



Level



Pressure



Flow



Temperature



Liquid Analysis



Registration



Systems Components



Services



Solutions

## Safety Instructions

# Liquiphant S FDL60, FDL61

Ex ia IIC T3...T6  
NEPSI GYJ05170

**XC011F-A**



**en** - Safety instructions for electrical apparatus for explosion-hazardous areas.

**zh** - 爆炸环境中电气设备的安全指南。



# Liquiphant S

## FDL60, FDL61

**Associated Documentation**

This document is an integral part of the following Operating Instructions:  
BA140F/00

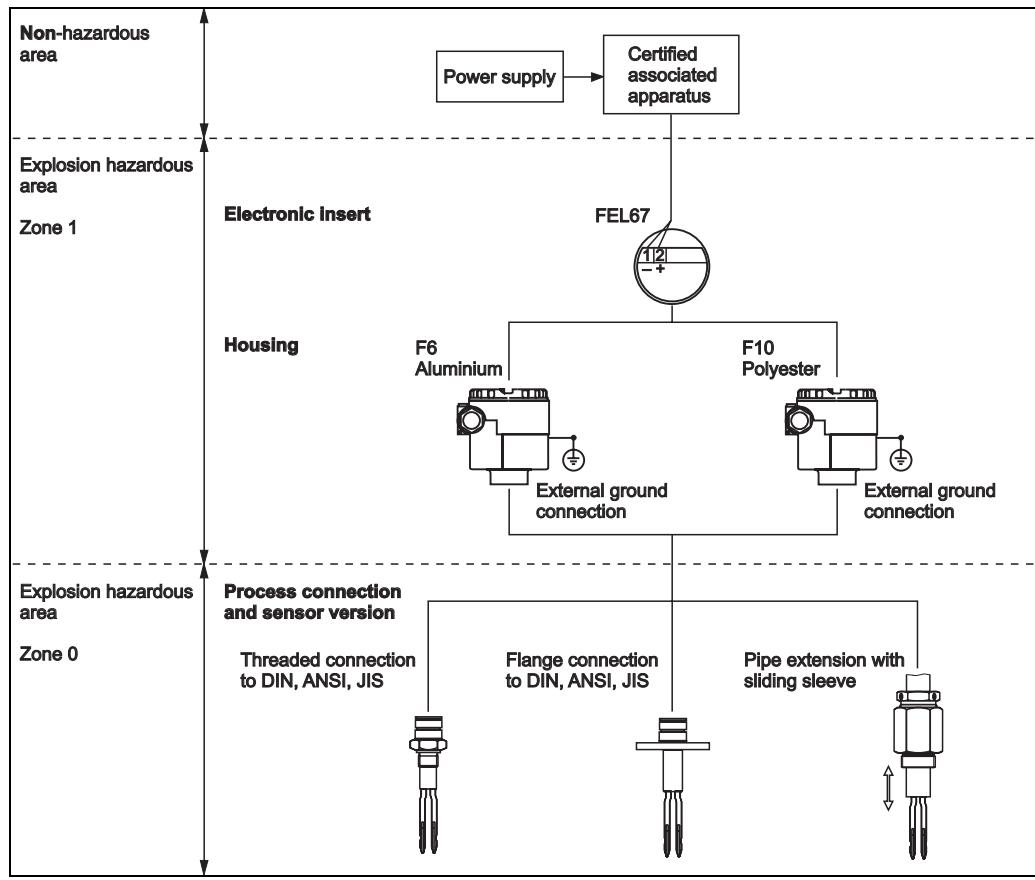
The Operating Instructions which are supplied and correspond to the device type apply.

**Designation**

Explanation of the labelling and type of protection can be found in the explosion protection brochure.

**Designation of explosion protection**

Ex ia IIC T3...T6



XC011en01

<b>Certified associated apparatus</b>	$U_i \leq 16.7 \text{ V}$ $I_i \leq 150 \text{ mA}$ $P_i \leq 1 \text{ W}$	[Ex ia] IIC
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<b>Electronic insert FEL67</b>	$-20 \text{ }^\circ\text{C} \leq T_a \leq +70 \text{ }^\circ\text{C}$	$C_i = 0$ $L_i = 0$
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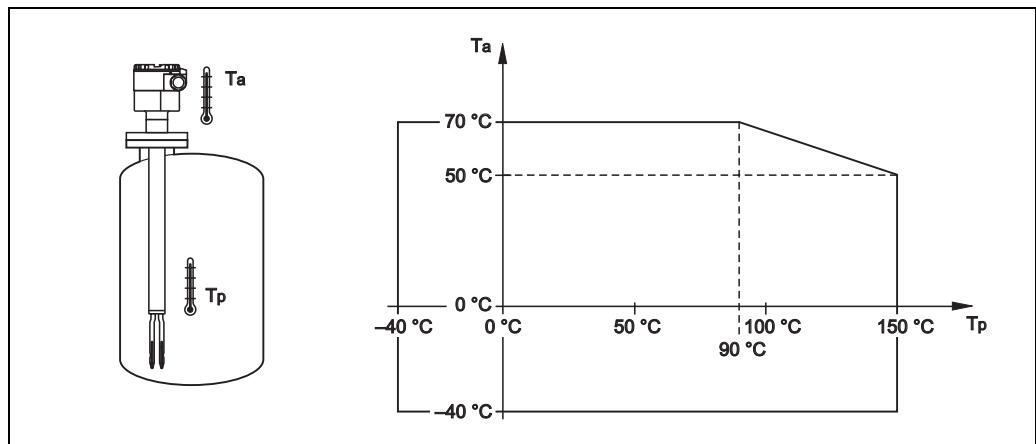
<b>Housing F6</b>	Aluminium
<b>Housing F10</b>	Polyester Warning: Avoid electrostatic charging of the housing for potentially explosive mixtures of Material Group IIC

#### Safety instructions: Installation

- Install the device according to the manufacturer's instructions and any other valid standards and regulations.
- The pertinent guidelines must be observed when intrinsically safe circuits are connected together.
- The housing of this product is equipped with a ground terminal; users must ensure that it is reliably connected to ground during use.
- The level limit switch must be connected to the Nivotester FTL670 in order to establish the intrinsically safe explosion-protected system, and it must also conform to the following specifications:  
 $U_o \leq U_i$ ,  $I_o \leq I_i$ ,  $P_o \leq P_i$ ,  $C_o \geq C_i + C_c$ ,  $L_o \geq L_i + L_c$   
 (Note:  $C_c$  and  $L_c$  represent the distributed capacitance and inductance of the respective connected cable.)
- For installation, use and maintenance of the device, users must also observe the requirements stated in the Operating Instructions and the standards GB3836.15-2000 and GB50058-1992.

Type of protection	Temperature class	Max. process temperature Tp (process): sensor	Max. ambient temperature Ta (ambient): electronics
Ex ia IIC	T6	+85 °C	+70 °C
	T5	+100 °C	+70 °C
	T4	+135 °C	+70 °C
	T3	+150 °C	+70 °C

FDL60, FDL61



XC011en02

**Safety instructions:  
Zone 0**

- The sensor part of the device approved for Zone 0 does not cause any ignition hazards if it is operated under non-atmospheric pressures and temperatures.  
Permissible process temperatures for operation in accordance with manufacturer's specifications: dependent on ambient temperature; see table and temperature graphics.  
Permissible pressures for operation in accordance with manufacturer's specifications:  
 $p_e = -1 \text{ bar} \dots +40 \text{ bar}$ , dependent on process connection; see manufacturer's Operating Instructions.
- Only install the devices in media for which the wetted materials have sufficient durability (e.g. process connection seal).



# Liquiphant S

## FDL60 , FDL61

中文

### 相关文档

该文件是下列操作手册的组成部分：  
BA140F/00

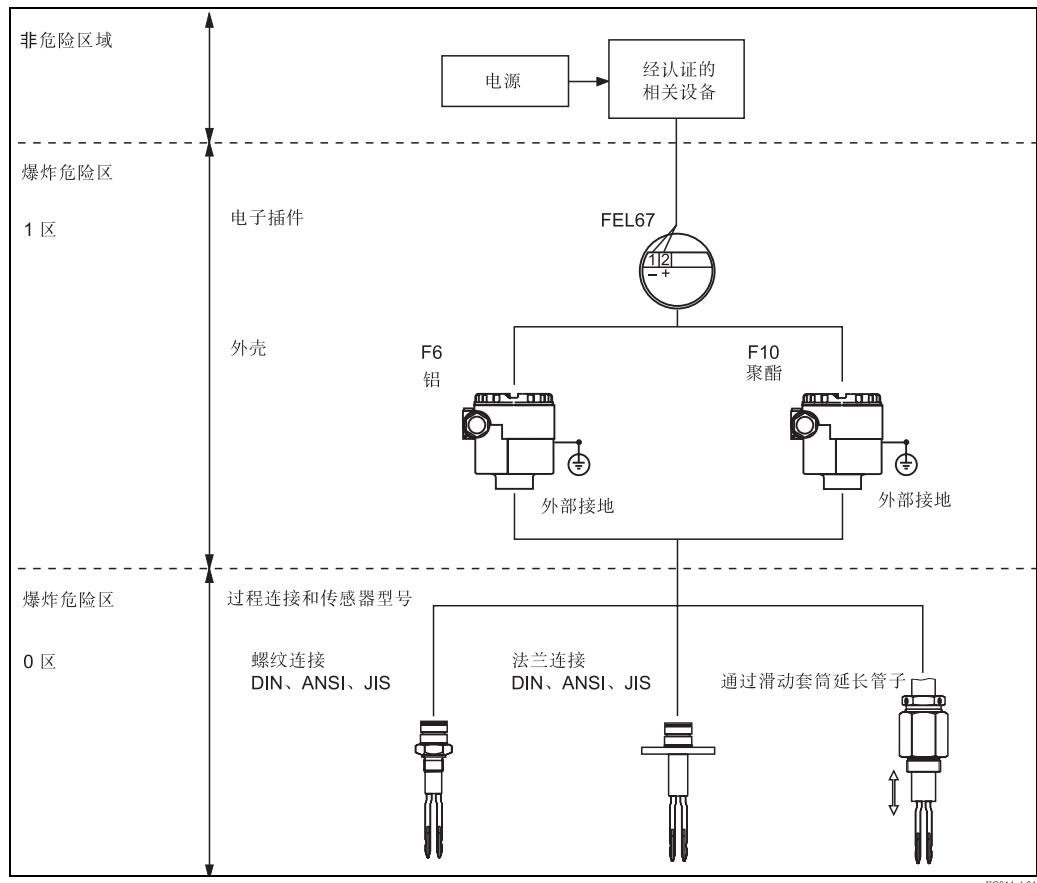
根据用户订购仪表的具体型号，提供相应的操作手册。

### 名称

防爆标志和防护类型的说明请查询防爆手册。

防爆代号

Ex ia IIC T3...T6



经认证的相关仪器	$U_i \leq 16.7 \text{ V}$ $I_i \leq 150 \text{ mA}$ $P_i \leq 1 \text{ W}$	[Ex ia] IIC
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电子插件 FEL67	$-20^\circ\text{C} \leq T_a \leq +70^\circ\text{C}$	$C_i = 0$ $L_i = 0$
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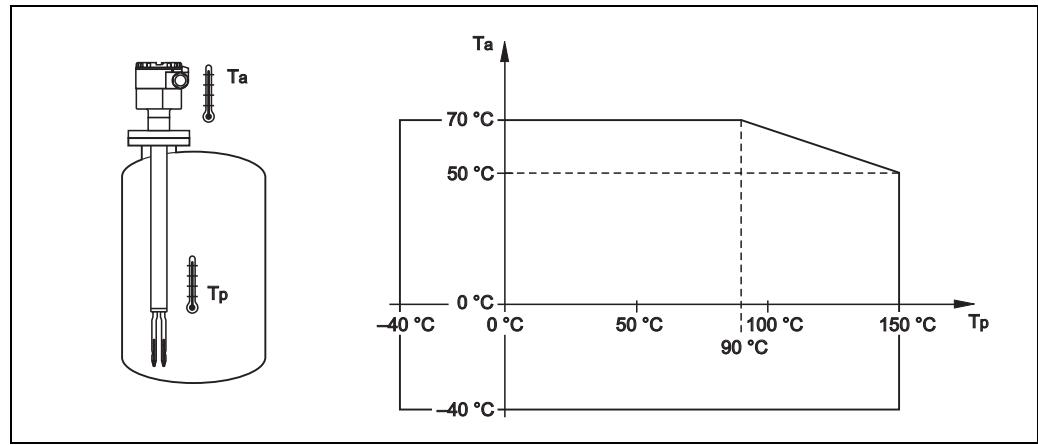
外壳 F6	铝
外壳 F10	聚酯 警告：避免 Material Group IIIC 潜在的爆炸混合物的外壳产生静电

### 安全指南：安装

- 按照制造商的说明及其它有效标准和规定来安装设备。
- 在将本安型电路连接在一起时，必须遵守有关的规定。
- 此产品的外壳装备有一个接地端子；在安装和使用的过程中，用户必须确保该端子可靠接地。
- 电平限位开关必须与 Nivotester FTL670 连接以建立本质安全型防爆系统，且必须同时符合下列规范：  
 $U_o \leq U_i, I_o \leq I_i, P_o \leq P_i, C_o \geq C_i + C_c, L_o \geq L_i + L_c$   
 (提示： $C_c$  和  $L_c$  分别代表各连接电缆的分布电容和分布电感。)
- 设备在安装、使用和维护过程中，用户必须遵守操作手册和 GB3836.15-2000 和 GB50058-1992 标准中陈述的要求。

防护类型	温度等级	最大过程温度 $T_p$ ( 过程 ): 传感器	最大环境温度 $T_a$ ( 环境 ): 电子部件
Ex ia IIIC	T6	+85 °C	+70 °C
	T5	+100 °C	+70 °C
	T4	+135 °C	+70 °C
	T3	+150 °C	+70 °C

FDL60, FDL61



XC011zh02

**安全指南：0 区**

- 经批准可用于 0 区的仪表传感器部分不会导致任何引燃危险 (当不在非大气压和温度下运行时)。  
符合制造商技术规范的运行过程温度：  
取决于环境温度；参见表格和温度图表。  
符合制造商技术规范的运行过程压力：  
 $p_e = -1 \text{ bar} \dots +40 \text{ bar}$ , 取决于工艺连接件；参见制造商操作说明。
- 当仪表的受潮部件具有足够耐久度时，才可将仪表安装于介质中。  
(例如工艺连接件密封)。





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