

1 **EU - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 2014/34/EU**

3 EU - Type Examination Certificate **Baseefa16ATEX0140X – Issue 1**
Number:

3.1 In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

4 Product: **K5L and K7L Series K4-20 Position Transmitter**

5 Manufacturer: **Topworx Incorporated**

6 Address: **3300 Fern Valley Road, Louisville, Kentucky, 40213
United States of America**

7 This re-issued certificate extends EC Type Examination Certificate No. **Baseefa16ATEX0140** to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 SGS Fimko Oy, Notified Body number 0598, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

8.1 The original certificate was issued by SGS Baseefa Ltd (UK Notified Body 1180). It, and any supplements previously issued by SGS Baseefa Ltd have been transferred to the supervision of SGS Fimko Oy (EU Notified Body 0598). The original certificate number is retained.

The examination and test results are recorded in confidential Report No. **See Certificate History**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0: 2018 EN 60079-11: 2012 EN 60079-31: 2014

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following:

E See Certificate Schedule

SGS Fimko Oy Customer Reference No. **2191**

Project File No. **21/0357**

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Schedule

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Certificate Number Baseefa16ATEX0140X – Issue 1

15 Description of Product

The K7L Series K4-20 Position Transmitter comprises an aluminium or stainless steel enclosure containing a terminal block, up to two volt free switches or up to four certified proximity sensors in any combination, a potentiometer and an optional Position Transmitter. The K5L K4-20 Position Transmitter is of a similar construction to the K7L but is housed in a low profile enclosure. Both K5L & K7L versions may include an optional mechanical visual indicator. External electrical connections are made via up to four tapped holes.

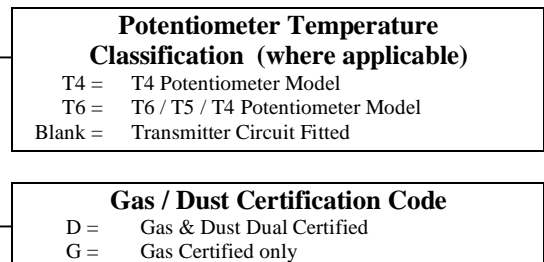
Models of the equipment with a 'D' in the model number are gas and dust certified. The installation of the external connections and plugging of the unused entries in these variants must be carried out using appropriately certified IP6X cable glands and blanking plugs.

Models of the equipment marked with a 'G' in the model number are only gas certified. The installation of the external connections and plugging of the unused entries in these variants must be carried out using appropriate cable glands and blanking plugs with a minimum ingress protection of at least IP20. These variants may also be optionally fitted with plug and socket connections fitted to the entries of the enclosure.

The K7L & K5L Series K4-20 Position Transmitter are available in the following dual certified IECEx & ATEX configurations. The following tables defines the models available and their associated certification codes and input parameters:

Dual ATEX / IECEx Certified Model Range

T-ET-DT4-IEC



Transmitter Configuration	
ET =	Endress & Hauser Position Transmitter only
AT =	ABB Automation Product GmbH Position Transmitter only
PT =	PR Electronics Position Transmitter only
RT =	Rosemount Position Transmitter only
PF =	-40°C Low Ambient Temperature PR Electronics Transmitter
PL =	-40°C Low Ambient Temperature PR Electronics FISCO Transmitter
R =	Potentiometer only
RM =	Potentiometer & Volt-free Contacts
RP =	Potentiometer with Pepperl & Fuchs Proximity Sensors
RT =	Potentiometer with Hans Turck Proximity Sensors
RF =	Potentiometer with IFM Proximity Sensors
RLF =	Potentiometer with IFM Low Temperature Proximity Sensors
ETM =	Endress & Hauser Position Transmitter and Volt-free Contacts
ATM =	ABB Automation Product GmbH Position Transmitter and Volt-free Contacts
PTM =	PR Electronics Position Transmitter and Volt-free Contacts
RTM =	Rosemount Position Transmitter and Volt-free Contacts
PFM =	-40°C Low Ambient Temperature PR Electronics Transmitter and Volt-free Contacts
PLM =	-40°C Low Ambient Temperature PR Electronics FISCO Transmitter and Volt-free Contacts
ETP =	Endress & Hauser Position Transmitter with Pepperl & Fuchs Proximity Sensors

ATP =	ABB Automation Product GmbH Position Transmitter with Pepperl & Fuchs Proximity Sensors
PTP =	PR Electronics Position Transmitter with Pepperl & Fuchs Proximity Sensors
RTP =	Rosemount Position Transmitter with Pepperl & Fuchs Proximity Sensors
PFP =	-40°C Low Ambient Temperature PR Electronics Transmitter with Pepperl & Fuchs Proximity Sensors
PLP =	-40°C Low Ambient Temperature PR Electronics FISCO Transmitter with Pepperl & Fuchs Proximity Sensors
ETT =	Endress & Hauser Position Transmitter with Hans Turck Proximity Sensors
ATT =	ABB Automation Product GmbH Position Transmitter with Hans Turck Proximity Sensors
PTT =	PR Electronics Position Transmitter with Hans Turck Proximity Sensors
RTT =	Rosemount Position Transmitter with Hans Turck Proximity Sensors
PFT =	-40°C Low Ambient Temperature PR Electronics Transmitter with Hans Turck Proximity Sensors
PLT =	-40°C Low Ambient Temperature PR Electronics FISCO Transmitter with Hans Turck Proximity Sensors
ETF =	Endress & Hauser Position Transmitter with IFM Proximity Sensors
ATF =	ABB Automation Product GmbH Position Transmitter with IFM Proximity Sensors
PTF =	PR Electronics Position Transmitter with IFM Proximity Sensors
RTF =	Rosemount Position Transmitter with IFM Proximity Sensors
PFF =	-40°C Low Ambient Temperature PR Electronics Transmitter with IFM Proximity Sensors
PLF =	-40°C Low Ambient Temperature PR Electronics FISCO Transmitter with IFM Proximity Sensors
ETLF =	Endress & Hauser Position Transmitter with IFM Low Temperature Proximity Sensors
ATLF =	ABB Automation Product GmbH Position Transmitter with IFM Low Temperature Proximity Sensors
PTLF =	PR Electronics Position Transmitter with IFM Low Temperature Proximity Sensors
RTLF =	Rosemount Position Transmitter with IFM Low Temperature Proximity Sensors
PFLF =	-40°C Low Ambient Temperature PR Electronics Transmitter with IFM Low Temperature Proximity Sensors
PLLF =	-40°C Low Ambient Temperature PR Electronics FISCO Transmitter with IFM Low Temperature Proximity Sensors

See Table 3 for certification details of the above Proximity Switches / Sensors & Transmitters.

Table 1: Certification Code & Input Parameters – Dual Gas & Dust Certified Models

Model Number	Certification Code(s)	Input Parameters
T-ET-D-IEC	ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T _a ≤ +55°C) Ex tb IIIC T85°C Db (-40°C ≤ T _a ≤ +55°C) Or Ex ia IIC T5 Gb (-40°C ≤ T _a ≤ +70°C) Ex tb IIIC T100°C Db (-40°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 24V, I _i = 100mA, P _i = 0.75W, C _i = 5nF & L _i = 0
T-AT-D-IEC	ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T _a ≤ +56°C) Ex tb IIIC T85°C Db (-40°C ≤ T _a ≤ +56°C) Or Ex ia IIC T5 Gb (-40°C ≤ T _a ≤ +70°C) Ex tb IIIC T100°C Db (-40°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 30V, I _i = 130mA, P _i = 0.8W, C _i = 5nF & L _i = 0.5mH
T-PT-D-IEC	ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T _a ≤ +40°C) Ex tb IIIC T85°C Db (-40°C ≤ T _a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T _a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 30V, I _i = 120mA, P _i = 0.84W, C _i = 1nF & L _i = 10μH
T-RT-D-IEC	ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T _a ≤ +60°C) Ex tb IIIC T85°C Db (-40°C ≤ T _a ≤ +60°C) Or Ex ia IIC T5 Gb (-40°C ≤ T _a ≤ +70°C) Ex tb IIIC T100°C Db (-40°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 30V, I _i = 130mA, P _i = 1.0W, C _i = 3.6nF & L _i = 0

Model Number	Certification Code(s)	Input Parameters
T-PF-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 2nF & L_i = 1μH</p>
T-PL-D-IEC	<p>ε II 2GD Ex ib IIC T6 Gb (-40°C ≤ T_a ≤ +60°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +60°C) Or Ex ib IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 17.5V, I_i = 380mA, P_i = 5.32W, C_i = 2nF & L_i = 1μH</p>
T-ETM-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +55°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +55°C) Or Ex ia IIC T5 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T100°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 24V, I_i = 100mA, P_i = 0.75W, C_i = 5nF & L_i = 0 Volt Free Contacts: U_i = 28V, I_i = 120mA, P_i = 1.3W, C_i = 0 & L_i = 0</p>
T-ATM-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +56°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +56°C) Or Ex ia IIC T5 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T100°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 0.8W, C_i = 5nF & L_i = 0.5mH Volt Free Contacts: U_i = 28V, I_i = 120mA, P_i = 1.3W, C_i = 0 & L_i = 0</p>
T-PTM-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 1nF & L_i = 10μH Volt Free Contacts: U_i = 28V, I_i = 120mA, P_i = 1.3W, C_i = 0 & L_i = 0</p>
T-RTM-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +60°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +60°C) Or Ex ia IIC T5 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T100°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 1.0W, C_i = 3.6nF & L_i = 0 Volt Free Contacts: U_i = 28V, I_i = 120mA, P_i = 1.3W, C_i = 0 & L_i = 0</p>
T-PFM-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 2nF & L_i = 1μH Volt Free Contacts: U_i = 28V, I_i = 120mA, P_i = 1.3W, C_i = 0 & L_i = 0</p>
T-PLM-D-IEC	<p>ε II 2GD Ex ib IIC T6 Gb (-40°C ≤ T_a ≤ +60°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +60°C) Or Ex ib IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 17.5V, I_i = 380mA, P_i = 5.32W, C_i = 2nF & L_i = 1μH Volt Free Contacts: U_i = 28V, I_i = 120mA, P_i = 1.3W, C_i = 0 & L_i = 0</p>
T-R-DT4-IEC	<p>ε II 2GD Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Potentiometer: U_i = 28V, P_i = 0.84W, C_i = 0 & L_i = 0</p>

Model Number	Certification Code(s)	Input Parameters
T-R-DT6-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +40°C) Or Ex ia IIC T5 Gb (-40°C ≤ T_a ≤ +55°C) Ex tb IIIC T100°C Db (-40°C ≤ T_a ≤ +55°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	Potentiometer: U _i = 28V, P _i = 0.19W, C _i = 0 & L _i = 0
T-RM-DT4-IEC	<p>ε II 2GD Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	Potentiometer: U _i = 28V, P _i = 0.84W, C _i = 0 & L _i = 0 Volt Free Contacts: U _i = 28V, I _i = 120mA, P _i = 1.3W, C _i = 0 & L _i = 0
T-RM-DT6-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +40°C) Or Ex ia IIC T5 Gb (-40°C ≤ T_a ≤ +55°C) Ex tb IIIC T100°C Db (-40°C ≤ T_a ≤ +55°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	Potentiometer: U _i = 28V, P _i = 0.19W, C _i = 0 & L _i = 0 Volt Free Contacts: U _i = 28V, I _i = 120mA, P _i = 1.3W, C _i = 0 & L _i = 0
T-RP-DT4-IEC	<p>ε II 2GD Ex ia IIC T4 Gb (-20°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-20°C ≤ T_a ≤ +70°C)</p>	Potentiometer: U _i = 28V, P _i = 0.84W, C _i = 0 & L _i = 0 Proximity Sensors: U _i = 16V, I _i = 52mA, P _i = 0.16W, C _i = 100nF & L _i = 250μH
T-RP-DT6-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-20°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-20°C ≤ T_a ≤ +40°C) Or Ex ia IIC T5 Gb (-20°C ≤ T_a ≤ +55°C) Ex tb IIIC T100°C Db (-20°C ≤ T_a ≤ +55°C) Or Ex ia IIC T4 Gb (-20°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-20°C ≤ T_a ≤ +70°C)</p>	Potentiometer: U _i = 28V, P _i = 0.19W, C _i = 0 & L _i = 0 Proximity Sensors: U _i = 16V, I _i = 52mA, P _i = 0.16W, C _i = 100nF & L _i = 250μH
T-RT-DT4-IEC	<p>ε II 2GD Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-25°C ≤ T_a ≤ +70°C)</p>	Potentiometer: U _i = 28V, P _i = 0.84W, C _i = 0 & L _i = 0 Proximity Sensors: U _i = 20V, I _i = 60mA, P _i = 0.13W, C _i = 250nF & L _i = 350μH
T-RT-DT6-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-25°C ≤ T_a ≤ +40°C) Or Ex ia IIC T5 Gb (-25°C ≤ T_a ≤ +55°C) Ex tb IIIC T100°C Db (-25°C ≤ T_a ≤ +55°C) Or Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-25°C ≤ T_a ≤ +70°C)</p>	Potentiometer: U _i = 28V, P _i = 0.19W, C _i = 0 & L _i = 0 Proximity Sensors: U _i = 20V, I _i = 60mA, P _i = 0.13W, C _i = 250nF & L _i = 350μH
T-RF-DT4-IEC	<p>ε II 2GD Ex ia IIC T4 Gb (-20°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-20°C ≤ T_a ≤ +70°C)</p>	Potentiometer: U _i = 28V, P _i = 0.84W, C _i = 0 & L _i = 0 Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 80nF & L _i = 110μH

Model Number	Certification Code(s)	Input Parameters
T-RF-DT6-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-20°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-20°C ≤ T_a ≤ +40°C) Or Ex ia IIC T5 Gb (-20°C ≤ T_a ≤ +55°C) Ex tb IIIC T100°C Db (-20°C ≤ T_a ≤ +55°C) Or Ex ia IIC T4 Gb (-20°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-25°C ≤ T_a ≤ +70°C)</p>	<p>Potentiometer: U_i = 28V, P_i = 0.19W, C_i = 0 & L_i = 0 Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 80nF & L_i = 110μH</p>
T-RLF-DT4-IEC	<p>ε II 2GD Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Potentiometer: U_i = 28V, P_i = 0.84W, C_i = 0 & L_i = 0 Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 150nF & L_i = 150μH</p>
T-RLF-DT6-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Potentiometer: U_i = 28V, P_i = 0.19W, C_i = 0 & L_i = 0 Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 150nF & L_i = 150μH</p>
T-ETP-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +45°C) Ex tb IIIC T85°C Db (-25°C ≤ T_a ≤ +45°C) Or Ex ia IIC T5 Gb (-25°C ≤ T_a ≤ +60°C) Ex tb IIIC T100°C Db (-25°C ≤ T_a ≤ +60°C) Or Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 24V, I_i = 100mA, P_i = 0.75W, C_i = 5nF & L_i = 0 Proximity Sensors: U_i = 16V, I_i = 52mA, P_i = 0.16W, C_i = 100nF & L_i = 250μH</p>
T-ATP-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +45°C) Ex tb IIIC T85°C Db (-25°C ≤ T_a ≤ +45°C) Or Ex ia IIC T5 Gb (-25°C ≤ T_a ≤ +60°C) Ex tb IIIC T100°C Db (-25°C ≤ T_a ≤ +60°C) Or Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 0.8W, C_i = 5nF & L_i = 0.5mH Proximity Sensors: U_i = 16V, I_i = 52mA, P_i = 0.16W, C_i = 100nF & L_i = 250μH</p>
T-PTP-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-25°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 1nF & L_i = 10μH Proximity Sensors: U_i = 16V, I_i = 52mA, P_i = 0.16W, C_i = 100nF & L_i = 250μH</p>
T-RTP-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +45°C) Ex tb IIIC T85°C Db (-25°C ≤ T_a ≤ +45°C) Or Ex ia IIC T5 Gb (-25°C ≤ T_a ≤ +60°C) Ex tb IIIC T100°C Db (-25°C ≤ T_a ≤ +60°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 1.0W, C_i = 3.6nF & L_i = 0 Proximity Sensors: U_i = 16V, I_i = 52mA, P_i = 0.16W, C_i = 100nF & L_i = 250μH</p>
T-PFP-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-25°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 2nF & L_i = 1μH Proximity Sensors: U_i = 16V, I_i = 52mA, P_i = 0.16W, C_i = 100nF & L_i = 250μH</p>

Model Number	Certification Code(s)	Input Parameters
T-PLP-D-IEC	<p>ε II 2GD Ex ib IIC T6 Gb (-25°C ≤ T_a ≤ +45°C) Ex tb IIIC T85°C Db (-25°C ≤ T_a ≤ +45°C) Or Ex ib IIC T4 Gb (-25°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 17.5V, I_i = 380mA, P_i = 5.32W, C_i = 2nF & L_i = 1μH Proximity Sensors: U_i = 16V, I_i = 52mA, P_i = 0.16W, C_i = 100nF & L_i = 250μH</p>
T-ETT-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +55°C) Ex tb IIIC T85°C Db (-25°C ≤ T_a ≤ +55°C) Or Ex ia IIC T5 Gb (-25°C ≤ T_a ≤ +70°C) Ex tb IIIC T100°C Db (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 24V, I_i = 100mA, P_i = 0.75W, C_i = 5nF & L_i = 0 Proximity Sensors: U_i = 20V, I_i = 60mA, P_i = 0.13W, C_i = 250nF & L_i = 350μH</p>
T-ATT-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +56°C) Ex tb IIIC T85°C Db (-25°C ≤ T_a ≤ +56°C) Or Ex ia IIC T5 Gb (-25°C ≤ T_a ≤ +70°C) Ex tb IIIC T100°C Db (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 0.8W, C_i = 5nF & L_i = 0.5mH Proximity Sensors: U_i = 20V, I_i = 60mA, P_i = 0.13W, C_i = 250nF & L_i = 350μH</p>
T-PTT-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-25°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 1nF & L_i = 10μH Proximity Sensors: U_i = 20V, I_i = 60mA, P_i = 0.13W, C_i = 250nF & L_i = 350μH</p>
T-RTT-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +60°C) Ex tb IIIC T85°C Db (-25°C ≤ T_a ≤ +60°C) Or Ex ia IIC T5 Gb (-25°C ≤ T_a ≤ +70°C) Ex tb IIIC T100°C Db (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 1.0W, C_i = 3.6nF & L_i = 0 Proximity Sensors: U_i = 20V, I_i = 60mA, P_i = 0.13W, C_i = 250nF & L_i = 350μH</p>
T-PFT-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-25°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 2nF & L_i = 1μH Proximity Sensors: U_i = 20V, I_i = 60mA, P_i = 0.13W, C_i = 250nF & L_i = 350μH</p>
T-PLT-D-IEC	<p>ε II 2GD Ex ib IIC T6 Gb (-25°C ≤ T_a ≤ +60°C) Ex tb IIIC T85°C Db (-25°C ≤ T_a ≤ +60°C) Or Ex ib IIC T4 Gb (-25°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 17.5V, I_i = 380mA, P_i = 5.32W, C_i = 2nF & L_i = 1μH Proximity Sensors: U_i = 20V, I_i = 60mA, P_i = 0.13W, C_i = 250nF & L_i = 350μH</p>
T-ETF-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-20°C ≤ T_a ≤ +55°C) Ex tb IIIC T85°C Db (-20°C ≤ T_a ≤ +55°C) Or Ex ia IIC T5 Gb (-20°C ≤ T_a ≤ +70°C) Ex tb IIIC T100°C Db (-20°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 24V, I_i = 100mA, P_i = 0.75W, C_i = 5nF & L_i = 0 Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 80nF & L_i = 110μH</p>
T-ATF-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-20°C ≤ T_a ≤ +56°C) Ex tb IIIC T85°C Db (-20°C ≤ T_a ≤ +56°C) Or Ex ia IIC T5 Gb (-20°C ≤ T_a ≤ +70°C) Ex tb IIIC T100°C Db (-20°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 0.8W, C_i = 5nF & L_i = 0.5mH Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 80nF & L_i = 110μH</p>

Model Number	Certification Code(s)	Input Parameters
T-PTF-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-20°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-20°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-20°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-20°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 1nF & L_i = 10μH Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 80nF & L_i = 110μH</p>
T-RTF-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-20°C ≤ T_a ≤ +60°C) Ex tb IIIC T85°C Db (-20°C ≤ T_a ≤ +60°C) Or Ex ia IIC T5 Gb (-20°C ≤ T_a ≤ +70°C) Ex tb IIIC T100°C Db (-20°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 1.0W, C_i = 3.6nF & L_i = 0 Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 80nF & L_i = 110μH</p>
T-PFF-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-20°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-20°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-20°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-20°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 2nF & L_i = 1μH Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 80nF & L_i = 110μH</p>
T-PLF-D-IEC	<p>ε II 2GD Ex ib IIC T6 Gb (-20°C ≤ T_a ≤ +60°C) Ex tb IIIC T85°C Db (-20°C ≤ T_a ≤ +60°C) Or Ex ib IIC T4 Gb (-20°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-20°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 17.5V, I_i = 380mA, P_i = 5.32W, C_i = 2nF & L_i = 1μH Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 80nF & L_i = 110μH</p>
T-ETLF-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +55°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +55°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 24V, I_i = 100mA, P_i = 0.75W, C_i = 5nF & L_i = 0 Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 150nF & L_i = 150μH</p>
T-ATLF-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +56°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +56°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 0.8W, C_i = 5nF & L_i = 0.5mH Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 150nF & L_i = 150μH</p>
T-PTLF-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 1nF & L_i = 10μH Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 150nF & L_i = 150μH</p>
T-RTLF-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +60°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +60°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 1.0W, C_i = 3.6nF & L_i = 0 Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 150nF & L_i = 150μH</p>
T-PFLF-D-IEC	<p>ε II 2GD Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +40°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 2nF & L_i = 1μH Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 150nF & L_i = 150μH</p>

Model Number	Certification Code(s)	Input Parameters
T-PLLF-D-IEC	<p>ε II 2GD Ex ib IIC T6 Gb (-40°C ≤ T_a ≤ +60°C) Ex tb IIIC T85°C Db (-40°C ≤ T_a ≤ +60°C) Or Ex ib IIC T4 Gb (-40°C ≤ T_a ≤ +70°C) Ex tb IIIC T135°C Db (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 17.5V, I_i = 380mA, P_i = 5.32W, C_i = 2nF & L_i = 1μH Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 150nF & L_i = 150μH</p>

Table 2: Certification Code & Input Parameters – Gas only Certified Models with no Wireless HART Adapter fitted

Model Number	Certification Code(s)	Input Parameters
T-ET-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +55°C) Or Ex ia IIC T5 Gb (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 24V, I_i = 100mA, P_i = 0.75W, C_i = 5nF & L_i = 0</p>
T-AT-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +56°C) Or Ex ia IIC T5 Gb (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 0.8W, C_i = 5nF & L_i = 0.5mH</p>
T-PT-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 1nF & L_i = 10μH</p>
T-RT-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +60°C) Or Ex ia IIC T5 Gb (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 1.0W, C_i = 3.6nF & L_i = 0</p>
T-PF-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 2nF & L_i = 1μH</p>
T-PL-G-IEC	<p>ε II 2G Ex ib IIC T6 Gb (-40°C ≤ T_a ≤ +60°C) Or Ex ib IIC T4 Gb (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 17.5V, I_i = 380mA, P_i = 5.32W, C_i = 2nF & L_i = 1μH</p>
T-ETM-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +55°C) Or Ex ia IIC T5 Gb (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 24V, I_i = 100mA, P_i = 0.75W, C_i = 5nF & L_i = 0 Volt Free Contacts: U_i = 28V, I_i = 120mA, P_i = 1.3W, C_i = 0 & L_i = 0</p>
T-ATM-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +56°C) Or Ex ia IIC T5 Gb (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 0.8W, C_i = 5nF & L_i = 0.5mH Volt Free Contacts: U_i = 28V, I_i = 120mA, P_i = 1.3W, C_i = 0 & L_i = 0</p>
T-PTM-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 1nF & L_i = 10μH Volt Free Contacts: U_i = 28V, I_i = 120mA, P_i = 1.3W, C_i = 0 & L_i = 0</p>
T-RTM-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +60°C) Or Ex ia IIC T5 Gb (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 1.0W, C_i = 3.6nF & L_i = 0 Volt Free Contacts: U_i = 28V, I_i = 120mA, P_i = 1.3W, C_i = 0 & L_i = 0</p>
T-PFM-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 2nF & L_i = 1μH Volt Free Contacts: U_i = 28V, I_i = 120mA, P_i = 1.3W, C_i = 0 & L_i = 0</p>

Model Number	Certification Code(s)	Input Parameters
T-PLM-G-IEC	ε II 2G Ex ib IIC T6 Gb (-40°C ≤ T _a ≤ +60°C) Or Ex ib IIC T4 Gb (-40°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 17.5V, I _i = 380mA, P _i = 5.32W, C _i = 2nF & L _i = 1μH Volt Free Contacts: U _i = 28V, I _i = 120mA, P _i = 1.3W, C _i = 0 & L _i = 0
T-R-GT4-IEC	ε II 2G Ex ia IIC T4 Gb (-40°C ≤ T _a ≤ +70°C)	Potentiometer: U _i = 28V, P _i = 0.84W, C _i = 0 & L _i = 0
T-R-GT6-IEC	ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T _a ≤ +40°C) Or Ex ia IIC T5 Gb (-40°C ≤ T _a ≤ +55°C) Or Ex ia IIC T4 Gb (-40°C ≤ T _a ≤ +70°C)	Potentiometer: U _i = 28V, P _i = 0.19W, C _i = 0 & L _i = 0
T-RM-GT4-IEC	ε II 2G Ex ia IIC T4 Gb (-40°C ≤ T _a ≤ +70°C)	Potentiometer: U _i = 28V, P _i = 0.84W, C _i = 0 & L _i = 0 Volt Free Contacts: U _i = 28V, I _i = 120mA, P _i = 1.3W, C _i = 0 & L _i = 0
T-RM-GT6-IEC	ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T _a ≤ +40°C) Or Ex ia IIC T5 Gb (-40°C ≤ T _a ≤ +55°C) Or Ex ia IIC T4 Gb (-40°C ≤ T _a ≤ +70°C)	Potentiometer: U _i = 28V, P _i = 0.19W, C _i = 0 & L _i = 0 Volt Free Contacts: U _i = 28V, I _i = 120mA, P _i = 1.3W, C _i = 0 & L _i = 0
T-RP-GT4-IEC	ε II 2G Ex ia IIC T4 Gb (-20°C ≤ T _a ≤ +70°C)	Potentiometer: U _i = 28V, P _i = 0.84W, C _i = 0 & L _i = 0 Proximity Sensors: U _i = 16V, I _i = 52mA, P _i = 0.16W, C _i = 100nF & L _i = 250μH
T-RP-GT6-IEC	ε II 2G Ex ia IIC T6 Gb (-20°C ≤ T _a ≤ +40°C) Or Ex ia IIC T5 Gb (-20°C ≤ T _a ≤ +55°C) Or Ex ia IIC T4 Gb (-20°C ≤ T _a ≤ +70°C)	Potentiometer: U _i = 28V, P _i = 0.19W, C _i = 0 & L _i = 0 Proximity Sensors: U _i = 16V, I _i = 52mA, P _i = 0.16W, C _i = 100nF & L _i = 250μH
T-RT-GT4-IEC	ε II 2G Ex ia IIC T4 Gb (-25°C ≤ T _a ≤ +70°C)	Potentiometer: U _i = 28V, P _i = 0.84W, C _i = 0 & L _i = 0 Proximity Sensors: U _i = 20V, I _i = 60mA, P _i = 0.13W, C _i = 250nF & L _i = 350μH
T-RT-GT6-IEC	ε II 2G Ex ia IIC T6 Gb (-25°C ≤ T _a ≤ +40°C) Or Ex ia IIC T5 Gb (-25°C ≤ T _a ≤ +55°C) Or Ex ia IIC T4 Gb (-25°C ≤ T _a ≤ +70°C)	Potentiometer: U _i = 28V, P _i = 0.19W, C _i = 0 & L _i = 0 Proximity Sensors: U _i = 20V, I _i = 60mA, P _i = 0.13W, C _i = 250nF & L _i = 350μH
T-RF-GT4-IEC	ε II 2G Ex ia IIC T4 Gb (-20°C ≤ T _a ≤ +70°C)	Potentiometer: U _i = 28V, P _i = 0.84W, C _i = 0 & L _i = 0 Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 80nF & L _i = 110μH
T-RF-GT6-IEC	ε II 2G Ex ia IIC T6 Gb (-20°C ≤ T _a ≤ +40°C) Or Ex ia IIC T5 Gb (-20°C ≤ T _a ≤ +55°C) Or Ex ia IIC T4 Gb (-20°C ≤ T _a ≤ +70°C)	Potentiometer: U _i = 28V, P _i = 0.19W, C _i = 0 & L _i = 0 Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 80nF & L _i = 110μH
T-RLF-GT4-IEC	ε II 2G Ex ia IIC T4 Gb (-40°C ≤ T _a ≤ +70°C)	Potentiometer: U _i = 28V, P _i = 0.84W, C _i = 0 & L _i = 0 Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 150nF & L _i = 150μH

Model Number	Certification Code(s)	Input Parameters
T-RLF-GT6-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T_a ≤ +70°C)</p>	<p>Potentiometer: U_i = 28V, P_i = 0.19W, C_i = 0 & L_i = 0 Proximity Sensors: U_i = 15V, I_i = 50mA, P_i = 0.12W, C_i = 150nF & L_i = 150μH</p>
T-ETP-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +45°C) Or Ex ia IIC T5 Gb (-25°C ≤ T_a ≤ +60°C) Or Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 24V, I_i = 100mA, P_i = 0.75W, C_i = 5nF & L_i = 0 Proximity Sensors: U_i = 16V, I_i = 52mA, P_i = 0.16W, C_i = 100nF & L_i = 250μH</p>
T-ATP-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +45°C) Or Ex ia IIC T5 Gb (-25°C ≤ T_a ≤ +60°C) Or Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 0.8W, C_i = 5nF & L_i = 0.5mH Proximity Sensors: U_i = 16V, I_i = 52mA, P_i = 0.16W, C_i = 100nF & L_i = 250μH</p>
T-PTP-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 1nF & L_i = 10μH Proximity Sensors: U_i = 16V, I_i = 52mA, P_i = 0.16W, C_i = 100nF & L_i = 250μH</p>
T-RTP-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +45°C) Or Ex ia IIC T5 Gb (-25°C ≤ T_a ≤ +60°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 1.0W, C_i = 3.6nF & L_i = 0 Proximity Sensors: U_i = 16V, I_i = 52mA, P_i = 0.16W, C_i = 100nF & L_i = 250μH</p>
T-PFP-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 2nF & L_i = 1μH Proximity Sensors: U_i = 16V, I_i = 52mA, P_i = 0.16W, C_i = 100nF & L_i = 250μH</p>
T-PLP-G-IEC	<p>ε II 2G Ex ib IIC T6 Gb (-25°C ≤ T_a ≤ +45°C) Or Ex ib IIC T4 Gb (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 17.5V, I_i = 380mA, P_i = 5.32W, C_i = 2nF & L_i = 1μH Proximity Sensors: U_i = 16V, I_i = 52mA, P_i = 0.16W, C_i = 100nF & L_i = 250μH</p>
T-ETT-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +55°C) Or Ex ia IIC T5 Gb (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 24V, I_i = 100mA, P_i = 0.75W, C_i = 5nF & L_i = 0 Proximity Sensors: U_i = 20V, I_i = 60mA, P_i = 0.13W, C_i = 250nF & L_i = 350μH</p>
T-ATT-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +56°C) Or Ex ia IIC T5 Gb (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 0.8W, C_i = 5nF & L_i = 0.5mH Proximity Sensors: U_i = 20V, I_i = 60mA, P_i = 0.13W, C_i = 250nF & L_i = 350μH</p>
T-PTT-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 1nF & L_i = 10μH Proximity Sensors: U_i = 20V, I_i = 60mA, P_i = 0.13W, C_i = 250nF & L_i = 350μH</p>
T-RTT-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +60°C) Or Ex ia IIC T5 Gb (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 130mA, P_i = 1.0W, C_i = 3.6nF & L_i = 0 Proximity Sensors: U_i = 20V, I_i = 60mA, P_i = 0.13W, C_i = 250nF & L_i = 350μH</p>
T-PFT-G-IEC	<p>ε II 2G Ex ia IIC T6 Gb (-25°C ≤ T_a ≤ +40°C) Or Ex ia IIC T4 Gb (-25°C ≤ T_a ≤ +70°C)</p>	<p>Transmitter: U_i = 30V, I_i = 120mA, P_i = 0.84W, C_i = 2nF & L_i = 1μH Proximity Sensors: U_i = 20V, I_i = 60mA, P_i = 0.13W, C_i = 250nF & L_i = 350μH</p>

Model Number	Certification Code(s)	Input Parameters
T-PLT-G-IEC	ε II 2G Ex ib IIC T6 Gb (-25°C ≤ T _a ≤ +60°C) Or Ex ib IIC T4 Gb (-25°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 17.5V, I _i = 380mA, P _i = 5.32W, C _i = 2nF & L _i = 1μH Proximity Sensors: U _i = 20V, I _i = 60mA, P _i = 0.13W, C _i = 250nF & L _i = 350μH
T-ETF-G-IEC	ε II 2G Ex ia IIC T6 Gb (-20°C ≤ T _a ≤ +55°C) Or Ex ia IIC T5 Gb (-20°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 24V, I _i = 100mA, P _i = 0.75W, C _i = 5nF & L _i = 0 Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 80nF & L _i = 110μH
T-ATF-G-IEC	ε II 2G Ex ia IIC T6 Gb (-20°C ≤ T _a ≤ +56°C) Or Ex ia IIC T5 Gb (-20°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 30V, I _i = 130mA, P _i = 0.8W, C _i = 5nF & L _i = 0.5mH Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 80nF & L _i = 110μH
T-PTF-G-IEC	ε II 2G Ex ia IIC T6 Gb (-20°C ≤ T _a ≤ +40°C) Or Ex ia IIC T4 Gb (-20°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 30V, I _i = 120mA, P _i = 0.84W, C _i = 1nF & L _i = 10μH Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 80nF & L _i = 110μH
T-RTF-G-IEC	ε II 2G Ex ia IIC T6 Gb (-20°C ≤ T _a ≤ +60°C) Or Ex ia IIC T5 Gb (-20°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 30V, I _i = 130mA, P _i = 1.0W, C _i = 3.6nF & L _i = 0 Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 80nF & L _i = 110μH
T-PFF-G-IEC	ε II 2G Ex ia IIC T6 Gb (-20°C ≤ T _a ≤ +40°C) Or Ex ia IIC T4 Gb (-20°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 30V, I _i = 120mA, P _i = 0.84W, C _i = 2nF & L _i = 1μH Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 80nF & L _i = 110μH
T-PLF-G-IEC	ε II 2G Ex ib IIC T6 Gb (-20°C ≤ T _a ≤ +60°C) Or Ex ib IIC T4 Gb (-20°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 17.5V, I _i = 380mA, P _i = 5.32W, C _i = 2nF & L _i = 1μH Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 80nF & L _i = 110μH
T-ETLF-G-IEC	ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T _a ≤ +55°C) Or Ex ia IIC T4 Gb (-40°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 24V, I _i = 100mA, P _i = 0.75W, C _i = 5nF & L _i = 0 Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 150nF & L _i = 150μH
T-ATLF-G-IEC	ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T _a ≤ +56°C) Or Ex ia IIC T4 Gb (-40°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 30V, I _i = 130mA, P _i = 0.8W, C _i = 5nF & L _i = 0.5mH Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 150nF & L _i = 150μH
T-PTLF-G-IEC	ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T _a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 30V, I _i = 120mA, P _i = 0.84W, C _i = 1nF & L _i = 10μH Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 150nF & L _i = 150μH
T-RTLF-G-IEC	ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T _a ≤ +60°C) Or Ex ia IIC T4 Gb (-40°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 30V, I _i = 130mA, P _i = 1.0W, C _i = 3.6nF & L _i = 0 Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 150nF & L _i = 150μH
T-PFLF-G-IEC	ε II 2G Ex ia IIC T6 Gb (-40°C ≤ T _a ≤ +40°C) Or Ex ia IIC T4 Gb (-40°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 30V, I _i = 120mA, P _i = 0.84W, C _i = 2nF & L _i = 1μH Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 150nF & L _i = 150μH
T-PLLF-G-IEC	ε II 2G Ex ib IIC T6 Gb (-40°C ≤ T _a ≤ +60°C) Or Ex ib IIC T4 Gb (-40°C ≤ T _a ≤ +70°C)	Transmitter: U _i = 17.5V, I _i = 380mA, P _i = 5.32W, C _i = 2nF & L _i = 1μH Proximity Sensors: U _i = 15V, I _i = 50mA, P _i = 0.12W, C _i = 150nF & L _i = 150μH

Table 3: Proximity Switches / Sensors and Transmitters Certification Details

Model Code	Proximity Switches/Sensors, Transmitter or Wireless HART Adapter	ATEX Certificate No(s).
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Model Code	Proximity Switches/Sensors, Transmitter or Wireless HART Adapter	ATEX Certificate No(s).
T-**P-*.IEC	Type 3 Pepperl + Fuchs Proximity Switches / Sensors	PTB 99 ATEX 2219X PTB 00 ATEX 2032X
T-**F-*.IEC	IFM Proximity Switches / Sensors	PTB 01 ATEX 2191
T-**LF-*.IEC	-40°C Low Ambient Temperature IFM Proximity Switches / Sensors	BVS 08 ATEX E 026
T-**T-*.IEC	Hans Turck GmbH Proximity Switches / Sensors	KEMA 02 ATEX 1090X
T-ET**-*.IEC	Endress & Hauser Transmitter	PTB 01 ATEX 2013 PTB 04 ATEX 2053 PTB 07 ATEX 2056
T-AT**-*.IEC	ABB Automation Product GmbH Transmitter	PTB 05 ATEX 2017X
T-PT**-*.IEC	PR Electronics Transmitter	KEMA 03 ATEX 1535 KEMA 03 ATEX 1537
T-RT**-*.IEC	Rosemount Transmitter	Baseefa03ATEX0030X Baseefa08ATEX0030X
T-PF**-*.IEC	-40°C Low Ambient Temperature PR Electronics Transmitter	KEMA 02 ATEX 1318
T-PL**-*.IEC	-40°C Low Ambient Temperature PR Electronics FISCO 'ib' Transmitter	KEMA 02 ATEX 1318

16 Report Number

See Certificate History

17 Specific Conditions of Use

- The cable glands used as entries to the enclosure must be suitably certified cable glands to the requirements of EN IEC 60079-0: 2018, including Annex A, with a minimum IP rating of IP6X in order to comply with the requirements of EN 60079-31: 2014.
- Any unused entries must be fitted with a suitably certified blanking plug certified to the requirements of EN IEC 60079-0: 2018 with a minimum IP rating of IP6X in order to comply with the requirements of EN 60079-31: 2014.

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
1.2.7	LVD type requirements
1.2.8	Overloading of equipment (protection relays, etc.)
1.4.1	External effects
1.4.2	Aggressive substances, etc.

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
CERT-ES-09204-1	1 of 14	AA	10/06/2023	K5L/K7L 4-20mA Transmitter – Ex ia Sensors
CERT-ES-09204-1*	2 of 14	AA	10/06/2023	K5L/K7L 4-20mA Transmitter – Ex ia Certification Label
CERT-ES-09204-1*	3 of 14	AA	10/06/2023	K5L/K7L 4-20mA Transmitter – Ex ia Certification Label
CERT-ES-09204-1*	4 of 14	AA	10/06/2023	K5L/K7L 4-20mA Transmitter – Ex ia Certification

Number	Sheet	Issue	Date	Description
CERT-ES-09204-1*	5 of 14	AA	10/06/2023	Label
CERT-ES-09204-1	6 of 14	AA	10/06/2023	K5L/K7L 4-20mA Transmitter – Ex ia Certification Label
CERT-ES-09204-1*	7 of 14	AA	10/06/2023	K5L/K7L 4-20mA Transmitter – Ex ia Product with Optional Connector(s)
CERT-ES-09204-1*	8 of 14	AA	10/06/2023	K5L/K7L 4-20mA Transmitter – Ex ia Certification Label
CERT-ES-09204-1*	9 of 14	AA	10/06/2023	K5L/K7L 4-20mA Transmitter – Ex ia Certification Label
CERT-ES-09204-1*	10 of 14	AA	10/06/2023	K5L/K7L 4-20mA Transmitter – Ex ia Certification Label
CERT-ES-09204-1	11 of 14	AA	10/06/2023	K5L/K7L 4-20mA Transmitter – Ex ia Indicator Options for Gas and Dust
CERT-ES-09204-1	12 of 14	AA	10/06/2023	K5L/K7L 4-20mA Transmitter – Ex ia Enclosure Detail
CERT-ES-09204-1	13 of 14	AA	10/06/2023	K5L/K7L 4-20mA Transmitter – Ex ia Circuit Detail
CERT-ES-09204-1	14 of 14	AA	10/06/2023	K5L/K7L 4-20mA Transmitter – Ex ia Typical Termination Detail

The above drawings are held with IECEx BAS 16.0108X.

*These drawings are also common to BAS21UKEX0673X

No current drawings remain unaffected by this issue.

20 Certificate History

Certificate No.	Date	Comments
Baseefa16ATEX0140	01 February 2017	The release of the prime certificate. The associated test and assessment against the requirements of EN 60079-0: 2012 + A11: 2013, EN 60079-11: 2012 and EN 60079-31: 2014 is documented in IECEx ExTR GB/BAS/ExTR16.0261/00 and held with Test Report No. 16/0387.
Baseefa16ATEX0140X Issue 1	10 November 2023	This issue of the certificate incorporates previously issued certificate and confirms the current design meets the requirements of EN IEC 60079-0: 2018. The variation also introduces conditions of safe use. The assessment and testing is documented in IECEx ExTR GB/SGS/ExTR23.0105/00 and held with Test Report No. 21/0357.

For drawings applicable to each issue, see original of that issue.