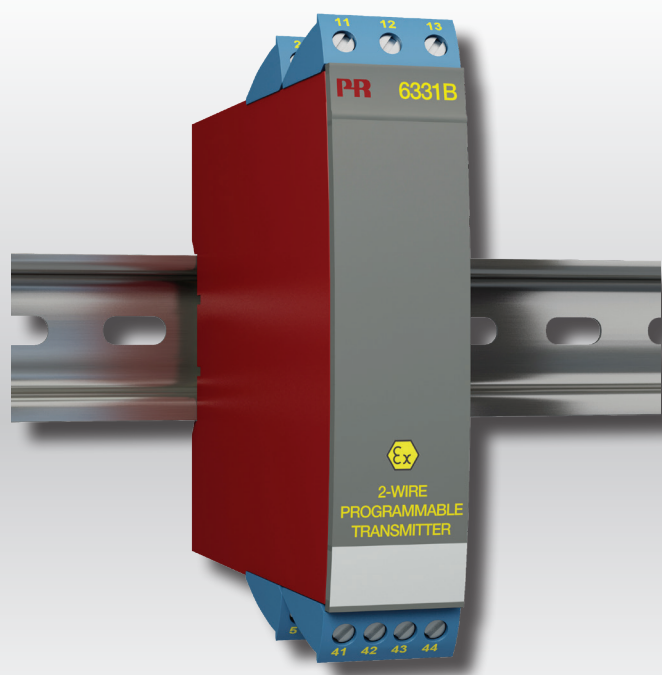


PERFORMANCE
MADE
SMARTER

产品手册

6331

二线制可编程变送器



温度

安全栅

通讯接口

多功能

隔离器

数显表

No. 6331V107-CN
序列号 : 159740001-221792249

PR
electronics

6 大特色产品

满足您的一切需求

单品出色·组合无敌

凭借创新型专利技术·信号调节更加简单·智能·产品组合由六大产品类组成·具备多种模拟量和数字量模块·涵盖上千种工业自动化应用·所有产品都符合甚至高于行业的最高标准·这可确保产品即便在最恶劣的环境条件下仍能可靠运行·5 年产品保修期·让您使用更安心·



Temperature

温度变送器和温度传感器系列产品·提供从温度测量点到系统控制一站式信号解决方案·从而在最大程度上保证信号的完整性·仅需一套点对点解决方案·您就可以在任何环境中将工业过程中的温度信号转换为模拟量信号·总线信号或数字通讯信号·该方案具备响应时间短·自动校准·传感器故障检测·低漂移和卓越 EMC 性能等诸多优点·



I.S. Interface

我们采用最严格的安全标准来检验产品·以期提供最安全的信号·秉承创新精神·我们已经在 SIL 2 全面评估本质安全型接口方面取得了开创性成就·其既高效又经济·效果卓著·成效斐然·模拟量和数字量本质安全栅种类齐全·同时提供多种输入输出·这使得 PR 标准成为一项易于实施的现场检验标准·在大型项目安装过程中·新背板方案大大简化安装和布线·且能与标准 DCS 系统无缝集成·



Communication

我们提供经济实惠·使用方便·面向未来的通讯接口·以便您能够访问所安装的 PR 产品·所有接口均可拆卸·并带有屏幕和按钮·可以显示过程值/诊断值和对参数进行配置·产品特定功能包括通过 Modbus 和蓝牙进行通讯·以及使用我们的 PR 过程主管 (PPS) 应用程序进行远程访问·适用于 iOS 和 Android 等终端·



Multifunction

单品为多功能系列产品·可涵盖大量现场应用·可轻而易举按照您的现场标准进行配置·此种单品可适用多种应用方式·既节省安装和培训时间·又大大简化库存备件管理·该设备专为长期信号精度高·功耗低·抗电噪声优异·编程简单而设计·



Isolation

基于微处理器技术研发的 6 mm 隔离器·小巧精致·响应迅速·品质一流·以极低的总拥有成本为专用应用提供卓越性能和抗电磁干扰·可水平或垂直安装·装置间无需间隙·



Display

数显表系列以其灵活性和稳定性著称·该设备系列几乎满足过程信号读数显示的所有需求·并具有通用的输入和供电能力·无论哪种行业·无论环境条件何其苛刻·该设备均能实时测量过程值并提供用户友好型界面和值得信赖的继电器信号·

二线制可编程变送器 6331

目录

应用.....	4
技术特点.....	4
安装调试.....	4
应用.....	4
订购.....	5
电气规格.....	5
接线方式.....	8
方框图.....	9
设置参数.....	9
ATEX 安装图 - 6331A.....	10
ATEX 安装图 - 6331B.....	12
IECEx Installation Drawing - 6331A.....	14
IECEx Installation Drawing - 6331B.....	16
CSA Installation Drawing - 6331A.....	18
CSA Installation Drawing - 6331B.....	20
FM Installation Drawing - 6331B.....	22
文档更新记录.....	24

二线制可编程变送器 6331

- RTD·TC·Ohm 或 mV 信号输入
- 超高测量精度
- 电气隔离
- 可设定传感器故障状态
- 单/双通道版本

应用

- Pt100...Pt1000·Ni100...Ni1000 或 TC 传感器线性化温度测量。
- 转换线性电阻阻值变化为标准模拟量电流信号·例如: 阀信号·或欧姆输出液位计。
- 转换双极性 mV 信号为标准 4...20 mA 电流信号。

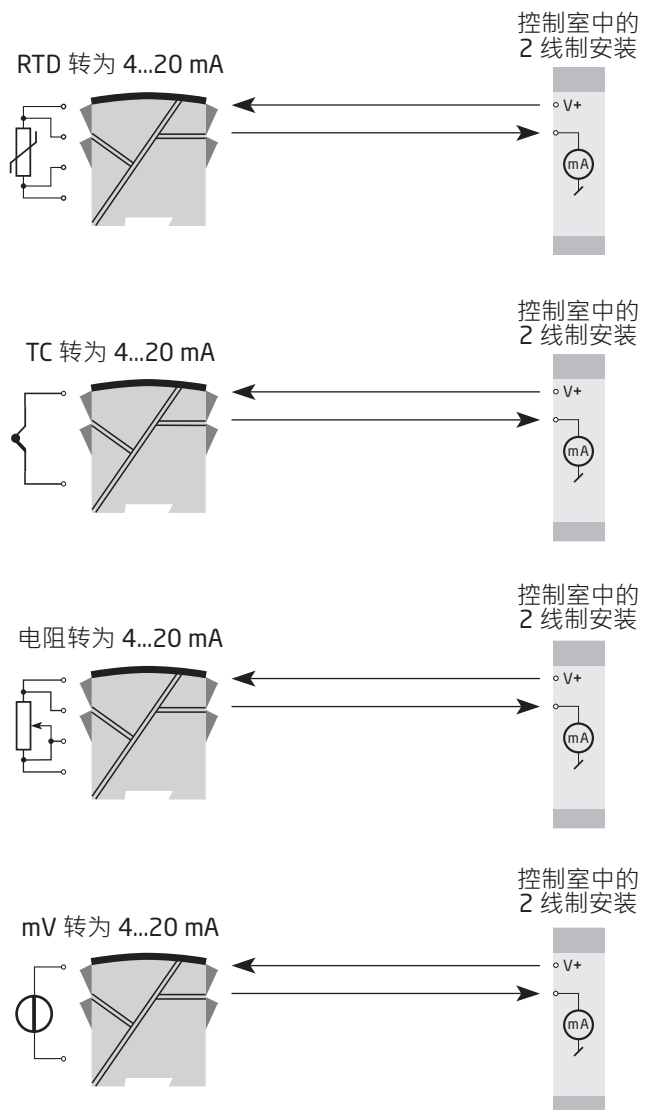
技术特点

- 参数设定简单方便。
- 2-·3- 和 4-线 RTD 和电阻输入电缆自动补偿。
- 输出信号限值可设定。
- 持续监测重要数据·保障使用安全。

安装调试

- 标准垂直或水平 DIN 导轨安装。选用双通道版本时·每米 DIN 导轨可以实现多达84个通道。
- 6331A 可以安装于 zone 2 和 zone 22 / Class I·Division 2·Groups A·B·C·D 区域。
- 6331B 可以安装于 zone 0, 1, 2 和 zone 20, 21, 22 以及 M1 / Class I, Division 1, Groups A, B, C, D 区域。

应用



订购

型号	版本	电气隔离	通道
6331	一般用途 : A	1500 VAC : 2	单通道 : A
	危险区域 : B		双通道 : B

*注意！选择支持 TC 输入的内部 CJC 时，请务必单独订购 5910 / 5910Ex 型 CJC 连接器（通道 1）和 5913 / 5913Ex 型 CJC 连接器（通道 2）。

电气规格

环境条件:

规格温度范围	-40°C 至 +85°C
存储温度	-40°C 至 +85°C
标定温度	20...28°C
湿度	< 95% RH (无冷凝)
防护等级	IP20

机械规格:

结构尺寸 (高x宽x深)	109 x 23.5 x 104 mm
重量 (单/双通道)	145 / 185 g
DIN 导轨类型	DIN EN/IEC 60715 - 35 mm
导线规格	0.13...2.08 mm ² / AWG 26...14 绞线
螺丝端子扭矩	0.5 Nm

常用规格:

电源电压 · DC	
6331A	7.2...35 VDC
6331B	7.2...30 VDC
最大需用功率 · 单/双通道 · 6331A	0.8 W / 1.6 W
最大需用功率 · 单/双通道 · 6331B	0.7 W / 1.4 W
内部功率耗散 · 6331A	0.17...0.8 W
内部功率耗散 · 6331B	0.17...0.7 W
电压降	7.2 VDC
隔离电压 · 测试/工作	1.5 kVAC / 50 VAC
预热时间	5 分钟
设置参数	Loop Link
信噪比	最低 60 dB
响应时间 (可设定)	1...60 s
EEPROM 错误校验	< 3.5 s
信号动态范围 · 输入	20 位
信号动态范围 · 输出	16 位
电源电压变化的影响	< 0.005% 所设量程 / VDC

精度·一般值和基本值中较大的一个：

一般值		
输入类型	绝对精度	温度系数
所有	$\leq \pm 0.05\%$ 所设量程	$\leq \pm 0.01\%$ 所设量程/ $^{\circ}\text{C}$

基本值		
输入类型	基本精度	温度系数
RTD	$\leq \pm 0.2^{\circ}\text{C}$	$\leq \pm 0.01^{\circ}\text{C}/^{\circ}\text{C}$
线性电阻	$\leq \pm 0.1 \Omega$	$\leq \pm 10 \text{ m}\Omega / ^{\circ}\text{C}$
电压	$\leq \pm 10 \mu\text{V}$	$\leq \pm 1 \mu\text{V} / ^{\circ}\text{C}$
TC 型号： E、J、K、L、N、T、U	$\leq \pm 1^{\circ}\text{C}$	$\leq \pm 0.05^{\circ}\text{C} / ^{\circ}\text{C}$
TC 型号：B、R、S、 W3、W5、LR	$\leq \pm 2^{\circ}\text{C}$	$\leq \pm 0.2^{\circ}\text{C} / ^{\circ}\text{C}$

EMC – 抗扰性影响	$< \pm 0.5\%$ 所设量程
扩展的 EMC 电磁兼容： NAMUR NE 21, A criterion, burst.	$< \pm 1\%$ 所设量程

电气规格·输入：

最大偏移量 所设量程高值的 50%

RTD 和线性电阻输入：

RTD 类型	最小值	最大值	最小量程	标准
Pt100	-200°C	$+850^{\circ}\text{C}$	25°C	IEC 60751
Ni100	-60°C	$+250^{\circ}\text{C}$	25°C	DIN 43760
线性电阻	0Ω	5000Ω	30Ω	-----

单根导线电缆电阻 (最大) 5Ω
 传感器电流 额定 0.2 mA
 传感器电缆电阻对精度的影响 (3/4 线制) $< 0.002 \Omega/\Omega$
 传感器故障检测. 是

TC 输入：

型号	最低温度	最高温度	最小量程	标准
B	$+400^{\circ}\text{C}$	$+1820^{\circ}\text{C}$	100°C	IEC584
E	-100°C	$+1000^{\circ}\text{C}$	50°C	IEC584
J	-100°C	$+1200^{\circ}\text{C}$	50°C	IEC584
K	-180°C	$+1372^{\circ}\text{C}$	50°C	IEC584
L	-100°C	$+900^{\circ}\text{C}$	50°C	DIN 43710
N	-180°C	$+1300^{\circ}\text{C}$	50°C	IEC584
R	-50°C	$+1760^{\circ}\text{C}$	100°C	IEC584
S	-50°C	$+1760^{\circ}\text{C}$	100°C	IEC584
T	-200°C	$+400^{\circ}\text{C}$	50°C	IEC584
U	-200°C	$+600^{\circ}\text{C}$	50°C	DIN 43710
W3	0°C	$+2300^{\circ}\text{C}$	100°C	ASTM E988-90
W5	0°C	$+2300^{\circ}\text{C}$	100°C	ASTM E988-90
LR	-200°C	$+800^{\circ}\text{C}$	50°C	GOST 3044-84

冷端补偿 $< \pm 1.0^{\circ}\text{C}$
 传感器故障检测. 是

传感器故障电流：

检测时	额定 33 μ A
其他	0 μ A

电压输入：

测量范围	-12..800 mV
最小量程	5 mV
输入电阻	10 M Ω

输出：**电流输出：**

信号范围	4..20 mA
最小信号范围	16 mA
更新时间	440 ms
EEprom 错误时的输出信号	\leq 3.5 mA
负载电阻	\leq (V电源 - 7.2) / 0.023 [Ω]
负载稳定性	$<$ \pm 0.01% 所设量程 / 100 Ω

传感器故障检测：

可设定	3.5..23 mA
NAMUR NE43 上限	23 mA
NAMUR NE43 下限	3.5 mA

所设量程 = 当前设定的量程范围

遵守主管机关要求：

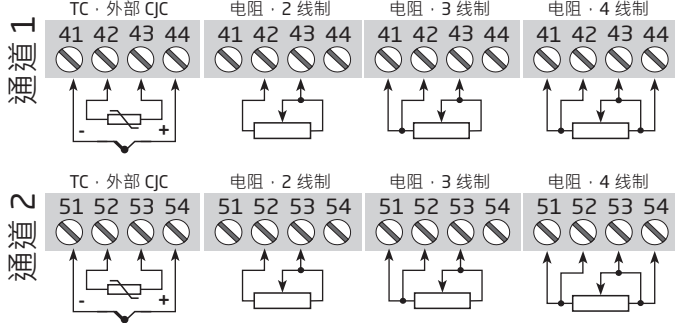
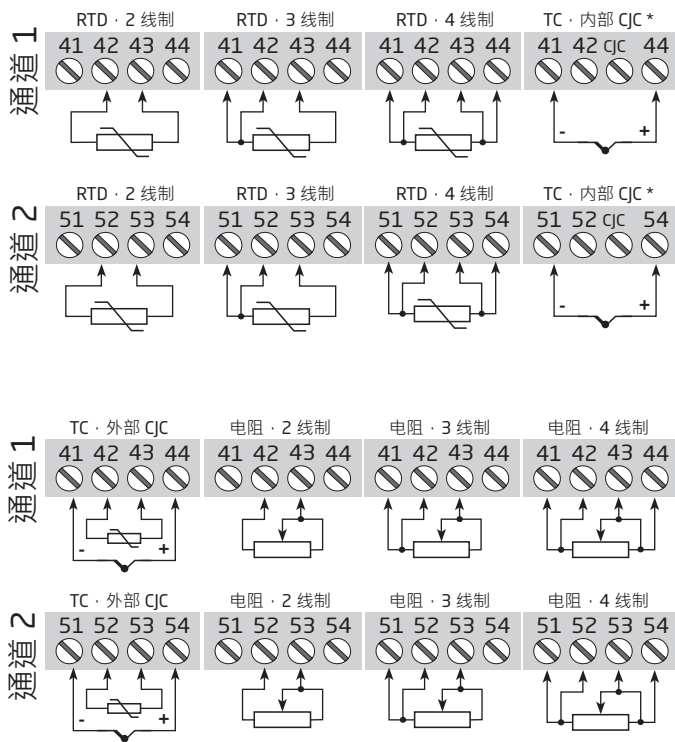
EMC	2014/30/EU
ATEX	2014/34/EU
RoHS	2011/65/EU
EAC	TR-CU 020/2011
EAC Ex	TR-CU 012/2011

本质安全/ 防爆认证：

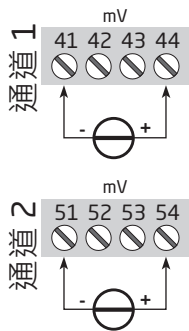
ATEX	KEMA 06ATEX0115 X
IECEX	IECEX DEK 14.0047X
FM	FM17US0013X
CSA	1125003
EAC Ex	RU C-DK.HA65.B.00355/19

接线方式

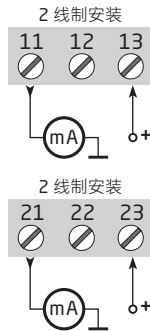
输入：



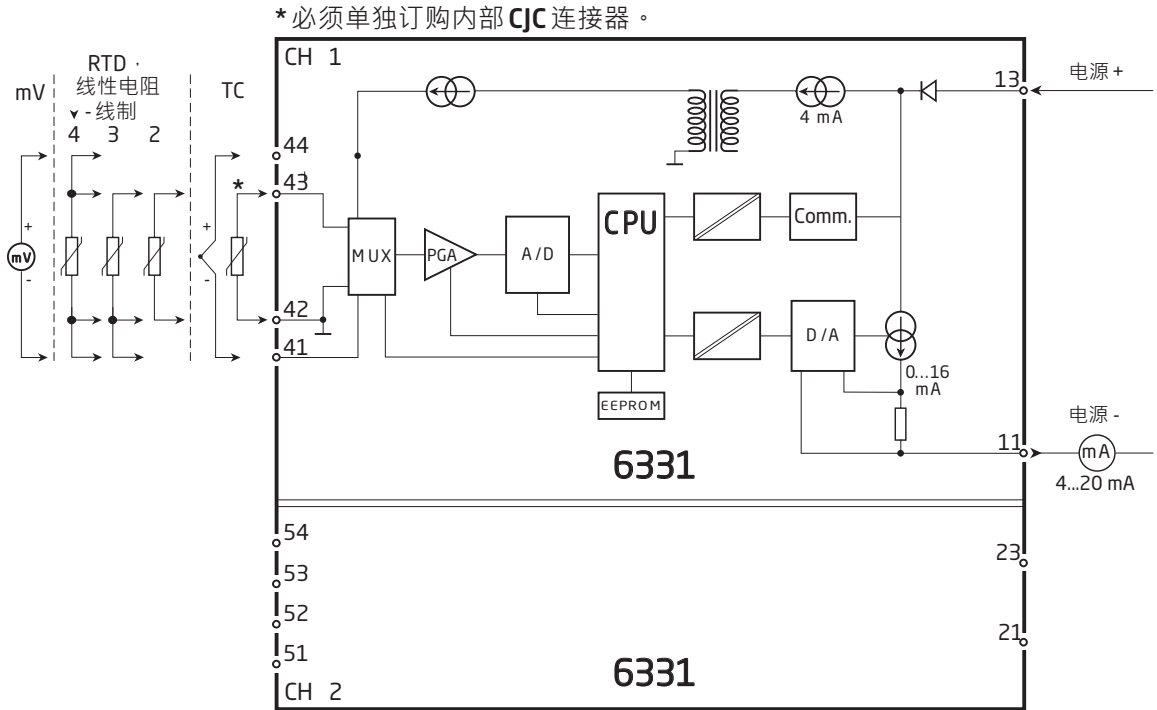
输入：



输出：

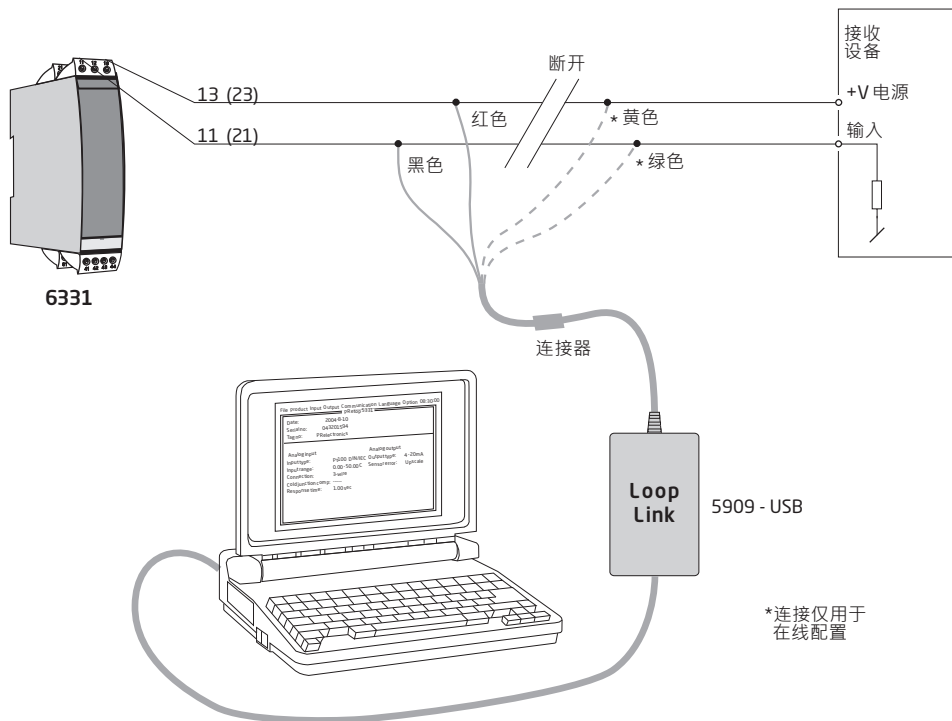


方框图



设置参数

- Loop Link 是 6331 配置所需的通信接口。
- 有关配置，请参考下图和 PReset 中的帮助功能。
- 与未安装的模块进行通信时，可在安全区域拆卸连接器 11、12、13 (通道 1) 和 21、22、23 (通道 2)，以便将通信接口端子连接至引脚。
- Loop link 不允许与安装在危险 (Ex) 区域中的模块进行通信。



ATEX 安装图



为安全安装 6331A 或者 6334A，必须遵守以下规定。该模块仅由熟悉适用于该地区国家和国际法律、指令和标准的合格专业人员安装。
设备制造年份由序列号的前两位数字指示。

ATEX 认证 KEMA 06 ATEX0115X

标志



II 3 G Ex nA [ic] IIC T6..T4 Gc
II 3 G Ex ic IIC T6..T4 Gc
II 3 D Ex ic IIIC Dc

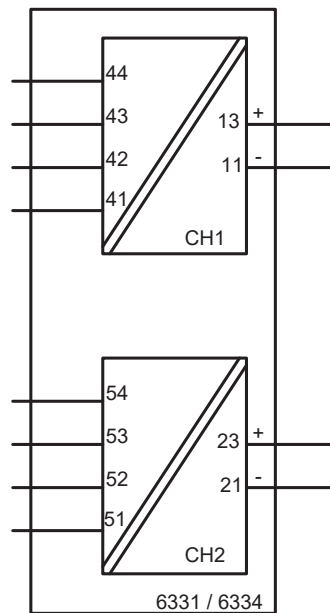
标准 EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010

T4: -40°C 至 85°C
T6: -40°C 至 60°C

端子:
41,42,43,44 /
51,52,53,54

Ex nA [ic]

U_o: 9.6 VDC
I_o: 25 mA
P_o: 60 mW
L_o: 33 mH
C_o: 2.4 μF



危险区 Zone 2

端子:
11-13 / 21-23

Ex nA
U_{max} ≤ 35 VDC

Ex ic
U_i = 35 VDC
L_i = 10 μH
C_i = 1.0 nF

一般安装说明

为避免安装和维护期间的引燃风险，需考虑采取针对静电放电 (ESD) 的适当安全措施。

传感器电路与输出电路并非绝对电气隔离。然而，电路间的电气隔离能够承受 1 分钟交流 500Vac 的测试电压。

对于安装在潜在爆炸性气体环境中，必须遵循以下说明：

若变送器作为保护类型为“Ex nA”部署时，则应安装在外壳内，该外壳需具备符合 IEC-EN 60079-15 标准的 Ex nA 认证或“Ex e”认证，且适用于相关应用并正确安装。

电缆入口装置和堵封件应满足相同的要求。

对于安装在潜在爆炸性粉尘环境中，必须遵循以下说明：

若变送器连接本质安全信号“ic”，并且作为本质安全信号“ic”的接口界面（例如无源设备），则变送器应安装于金属外壳内，该外壳能根据 EN/IEC 60529 提供至少为 IP6X 的防护等级，且适用于相关应用并正确安装。电缆入口装置和堵封件应满足相同的要求。粉尘层最大厚度为 5 mm 时，外壳表面温度等于环境温度加 +20K。

ATEX 安装图



为安全安装 6331Bxx 或者 6334Bxx，必须遵守以下规定。该模块仅由熟悉适用于该地区国家和国际法律、指令和标准的合格专业人员安装。
设备制造年份由序列号的前两位数字指示。

ATEX 认证 KEMA 06ATEX 0115X

标志



II 1 G Ex ia IIC T6..T4 Ga
II 1 D Ex ia IIIC Da
I M 1 Ex ia I Ma

标准 EN 60079-0: 2012, EN 60079-11: 2012, EN 60079-26: 2007

危险区

Zone 0, 1, 2, 20,

T4: $-40 \leq T_a \leq 85^\circ \text{C}$

T5: $-40 \leq T_a \leq 60^\circ \text{C}$

T6: $-40 \leq T_a \leq 40^\circ \text{C}$

端子:

41,42,43,44

U_o: 9.6 VDC

I_o: 25 mA

P_o: 60 mW

L_o: 33 mH

C_o: 2.4 μF

端子:

51,52,53,54

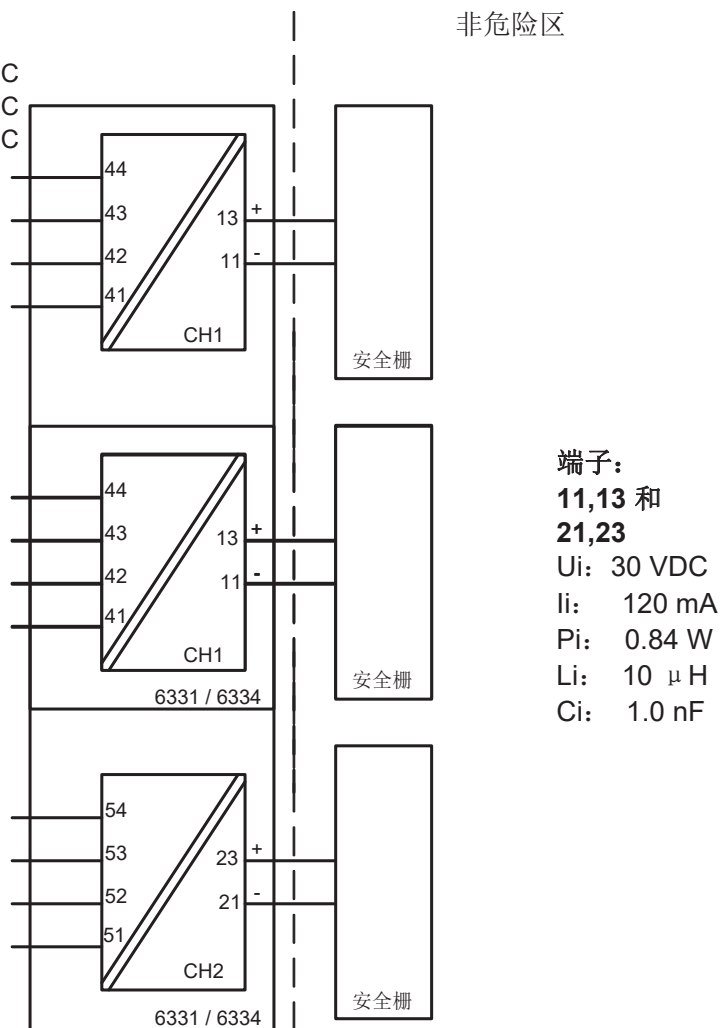
U_o: 9.6 VDC

I_o: 25 mA

P_o: 60 mW

L_o: 33 mH

C_o: 2.4 μF



端子:

11,13 和

21,23

U_i: 30 VDC

I_i: 120 mA

P_i: 0.84 W

L_i: 10 μH

C_i: 1.0 nF

一般安装说明

为避免安装和维护期间的引燃风险，需考虑采取针对静电放电 (ESD) 的适当安全措施。

传感器电路与输出电路并非绝对电气隔离。然而，电路间的电气隔离能够承受 1 分钟交流 500Vac 的测试电压。

对于安装在潜在爆炸性气体环境中，必须遵循以下说明：

为避免由于静电放电 (ESD) 造成的引燃风险，应将变送器安装于外壳内，该外壳能根据 EN/IEC 60529 提供至少为 IP20 的防护等级。

环境温度范围：

T4: $-40 \leq T_a \leq 85^\circ\text{C}$

T5: $-40 \leq T_a \leq 60^\circ\text{C}$

T6: $-40 \leq T_a \leq 40^\circ\text{C}$

对于安装在潜在爆炸性粉尘环境中，必须遵循以下说明：

变送器应安装在金属外壳内，该外壳能根据 EN/IEC 60529 提供至少为 IP6X 的防护等级，且适用于相关应用并正确安装。应使用适用于相关应用和正确安装的电缆封口和堵封件。粉尘层最大厚度为 5 mm 时，外壳表面温度等于环境温度加 +20K。

环境温度范围：

T4: $-40 \leq T_a \leq 85^\circ\text{C}$

对于安装在矿井中的潜在爆炸性环境中，必须遵循以下说明：

变送器应安装于外壳内，该外壳能根据 EN/IEC 60529 提供至少为 IP6X 的防护等级。应使用适用于相关应用和正确安装的电缆封口和堵封件。

环境温度范围：

T4: $-40 \leq T_a \leq 85^\circ\text{C}$

IECEx Installation drawing

For safe installation of 6331A or the 6334A the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area.
Year of manufacture can be taken from the first two digits in the serial number.

IECEx Certificate IECEx DEK 14.0047X

Marking
 Ex nA [ic] IIC T6..T4 Gc
 Ex ic IIC T6..T4 Gc
 Ex ic IIIC Dc

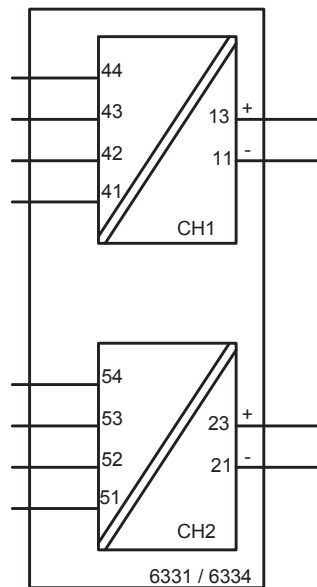
Standards IEC 60079-0 : 2011, IEC 60079-11 : 2011, IEC 60079-15 : 2010

T4: -40°C to 85 °C
 T6: -40°C to 60 °C

Terminal:
41,42,43,44 /
51,52,53,54

Ex nA [ic]

U_o: 9.6 VDC
 I_o: 25 mA
 P_o: 60 mW
 L_o: 33 mH
 C_o: 2.4 µF



Hazardous Area Zone 2

Terminal:
11-13 / 21-23

Ex nA
 U_{max} ≤ 35 VDC

Ex ic
 U_i = 35 VDC
 L_i = 10 µH
 C_i = 1.0 nF

General installation instructions

To avoid risk of ignition during installation and maintenance appropriate safety measures against electrostatic discharge (ESD) are to be considered.

The sensor circuit is not infallibly galvanic isolated from the supply output circuit. However, the galvanic isolation between the circuits is capable of withstanding a test voltage of 500Vac during 1 minute.

For installation in a potentially explosive gas atmosphere, the following instructions apply:

If the transmitter is applied in type of protection "Ex nA", it shall be installed in an enclosure that is Ex nA certified according to IEC-EN 60079-15, or "Ex e" certified and suitable for the application and correctly installed.

Cable entry devices and blanking elements shall fulfill the same requirements

For installation in a potentially explosive dust atmosphere, the following instructions apply:

If the transmitter is supplied with an intrinsically safe signal "ic" and interfaces an intrinsically safe signal "ic" (e.g. a passive device), the transmitter shall be mounted in a metal enclosure that provides a degree of protection of at least IP6X according to EN/IEC 60529, and that is suitable for the application. Cable entry devices and blanking elements shall fulfill the same requirements. The surface temperature of the enclosure is equal to the ambient temperature +20K for a dust layer with a maximum thickness of 5 mm.

IECEx Installation drawing

For safe installation of 6331Bxx or 6334Bxx the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area.
Year of manufacture can be taken from the first two digits in the serial number.

IECEx Certificate	IECEx DEK 14.0047X
Marking	Ex ia IIC T6..T4 Ga Ex ia IIIC Da Ex ia I Ma
Standards:	IEC60079-11:2011, IEC60079-0: 2011, IEC60079-26:2006

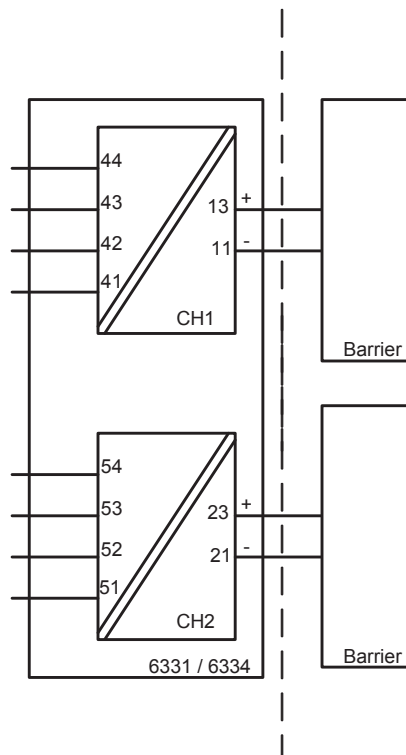
Hazardous area
Zone 0, 1, 2, 20, 21, 22

Non Hazardous Area

T4: $-40 \leq T_a \leq 85^\circ\text{C}$
T5: $-40 \leq T_a \leq 60^\circ\text{C}$
T6: $-40 \leq T_a \leq 40^\circ\text{C}$

**Terminal:
41,42,43,44**
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 μF

**Terminal:
51,52,53,54**
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 μF



**Terminal:
11,13 and
21,23**
Ui: 30 VDC
Ii: 120 mA
Pi: 0.84 W
Li: 10 μH
Ci: 1.0 nF

General installation instructions

To avoid risk of ignition during installation and maintenance appropriate safety measures against electrostatic discharge (ESD) are to be considered.

The sensor circuit is not infallibly galvanic isolated from the supply output circuit. However, the galvanic isolation between the circuits is capable of withstanding a test voltage of 500Vac during 1 minute.

For installation in a potentially explosive gas atmosphere the following instructions apply:

To avoid risk of ignition due to electrostatic discharge (ESD) the transmitter shall be mounted in an enclosure providing a degree of protection of at least IP20 according to EN/IEC 60529.

Ambient temperature range:

T4: $-40 \leq T_a \leq 85^{\circ}\text{C}$

T5: $-40 \leq T_a \leq 60^{\circ}\text{C}$

T6: $-40 \leq T_a \leq 40^{\circ}\text{C}$

For installation in a potentially explosive dust atmosphere, the following instructions apply:

The transmitter shall be mounted in a metal enclosure or equivalent that is providing a degree of protection of at least IP6X according to EN/IEC 60529 that is suitable for the application and correctly installed. Cable entries and blanking elements shall be used that are suitable for the application and correctly installed. The surface temperature of the enclosure is equal to the ambient temperature +20K for a dust layer with a maximum thickness of 5 mm.

Ambient temperature range:

T4: $-40 \leq T_a \leq 85^{\circ}\text{C}$

For installation in a potentially explosive atmosphere in mines, the following instructions apply:

The transmitter shall be mounted in an enclosure providing a degree of protection of at least IP6X according to EN/IEC 60529. Cable entries and blanking elements shall be used that are suitable for the application and correctly installed.

Ambient temperature range:

T4: $-40 \leq T_a \leq 85^{\circ}\text{C}$

For safe installation of the single channel 6331A2A or the two channel 6331A2B the following must be observed. The module shall only be installed by qualified personnel who are familiar with the national and international laws, directives and standards that apply to this area.

Marking

Class I, Division 2, Group A,B,C,D T4..T6

Class I Zone 2 Ex/AEx nA IIC T4..T6

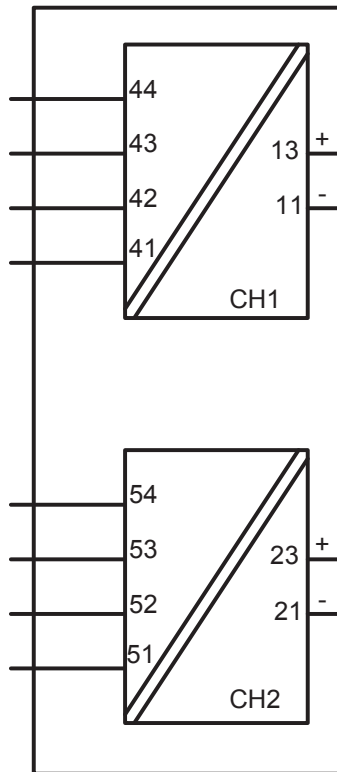
Class I Zone 2 Ex/AEx nA IIC T4..T6

NIFW Class I Division 2, Group A,B,C,D

T4: -40°C to 85 °C
T6: -40°C to 60 °C

Hazardous Area
CL I, Div 2, GP ABCD
CL I, Zone 2, IIC

Terminal:
41,42,43,44
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 µF



Terminal:
11-13
Functional Ratings:
U nominal ≤ 35 VDC;
I nominal ≤ 3.5 - 23 mA

Terminal:
51,52,53,54
Uo: 9.6 VDC
Io: 25 mA
Po: 60 mW
Lo: 33 mH
Co: 2.4 µF

Terminal:
21-23
Functional Ratings:
U nominal ≤ 35 VDC;
I nominal ≤ 3.5 - 23 mA

NI Installation instructions

The transmitter must be installed in an enclosure providing a degree of protection of at least IP54 according to IEC60529 that is suitable for the application and is correctly installed. Cable entry devices and blanking elements shall fulfill the same requirements.

If the enclosure is made of non-metallic materials or of painted metal, electrostatic charging shall be avoided.

Use supply wires with a rating of at least 5 K above the ambient temperature.

Supply from a Class 2 Power Supply with Transient protection or equivalent.

WARNING: Substitution of components may impair suitability for Class I, Division 2.

AVERTISSEMENT: la substitution de composants peut nuire à l'aptitude à la Classe I, Division 2.

WARNING: Do not disconnect equipment unless power has been switched off or the area is known to be safe.

AVERTISSEMENT: Ne débranchez pas l'équipement sauf si l'alimentation a été coupée ou si la zone est connue pour être sûre.

Non Incendive field wiring installation

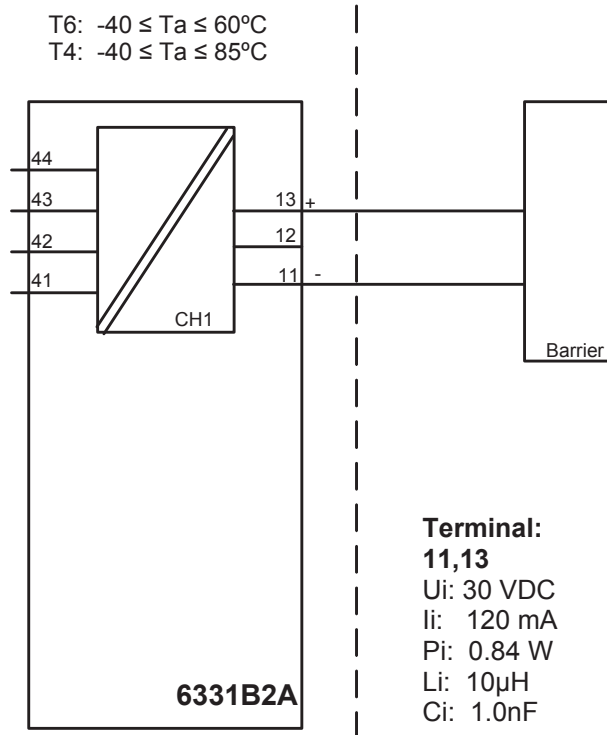
The non incendive field Wiring Circuit concept allows interconnection of Nonincendive Field wiring Apparatus with Associated Nonincendive Field Wiring Apparatus or Associated Intrinsically Safe Apparatus or Associated Apparatus not specially examined in combination as a system using any of the wiring methods permitted for unclassified locations,

$V_{oc} < V_{max}$, $C_a \geq C_i + C_{cable}$, $L_a \geq L_i + L_{cable}$.

Hazardous (Classified) Location
IS, Class I, Division 1, Group A,B,C,D T4..T6
Ex ia IIC T4..T6 Ga
Class I, Zone 0, AEx ia IIC T4..T6 Ga

Non Hazardous Location

Terminal: 41,42,43,44
Connect to passive or non-energy storing devices such as RTD's Resistors and Thermocouples only.



**Terminal:
11,13**
Ui: 30 VDC
li: 120 mA
Pi: 0.84 W
Li: 10µH
Ci: 1.0nF

$Co(Ca) > \sum(Ci+Ccable)$
 $Lo(La) > \sum(Li+Lcable)$

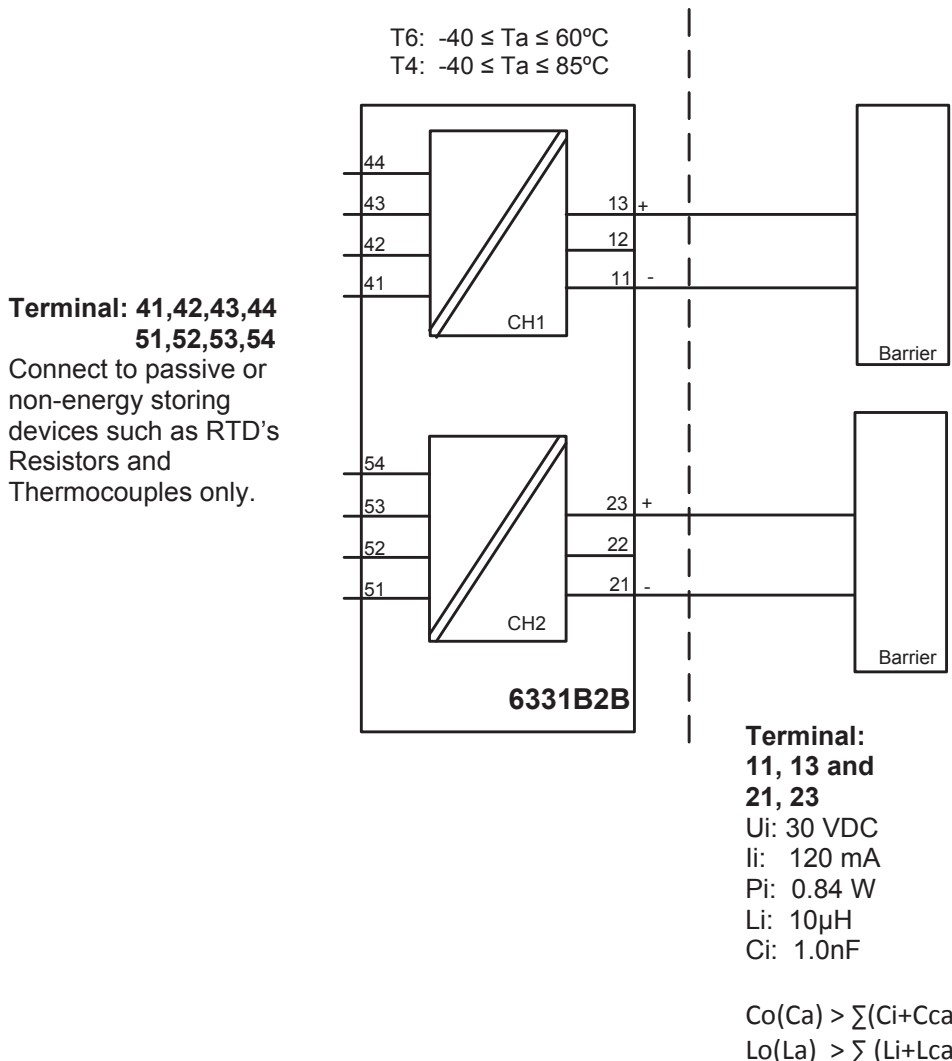
Installation notes.

The Transmitter must be installed in a suitable enclosure to meet installation codes stipulated in The Canadian Electrical Code (CEC).

Substitution of components may impair intrinsic safety.

Hazardous (Classified) Location
IS,Class I, Division 1, Group A,B,C,D T4..T6
Ex ia IIC T4..T6 Ga
Class I, Zone 0, AEx ia IIC T4..T6 Ga

Non Hazardous Location



Installation notes.

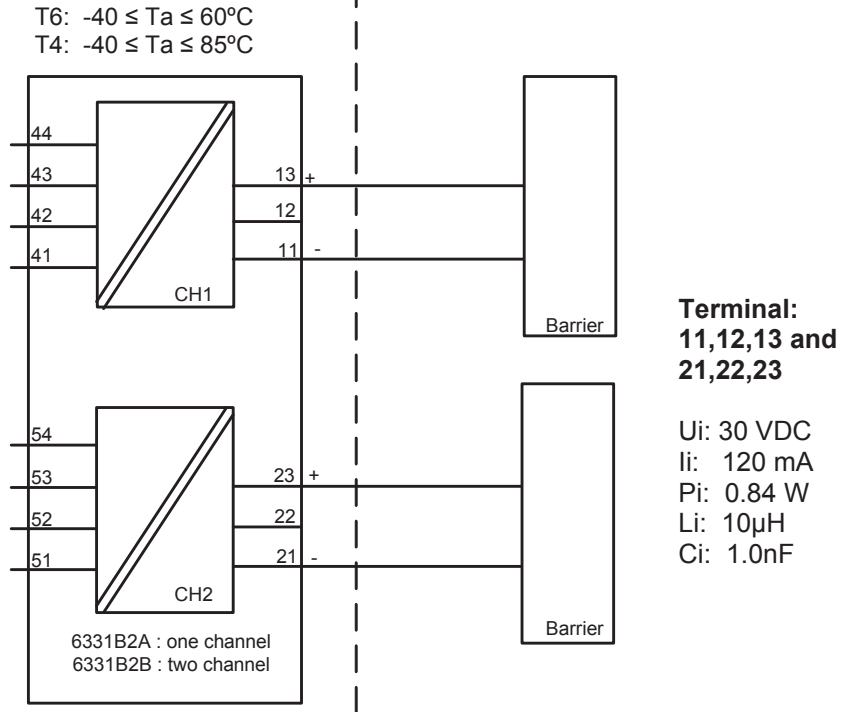
The Transmitter must be installed in a suitable enclosure to meet installation codes stipulated in The Canadian Electrical Code (CEC).

Channel 1 and Channel 2 are separate channels and therefore separate shielded cables shall be used for each channel.

Substitution of components may impair intrinsic safety.

Hazardous (Classified) Location
Class I, Division 1, Group A,B,C,D T4..T6
Class I, Zone 0, AEx ia IIC T4..T6

Non Hazardous Location



Installation notes.

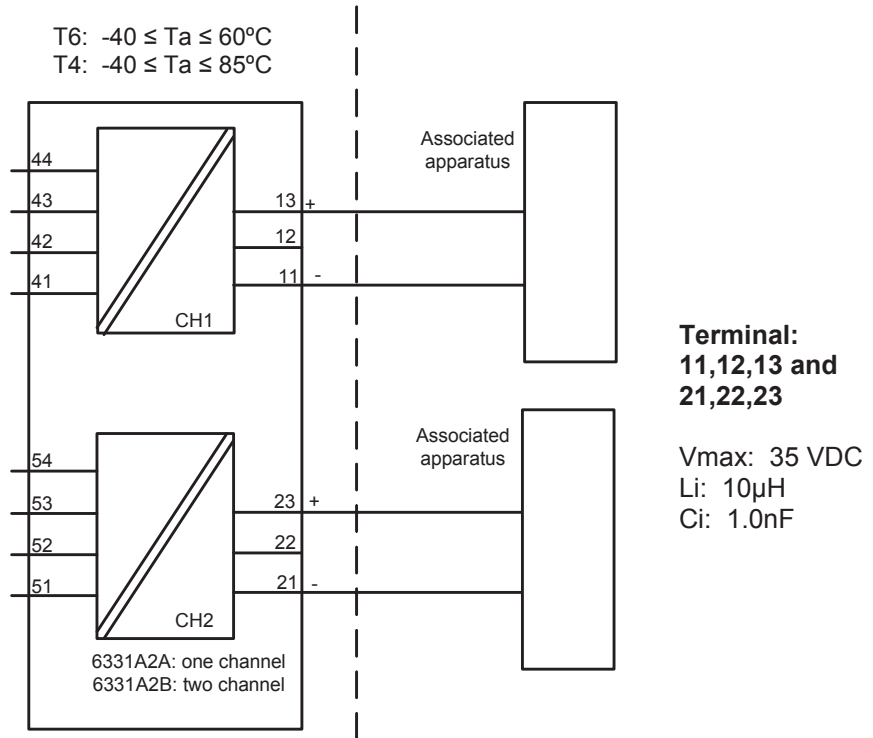
For installation in Class I the Transmitter must be installed in a suitable enclosure to meet installation codes stipulated in The National Electrical Code (ANSI-NFPA 70).

Equipment that is FM-approved for intrinsic safety may be connected to barriers based on the Entity Concept. This concept permits interconnection of approved transmitters, meters and other devices in combinations, which have not been specifically examined by FM, provided that the agency's criteria are met. The combination is then intrinsically safe, if the entity concept is acceptable to the authority having jurisdiction over the installation.

The entity concept criteria are as follows: The intrinsically safe devices, other than barriers, must not be a source of power. The maximum voltage $U_i(V_{MAX})$ and current $I_i(I_{MAX})$, and maximum power $P_i(P_{max})$, which the device can receive and remain intrinsically safe, must be equal to or greater than the voltage (U_o or V_{OC} or V_t) and current (I_o or I_{SC} or I_t) and the power P_o which can be delivered by the barrier. The sum of the maximum unprotected capacitance (C_i) for each intrinsically device and the interconnecting wiring must be less than the capacitance (C_a) which can be safely connected to the barrier. The sum of the maximum unprotected inductance (L_i) for each intrinsically device and the interconnecting wiring must be less than the inductance (L_a) which can be safely connected to the barrier. The entity parameters U_o , V_{OC} or V_t and I_o , I_{SC} or I_t , and C_a and L_a for barriers are provided by the barrier manufacturer.

Hazardous (Classified) Location
Class I, Division 2, Group A,B,C,D T4..T6
Class I, Zone 2, IIC T4..T6

Non Hazardous Location



Installation notes.

The Transmitter must be installed in a suitable enclosure to meet installation codes stipulated in The National Electrical Code (ANSI-NFPA 70).

To assure a Non-Incendive system the transmitter and associated apparatus must be wired in accordance with the associated apparatus manufacturers field wiring instructions and the circuit diagram shown above.

文档更新记录

以下列表提供了有关本文档修订的说明。

版本号	日期	说明
106	1548	添加 CSA、FM 和 IECEx 认证。
107	1903	添加了有关最大需用功率的规格。 新 FM 证书。 获得 6331A 的 CSA 认证。添加安装图。

无论您身在何处， 我们始终在您身边

无论您身在何处，都将获得我们标志性红色模块的全力支持

我们所有的设备都提供权威的专家服务，且享受长达五年的质量保证。您购买的每款产品都将获得个性化的技术支持和指导，按时交货，保修期内免费维修，丰富的技术文档等服务。

我们的总部在丹麦，我们在世界各地设有办事处并在全球创建授权合作伙伴关系。我们能在全球范围内为您提供本地化

服务。这意味着我们总是伴随在您身边，并且非常了解当地市场。

我们致力于打造高客户满意度产品，并将 PERFORMANCE MADE SMARTER 这一理念传向世界。

了解更多有关我们的保修计划，或想与您所在地区的销售代表会面，请访问 prelectronics.com。

让 PERFORMANCE MADE SMARTER 助您一臂之力

PR electronics 是一家行业领先的、专注于使过程控制更加安全、可靠和高效的技术型公司。自 1974 年以来，我们一直致力于高精度-低功耗型核心技术的开发。秉承这种精神，我们不断地为产品设置新的标准，如此这般能够在客户的过程测量点与其过程控制系统之间进行通信、监控和连接。

我们的创新专利技术来源于大量的研发设施以及对客户需求和工艺过程的深刻理解。简约、专注、勇气、卓越是我们的座右铭。这指引着我们不断帮助一些世界上最大的公司实现更卓越的智能化 (PERFORMANCE MADE SMARTER)。