



Level



Pressure



Flow



Temperature



Liquid
Analysis



Registration



Systems
Components



Services



Solutions

Safety Instructions

Solphant T FTM20, FTM21

DIP A20/22 T170°C IP66

NEPSI GYJ13.1033



en - Document: XA00434F-B
Safety instructions for electrical apparatus for explosion-hazardous areas
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zh - 文档: XA00434F-B
爆炸环境中电气仪表的安全指南
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Soliphant T

FTM20, FTM21

english

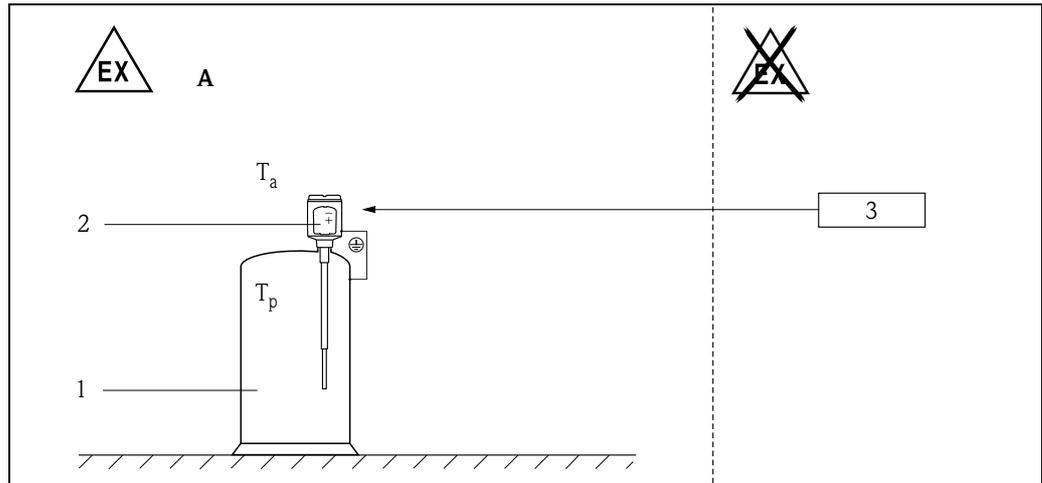
**Associated
Documentation**

This document is an integral part of the following Operating Instructions:
KA00227F/00

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

Designation

Designation of explosion protection**DIP A20/22 T170 °C IP66****Applied standards****GB 12476.1-2000**



1

A Zone 22

1 Tank, hazardous area Zone 20

2 Electronic insert

3 Supply voltage

T_a Ambient temperature

T_p Process temperature

Electrical connection data:

Electronic insert	Supply voltage U_b	Relay circuit
FEM22	10... 45 V DC	—
FEM24	19...253 V AC or 19... 55 V DC	253 V AC / 6 A, 1500 VA / $\cos \varphi = 1$, 750 VA / $\cos \varphi > 0.7$

Maximum surface temperature:

Ambient temperature T_a	Process temperature T_p	Surface temperature: Zone 20 (under fault condition)	Surface temperature: housing (under fault condition)
-40 °C...+70 °C	-40 °C...+150 °C	T 170 °C	T 90 °C

**Safety instructions:
Installation**

- 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 electronics enclosure of the level limit switch is suitable for Zone 22, while the sensor is suitable for Zone 20.
- Do not operate the device outside the specified electrical, thermal and mechanical parameters.
- Changes in electrical and mechanical parts of the equipment could harm the type of explosion protection and are not allowed for the user.
- The housing of transmitter is equipped with a ground terminal; users must ensure that it is reliably connected to ground during installation and use.
- Max. heat developed at the device surface in Zone 20 under fault conditions: ≤ 20 K (measured when device covered with a layer of dust greater than 50 mm).
- Max. heat developed at the device surface in Zone 22 under fault conditions: ≤ 20 K
- Support extension tube of the device if a dynamic load is expected.
- Only install the devices in media for which the wetted materials have sufficient durability.
- Use a process connection seal that meets the material compatibility and temperature requirements.
- After mounting and connecting the sensor, check that a degree of protection of at least IP66 as per GB4208-2008 has been attained (screw the cover tight, mount cable glands correctly).
- When connecting the cables, ensure there is adequate strain relief at place of installation.
- No conductive dusts may be present outside the tank (Zone 22).
- Only use cable glands or blind-plugs with Ex approval and ingress protection of IP6X.
- The external earth connection facility should be connected reliably.
- Obey the warning "Keep tight when the circuit is alive".
- 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".

Accessory high pressure sliding sleeve

- The high pressure sliding sleeve can be used for a continuous setting of the switch point and is suited for zone division if mounted properly (→ Operating Instructions).

Soliphant T

FTM20, FTM21

中文

相关资料

本文档是下列操作手册的组成部分：
KA00227F/00

根据用户订购仪表的具体型号所提供的相应操作手册。

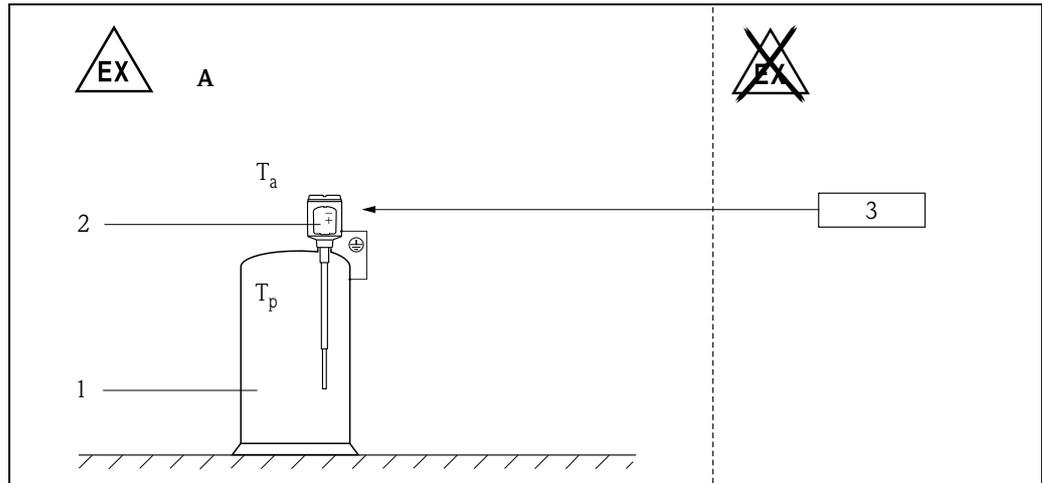
名称

防爆代号

DIP A20/22 T170 °C IP66

适用标准

GB 12476.1-2000



1

- A** 区域 22
 1 液罐，危险区 20
 2 电子插件
 3 供电电压
 T_a 环境温度
 T_p 过程温度

电气连接数据：

电子插件	供电电压 U_b	继电器电路
FEM22	10... 45 V DC	—
FEM24	19...253 V AC 或 19... 55 V DC	253 V AC / 6 A, 1500 VA / $\cos \varphi = 1$, 750 VA / $\cos \varphi > 0.7$

最高表面温度：

环境温度 T_a	过程温度 T_p	表面温度：区域 20 (故障状况下)	表面温度：外壳 (故障状况下)
-40 °C...+70 °C	-40 °C...+150 °C	T 170 °C	T 90 °C

**安全指南：
安装**

- 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。
- 液位限位开关的电子外壳适用于区域 22，传感器适用于区域 20。
- 使用设备时请勿超出指定的电、热和机械参数。
- 改动设备的电气和机械部件会降低防爆保护的类型，用户请勿擅自改动。
- 变送器的外壳装备有接地端子；用户必须确保该端子在安装和使用过程中可靠接地。
- 故障状况下区域 20 中设备表面的最大升温： $\leq 20\text{ K}$ (测量时设备表面覆盖有一层超过 50 mm 的灰尘)。
- 故障状况下区域 22 中设备表面的最大升温： $\leq 20\text{ K}$
- 如果有可能出现动态负载，则支持使用仪表延伸管。
- 只有当介质的防潮材料具备足够的耐用性时，才可把设备安装于介质中。
- 使用满足材料兼容性和温度要求的工艺连接密封件。
- 在安装和连接传感器后，检查是否达到 GB4208-2008 标准所规定的 IP66 以上防护等级 (拧紧盖子，正确安装电缆栓塞)。
- 当连接电缆时，要保证充分消除安装位置的应力。
- 液罐外 (区域 22) 不得有导电灰尘。
- 仅可使用通过 Ex 认证并且达到 IP6X 入口保护标准的电缆栓塞或绝缘插头。
- 外部接地连接部件应可靠连接。
- 遵守警告信息“在电路通电时保持紧密连接”。
- 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”。

附加高压滑动套管

- 正确安装后，高压滑动套管可用于连续设置转换点及区域划分 (→ 《操作手册》)。

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