

Updated 2023-03-28

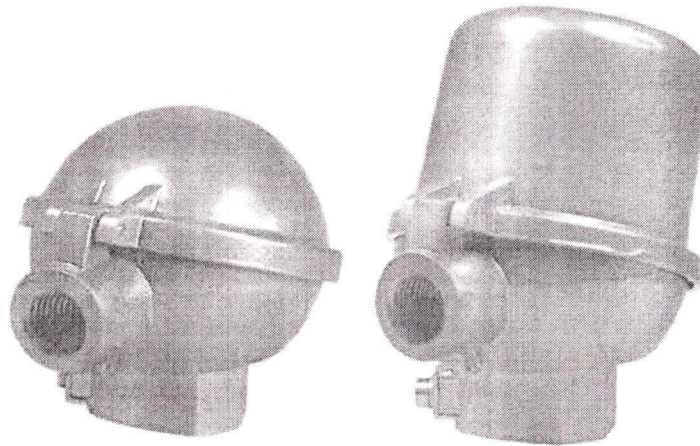
APPLICATION MANUAL

Increased safety Ex e connection head

Type : XE - DANA... XE - DANAW...

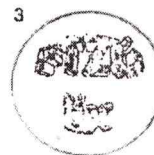
Increased safety Ex e field transmitter housing

Type : XE - DANAF... XE - DANAFW...



Contents:

1. Destination.
2. Process openings : D_1 , d_1 .
3. Optional solutions.
4. Conduit opening : D_2
5. Earth and protection terminal.
6. Maximum space for transmitter.
7. Way of fixing field transmitter housing to the wall and on the pipe.
8. Warning phrase.
9. Protection degree.
10. Marking.



Datum: 13. 04. 2023

Podpis:

1. DESTINATION.


Connection head XE-DANA ... are foreseen to accommodate both: DIN - measuring insert and temperature transmitters of temperature sensors.

Field transmitter housings XE-DANAF ... are foreseen to accommodate temperature transmitters and can be mounted on a wall or on pipes ½ to 2" OD.

Both of them are destined for use in hazardous areas :

- surface equipment (non mining) - II
- equipment category - 2, 3
- type of flammable substance - G, D

Type of protection: II 2G Ex eb IIC Gb
 II 2D Ex tb IIIC Db

Marking to 2014/34/UE:  II 2 GD

Standards: ATEX 2014/34/UE
 EN 60079-0
 EN 60079-7
 EN 60079-31

Service temperature:

Connection head type	T serv
XE-DANA XE-DANAW XE-DANAF XE-DANAFW	- 40 to 100 ° C

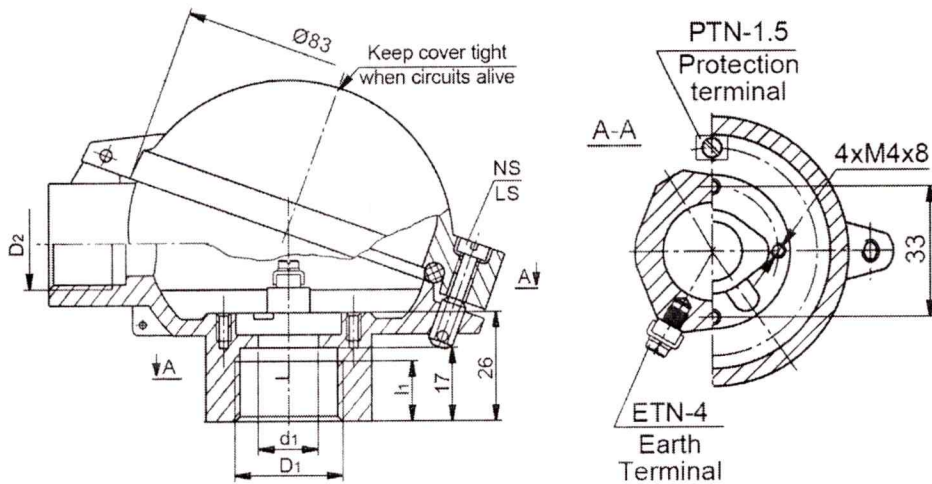
Possible zone application:

Zone	Protection Code
Zone 1 , Zone 21	Ex e
Zone 2 , Zone 22	Ex e

2. PROCESS OPENING : D_1 , d_1 .

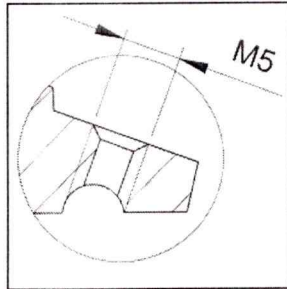
Dimension of thread D_1 for sensor thermowells and hole d_1 are given in the table below.

BODY	
D_1 [mm]	d_1 [mm]
M20×1.5	Ø 14
M24×1.5	Ø 14
G 3/8	Ø 11
G 1/2	Ø 11
G 3/4	Ø 14
1/2 NPT	-----
3/4 NPT	-----
Ø 17	closed

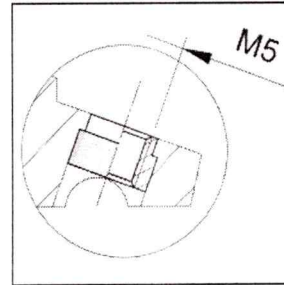


In field transmitter housing XE-DANAF, XE-DANAFW hole d_1 is closed.

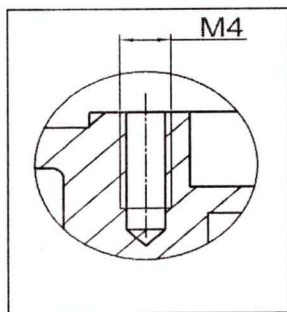
3. OPTIONAL SOLUTIONS.



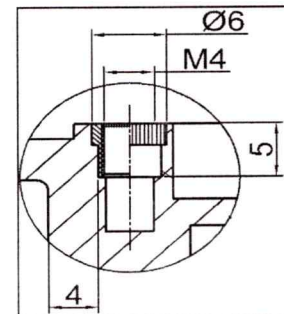
"standard closed/thread - M5"



"optional closed - M5"
(embedded element - wtopka)



"standard thread - M4"



"alternative to thread - M4"
(embedded element - wtopka)

4. CONDUIT OPENING : D₂.

Connection head is adopted to be equipped with various certificated **Ex e** explosion proof : cable glands , sealing fittings or flexible couplings .

5. EARTH AND PROTECTION TERMINALS.

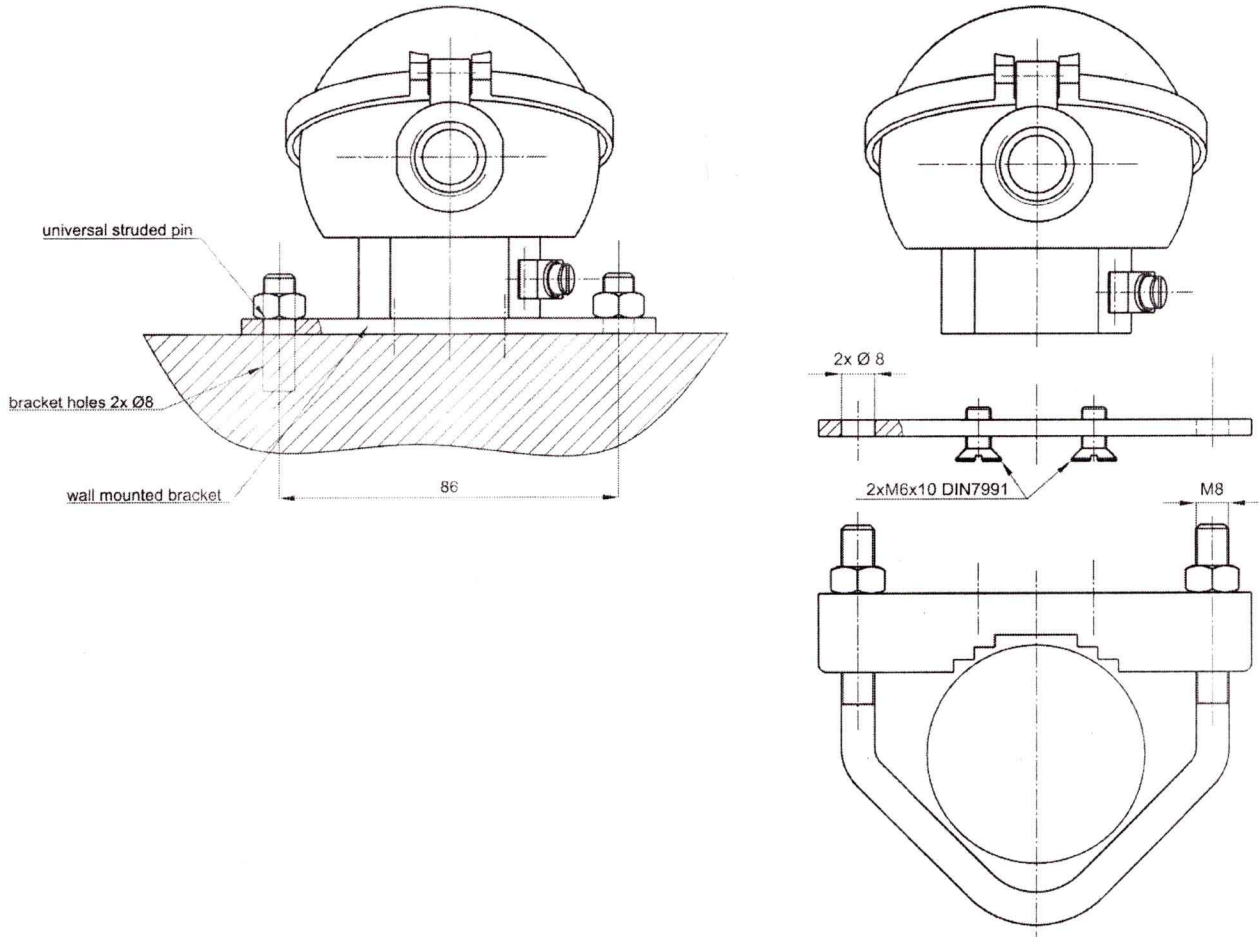
These terminals can be connected with both solid and stranded wire cables as shown in the table below .

Place	Type	Cable cross section [mm ²]	
		stranded wire	solid wire
Inside	Protection terminal	1,5	2,5
Outside	Earth terminal	4,0	6,0

6. MAXIMUM SPACE FOR TRANSMITTER.

Connection head / housing type	At the body	In the cover
XE-DANA XE-DANAF	ø 45 x 40	-
XE-DANAW XE-DANAFW	ø 45 x 16	ø 60 x 40

7. WAY OF FIXING FIELD TRANSMITTER HOUSING TO THE WALL AND ON THE PIPE.



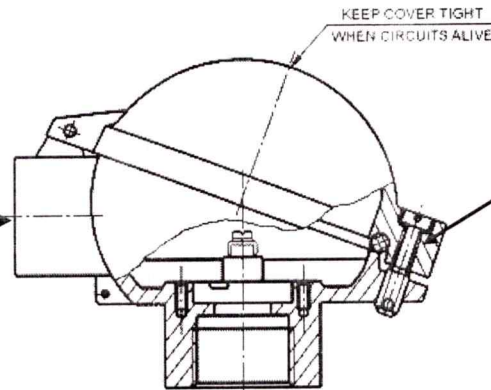
8. WARNING PHRASE.

Connection head/ housing type	Warning phrase on cover	Type of circuits permitted enclosed inside	Connection head/ housing equipped with additional
XE - DANA XE - DANAW XE - DANAF XE - DANAFW	Yes	intrinsically safe non intrinsically safe	non required

9. PROTECTION DEGREE. There are three places which decide of IP degree .

2
LIMATHERM RESPONSIBILITY
· sealing surface quality
CUSTOMER RESPONSIBILITY
· choosing of cable gland type with regards to IP degree
· cable gland mounting and sealing quality
· choosing of cable diameter with regards to producer requirements
· rate of press cap tightness
· max. possible to achieve IP66 ÷ IP68

1
LIMATHERM RESPONSIBILITY
· design
· execution quality
CUSTOMER RESPONSIBILITY
· rate of screw tightness
· max. possible to achieve IP 68

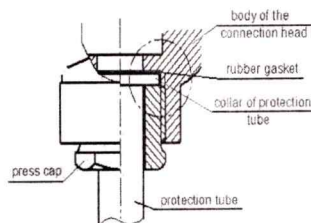
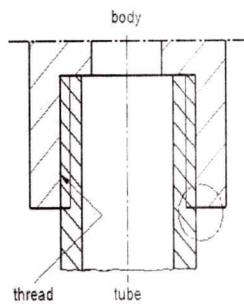


TIGHTEN TYPE DESCRIPTION OF THE SOLUTION PROTECTION DEGREE

1. Parallel and taper thread are manufactured in the standard accuracy class of manufacturing.
 2. No gasket, no packing with any packing agent.

IP 54 Threads are additionally packed with use of - for example - LOCTITE 577 agent
IP 68 Tube with a pressing flange for rubber gasket to be pressed to the head, and with a cap
IP 68 XE-DANAF, XE-DANAFW

3
LIMATHERM RESPONSIBILITY
· thread execution quality
CUSTOMER RESPONSIBILITY
· choosing of connection head type - thermowell connection
· connection head - thermowell sealing




Protection degree for elements			Total protection degree possible to achieve
1	2	3	
IP 68	IP 66	IP 54	IP 54
IP 68	IP 66	IP 68	IP 66
IP 68	IP 67	IP 54	IP 54
IP 68	IP 67	IP 68	IP 67
IP 68	IP 68	IP 54	IP 54
IP 68	IP 68	IP 68	IP 68


10. MARKING.


According to standards:


- ATEX 2014/34/UE
- EN 60079-0
- EN 60079-7
- EN 60079-31

marking of the XE-DANA... is as follow:

Limatherm Components Sp z o.o.
 Żelazna 5, 41-506 Chorzów Poland
 1026  II 2G Ex eb IIC Gb
 II 2D Ex tb IIIC Db
 FTZU 03 ATEX 0073 U
 Type: XE-DANA

Limatherm Components Sp z o.o.
 Żelazna 5, 41-506 Chorzów Poland
 1026  II 2G Ex eb IIC Gb
 II 2D Ex tb IIIC Db
 FTZU 03 ATEX 0073 U
 Type: XE-DANAW

Limatherm Components Sp z o.o.
 Żelazna 5, 41-506 Chorzów Poland
 1026  II 2G Ex eb IIC Gb
 II 2D Ex tb IIIC Db
 FTZU 03 ATEX 0073 U
 Type: XE-DANAF

Limatherm Components Sp z o.o.
 Żelazna 5, 41-506 Chorzów Poland
 1026  II 2G Ex eb IIC Gb
 II 2D Ex tb IIIC Db
 FTZU 03 ATEX 0073 U
 Type: XE-DANAFW

Batch. No. ZP
 xxxx/xx/xx/
 xxx

Each connection head is equipped with this label. The label is put inside. Sensor producer should apply own label with the rest marking of complete sensor or transfer valuable information from Limatherm's label to sensor label.

To each batch of connection heads will be attached also this Application Manual with drawing of the marking label.