Certificate of Compliance

Certificate:	2354484	**Master Contract:**	153857
Project:	80092261	**Date Issued:**	2022-07-19

Issued To: **Vega Grieshaber KG**
Am Hohenstein 113
Schiltach, Baden-Württemberg, 77761
Germany

Attention: Thomas Roming

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

Issued by: *Amandeep Singh Khatra*
Amandeep Singh Khatra

C US

PRODUCTS

CLASS 2258-03- PROCESS CONTROL EQUIPMENT – Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations
CLASS 2258-83 - PROCESS CONTROL EQUIPMENT – Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations - Certified to US Standards

Class I, Division 2, Groups A, B, C, and D T* with Associated Nonincendive Field Wiring.
Class II, Division 2, Groups F and G T*; Class III, with Associated Nonincendive Field Wiring.
Enclosure Type 4X

Protrac Series Nuclear Scintillation Detectors - Models FIBERTRAC 31, FIBERTRAC 32, SOLITRAC 31, MINITRAC 31, MINITRAC 32, WEIGHTRAC 31, WEIGHTRAC 32, and POINTRAC 31.
Rated: 24 – 230Vac (-15%/+10%), 6VA, 50/60Hz / 24 – 65Vdc (-15%/+10%), 4W.

Relay contacts: 250Vac, 3A max.
Associated Non-incendive Field Wiring connections when installed per drawing GE2779
*T5 at -40°C ≤ $T_{ambient}$ ≤ +60°C
*T6 at -40°C ≤ $T_{ambient}$ ≤ +46°C
Maximum Process temperature (Tp) = +60°C

Model FIBERTRAC 31 model code* FT31.KX a b c d e f g
Where:
a = 1;
b = B, L, D, G, A, I, C, E;
c = D, A, S, R, W, V;
d = N, M;
e = X, B, F, L;
f = X;
g = Length (3 Digit Code Representing Detector Length)

Model FIBERTRAC 32 model code* FT32.KX a b c d e f g
Where:
a = 1;
b = B, L, D, G, A, I, C, E;
c = D, A, S, R, W, V;
d = N, M;
e = X, B, F, L;
f = X;
g = Length (3 Digit Code Representing Detector Length)

Model SOLITRAC 31 model code ST31.KX a b c d e f g
Where:
a = 1;
b = B, L, D, G, A, I, C, E;
c = D, S, W;
d = N, M;
e = X, B, F, L;
f = X;
g = Length (3 Digit Code Representing Detector Length)

Model MINITRAC 31 model code MT31.KX a b c d e f
Where:
a= 1;
b = B, L, D, G, A, I, C, E;
c = D, S, W;
d = N, M;
e = X, B, F, L;
f = X, S;

Model MINITRAC 32 model code MT32.KX a b c d e f
Where:
a = 1;
b = B, L, D, G, A, I, C, E;
c = D, S, W;
d = N, M;
e = X, B, F, L;
f = X;

Model WEIGHTRAC 31 model code WT31. KX abedefghi
Where:
a = 1;
b = B, D, G, A, C, E;
c = D, S, W;
d = N, M;
e = X, B, F, L;
f = X;
g= Frame Construction (1 digit code representing frame material)
h = Conveyor Width / Frame Upright Height (2 digit code representing frame size)
i = X; Source Holder Configuration (1digit code gamma source holder type)

Model WEIGHTRAC 32 model code WT32. KX abcdefghi
Where:
a = 1;
b = B, D, G, A, C, E;
c = D, S, W;
d = N, M;
e = X, B, F, L;
f = X;
g= Frame Construction (1 digit code representing frame material)
h = Conveyor Width / Frame Upright Height (2 digit code representing frame size)
i = X; Source Holder Configuration (1digit code gamma source holder type)

***Model POINTRAC 31 model code PT31. KX abcde*fg**
Where:
a = 1;
b = B, L, D, G, A, I, C, E;
c = D, S, W,
d = N, M;
e = X, B, F, L;
f = X;
g = Length (3 Digit Code Representing Detector Length)

Order code details:

Values	Description
a = Version / Ambient Temperature	
1	Standard temperature range
b = Electronics	
B or L	4 wire 4-20mA/ HART (non-incendive connection) in lateral compartment
D	4-wire Foundation Fieldbus (non-incendive connections) in lateral compartment
G	4-wire Profibus PA (non-incendive connections) in lateral compartment
A or I	4-wire 4-20mA/HART (incendive circuits) in main compartment
C	4-wire Foundation Fieldbus (incendive circuits) in main compartment
E	4-wire Profibus PA (incendive circuits) in main compartment
c = Housing / Ingress Protection:	
D	Aluminum
A	Aluminum with 316L conduit mount /
S	Aluminum (Special Color)
R	Aluminum with conduit mount (Special Color)
W	Type 316 Stainless Steel
V	Type Stainless Steel with 316L Conduit Mount
d = Cable Entry / Plug Connection	
N	1/2 NPT / without
M	M20x15 / without
e = Indicating/adjustment module (PLICSCOM):	
X	Without
B	Side mounted with backlight
F	Without; lid with inspection window
L	Side mounted with Bluetooth, magnetic pen operation
f = Additional Equipment: (1 digit representing accessories)	
X	Without
S	Internal lead shielding
g = Length	
3 Digit Code Representing Detector Length	
h = Conveyor Width / Frame Upright Height	
2 digit code representing frame size	
i = Source Holder Configuration (1 digit code gamma source holder type)	
X	No Source Holder Required - Plain Cross Beam

Electronics details

HART Electronics Option (Electronics B or L):
Non incendive current loop output with the parameters (terminals 1[+], 2 [-] in the lateral chamber): Uo = 22.16V, Io = 111.9mA, Po = 620.03mW

Ui=10V
Ii=32mA,
Pi=80mW,
C_i negligible, L_i negligible

Profibus PA (Electronics G) or Foundation Fieldbus (Electronics D) Electronic Option:

Non incendive communication interface for connection to an intrinsically safe H1 voltage supply (terminals 1, 2 [Signal+Power] in the lateral chamber):

Ignition protection type intrinsic safety Ex ia IIC (Gr A, B, C, D)
Maximum values:
Ui = 24 V,
Ii = 250 mA,
Pi = 1.2 W
Ci negligible
Li < 5µH

HART Electronics Option (Electronics A, B, I or L), Profibus PA (Electronics G or E) or Foundation Fieldbus (Electronics D or C) Electronic Option:
Display- and adjustment output (terminals 5,6,7,8 in the lateral chamber):
Uo = 6,0V,
Io = 209.7mA,
Po = 314.6mW,
C_i negligible, L_i negligible

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations
CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations
Certified to US Standards

Ex db [ia Ga] IIC T* Gb
Class I, Zone 1 AEx db [ia Ga] IIC T* Gb
Ex ta [ia Da] IIIC T98°C Da
Ex tb [ia Da] IIIC T98°C Db
Zone 20 AEx ta [ia Da] IIIC T98°C Da
Zone 21 AEx tb [ia Da] IIIC T98°C Db
Class I, Division 1 Groups A, B, C, D T* with Associated Intrinsically Safe connections
Class II, Division 1, Groups E, F, G T*; Class III with Associated Intrinsically Safe connections
Enclosure Type 4X; IP66

Protrac Series Nuclear Scintillation Detectors - Models FIBERTRAC 31, FIBERTRAC 32, SOLITRAC 31, MINITRAC 31, MINITRAC 32, WEIGHTRAC 31, WEIGHTRAC 32, and POINTRAC 31.
Rated: 24 – 230Vac (-15%/+10%), 6VA, 50/60Hz / 24 – 65Vdc (-15%/+10%), 4W
Relay contacts: 250Vac, 3A max.
*T5 / T98°C at -40°C ≤ $T_{ambient}$ ≤ +60°C

*T6 / T85°C at -40°C ≤ $T_{ambient}$ ≤ +46°C
Maximum Process temperature (Tp) = +60°C
Associated Intrinsically Safe interface for Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; Class I, Zone 0, and Zone 20 when installed per drawing GE2779

Model FIBERTRAC 31 model code* FT31.KG a b c d e f g
Where:
a = 1;
b = B, L, D, G, A, I, C, E;
c = D, A, S, R, W, V;
d = N, M;
e = X, B, F, L;
f = X;
g = Length (3 Digit Code Representing Detector Length)

Model FIBERTRAC 32 model code* FT32. KG a b c d e f g
Where:
a = 1;
b = B, L, D, G, A, I, C, E;
c = D, A, S, R, W, V;
d = N, M;
e = X, B, F, L;
f = X;v
g = Length (3 Digit Code Representing Detector Length)

Model SOLITRAC 31 model code ST31. KG a b c d e f g
Where:
a = 1;
b = B, L, D, G, A, I, C, E;
c = D, S, W;
d = N, M;
e = X, B, F, L;
f = X;
g = Length (3 Digit Code Representing Detector Length)

Model MINITRAC 31 model code MT31. KG a b c d e f
Where:
a = 1;
b = B, L, D, G, A, I, C, E;
c = D, S, W;
d = N, M;
e = X, B, F, L;
f = X, S;

Model MINITRAC 32 model code MT32. KG a b c d e f

Where:
a = 1;
b = B, L, D, G, A, I, C, E;
c = D, S, W;
d = N, M;
e = X, B, F, L;
f = X;

Model WEIGHTRAC 31 model code WT31. KG abedefghi
Where:
a = 1;
b = B, D, G, A, C, E;
c = D, S, W;
d = N, M;
e = X, B, F, L;
f = X;
g= Frame Construction (1 digit code representing frame material)
h = Conveyor Width / Frame Upright Height (2 digit code representing frame size)
i = X; Source Holder Configuration (1digit code gamma source holder type)

Model WEIGHTRAC 32 model code WT32. KG abcdefghi
Where:
a = 1;
b = B, D, G, A, C, E;
c = D, S, W;
d = N, M;
e = X, B, F, L;
f = X;
g= Frame Construction (1 digit code representing frame material)
h = Conveyor Width / Frame Upright Height (2 digit code representing frame size)
i = X; Source Holder Configuration (1digit code gamma source holder type

***Model POINTRAC 31 model code PT31. KG abcdef*g**
Where:
a = 1;
b = B, L, D, G, A, I, C, E;
c = D, S, W
d = N, M;
e = X, B, F, L;
f = X;
g = Length (3 Digit Code Representing Detector Length)

Order code details:

Values	Description

a = Version / Ambient Temperature	
1	Standard temperature range
b = Electronics	
B or L	4 wire 4-20mA/ HART (intrinsically safe connection) in lateral compartment
D	4-wire Foundation Fieldbus (intrinsically safe connections) in lateral compartment
G	4-wire Profibus PA (intrinsically safe connections) in lateral compartment
A or I	4-wire 4-20mA/HART (non-intrinsically safe circuits) in main compartment
C	4-wire Foundation Fieldbus (non-intrinsically safe circuits) in main compartment
E	4-wire Profibus PA (non-intrinsically safe circuits) in main compartment
c = Housing / Ingress Protection:	
D	Aluminum
A	Aluminum with 316L conduit mount
S	Aluminum (Special Color)
R	Aluminum with conduit mount (Special Color)
W	Type 316 Stainless Steel
V	Type Stainless Steel with 316L Conduit Mount / IP 66/67
d = Cable Entry / Plug Connection	
N	1/2 NPT / without
M	M20x15 / without
e = Indicating/adjustment module (PLICSCOM):	
X	Without
B	Side mounted with backlight
F	Without; lid with inspection window
L	Side mounted with Bluetooth, magnetic pen operation
f = Additional Equipment: (1 digit representing accessories)	
X	Without
S	Internal lead shielding
g = Length	
3 Digit Code Representing Detector Length	
h = Conveyor Width / Frame Upright Height	
2 digit code representing frame size	
i = Source Holder Configuration (1 digit code gamma source holder type)	
X	No Source Holder Required - Plain Cross Beam

Electronics details

HART Electronics Option (Electronics B or L):
Intrinsically safe current loop output with the parameters (terminals 1[+], 2 [-] in the lateral chamber): Uo = 22.16V, Io = 111.9mA, Po = 620.03mW Ui=10V

Ii=32mA,
Pi=80mW,
C_i negligible, L_i negligible

Maximum connection values for Single appearance only

Class I, Zone 0, Group IIC Class I, Division 1, Groups A & B Class I, Zone 0, Group IIB	Co (Ca) = 0.16 µF	Lo (La) = 2.8 mH
Zone 20, Group IIIC Class I & II, Division 1, Groups C & E,F,G	Co (Ca) = 1.11 µF	Lo (La) = 12 mH
Class I, Zone 0, Group IIA Class I, II, III Division 1, Groups D, F, & G	Co (Ca) = 4.08 µF	Lo (La) =22.7 mH

Profibus PA (Electronics G) or Foundation Fieldbus (Electronics D) Electronic Option:

Intrinsically safe communication interface for connection to an intrinsically safe H1 voltage supply (terminals 1, 2 [Signal+Power] in the lateral chamber):

Ignition protection type intrinsic safety Ex ia IIC (Gr A, B, C, D)
Maximum values:
Ui = 17.5 V,
Ii = 500 mA,
Pi = 5.5 W,
Ci negligible,
Li < 5µH

The instrument is suitable for connection to a Fieldbus system according to the FISCO model (CSA C22.2 No 60079-11 and UL 60079-11), or
Ui = 24 V,
Ii = 250 mA,
Pi = 1.2 W,
Ci negligible,
Li < 5µH

HART Electronics Option (Electronics A, B, I or L), Profibus PA (Electronics G or E) or Foundation Fieldbus (Electronics D or C) Electronic Option:
Display- and adjustment output (terminals 5,6,7,8 in the lateral chamber): For Display only
Uo = 6,0V,
Io = 209.7mA,
Po = 314.6mW,
C_i negligible, L_i negligible

Maximum connection values for Single appearance only

Class I, Zone 0, Group IIC Zone 20, Group IIIC Class I, II Division 1, Groups A, B, C, D Class II, III Division 1, Groups E, F, & G	Co (Ca) = 1.4 µF	Lo (La) = 0.8 mH

Conditions of Acceptability:

1. The nonmetallic enclosure parts of this equipment may become a spark ignition hazard in the presence of static electricity. The enclosure shall be cleaned only with a damp cloth, and the equipment shall be mounted to avoid building static electric charge from nonconductive process flow, strong air currents, or other potential charging through friction.
2. Enclosures containing aluminum constitute a potential risk of ignition by impact or friction. This equipment must be mounted and/or physically guarded such that it is not subjected to impact or friction.

APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No. 61010-1-12 + Amd 1-18	Safety requirements for electrical equipment for measurement, control, and laboratory use — Part 1: General requirements
ANSI/UL 61010-1-2018 *Third Edition*	Safety requirements for electrical equipment for measurement, control, and laboratory use — Part 1: General requirements
CAN/CSA C22.2 No. 94.2:20	Enclosures for electrical equipment, environmental considerations
ANSI/UL 50E-2020 *Third Edition*	Enclosures for electrical equipment, environmental considerations
CAN/CSA C22.2 No. 60079-0:19	Explosive atmospheres — Part 0: Equipment — General requirements
ANSI/UL 60079-0-2020 *Seventh Edition*	Explosive atmospheres — Part 0: Equipment — General requirements
CAN/CSA C22.2 No. 60079-1:16	Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures "d"
ANSI/UL 60079-1-2015 *Seventh Edition*	Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures "d"
CAN/CSA C22.2 No. 60079-11:14 (R2018)	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i"
ANSI/UL 60079-11-2018 *Sixth Edition*	Explosive atmospheres – Part 11: Equipment protection by intrinsic safety "i"
CAN/CSA C22.2 No. 60079-31:15 (R2020)	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"
ANSI/UL 60079-31-2015 *Second Edition*	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t"

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CAN/CSA C22.2 No. 213-17 +UPD1(2018) +UPD2 (2019) +UPD3 (2021)	Nonincendive electrical equipment for use in Class I and II, Division 2 and Class III Hazardous (Classified) Locations
ANSI/UL 121201-2021 *Ninth Edition*	Nonincendive electrical equipment for use in Class I and II, Division 2 and Class III Hazardous (Classified) Locations
CSA C22.2 No. 25-17	Enclosures for use in Class II, Division 1, Groups E, F, and G hazardous locations
CAN/CSA C22.2 No. 30:20	Explosion-proof equipment
FM 3600 *(January 2018)*	Electrical Equipment for Use in Hazardous (Classified) Locations, General Requirements
FM 3610 *(January 2018)*	Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1, Hazardous (Classified) Locations
FM 3615 *(January 2018)*	Explosionproof Electrical Equipment General Requirements
FM 3616 *(January 2022)*	Dust-Ignitionproof Electrical Equipment General Requirements

MARKINGS

As per Descriptive report

Notes:

Products certified under Class C225802, C225804, C225882, C225884 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). www.scc.ca

Supplement to Certificate of Compliance

Certificate: 2354484 **Master Contract:** 153857

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
80092261	2022-07-19	The scope is to update report 2327401 (LR 23257) for explosionproof, dust igntionproof, and intrinsically safe Protrac Series Nuclear Scintillation Detectors including FIBERTRAC 31, FIBERTRAC 32, SOLITRAC 31, MINITRAC 31, MINTRAC 32, POINTRAC 31, WEIGHTRAC 31 and WEIGHTRAC 32 to assess the following: I. Change of master contract number to 153857, and report number change from 2327401 to 2354484 II. Update the applicable standards list to latest editions III. Update the descriptive documents to bring these in line with updates contained in IECEx BVS 10.0060 Issues 2 through 4, and updated FM Approval Reports 3037611, 3031547, and FM Certificate of Conformity FM16US0215X. IV. Address the findings per Vega Grieshaber KG (FC# 153858) FIR dated Sept. 10, 2020, report 2327401 a. Correction to temperature range in report b. Review and update of drawings to reflect current/correct rev levels and dates
2354484	2010-10-05	Duplication of Ohmart Vega report 153855-2327401 to VEGA Grieshaber KG, Master Contract 153857.