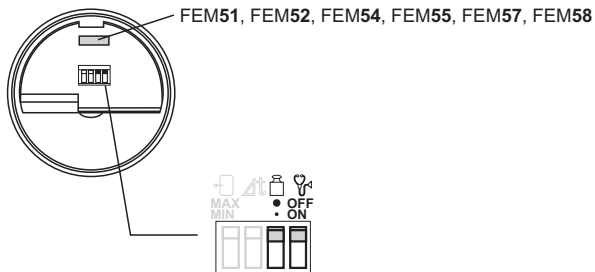
GN YE RD
  
 1 Hz
 + 0.4...
 + 1.0 mA → 1

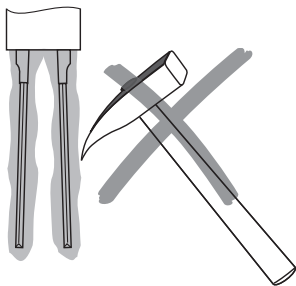
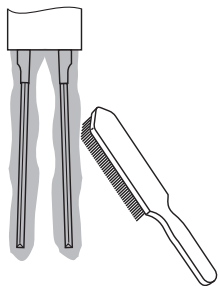
hr - Test gumb funkcije FEM58
 Sigurnosni način rada MIN



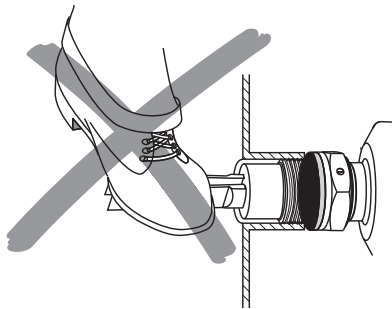
hr - Sedimentacija

Na tačku prekidača ne utječu
tekućine slične vodi





Nemojte koristiti
kao stepenicu!



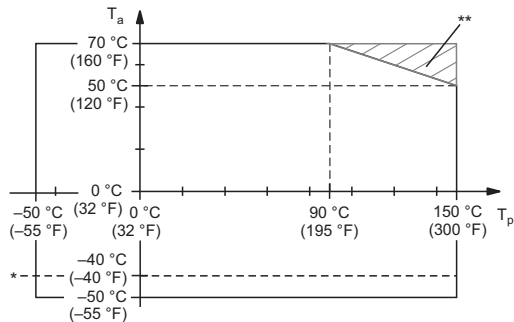
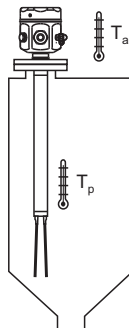
hr - Održavanje
Uklanjanje gustog okoravanja

hr - Tehnički podaci

Ambijentalna temperatura T_a

Temperatura procesa T_p

Maks. radni tlak MWP



* Za F16 kućište

** Sa temperaturnim odstojnikom

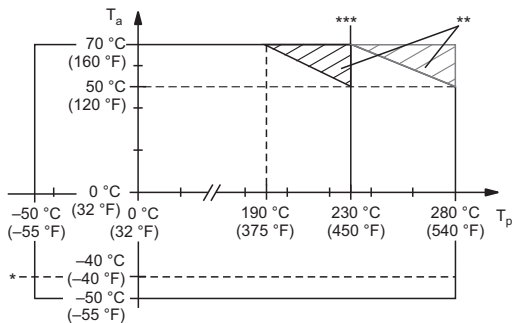
MWP = 25 bar (360 psi)



Priključak procesa

Gustoća tovara



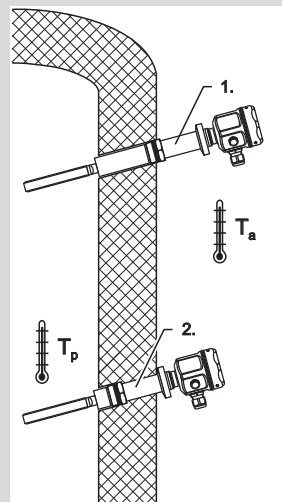


* Za F16 kućište

** Sa temperaturnim odstojnikom izvan izolacije

*** Premaz protiv lijepljenja
do: max. 230°C (max. 450°F)

hr - Visoka temperatura

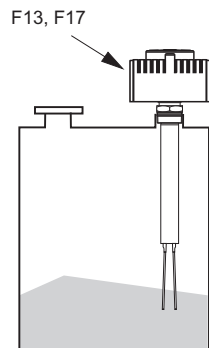
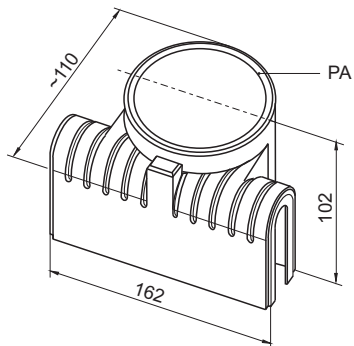


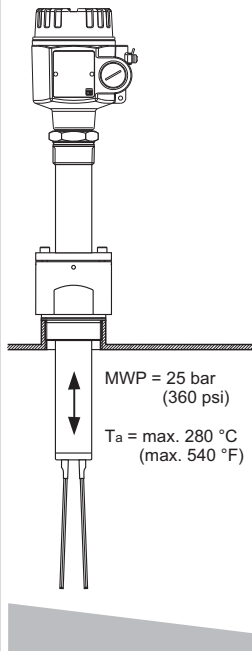
1. Izvan izolacije

2. Unutar izolacije

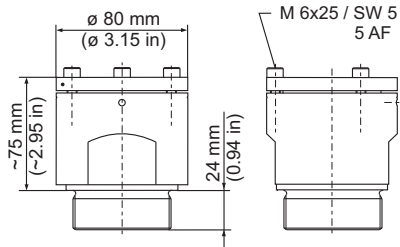
hr - Dodatna oprema

Zaštitni poklopac za F13 i F17
kućišta
71040497

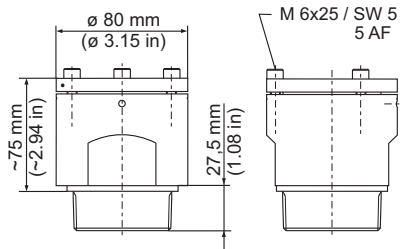




G 2
DIN ISO 228/1 (316L)
52024631



2 NPT
ANSI B 1.20.1 (316L)
52024630



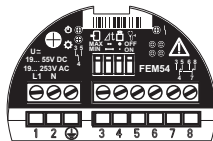
hr - Klizni rukav, pod tlakom
za FTM51 sa verzijom materijala
A, 2, 5

hr - Uklanjanje smetnji

Uzrok	Ne pali se	Pogrešno se pali	Sporadično neispravno paljenje	Prikaz održavanja	Prikaz kvara instrumenta
Nema napona napajanja	Provjerite napon napajanja				
Obrtanje polariteta	Provjerite dodjelu priključaka				
Kratki spoj izlaza				Provjerite dodjelu priključaka	
Neispravna signalna linija	Provjerite signalnu liniju				
Pogrešan sigurnosni način rada odabran		Postavite MAX za zaštitu od presipanja punjenja, MIN za zaštitu od rada na suho			
Ekstremne radio smetnje			Koristite zaštićeni kabel		
Voda u kućištu			očistite poklopac i ulaze kabela i čvrsto ih zategnite		
FEM51: Struja držanja korištenog releja je preniska		Koristite odgovarajući relej ili zatražite MVT 2Y1278 opcionalno			
Gustoća tereta je premala	Prilagodite da smanjite gustoću tereta		Prilagodite da smanjite gustoću tereta		
Izuzetne vanjske vibracije			Prilagodite kašnjenje prebacivanja 5 s		
Naslage			Prilagodite da povećate gustoću tereta	Uklonite naslage	
Neispravan elektronički umetak					Zamijenite elektronički umetak
Abrazija					Zamijenite senzor
Nema priključka na senzor					Zamijenite senzor







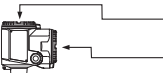
hr - Rezervni dijelovi

Elektronički umeci



FEM51	52026497
FEM52	52026498
FEM54	52026499
FEM55	52026500
FEM57	52026501
FEM58	52026502

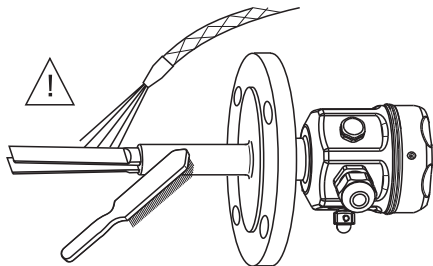
Specifikacije ugradnje: Za vrijeme ugradnje, imajte na umu da elektronički umetci FEM57 i FEM58, koji se pokreću iz nesigurno sigurnih krugova, više ne moraju biti međusobno povezani sa svojstvenim sigurnim krugovima.

Materijal kućišta / pokloca	Brtve	Broj dijela
F16 / PA12	EPDM *	52025790
F13, F17 / Alu 	 EPDM *	52027693
F13, F17 / Alu	 EPDM *	52002699
F13 / Alu	 EPDM *	52002698
F15 / 316L	VMQ/PTFE	52027000
F15 / 316L	VMQ/PTFE	52027708
Kod narudžbe FTM5# - #####		
↓ D, 2, 3, 4		
F15 / 316L 	VMQ/PTFE	52027002
F15 / 316L 	VMQ/PTFE	52027709
Kod narudžbe FTM5# - #####		
↓ D, 2, 3, 4		
T13 / Alu 	EPDM *	52006903
T13 / Alu	EPDM *	52007103

* Koristite samo odgovarajuća maziva

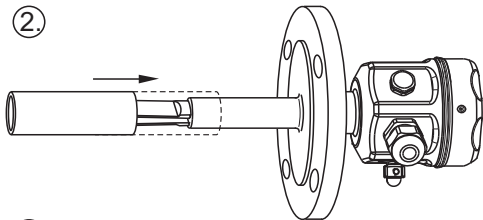
hr - Popravak
u Endress+Hauser

1.



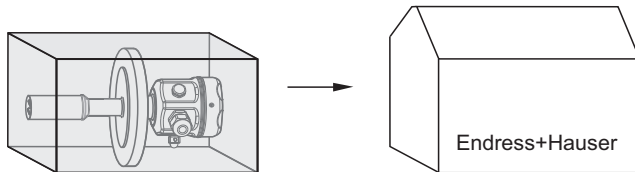
Čisto

2.



Transportna zaštita

3.



Tehničke informacije

TI00392F Soliphant M FTM50, FTM51, FTM52

Upute za uporabu

KA00239F Soliphant M FTM51
Klizni rukav, pod tlakom

KA00264F Soliphant M FTM50, FTM51, FTM52
Odvojeno kućište: Upute za montažu i skraćivanje
(Na strani kućišta)

KA00265F Soliphant M FTM50, FTM51, FTM52
Odvojeno kućište i ojačana cijev: Upute za montažu i skraćivanje
(Na strani kućišta)

KA00273F Soliphant M FTM50, FTM51, FTM52
Odvojeno kućište: Demontaža i montaža senzora

Sigurnosne napomene

ATEX II	Ex i	1D, 1/2D, 1G, 1/2G	XA00305F
ATEX II	Ex i (X)	1D, 1G	XA00319F
ATEX II	Ex d/Ex de/Ex t	1/2G,1D, 1/2D	XA00306F
ATEX II	Ex t	1/2D, 1/3D	XA00307F
ATEX II	Ex t, Ex n	3D, 3G	XA00331F
NEPSI	Ex t		XA00393F
NEPSI	Ex ia		XA00394F
NEPSI	Ex d, Ex t		XA00395F
IECEX	Ex ia		XA00391F
IECEX	Ex t		XA00392F
IECEX	Ex d, Ex de, Ex t		XA00633F
INMETRO	Ex t		XA01336F
INMETRO	Ex d, Ex de, Ex t		XA01354F
EAC	Ex d,Ex t	Ga/Gb, Da/Db	XA01590F
FM	IS, NI		XA01337F
CSA	IS, NI		XA01248F
CSA	XP, DIP		XA01042F

Funkcionalna sigurnost

Soliphant M + FEM51	SD00203F
Soliphant M + FEM52	SD00204F
Soliphant M + FEM54	SD00205F
Soliphant M + FEM55	SD00208F
Soliphant M + FEM57 + Nivotester FTL325P	SD00207F
Soliphant M + FEM58	SD00206F



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