



Level



Pressure



Flow



Temperature



Liquid
Analysis



Registration



Systems
Components



Services



Solutions

Safety Instructions

Solicap M FTI55, FTI56

DIP A20/21 T_A, T 100°C IP65

NEPSI GYJ12.1431



en - Document: XA00426F-C
Safety instructions for electrical apparatus for explosion-hazardous areas
→ 3

zh - 文档: XA00426F-C
爆炸环境中电气仪表的安全指南
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Solicap M FTI55, FTI56

english

**Associated
Documentation**

This document is an integral part of the following Operating Instructions:
BA00300F/00

The Operating Instructions which are supplied and correspond to the device type apply.

Designation

Designation of explosion protection**DIP A20/21 T_A, T 100°C IP65****Applied standards****GB12476.1-2000**

- Comply with the installation and safety instructions in the Operating Instructions.
- Install the device according to the manufacturer's instructions and any other valid standards and regulations.
- The device may not be operated outside the electrical and thermal parameters.
- The external earth connection facility should be connected reliably.
- The relationship between the type of electronic insert, ambient temperature, medium temperature and the electrical parameters is shown in the tables.
- Do not open in a potentially explosive dust atmosphere.
- Pay attention to the maximum process conditions according to the manufacturer's Operating Instructions.
- At high medium temperatures: note flange pressure load capacity as a factor of temperature.
- To maintain the ingress protection of the housing, install the housing cover and cable glands correctly.
- After aligning (rotating) the housing, retighten the fixing screw (see Operating Instructions).
- Only use cable glands with an ingress protection of at least IP65, which are suitable for an ambient temperature of -50 °C to $+70\text{ °C}$. Lay connecting cable and secure.
- The pertinent guidelines must be observed when intrinsically safe circuits are connected together acc. EN/IEC 60079-14 (Proof of Intrinsic Safety).
- Close unused entry glands with approved sealing plugs.
- The potential matching line should lead from the intrinsically safe associated apparatus (in the non-hazardous area) and the probe (in the explosion-hazardous area).
- For installation, use and maintenance of the device, users must also observe the requirements stated in the Operating Instructions and the standards:
 - GB50257-1996: "Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering".
 - GB15577-2007: "Safety regulations for dust explosive prevention and protection".
 - GB12476.2-2006: "Electrical apparatus for use in the presence of combustible dust, Part 1-2: Electrical apparatus protected by enclosures and surface temperature limitation - Selection, installation and maintenance".

F15 housing

- During operation, the cover must be screwed all the way in and the cover's safety catch must be fastened.

F17, F13, T13 housing

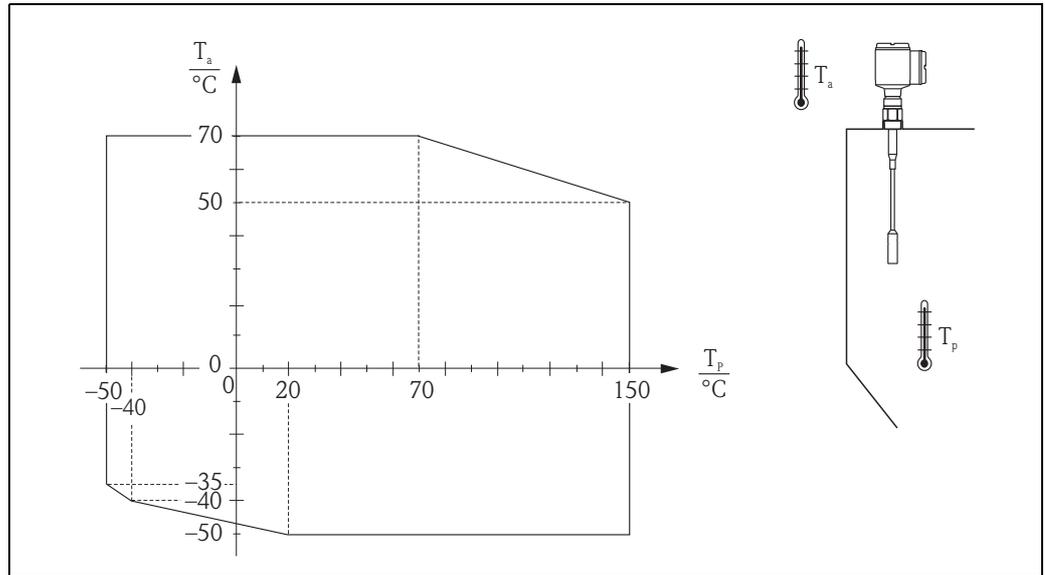
- Tighten the cover with torque 12 Nm.

Temperature tables

	Probe in Zone 20	Electronics housing in Zone 21
		Connection to non-intrinsically safe power circuits
Maximum surface temperature at 70 °C ambient temperature	70 °C	100 °C
The compact version can also be used for process temperatures between $+70\text{ °C}$ and 150 °C if it can also be ensured that the ambient temperature at the electronics housing does not exceed the values as indicated in the temperature graphic	150 °C	50 °C

Compact version

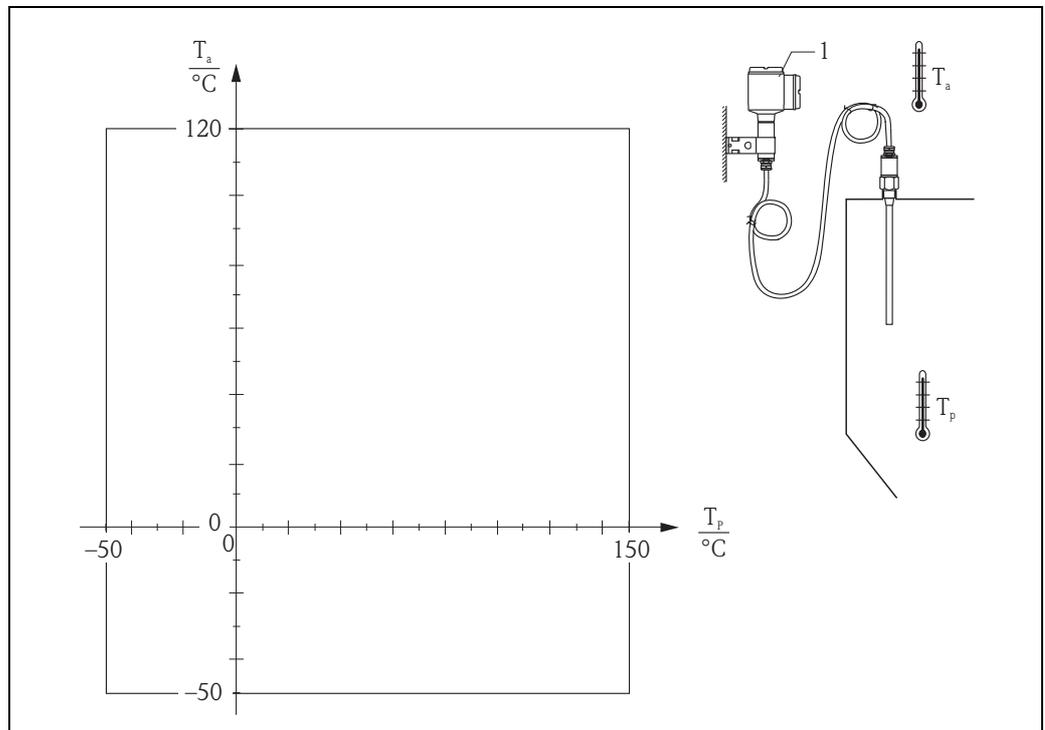
Rod and rope version, partially insulated



2

T_a Ambient temperature
 T_p Process temperature

Version with separate housing



3

1 Temperature at the separate housing: $-40\text{ °C} \leq T_a \leq 70\text{ °C}$
 T_a Ambient temperature
 T_p Process temperature

Connection data

Connection to non-intrinsically safe circuits

Electronic insert	Electrical data
FEI50H*	$U \leq 36 \text{ V DC}$
FEI55*	$U \leq 36 \text{ V DC}$

* with T13 housing only with limiting module

Electronic insert	Power supply	Relay circuit
FEI51	19...253 V AC	–
FEI52	10... 55 V DC	–
FEI54	19...253 V AC	253 V AC / 4 A 1500 VA / $\cos \varphi = 1$ 750 VA / $\cos \varphi > 0.7$
	19... 55 V DC	30 V DC / 4 A 125 V DC / 0.2 A
FEI57S	$\leq 16.1 \text{ V DC}$	–
FEI58	$\leq 18 \text{ V DC}$	–

Solicap M

FTI55, FTI56

中文

相关资料

本文档是下列操作手册的组成部分：
BA00300F/00

根据用户订购仪表的具体型号所提供的相应操作手册。

名称

防爆代号

DIP A20/21 T_A, T 100°C IP65

适用标准

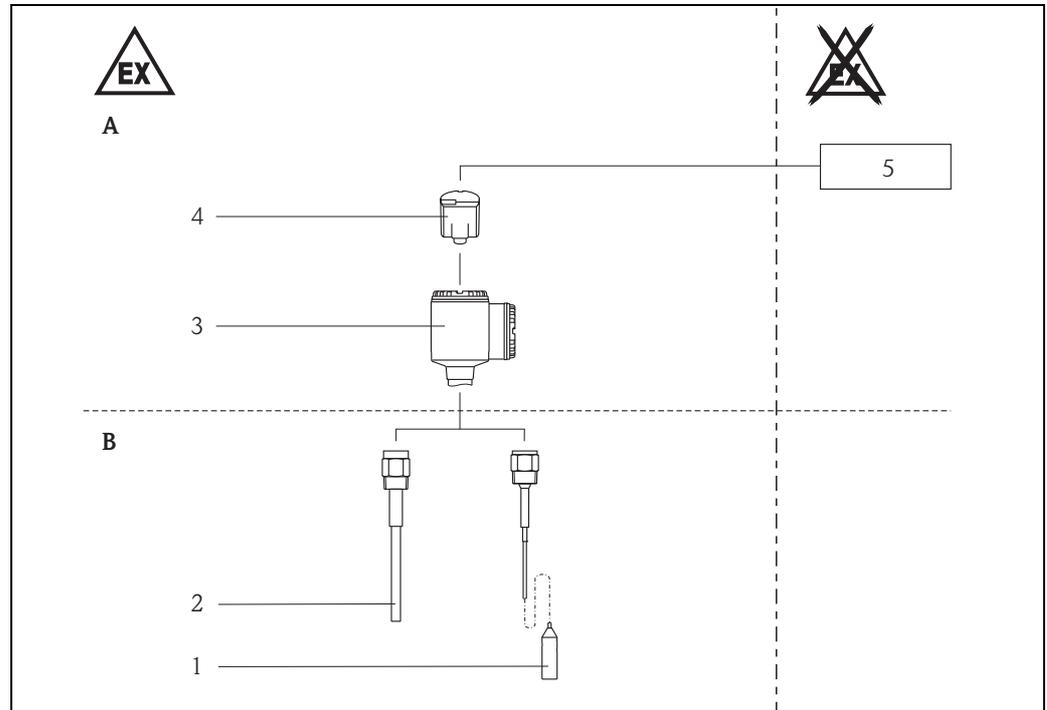
GB12476.1-2000

安全指南：
特殊条件

电子部件外壳处的允许环境温度范围，允许的过程温度： $-50\text{ °C} \leq T_a \leq +70\text{ °C}$ 。
遵守温度表中的信息。

安全指南：
安装

电源电路“非本质安全型”



1

A 区域 21

B 区域 20

1 绳式探针：

- $\varnothing 6$ 或 $\varnothing 12$ ，部分绝缘 + 非活动长度
- $\varnothing 6$ 或 $\varnothing 12$ ，部分绝缘

2 杆式探针：

- $\varnothing 18$ ，部分绝缘

3 外壳：

- F15，不锈钢
- F17，铝
- F13，铝，带气密过程密封
- T13，铝，带独立接线柜
和气密过程密封

4 电子插件：

- FEI51
- FEI52
- FEI54
- FEI57S
- FEI58
- FEI55，仅使用 T13 外壳
- FEI50H，仅使用 T13 外壳

5 电源

- 遵守操作说明中的安装和安全指南。
- 按照制造商的说明及其它有效标准和规定来安装设备。
- 使用设备时请勿超出指定的电、热参数。
- 外部接地连接部件应可靠连接。
- 电子插件类型、环境温度、介质温度和电气参数之间的关系如表格中所示。
- 请勿暴露于存在爆炸危险的粉尘环境中。
- 请遵照制造商操作说明注意极端运行条件。
- 在输入温度较高时：注意作为温度因数的凸缘压力负荷量。
- 要维持外壳入口保护等级，请正确安装外壳封盖和电缆栓塞。
- 在对齐（旋转）外壳后，重新拧紧固定螺丝（参见操作说明）。
- 只能使用入口保护等级至少为 IP65、能承受的环境温度为 -50 °C 至 +70 °C 的电缆栓塞。敷设并保护连接电缆。
- 在将本安型电路连接在一起时，必须遵守 EN/IEC 60079-14（本质安全型防护）的有关规定。
- 使用通过防爆认证的密封塞堵塞未使用的电缆入口密封套。
- 等电势匹配线路应该穿过本质安全型关联设备（位于非危险区）和探针（位于爆炸危险区）。
- 在安装、使用和维护设备时，用户还必须遵守操作手册和下列标准中的规定：
 - GB50257-1996：“电气装置安装工程 爆炸和火灾危险环境电气装置施工及验收规范”。
 - GB15577-2007：“粉尘防爆安全规程”。
 - GB12476.2-2006：“可燃性粉尘环境用电气设备，第 1 部分：用外壳和限制表面温度保护的电气设备 第 2 节：电气设备的选择、安装和维护”。

F15 外壳

- 在操作过程中，盖罩必须始终拧紧且盖罩的安全销子必须夹紧。

外壳 F17、F13、T13

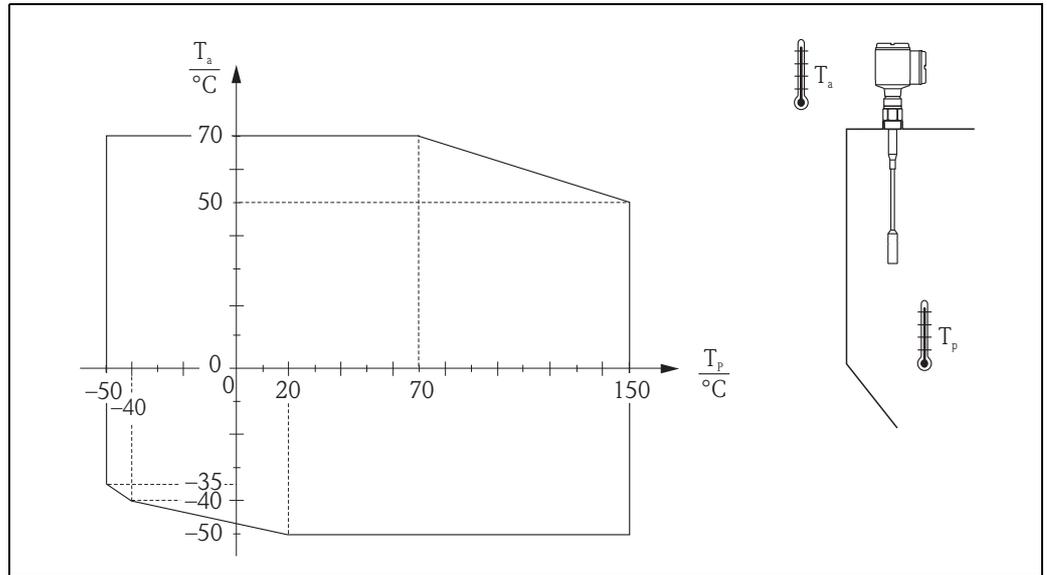
- 用 12 Nm 的扭力拧紧封盖。

温度表

	探针在区域 20 中	电子部件外壳位于区域 21
		适合连接到非本质安全型电源电路
在 70 °C 环境温度时的最大表面温度	70 °C	100 °C
如果可以同时确保电子部件外壳处的环境温度不超过温度图表中的规定值，那么也可以将紧凑型仪表用于过程温度处于 +70 °C 和 150 °C 之间的情况。	150 °C	50 °C

紧凑型

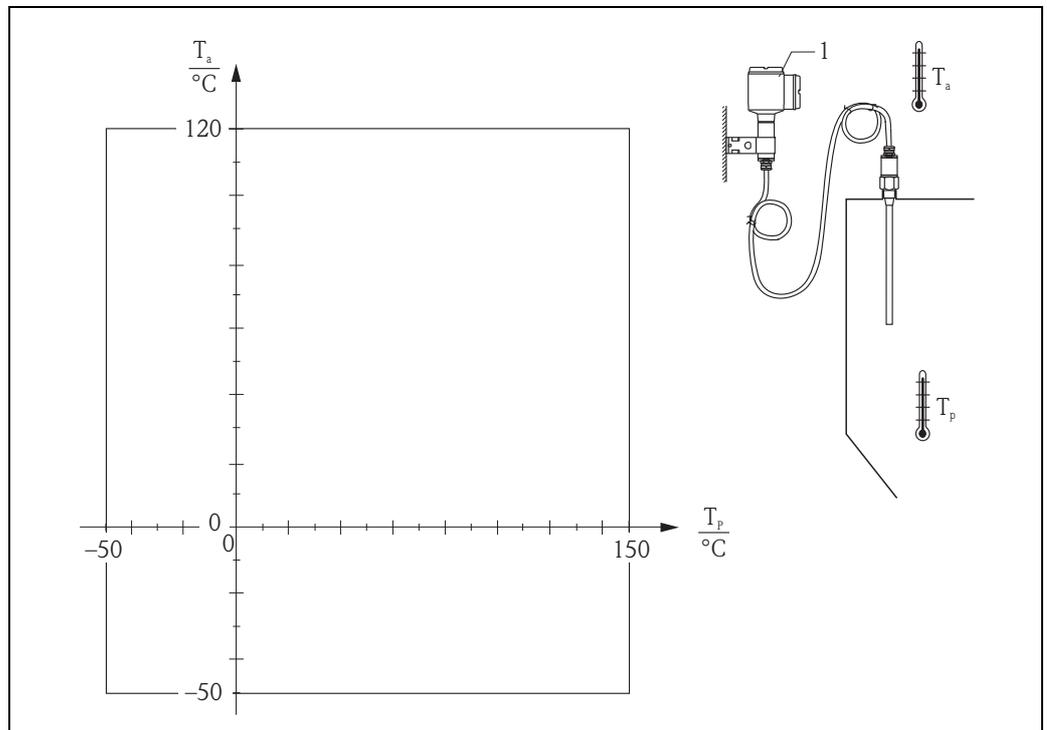
杆式和缆式，部分绝缘



2

T_a 环境温度
 T_p 过程温度

带分离式外壳的型式



3

1 分离型外壳处的温度: $-40\text{ °C} \leq T_a \leq 70\text{ °C}$

T_a 环境温度
 T_p 过程温度

连接数据

用于连接到非本质安全型电路

电子插件	电气参数
FEI50H*	$U \leq 36 \text{ V DC}$
FEI55*	$U \leq 36 \text{ V DC}$

* 对于 T13 外壳，该电子插件只能与限制模块同时使用

电子插件	电源	继电器电路
FEI51	19...253 V AC	—
FEI52	10... 55 V DC	—
FEI54	19...253 V AC	253 V AC / 4 A 1500 VA / $\cos \varphi = 1$ 750 VA / $\cos \varphi > 0.7$
	19... 55 V DC	30 V DC / 4 A 125 V DC / 0.2 A
FEI57S	$\leq 16.1 \text{ V DC}$	—
FEI58	$\leq 18 \text{ V DC}$	—

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