Base Load Power Hub (BLPH)

ATEX REGISTER

PT, PDT, TT, LT RADAR

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Revision / Change Log

Rev.	Description
00	ISSUE FOR REVIEW (IFR)
01	ACCEPTED FOR CONSTRUCTION (AFC)
02	ACCEPTED FOR CONSTRUCTION (AFC)

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No.	Revision	Tag Number	Description	Location	Manufacturer	Model Type Catalogue Number	Serial Number	ATEX Certification Marking	Reference Document	ATEX Certificate Number	Installation Zone	Notes / Comments	P.O.	Vendor	Skid / Package	Barrier Calculation Ref.	Non-Electrical Equipment	Special Conditions of safe use Applicable
1	00	43-LT-001	Differential Pressure Transmitter	Upper Deck	Terranova Srl	SST77B-H-9-D-2-3-0-0-4 + MANS-D1	SE240632	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
2	00	43-LT-003	Differential Pressure Transmitter	Upper Deck	Terranova Srl	SST77B-H-9-D-2-3-0-0-4 + MANS-D1	SE240633	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
3	00	25-PT-001	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240634	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
4	00	25-PT-002	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240635	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
5	00	25-PT-004	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240636	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
6	00	25-PT-035	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240637	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
7	00	25-PT-006	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240638	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
8	00	25-PT-037	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240639	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
9	00	25-PT-008	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240640	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
10	00	25-PT-040	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240641	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
11	00	25-PT-009	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240642	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
12	00	25-PT-043	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240643	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
13	00	25-PT-011	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240644	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
14	00	25-PT-046	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240645	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
15	00	25-PT-012	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240646	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
16	00	25-PT-049	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-L-2-9-2-1-4 + MAN2-R6	SE240647	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
17	00	25-PT-055A	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-K-2-9-2-1-4 + MAN2-R6	SE240648	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
18	00	25-PT-055B	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-K-2-9-2-1-4 + MAN2-R6	SE240649	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
19	00	43-PT-001	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-G-2-9-2-1-4 + MAN2-R6	SE240650	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
20	00	50-PT-014	Pressure Transmitter	Lower Deck	Terranova Srl	SST76-H-7-K-2-0-2-1-4 + MAN2-R6	SE240651	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
21	00	63-PT-003	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-K-2-0-2-1-4 + MAN2-R6	SE240652	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
22	00	63-PT-004	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-K-2-0-2-1-4 + MAN2-R6	SE240653	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
23	00	64-PT-031A	Pressure Transmitter	Lower Deck	Terranova Srl	SST76-H-7-K-2-0-2-1-4 + MAN2-R6	SE240654	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
24	00	64-PT-031B	Pressure Transmitter	Lower Deck	Terranova Srl	SST76-H-7-K-2-0-2-1-4 + MAN2-R6	SE240655	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
25	00	64-PT-002	Pressure Transmitter	Lower Deck	Terranova Srl	SST76-H-7-K-2-0-2-1-4 + MAN2-R6	SE240656	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
26	00	80-PT-002	Pressure Transmitter	Upper Deck	Terranova Srl	SST76-H-7-K-2-0-2-1-4 + MAN2-R6	SE240657	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
27	00	50-TT-001 / 50-TE-001 / 50-TW-001	Temperature Transmitter	Lower Deck	Terranova Srl	SST72-TH-1-C-9-1-B-4-3 + TWE	SE240658	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
28	00	50-TT-002 / 50-TE-002 / 50-TW-002	Temperature Transmitter	Lower Deck	Terranova Srl	SST72-TH-1-C-9-1-B-4-3 + TWE	SE240659	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
29	00	50-PT-001	Pressure Transmitter	Lower Deck	Terranova Srl	SST76-H-7-K-2-9-2-1-4 + SEA03 + CAP-2-03	SE240660	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
30	00	50-PT-002	Pressure Transmitter	Lower Deck	Terranova Srl	SST76-H-7-K-2-9-2-1-4 + SEA03 + CAP-2-03	SE240661	ATEX Ex II 1/2G Ex db IIC / IIB, T6/T5, Ga/Gb or ATEX Ex II 1/2G Ex ia IIC T6/T5/T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	TI17ATEX304X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes
31	00	55-LIT-001	Radar Level Transmitter	Lower Deck	Tokio Heiki Inc.	KRG-10-AD03PV-AA (KRG-E-P3-R01-N-L-D08-F79-N00-N-D-V-81-A-R2-Z6)	105429 (VE241368)	ATEX Ex II 1/2 G Ex ia/db IIC T4 Ga/Gb	1724000979-IN-DA-00003 Rev. 03	FM13ATEX0069X	Zone 2	N/A	4718_OS	Terranova Srl	N/A	N/A	No	Yes

ATEX CERTIFICATE for SST77B, SST76 and SST72

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Technická inšpekcia, a.s.
Trnavská cesta 56, 821 01 Bratislava
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[1] SUPPLEMENTARY EU-TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protective System Intended for use in potentially explosive atmospheres
Directive 2014/34/EU

[3] Supplementary EU-Type Examination Certificate Number:

TI17ATEX 304 X / 1

[4] Product:

SPRIANO® Electronic transmitter series SST7X
Type: SST70, SST71, SST72, SST75, SST76, SST77B, SST77BL, SST79B and SST70-REM (Indicator)

[5] Manufacturer: **TERRANOVA S.r.l.**

[6] Address: **Via Gramsci, 1, 26827 – Terranova dei Passerini (LO), Italy**

[7] This supplementary certificate extends EU – Type Examination Certificate No. TI17ATEX 304 X to apply to products 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] Technická inšpekcia, a.s., Notified Body Number 1354 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that the product, as modified by this supplementary certificate, 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.

Bratislava, March 08th, 2021

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Ing. Dušan Perniš
General Director

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CSTA3-128

NB 1354

[13] **Schedule**

[14] **Supplementary EU-Type Examination Certificate Number: TI17ATEX 304 X / 1**

[15] Description of the variation to the product:

The subject of this supplementary certificate is extension of product SPRIANO® Electronic transmitter series SST7X, Type: SST70, SST71, SST72, SST75, SST76, SST77B, SST77BL, SST79B and SST70-REM (Indicator), which has protection mode "Ex-db" certified by certificate TI17ATEX304X, to the protection mode "Ex-ia" certified by certificate TI17ATEX305X.
Electronic inside the Series SST7X has been used the same as the SST5X described into TI17ATEX305X certificate.
Housing materials to be used Anticorodal Aluminum or Stainless Steel according previous certificates.
New Variation to the product are:

		With Aluminum housing	
		Without safety barrier	
Ex	II 1/2 G	Ex db IIC T6 Ga/Gb	-40°C<Tamb<+60°C
		Ex db IIB T5 Ga/Gb	-40°C<Tamb<+80°C
		or	
		With safety barrier	
Ex	II 1/2 G	Ex ia IIC T6, T5, T4 Ga	-40°C<Tamb<+40°C / +55°C / +80°C
		With SS AISI 316 housing	
		Without safety barrier	
Ex	II 1/2 G	Ex db IIC T6 Ga/Gb	-40°C<Tamb<+60°C
		Ex db IIB T5 Ga/Gb	-40°C<Tamb<+80°C
		or	
		With safety barrier	
Ex	II 1 G	Ex ia IIC T6, T5, T4 Ga	-40°C<Tamb<+40°C / +55°C / +80°C

Basic description of product:

The Transmitters series electronic SST7X measure pressure, level or temperature of liquids, gases and vapors and transmit a current signal 4-20mA + HART®.
According to the process connection, the series SST7X is constituted by the following models, they can be identified by the code following the series name:

SST70	Displacer level transmitter
SST71	Float level transmitter
SST72	Temperature transmitter
SST75	Relative or absolute pressure transmitter with incorporate separating diaphragm (ceramic)
SST76	Relative or absolute pressure transmitter with incorporate separating diaphragm (piezo)
SST77B	Differential pressure transmitter
SST77BL	Pressure transmitter for level measure
SST79B	Submersible level transmitter
SST70-REM	Field digital indicator

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CSTA3-128

TERRANOVA® SPRIANO MEC-RELA

Model SST70: The transmitter is isolated from the process via a mechanical system to the torsion tube and also the measuring cell presents a separation membrane filled with inert fluid.
Model SST71: The transmitter is isolated from the process via a tube containing reed switches.
Model SST72: The transmitter is isolated from the process via a tube containing sensors PT100.
Models SST75, SST76, SST77B and SST77BL: The transmitter is isolated from the process by membrane separation metal filled with inert fluid.
Model SST79 (version with remote sensor): The remote transmitter is isolated from the process by separation membranes metal filled with inert fluid. It is connected to the housing means shielded cable with 5 wires soldered.
Model SST70-REM (Loop powered field digital indicator): The indicator has no element part but only it is connected via current loop for displaying the desired variable.

Product with variation of Exdb protection:

The instruments are suitable for gas group IIC or IIB depending by the Ambient Temperature and they have the type of protection "Ex db".
Temperature: -40 ° C ≤Tamb≤ + 60 ° C (or -40 ° C ≤Tamb≤ + 80 ° C)
In the case where the process temperatures are higher than the maximum ambient temperature (or below the minimum ambient temperature), the instrument is installed with a suitable finned arm that can dissipate the temperature in excess and ensure the installation inside the ambient temperature range specified by the manufacturer.
The instruments are composed of two parts:
• The housing, the same for all models, which contains the electronic board and the electrical connections.
• The sensing element contained in a body of stainless steel that allows the process connection.
The housing is constituted by the body and by two closing covers (one of which is equipped with transparent windows). The metal parts can be made in Anticorodal Aluminum or Stainless Steel AISI 304 / 316 (Thickness of coating <0.15mm) while the door is tempered-glass glued to the lid with a silicone seal.

Electrical characteristics:

Supply voltage	≤ 30 VDC
Output signal	4 ÷ 20 mA + HART®
Maximum power transferred	0,75 W
ATEX category	II 1/2 G
Protection mode	Ex db IIC T6 Ga/Gb with Tamb [- 40°C, +60°C] Ex db IIB T5 Ga/Gb with Tamb [- 40°C, +80°C]
IP Code	IP 66
The power cables must be at least 22 AWG (0.34mm2 section section - 0.64mm2), suitable for an operating temperature ≥ 90 ° C for Tamb ≥ 70 ° C.	

The marking of the product shall include the following:

⟨Ex⟩ II 1/2 G Ex db IIC T6 Ga/Gb -40°C ≤ Tamb ≤ 60°C
Ex db IIB T5 Ga/Gb -40°C ≤ Tamb ≤ 80°C

Product with variation of Exia protection:

The instruments are suitable for gas group IIC and have the type of protection "Ex i".
The instruments are composed of two parts:
• The housing, the same for all models, which contains the electronic board and the electrical connections.
• The sensing element contained in a body of stainless steel that allows the process connection.
The housing is constituted by the body and by two closing covers (one of which is equipped with transparent windows). The metal parts can be made of stainless steel or aluminum having a content Mg of less than 6% (coating thickness <0.15mm) while the door can be static plastic, 5 mm thick (glue Araldite 2021) or sodalime tempered glass, 5 mm thick (glue Araldite 2011).

TERRANOVA MEC-RELLA

TEKNIŠKA INSPEKCIJA SLOVENSKÁ REPUBLIKA NB 1354 -5-

Electrical characteristics:

Parameter	Tamb<60°C	Tamb<80°C
Maximum voltage input **Ui**	30 V	25.2 V
Maximum current input **Ii**	100 mA	100 mA
Power maximum input **Pi**	0.75 W	0.62 W
Maximum capacity Internal	10 nF	10 nF
Maximum Internal Inductance	0.2 mH	0.2 mH
Output signal	4 ÷ 20 mA + HART®	
Degree of protection	IP 66 for Aluminum housing IP67 for SS AISI 316 housing	

The marking of the product shall include the following:

II 1/2G Ex ia IIC T6, T5, T4 Ga/Gb **-40°C ≤ Tamb ≤ 40°C (T6)** **-40°C ≤ Tamb ≤ 55°C (T5)** **-40°C ≤ Tamb ≤ 80°C (T4)** **For Aluminum housing**	**1G Ex ia IIC T6, T5, T4 Ga** **-40°C ≤ Tamb ≤ 40°C (T6)** **-40°C ≤ Tamb ≤ 55°C (T5)** **-40°C ≤ Tamb ≤ 80°C (T4)** **For SS AISI 316 housing**

[16] Report Number:
Inspection report No: 54/5/2021
Final Test Report No: 54/5/2021

[17] Specific Conditions of Use:

Product with variation of Exdb protection:

Ambient temperature:
Ex db IIC T6 Ga/Gb -40°C ≤ Tamb ≤ 60°C
Ex db IIB T5 Ga/Gb -40°C ≤ Tamb ≤ 80°C
In the case where the process temperatures are higher than the maximum ambient temperature (or lower than the minimum ambient temperature), the equipment is installed with a suitable spacer (example: finned arm, syphon, capillary, remote head, etc.) capable of dissipating the excess temperature and ensure the installation inside the temperature range specified by the manufacturer.

Entries for flameproof enclosure:
The accessories used for cable entry into the housing (which must be treated ½ "NPT or M20x1.5) must comply with the standards EN 60079-0 and EN 60079-1.
The entrance hole leads not used should be closed with the cap conforms to EN 60079-1.

Warning marking:
- "WARNING – DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT"

Informative marking:
- "SEE INSTALLATION INSTRUCTION DOCUMENT".

Product with variation of Exia protection:

Ambient temperature:

-40°C ÷ +40°C	For Class T6
-40°C ÷ +55°C	For Class T5
-40°C ÷ +80°C	For Class T4

In the case where the process temperatures are higher than the maximum ambient temperature (or lower than the minimum ambient temperature), the equipment is installed with a suitable

spacer (example: finned arm, syphon, capillary, remote head, etc.) capable of dissipating the excess temperature and ensure the installation inside the temperature range specified by the manufacturer.

[18] Essential Health and Safety Requirements:
The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.
Additional information: None.

[19] Drawings and Documents:

Number	Sheet	Issue	Date	Description
DTP-SST7X	4pgs	REV No.21.02	12/02/2021	List of drawings and Documents SPRIANO ® Electronic Switches SST7X By TERRANOVA ®
TI17ATEX305X	3 pgs	-	13/03/2017	EU –Type Examination Certificate (Exia)

Technická inšpekcia, a.s.
Trnavskácesta 56
821 01 Bratislava, Slovakia
e-mail: tisr@tisr.sk
web: www.tisr.sk
Tel.: +421 2 49208 100

TECHNICKÁ INŠPEKCIA • TI NB 1354 - 5 - • SLOVENSKÁ REPUBLIKA

Bratislava, March 08th, 2021

Ing. Dušan Perniš
General Director

TECHNICKÁ INŠPEKCIA, a.s.

SLOVENSKÁ REPUBLIKA

CEOC INTERNATIONAL

[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 Number:

TI17ATEX 304 X

[4] Product:

SPRIANO® Electronic transmitter series SST7X
Type: SST70, SST71, SST72, SST75, SST76, SST77B, SST77BL, SST79B and SST70-REM (Indicator)

[5] Manufacturer: **TERRANOVA S.r.l.**

[6] Address: **Via Gramsci, 1, 26827 – Terranova dei Passerini (LO), Italy**

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] Technická inšpekcia, a.s., Notified Body Number 1354 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 product intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential report No. 304/5/2017.

[9] Compliance with the Essential Health and safety Requirements has been assured by compliance with: **EN 60079-0:2012+A11:2013, EN 60079-1:2014**
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 indicate 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 this Directive apply to the manufacturing process and supply of this product.

[12] The marking of the product shall include the following:

Ex II 1/2 G Ex db IIC T6 Ga/Gb -40°C ≤ Tamb ≤ 60°C
Ex db IIB T5 Ga/Gb -40°C ≤ Tamb ≤ 80°C

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TECHNICKÁ INŠPEKCIA • TI • NB 1354 - 5 - • SLOVENSKÁ REPUBLIKA

Bratislava, March 13th, 2017

Ing. Dušan Perniš
General Director

NB 1354

[13] **Schedule**

[14] **EU-Type Examination Certificate Number: TI17ATEX 304 X**

[15] Description of product:
The Transmitters series electronic SST7X measure pressure, level or temperature of liquids, gases and vapors and transmit a current signal 4-20mA.
The instruments are suitable for gas group IIC and have the type of protection "Ex db".
Temperature: -40 ° C ≤Tamb≤ + 60 ° C (or -40 ° C ≤Tamb≤ + 80 ° C)
In the case where the process temperatures are higher than the maximum ambient temperature (or below the minimum ambient temperature), the appliance is installed with a suitable spacer can dissipate the temperature in excess and ensure the installation inside the ambient temperature range specified by the manufacturer.
The instruments are composed of two parts:
• The housing, the same for all models, which contains the electronic board and the electrical connections.
• The sensing element contained in a bodice of stainless steel that allows the process connection.
The housing is constituted by the body and by two closing covers (one of which is equipped with transparent windows). The metal parts can be made in anticorodal aluminum or stainless steel AISI 304 (Thickness of coating <0.15mm) while the door is tempered-glass glued to the lid with a silicone seal.

According to the process connection, the series SST7 is formed by the following models, they can be identified by the code following the series name:

SST70	Displacer level transmitter
SST71	Float level transmitter
SST72	Temperature transmitter
SST75	Relative or absolute pressure transmitter with incorporate separating diaphragm (ceramic)
SST76	Relative or absolute pressure transmitter with incorporate separating diaphragm (piezo)
SST77B	Differential pressure transmitter
SST77BL	Pressure transmitter for level measure
SST79B	Submersible level transmitter
SST70-REM	Field digital indicator

Model SST70: The transmitter is isolated from the process via a mechanical system to the torsion tube and also the measuring cell presents a separation membrane filled with inert fluid.

Model SST71: The transmitter is isolated from the process via a tube containing reed switches.

Model SST72: The transmitter is isolated from the process via a tube containing sensors PT100.

Models SST75, SST76, SST77B and SST77BL: The transmitter is isolated from the process by membrane separation metal filled with inert fluid.

Model SST79 (version with remote sensor): The remote transmitter is isolated from the process by separation membranes metal filled with inert fluid. It is connected to the housing means shielded cable with 5 wires soldered.

Model SST70-REM (Loop powered field digital indicator): The indicator has no element part but only it is connected via current loop for displaying the desired variable.

Electrical characteristics:

Supply voltage	≤ 30 VDC
Output signal	4 ÷ 20 mA
Maximum power transferred	0,75 W
ATEX category	1/2 G
Protection mode	Ex db IIC T6 Ga/Gb with Tamb [- 40°C, +60°C] Ex db IIB T5 Ga/Gb with Tamb [- 40°C, +80°C]
IP Code	IP 66
The power cables must be at least 22 AWG (0.34mm2 section section - 0.64mm2), suitable for an operating temperature ≥ 90 ° C for Tamb ≥ 70 ° C.	

[16] Report Number:
Inspection report No: 304/5/2017
Final Test Report No: 304/5/2017

[17] Specific Conditions of Use:

Ambient temperature:
Ex db IIC T6 Ga/Gb -40°C ≤ Tamb ≤ 60°C
Ex db IIB T5 Ga/Gb -40°C ≤ Tamb ≤ 80°C

In the case where the process temperatures are higher than the maximum ambient temperature (or lower than the minimum ambient temperature), the equipment is installed with a suitable spacer (example: finned arm, syphon, capillary, remote head, etc.) capable of dissipating the excess temperature and ensure the installation inside the temperature range specified by the manufacturer.

Entries for flameproof enclosure:
The accessories used for cable entry into the housing (which must be treated ½ "NPT) must comply with the standards EN 60079-0 and EN 60079-1.
The entrance hole leads not used should be closed with the cap conforms to EN 60079-1.

Warning marking:
- "WARNING – DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT"

Informative marking:
- "SEE INSTALLATION INSTRUCTION DOCUMENT".

[18] Essential Health and Safety Requirements:
The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9.
Additional information: None.

[19] Drawings and Documents:

Number	Sheet	Issue	Date	Description
DTP-SST7X	3pgs	REV No.17.01	31/01/2017	List of drawings and Documents SPRIANO® Electronic Switches SST7X

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TECHNICKÁ INŠPEKCIA · SLOVENSKÁ REPUBLIKA · TI NB 1354 - 5 -

Bratislava, March 13th, 2017

Ing. Dušan Perniš
General Director

CSTA3-128

DECLARATION of CONFORMITY for SST77B, SST76 and SST72

TERRANOVA® Srl - www.terranova-instruments.com
Factory & Sales: Via Gramsci 1 – 26827 Terranova dei Passerini (LO) – Italy
Head Office: Via Rosso Medardo 16 – 20159 Milano – Italy
Phone: +39 0377 919119 – Fax: +39 0377 855720 - VAT IT07848810151

CE 1354

EU Declaration of Conformity

TERRANOVA® Srl

Via Gramsci 1 – 26827 Terranova dei Passerini (LO) – Italy
declares on his sole responsibility that the product:

SPRIANO® Electronic Transmitter series **SST7x**

(device controlling or regulating the limits of an industrial process, like pressure, level and temperature)
satisfies the essential requirements and conformity assessment procedures of the following legislation:

Directive 2014/34/EU (ATEX)

EU TYPE CERTIFICATE: TI 17 ATEX 304 X / 1

Equipment for use in potentially explosive atmospheres, suitable for Zones 0, 1, 2 (process side and external side)

With Aluminum housing

Without safety barrier

II 1/2 G	Ex db IIC T6 Ga/Gb	-40°C<Tamb<+60°C
	Ex db IIB T5 Ga/Gb	-40°C<Tamb<+80°C

or

With safety barrier

II 1/2 G	Ex ia IIC T6, T5, T4 Ga	-40°C<Tamb<+40°C / +55°C / +80°C

With SS AISI 316 housing

Without safety barrier

II 1/2 G	Ex db IIC T6 Ga/Gb	-40°C<Tamb<+60°C
	Ex db IIB T5 Ga/Gb	-40°C<Tamb<+80°C

or

With safety barrier

II 1 G	Ex ia IIC T6, T5, T4 Ga	-40°C<Tamb<+40°C / +55°C / +80°C

Presumption of conformity provided by the application of the harmonised standards:
EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-11:2012, EN 60079-26:2007
The Notified Body NB 1354 Technicka inspekcia a.s. performed Module D, Annex IV, Directive 2014/34/EU and issued the Production Quality Assurance Notification. Periodical Surveillance is provided according to Annex IV, Point 4, Directive 2014/34/EU by the same Notified Body.

Continues in next page.

CE 1354

EU Declaration of Conformity

TERRANOVA® Srl

Via Gramsci 1 – 26827 Terranova dei Passerini (LO) – Italy
declares on his sole responsibility that the product:

SPRIANO® Electronic Transmitter series **SST7x**

(device controlling or regulating the limits of an industrial process, like pressure, level and temperature)
satisfies the essential requirements and conformity assessment procedures of the following legislation:

Directive 2014/68/EU (PED)

EU DESIGN EXAMINATION CERTIFICATE:
1292/1/2017-2 - Carbon steel torque tube level transmitters / switches
1292/1/2017-3 - Stainless steel torque tube level transmitters / switches

1292/1/2017-4 – Carbon steel transmitters / switches
1292/1/2017-5 – Stainless steel transmitters / switches
1292/1/2017-6 – Titanium transmitters / switches
1292/1/2017-7 – Hastelloy alloy transmitters / switches
1292/1/2017-8 – Inconel alloy transmitters / switches

Pressure equipment, up to Category III, for fluids (gases, liquids and vapours) in Group 1.

Presumption of conformity provided by the application of the harmonised standard:
EN 13445-2:2009/A2:2012

The Notified Body NB 1354 Technicka inspekcia a.s. performed Module H1, Directive 2014/68/EU and issued the Production Examination Certificate N.° 1860/1/2020. Periodical Surveillance is provided according to Directive 2014/68/EU by the same Notified Body.

Directive 2014/30/EU (EMC)

Equipment with an adequate level of electromagnetic compatibility.

Presumption of conformity provided by the application of the harmonised standard:
EN 61326-1:2006

Terranova dei Passerini, 08/03/2021

Mr Sergio Valletti,
General Manager



ATEX CERTIFICATE for KRG

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1 EU-TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU**

3 **EU-Type Examination Certificate No:** **FM13ATEX0069X**

4 **Equipment or protective system: (Type Reference and Name)** **KRG-10 Microwave Level Gauge**

5 **Name of Applicant:** **Tokyo Keiki Inc.**

6 **Address of Applicant:** **2-16-46 Minami-Kamata Ohta-ku Tokyo-To 144-8551 Japan**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number:

3049358 dated 20th January 2015

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-11:2012, EN 60079-26:2015 and EN 60529:1991+A1:2000+A2:2013

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

11 This EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include:

II 1 G Ex ia IIC T4 Ga
II 1 D Ex ia IIIC T135°C Da
II 1/2 G Ex ia/db IIC T4 Ga/Gb
Ta = -40°C to +60°C

Martin Crowe
Certification Manager, FM Approvals Europe Ltd.

Issue date: 30th March 2023

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals Europe Limited, One Georges Quay Plaza, Dublin. Ireland. D02 E440
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SCHEDULE

to EU-Type Examination Certificate No. FM13ATEX0069X

13 **Description of Equipment or Protective System:**

The KRG-10 Microwave Level Gauge is designed for level measurements using microwave technology. The KRG-10 Type A is an Intrinsically Safe protection scheme with or without an LCD display installed. The Type B version also comes with an optional LCD display but is flameproof protected as well as intrinsically safe. The Type B version contains a IS barrier circuit allowing 250V to power the unit. The KRG-10 utilizes 6 different antennas which contain both metal and plastic. There are 3 different O-ring options depending on the antenna installed. All signal outputs are available in 4 to 20 mA and HART communications. The KRG-10 electronic enclosure is made of die cast aluminum with the LCD version having a polycarbonate window and silicone rubber LCD cover cap.

The equipment is rated for Degree of Protection IP66 in accordance with EN 60529.

Operation Temperature Ranges:
The ambient operating temperature range of the KRG-10 Microwave Level Gauge is -40°C to 60°C. Process temperature range is -40°C to 200°C for flameproof applications. Depending on the antenna used and the o-ring, the process temperature range varies within the range of -40°C to +200°C The process pressure range is -0.1 to +1.5 MPa.

Electrical data:

In type of protection intrinsic safety, the following energy limitation parameters apply (Type A only): U_i = 30Vdc; I_i = 93mA; P_i = 0.7W; C_i = 0nF; L_i = 0mH

All other protection techniques, the electronic connection has the following values (Type B only): Um= 250VAC

KRG-10a0bc-dA Microwave Level Gauge
Type A
II 1 G Ex ia IIC T4 Ga Ta = -40°C to +60°C; IP66
II 1 D Ex ia IIIC T135°C Da Ta = -40°C to +60°C; IP66
Ui = 30Vdc, Ii = 93mA, Pi = 0.7W, Li = 0mH, Ci = 0nF

Type B
II 1/2 G Ex ia/db IIC T4 Ga/Gb Ta = -40°C to +60°C; IP66

a = EX Approval; AI, or AD
b = Antenna Type; 2H, 4H, 2P, 3P, 4P, or 1R
c = Material of Seal; V, S, or K
d = Display; N or A

14 **Specific Conditions of Use:**

1. *The KRG-10 enclosure contains aluminium and is considered to present a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.*
2. *The KRG-10 enclosure contains exposed non-metallic surfaces considered to constitute an electrostatic discharge hazard. Clean only with a damp cloth.*
3. *The painted surface of the KRG-10 may store electrostatic charge and become a source of ignition in applications with a low relative humidity <30% relative humidity where the painted surface is relatively free of surface contamination such as dirt, dust, or oil. Guidance on protection against the risk of ignition due to electrostatic discharge can be found in PD CLC/TR 60079-32-1 and IEC TS 60079-32. Cleaning of the painted surface should only be done with a damp cloth.*
4. *For the Ex ia/db rated Microwave Level Gauge, this equipment can be installed in the boundary wall*

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

SCHEDULE

to EU-Type Examination Certificate No. FM13ATEX0069X

between an area of EPL Ga (Category 1) and the less hazardous area, EPL Gb (Category 2). In this configuration, the antenna process connection portion may be installed in EPL Ga (Category 1), while the electronics housing is installed in EPL Gb (Category 2).

5. *For the Ex ia/db rated Microwave Level Gauge, consult the manufacturer for dimensional information on the flameproof joints for repair.*
6. *The device contains a nonmetallic wall constructed of PTFE, PFA, Glass parts and Epoxy resin that acts as a partition wall between the process and the device. Installation, Maintenance and use shall take into account the environmental conditions to which the partition wall will be subjected. The manufacturer's instruction for maintenance shall be followed in detail to assure safety during its expected lifetime.*

15 **Essential Health and Safety Requirements:**

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16 **Test and Assessment Procedure and Conditions:**

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

17 **Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

18 **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
20th January 2015	Original Issue.
12th January 2017	Supplement 1: Report Reference: - 3056241 Dated 11th January 2017. Description of the Change: Redesign of inter-compartmental feed through. Increase process temperature for flameproof applications. Correction of drawing errors. Change of Type B product ratings. Removal of Cone Antenna rating. Correction of Specific Condition 6. Updated to EU format.

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SCHEDULE

to EU-Type Examination Certificate No. FM13ATEX0069X

Date	Description
04th June 2019	Supplement 2: Report Reference: - RR218082 Dated 31st May 2019. Description of the Change: Revised Certificate Specific Conditions of Use: Item 3 - replaced EN TR50404 with PD CLC/TR 60079-32-1. Updates made to Product Label Marking and Notified Body Number. Updated Installation Manual label. Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.
29th May 2020	Supplement 3: Report Reference: - RR222698 Dated 28th May 2020. Description of the Change: i) Minor documentation update (no physical changes; only editorial changes). ii) Updated description correctly in the certificate from "for flameproof applications. Process temperature range is -40°C to 180°C for all other applications." and ".1 to 1.5 MPa" to "[d]epending on the antenna used and the o-ring, the process temperature range varies within the range of -40°C to +200°C" and "-.1 to 1.5 MPa", respectively.
28th October 2020	Supplement 4: Report Reference: - PR457466 Dated 26th October 2020. Description of the Change: Evaluation conducted to qualify updates to enclosure and probe construction, minor drawing revisions, moved IP66 ratings from Section 12 to Section 13 as is appropriate, removed Material of Seal option V that had previously been added in error.
25th February 2021	Supplement 5: Report Reference: - RR226323 Dated 23rd February 2021. Description of the Change: Add a new antenna (3" PTFE Sealing Antenna option 3P). Update of safety instructions, model code and manual.
30th July 2021	Supplement 6: Report Reference: - RR228480 Dated 29th July 2021. Description of the Change: Change description in ATEX Cert to match IECEx cert IECEx FMG13.0039X. Um=250VAC was previously 120/240VAC 50/60Hz.
30th March 2023	Supplement 7: Report Reference: - RR236287 Dated 28th March 2023. Description of the Change: Minor technical and documentation changes.

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals Europe Limited, One Georges Quay Plaza, Dublin. Ireland. D02 E440
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Blueprint Report

Tokyo Keiki Inc (144654)

Class No 3610

Original Project I.D. ***3049358***

Certificate I.D. ***FM13ATEX0069X***

Drawing No.	Revision Level	Drawing Title	Last Report
51986690	06	External Dim DWG	PR457466
51986691	**05**	**Internal Structure DWG Type A**	**RR236287**
51986692	**07**	**Internal Structure DWG Type B**	**RR236287**
51986693	05	Internal Structure Detail DWG	PR457466
51986694	05	Assembly Dimension DWG 1	PR457466
51986695	06	Assembly Dimension DWG 2	RR226323
51986696	05	Assembly Dimension DWG 3	PR457466
51986697	10	Labels DWG	RR228480
51986714	00	KAR-20 PCB diagram 1-2	3049358
51986715	00	KMB-10 PCB diagram	3049358
51986716	00	KRF-10 PCB diagram	3049358
51986717	00	KIB-10 PCB diagram	3049358
51986718	01	KTR-20 PCB diagram 1-2	3049358
51986719	02	KPB-20 PCB diagram 1-4	3049358
51986720	01	KPB-20 Parts list 1-6	3049358
51986721	00	KAR-20 Parts list	3049358
51986722	00	KTR-20 Parts list 1-2	3049358
51986723	00	ARM-10 parts list	3049358
51986724	01	BRM-10 parts list 1-3	3049358
51986725	00	KRF-10 Parts list 1-5	3049358
51986726	00	KMB-10 Parts list 1-9	3049358
51986727	00	KIB-10 Parts list	3049358
51986729	01	Blind Plug	3056241
51986962	03	O-Ring Detail DWG	RR226323
51987060	01	Installation DWG Type A	3049358
51987061	04	Installation DWG Type B	RR218082
51987062	01	Intrinsic Safety Concept Type A	3049358
51987063	04	Intrinsic Safety Concept Type B	RR218082
51987064	00	KAR-20 Circuit Diagram	3049358
51987065	00	KTR-20 Circuit Diagram	3049358
51987066	00	ARM-10 Circuit Diagram	3049358
51987067	00	BRM-10 Circuit Diagram	3049358
51987068	00	KPB-20 Circuit Diagram 1-2	3049358
51987069	00	KMB-10 Circuit Diagram 1-4	3049358
51987070	00	KRF-10 Circuit Diagram 1-2	3049358
51987071	00	KIB-10 Circuit Diagram	3049358
51987072	00	BRM-10 PCB Diagram 1-2	3049358
51987073	01	ARM-10 PCB Diagram 1-2	3049358
51987188	01	Line bushing	3056241
KF13-001	**R**	**KRG-10 Manual**	**RR236287**
KF13-003	H	KRG-10 Safety Instructions	RR228480