Translation

(1) # EC-Type Examination Certificate

(2) **- Directive 94/9/EC -**
Equipment and protective systems intended for use in potentially explosive atmospheres

(3) ## BVS 10 ATEX E 096

(4) **Equipment:** **Radiometric Sensor PROTRAC Type FIBERTRAC FT3*.** ****** (*)**, Type MINITRAC MT3*.** ****** and Type SOLITRAC ST3*.** ****** (*)****

(5) **Manufacturer:** **VEGA Grieshaber KG**

(6) **Address:** **77757 Schiltach, Germany**

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this type examination certificate.

(8) The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.
The examination and test results are recorded in the test and assessment report BVS PP 10.2202 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

EN 60079-0:2009	General requirements
EN 60079-1:2007	Flameproof enclosure „d“
EN 60079-11:2007	Intrinsic safety „i“
IEC 60079-31:2008	Protection by enclosures „t“
EN 61241-11:2006	Intrinsic safety

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the appendix to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

II 2(1)G Ex d [ia Ga] IIC T6 Gb
⟨Ex⟩ **II 1D Ex ta [ia Da] IIIC T** see BA **Da IP66**
II 2(1)D Ex tb [ia Da] IIIC T see BA **Db IP66**

FIBERTRAC FT3*.DK ****** (*)**,
MINITRAC MT3*.DK ****** and
SOLITRAC ST3*.DK ****** (*)**

⟨Ex⟩ **I M2 (M1) Ex d [ia Ma] I Mb**

FIBERTRAC FT31.TX ****** (*)**,
MINITRAC MT3*.TX ****** and
SOLITRAC ST3*.TX ****** (*)**

DEKRA EXAM GmbH
Bochum, dated 02 August 2010

Signed: Dr. Franz Eickhoff
Certification body

Signed: Dr. Michael Wittler
Special services unit

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com

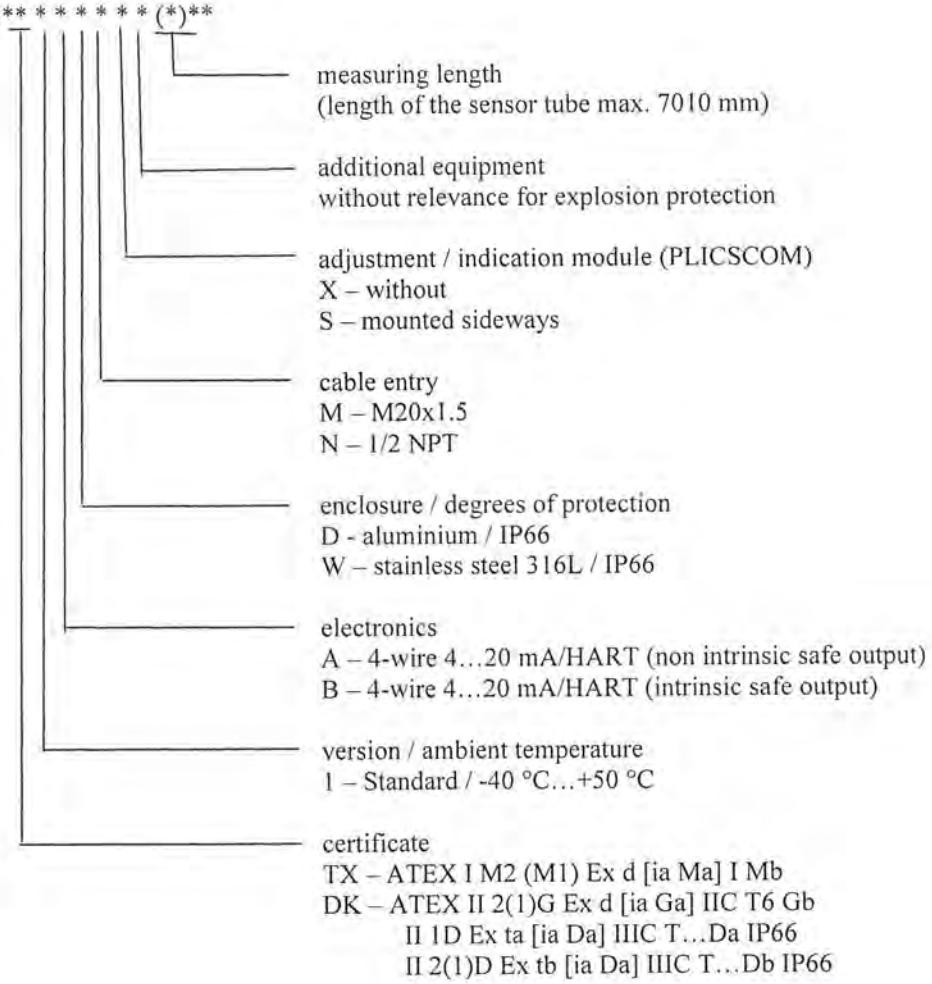
(13) Appendix to

(14) # EC-Type Examination Certificate

BVS 10 ATEX E 096

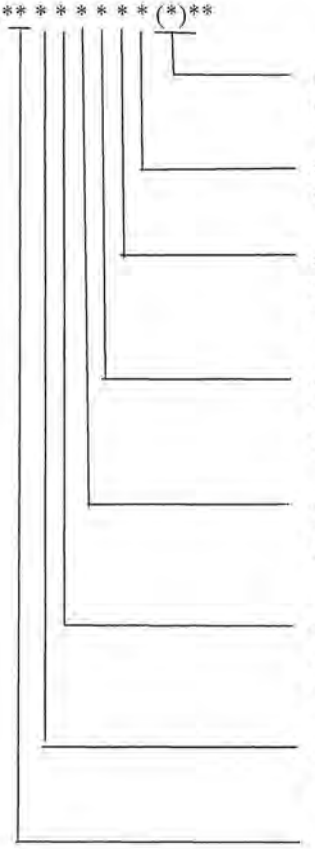
(15) 15.1 Subject and type

PROTRAC Type
FIBERTRAC FT31.** * * * * * * * (*)**



DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com

PROTRAC Type
FIBERTRAC FT32.** * * * * * * (*)**



measuring length
(length of the sensor tube max. 7010 mm)

additional equipment
without relevance for explosion protection

adjustment / indication module (PLICSCOM)
X – without
B – mounted sideways with backlight

cable entry
M – M20x1.5
N – 1/2 NPT

enclosure / degrees of protection
D - aluminium / IP66
W – stainless steel 316L / IP66

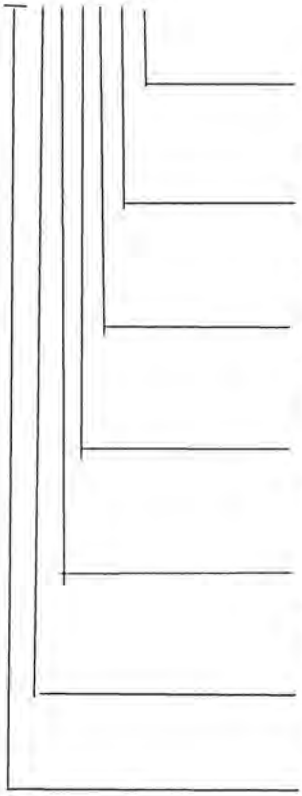
electronics
A – 4-wire 4...20 mA/HART (non intrinsic safe output)
B – 4-wire 4...20 mA/HART (intrinsic safe output)

version / ambient temperature
1 – standard / -40 °C...+50 °C

certificate
DK – ATEX II 2(1)G Ex d [ia Ga] IIC T6 Gb
II 1D Ex ta [ia Da] IIIC T...Da IP66
II 2(1)D Ex tb [ia Da] IIIC T...Db IP66

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com

PROTRAC Type
MINITRAC MT31.** * * * * * * *



additional equipment
X - without
S – built in lead sheath

adjustment / indication module (PLICSCOM)
X – without
B – mounted sideways with backlight

cable entry
M – M20x1.5
N – 1/2 NPT

enclosure / degrees of protection
D - aluminium / IP66
W – stainless steel 316L / IP66

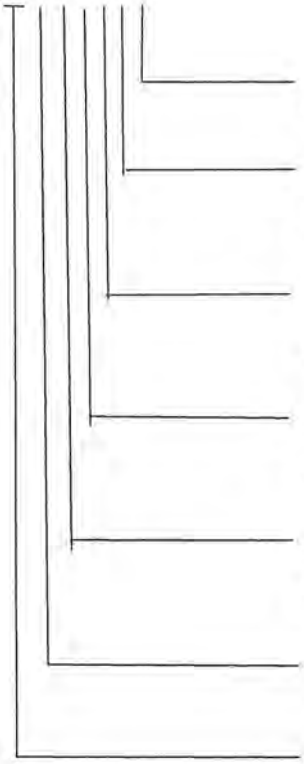
electronics
A – 4-wire 4…20 mA/HART (non intrinsic safe output)
B – 4-wire 4…20 mA/HART (intrinsic safe output)

version / ambient temperature
1 – standard / -40 °C…+60 °C

certificate
TX – ATEX I M2 (M1) Ex d [ia Ma] I Mb
DK – ATEX II 2(1)G Ex d [ia Ga] IIC T6 Gb
II 1D Ex ta [ia Da] IIIC T…Da IP66
II 2(1)D Ex tb [ia Da] IIIC T…Db IP66

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com

PROTRAC Type
MINITRAC MT32.** * * * * * * *



additional equipment
without relevance for explosion protection

adjustment / indication module (PLICSCOM)
X – without
B – mounted sideways with backlight

cable entry
M – M20x1.5
N – 1/2 NPT

enclosure / degrees of protection
D - aluminium / IP66
W – stainless steel 316L / IP66

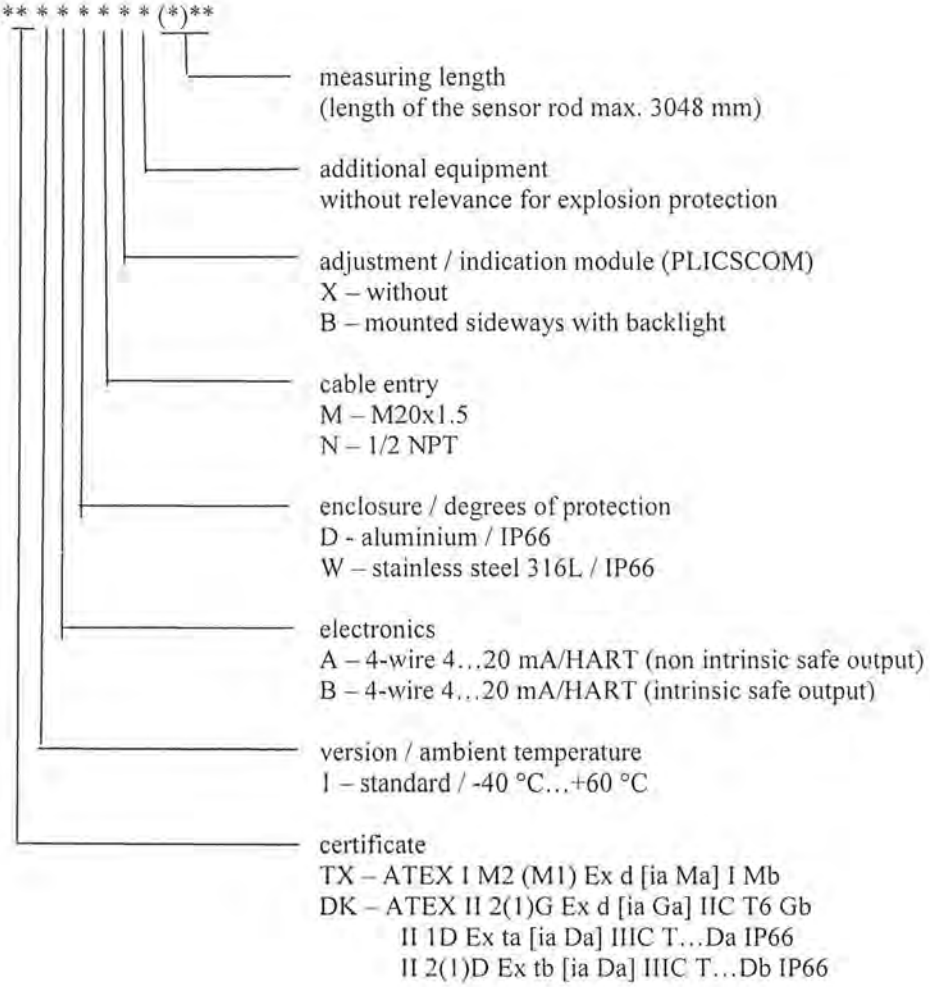
electronics
A – 4-wire 4…20 mA/HART (non intrinsic safe output)
B – 4-wire 4…20 mA/HART (intrinsic safe output)

version / ambient temperature
1 – standard / -40 °C…+60 °C

certificate
TX – ATEX I M2 (M1) Ex d [ia Ma] I Mb
DK – ATEX II 2(1)G Ex d [ia Ga] IIC T6 Gb
II 1D Ex ta [ia Da] IIIC T…Da IP66
II 2(1)D Ex tb [ia Da] IIIC T…Db IP66

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com

PROTRAC Type
SOLITRAC ST31.** * * * * * * (*)**



15.2 Description

The radiometric sensor PROTRAC type FIBERTRAC and type SOLITRAC is used for the contact-free continuous measurement of filling level and level limit, type MINITRAC is used for the contact-free continuous measurement of density and concentration of bulk goods or fluids.
Type FIBERTRAC is equipped with a flexible plastic sensor, type SOLITRAC with a metallic PVT rod detector and type MINITRAC with an extra sensitive PVT detector.
The sensor consists of a metallic enclosure in type of protection Flameproof enclosure „d" or Protection by enclosures „t".
The indicating- and adjustment circuits are in type of protection Intrinsic safety (standard). Another optional current loop output can be intrinsic safe or non intrinsic safe.
These differences in the electronic are shown in the model code in the type A or type B of the electronic.
The difference is:
electronic type A has a non Intrinsic safe current loop output.
electronic type B has an Intrinsic safe current loop output.
For use in mining the interconnection of the intrinsic safety circuits with other apparatus has to be tested and certified separately.

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com

15.3 Parameters

15.3.1 Electrical data

15.3.1.1 Non intrinsically safe circuits (in the Ex d compartment)

15.3.1.1.1 Power supply
terminals 1 and 2

For the following versions

FIBERTRAC FT31.DK*A/B****(*)**
FIBERTRAC FT32.DK*A/B****(*)**
FIBERTRAC FT31.TX*A/B****(*)**
SOLITRAC ST31.DK*A/B****(*)**
SOLITRAC ST31.TX*A/B****(*)**
MINITRAC MT31.DK*A/B****(*)**
MINITRAC MT32.DK*A/B****(*)**
MINITRAC MT31.TX*A/B****(*)**
MINITRAC MT32.TX*A/B****(*)**

input voltage	U	20 ... 72 VDC
	U	20 ... 253 VAC
	Um	253 VAC

15.3.1.1.2 Relais circuit
terminals 4, 5 and 6

For the following versions
FIBERTRAC FT31.DK*A/B****(*)**
FIBERTRAC FT32.DK*A/B****(*)**
FIBERTRAC FT31.TX*A/B****(*)**
SOLITRAC ST31.DK*A/B****(*)**
SOLITRAC ST31.TX*A/B****(*)**
MINITRAC MT31.DK*A/B****(*)**
MINITRAC MT32.DK*A/B****(*)**
MINITRAC MT31.TX*A/B****(*)**
MINITRAC MT32.TX*A/B****(*)**

maximal values	253 V AC, 3 A, 500 VA
	253 V AC, 1 A, 41 W

15.3.1.1.3 Optional current output 4 .. 20 mA
terminals 9, 10 and 11

For the following versions
FIBERTRAC FT31.DK*A****(*)**
FIBERTRAC FT32.DK*A****(*)**
FIBERTRAC FT31.TX*A****(*)**
SOLITRAC ST31.DK*A****(*)**
SOLITRAC ST31.TX*A****(*)**
MINITRAC MT31.DK*A****(*)**
MINITRAC MT32.DK*A****(*)**
MINITRAC MT31.TX*A****(*)**
MINITRAC MT32.TX*A****(*)**

current	4 ... 20 mA

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com

15.3.1.1.4 Current input 4 .. 20 mA
terminals 12 and 13

For the following versions
FIBERTRAC FT31.DK*A/B****(*)**
FIBERTRAC FT32.DK*A/B****(*)**
FIBERTRAC FT31.TX*A/B****(*)**
SOLITRAC ST31.DK*A/B****(*)**
SOLITRAC ST31.TX*A/B****(*)**
MINITRAC MT31.DK*A/B****(*)**
MINITRAC MT32.DK*A/B****(*)**
MINITRAC MT31.TX*A/B****(*)**
MINITRAC MT32.TX*A/B****(*)**

current	4 … 20 mA

15.3.1.1.5 Digital input
terminals 14, 15 and 16

For the following versions
FIBERTRAC FT31.DK*A/B****(*)**
FIBERTRAC FT32.DK*A/B****(*)**
FIBERTRAC FT31.TX*A/B****(*)**
SOLITRAC ST31.DK*A/B****(*)**
SOLITRAC ST31.TX*A/B****(*)**
MINITRAC MT31.DK*A/B****(*)**
MINITRAC MT32.DK*A/B****(*)**
MINITRAC MT31.TX*A/B****(*)**
MINITRAC MT32.TX*A/B****(*)**

Open collector inputs		
between terminals 14 and 16	I	100 mA
between terminals 15 and 16	I	10 mA

15.3.1.1.6 Digital output
terminals 17 and 18

For the following versions
FIBERTRAC FT31.DK*A/B****(*)**
FIBERTRAC FT32.DK*A/B****(*)**
FIBERTRAC FT31.TX*A/B****(*)**
SOLITRAC ST31.DK*A/B****(*)**
SOLITRAC ST31.TX*A/B****(*)**
MINITRAC MT31.DK*A/B****(*)**
MINITRAC MT32.DK*A/B****(*)**
MINITRAC MT31.TX*A/B****(*)**
MINITRAC MT32.TX*A/B****(*)**

Output voltage (potential free)	55 V DC
max. output current	400 mA

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com

15.3.1.1.7 Communications circuit
terminals 19 up to 22

only for the communication with other PROTRAC Gauges

For the following versions
FIBERTRAC FT31.DK*A/B****(*)**
FIBERTRAC FT32.DK*A/B****(*)**
FIBERTRAC FT31.TX*A/B****(*)**
SOLITRAC ST31.DK*A/B****(*)**
SOLITRAC ST31.TX*A/B****(*)**
MINITRAC MT31.DK*A/B****(*)**
MINITRAC MT32.DK*A/B****(*)**
MINITRAC MT31.TX*A/B****(*)**
MINITRAC MT32.TX*A/B****(*)**

Output voltage	3.3 V

15.3.1.2 Outputs (intrinsically safe) in the Ex i compartment
For the following versions
FIBERTRAC FT31.DK*A/B****(*)**
FIBERTRAC FT32.DK*A/B****(*)**
FIBERTRAC FT31.TX*A/B****(*)**
SOLITRAC ST31.DK*A/B****(*)**
SOLITRAC ST31.TX*A/B****(*)**
MINITRAC MT31.DK*A/B****(*)**
MINITRAC MT32.DK*A/B****(*)**
MINITRAC MT31.TX*A/B****(*)**
MINITRAC MT32.TX*A/B****(*)**

15.3.1.2.1 Display- and adjustment output
(intrinsically safe Ex ia IIC, Ex ia IIB and Ex ia I)
(intrinsically safe Ex i terminals 5, 6, 7 and 8)

For connection to the intrinsically safe circuit of the associated external indicating instrument VEDADIS 61 (PTB 02 ATEX 2136 X und BVS 05 ATEX E 023).

max. output voltage	Uo	6.0 V DC
max. output current	Io	209.7 mA
max. output power	Po	314.6 mW

output characteristic linear

effective internal capacitance	Ci	negligible
effective internal inductance	Li	negligible

Connectable values for group IIC and group I (in combination)

effective external inductance	Lo	1.00 mH
effective external capacitance	Co	1.40 uF

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com

15.3.1.2.2 Circuit of the indicating and adjustment module
(spring contacts in the intrinsically compartment)
(intrinsically safe Ex ia IIC)

Only for connection to the indicating and adjustment module PLICSCOM or VEGACONNECT (PTB 07 ATEX 2013 X).

15.3.1.2.3 Optional current loop circuit ia IIC or ia I
(intrinsically safe Ex i terminals 1 and 2)

For the following versions
FIBERTRAC FT31.DK*B****(*)**
FIBERTRAC FT32.DK*B****(*)**
FIBERTRAC FT31.TX*B****(*)**
SOLITRAC ST31.DK*B****(*)**
SOLITRAC ST31.TX*B****(*)**
MINITRAC MT31.DK*B****(*)**
MINITRAC MT32.DK*B****(*)**
MINITRAC MT31.TX*B****(*)**
MINITRAC MT32.TX*B****(*)**

max. output voltage	Uo	22.16	V DC
max. output current	Io	119.90	mA
max. output power	Po	629.03	mW

output characteristic linear

effective internal capacitance		negligible	
effective internal inductance		negligible	

Connectable values for group IIC (in combination)

effective external inductance	Lo	1.00 mH	0.50	mH
effective external capacitance	Co	0.08 uF	0.098	uF

Connectable values for group IIB (in combination)

effective external inductance	Lo	5.00 mH	0.50	mH
effective external capacitance	Co	0.58 uF	0.65	uF

Connectable values for group I (in combination)

effective external inductance	Lo	5.00	mH
effective external capacitance	Co	1.3	uF

15.3.2 Thermal data

15.3.2.1 Permitted ambient temperature range
15.3.2.1.1 PROTRAC Type FIBERTRAC FT3*.** ****** (*)**
-40 °C ....+50 °C

15.3.2.1.2 PROTRAC type MINITRAC MT3*.** ******
PROTRAC type SOLITRAC ST3*.** ******
-40 °C ....+60 °C

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com

15.3.2.2 Max. surface temperature T
with thermo fuse limited to 98 °C

15.3.2.3 Temperature class T6

15.3.3 Degrees of protection according to EN 60529 IP66

(16) Test and assessment report

BVS PP 10.2202 EG as of 02.08.2010

(17) Special conditions for safe use

None

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 02.08.2010
BVS-Hk/Her A 20100152

DEKRA EXAM GmbH

Certification body

Special services unit

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Germany Phone +49 234/3696-105 Fax +49 234/3696-110 E-mail zs-exam@dekra.com

Translation

(1) # 1. Supplement to the EC-Type Examination Certificate

(2) Equipment and protective systems intended for use in potentially explosive atmospheres - Directive 94/9/EC
Supplement accordant with Annex III number 6

(3) No. of EC-Type Examination Certificate: **BVS 10 ATEX E 096**

(4) Equipment: **Radiometric sensor PROTRAC**
Type FIBERTRAC FT3*.******(*)** ,**
Type MINITRAC MT3*.******
Type SOLITRAC ST3*.********(*)**
Type POINTRAC PT3*.*********(*) and
Type WEIGHTRAC WT3*.*********

(5) Manufacturer: **VEGA Grieshaber KG**

(6) Address: **Am Hohenstein 113, 77761 Schiltach, Germany**

(7) The design and construction of this equipment and any acceptable variation thereto are specified in the appendix to this supplement.

(8) The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive. The examination and test results are recorded in the test and assessment report BVS PP 10.2202 EG.

(9) The Essential Health and Safety Requirements are assured by compliance with:

IEC 60079-0:2011 General requirements
EN 60079-1:2007 Flameproof enclosure „d“
EN 60079-11:2012 Eigensicherheit „i“
EN 60079-31:2009 Protection by enclosures „t“

(10) The sign "U" placed after the certificate number indicates that the certificate must not be mistaken for a certificate for equipment. This certificate may only be used as the basis for the certification of equipment.

(11) This supplement to the EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

 **See 15.1**

DEKRA EXAM GmbH
Bochum, dated 29. October 2012

Signed: Simanski — Certification body

Signed: Dr. Wittler — Special services unit

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

(13) Appendix to

(14) **1. Supplement to the EC-Type Examination Certificate BVS 10 ATEX E 096**

(15) 15.1 Subject and type

PROTRAC Typ
FIBERTRAC FT31.** * * * * * * (*)**

- Measuring length
  (Length of sensor tube max. 7010 mm)
- Additional equipment
  without relevance for explosion protection
- Indicating / Adjustment module (PLICSCOM)
  X - Without
  B - Side mounted
- Cable entry
  M - M20x1.5
  N - 1/2 NPT
- Housing / Protection
  D - Aluminium / IP66/IP67
  W - 316L SS / IP66/IP67
- Electronics
  A - Four-wire 4...20 mA/HART®
  (Explosion Proof Output)
  B - Four-wire 4...20 mA/HART®
  (Intrinsic Safe Output)
  I - Four-wire 4...20 mA/HART®
  (Explosion Proof Output) with SIL qualification
  L - Four-wire 4...20 mA/HART®
  (Intrinsic Safe Output) with SIL qualification
  C - Four-wire Foundation Fieldbus
  (Explosion Proof Output)
  D - Four-wire Foundation Fieldbus
  (Intrinsic Safe Output)
  E - Four-wire Profibus PA
  (Explosion Proof Output)
  G - Four-wire Profibus PA
  (Intrinsic safe Output)
- Version / Ambient temperature
  1 - Standard / -20 °C...+50 °C
- Approval
  TX - ATEX I M2 (M1) Ex d [ia Ma] I Mb
  DK - ATEX II 2(1) G Ex d [ia Ga] IIC T6 Gb
  II 1D Ex ta [ia Da] IIIC T...Da IP66
  II 2(1)D Ex tb [ia Da] IIIC T...Db IP66

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

PROTRAC Typ
FIBERTRAC FT32.** * * * * * * (*)**

Measuring length
(Length of sensor tube max. 7010 mm)

Additional equipment
without relevance for explosion protection

Indicating / Adjustment module (PLICSCOM)
X - Without
B - Side mounted

Cable entry
M - M20x1.5
N - 1/2 NPT

Housing / Protection
D - Aluminium / IP66/IP67
W - 316L SS / IP66/IP67

Electronics
A - Four-wire 4...20 mA/HART®
(Explosion Proof Output)
B - Four-wire 4...20 mA/HART®
(Intrinsic Safe Output)
I - Four-wire 4...20 mA/HART®
(Explosion Proof Output) with SIL qualification
L - Four-wire 4...20 mA/HART®
(Intrinsic Safe Output) with SIL qualification
C - Four-wire Foundation Fieldbus
(Explosion Proof Output)
D - Four-wire Foundation Fieldbus
(Intrinsic Safe Output)
E - Four-wire Profibus PA
(Explosion Proof Output)
G - Four-wire Profibus PA
(Intrinsic safe Output)

Version / Ambient temperature
1 - Standard / -20 °C...+50 °C

Approval
DK - ATEX II 2(1)G Ex d [ia Ga] IIC T6 Gb
II 1D Ex ta [ia Da] IIIC T...Da IP66
II 2(1)D Ex tb [ia Da] IIIC T...Db IP66

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

PROTRAC Typ
SOLITRAC ST31.** * * * * * * (*)**

Measuring length
(length of the sensor rod max . 3048 mm)

Additional equipment
without relevance for explosion protection

Indicating / Adjustment module (PLICSCOM)
X - Without
B - Side mounted

Cable entry
M - M20x1.5
N - 1/2 NPT

Housing / Protection
D - Aluminium / IP66/IP67
W - 316L SS / IP66/IP67

Electronics
A - Four-wire 4...20 mA/HART®
(Explosion Proof Output)
B - Four-wire 4...20 mA/HART®
(Intrinsic Safe Output)
I - Four-wire 4...20 mA/HART®
(Explosion Proof Output) with SIL qualification
L - Four-wire 4...20 mA/HART®
(Intrinsic Safe Output) with SIL qualification
C - Four-wire Foundation Fieldbus
(Explosion Proof Output)
D - Four-wire Foundation Fieldbus
(Intrinsic Safe Output)
E - Four-wire Profibus PA
(Explosion Proof Output)
G - Four-wire Profibus PA
(Intrinsic safe Output)

Version / Ambient temperature
1 - Standard / -40 °C...+60 °C

Approval
TX - ATEX I M2 (M1) Ex d [ia Ma] I Mb
DK - ATEX II 2(1)G Ex d [ia Ga] IIC T6 Gb
II 1D Ex ta [ia Da] IIIC T...Da IP66
II 2(1)D Ex tb [ia Da] IIIC T...Db IP66

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

PROTRAC Typ
MINITRAC MT31.** * * * * * * *

Additional equipment
without relevance for explosion protection

Indicating / Adjustment module (PLICSCOM)
X - Without
B - Side mounted

Cable entry
M - M20x1.5
N - 1/2 NPT

Housing / Protection
D - Aluminium / IP66/IP67
W - 316L SS / IP66/IP67

Electronics
A - Four-wire 4...20 mA/HART®
(Explosion Proof Output)
B - Four-wire 4...20 mA/HART®
(Intrinsic Safe Output)
I - Four-wire 4...20 mA/HART®
(Explosion Proof Output) with SIL qualification
L - Four-wire 4...20 mA/HART®
(Intrinsic Safe Output) with SIL qualification
C - Four-wire Foundation Fieldbus
(Explosion Proof Output)
D - Four-wire Foundation Fieldbus
(Intrinsic Safe Output)
E - Four-wire Profibus PA
(Explosion Proof Output)
G - Four-wire Profibus PA
(Intrinsic safe Output)

Version / Ambient temperature
1 - Standard / -40 °C...+60 °C

Approval
TX - ATEX I M2 (M1) Ex d [ia Ma] I Mb
DK - ATEX II 2(1)G Ex d [ia Ga] IIC T6 Gb
II 1D Ex ta [ia Da] IIIC T...Da IP66
II 2(1)D Ex tb [ia Da] IIIC T...Db IP66

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

PROTRAC Typ
MINITRAC MT32.** * * * * * * *

Additional equipment
without relevance for explosion protection

Indicating / Adjustment module (PLICSCOM)
X - Without
B - Side mounted

Cable entry
M - M20x1.5
N - 1/2 NPT

Housing / Protection
D - Aluminium / IP66/IP67
W - 316L SS / IP66/IP67

Electronics
A - Four-wire 4...20 mA/HART®
(Explosion Proof Output)
B - Four-wire 4...20 mA/HART®
(Intrinsic Safe Output)
I - Four-wire 4...20 mA/HART®
(Explosion Proof Output) with SIL qualification
L - Four-wire 4...20 mA/HART®
(Intrinsic Safe Output) with SIL qualification
C - Four-wire Foundation Fieldbus
(Explosion Proof Output)
D - Four-wire Foundation Fieldbus
(Intrinsic Safe Output)
E - Four-wire Profibus PA
(Explosion Proof Output)
G - Four-wire Profibus PA
(Intrinsic safe Output)

Version / Ambient temperature
1 - Standard / -40 °C...+60 °C

Approval
TX - ATEX I M2 (M1) Ex d [ia Ma] I Mb
DK - ATEX II 2(1)G Ex d [ia Ga] IIC T6 Gb
II 1D Ex ta [ia Da] IIIC T...Da IP66
II 2(1)D Ex tb [ia Da] IIIC T...Db IP66

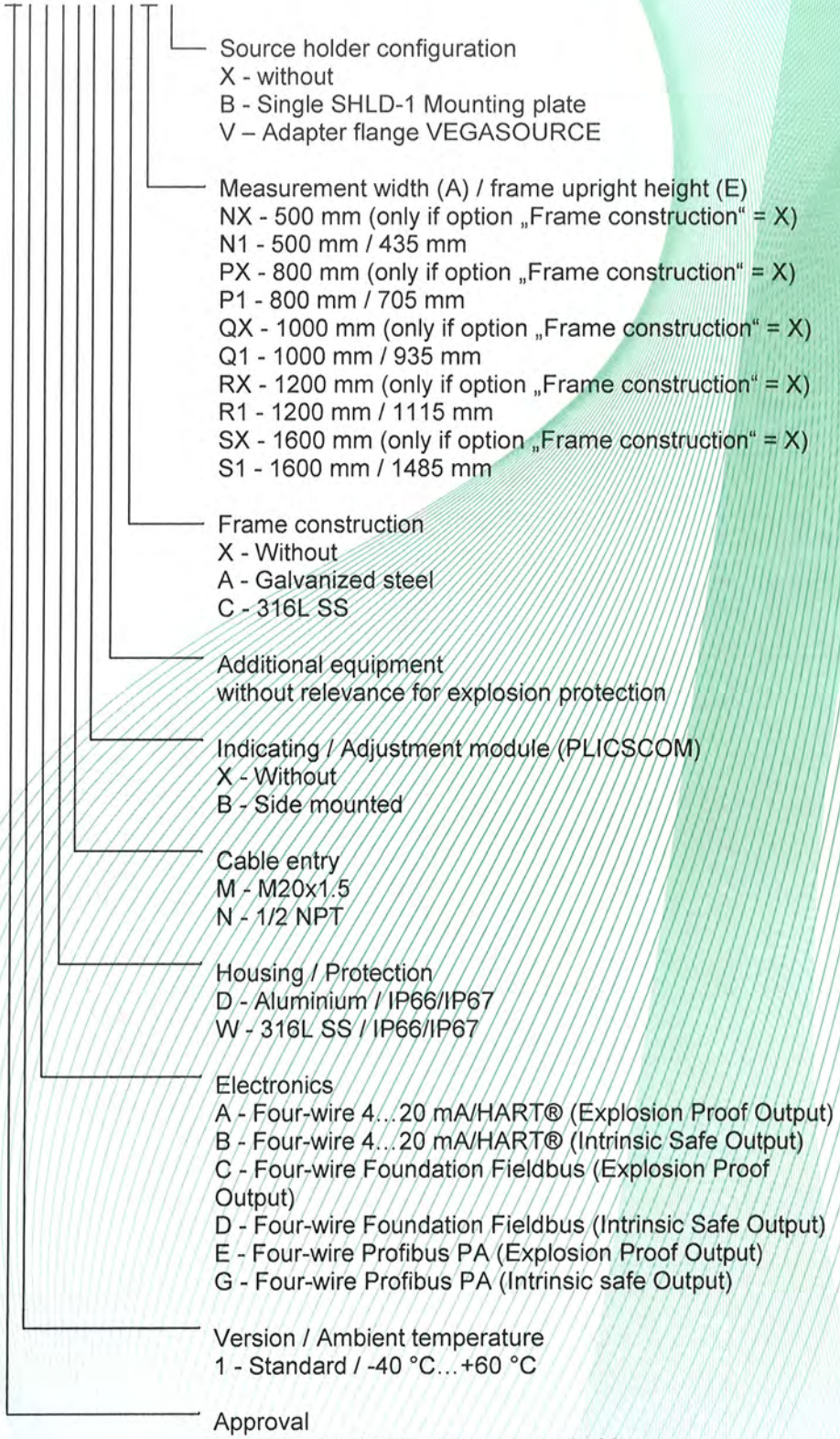
DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

PROTRAC Typ
POINTRAC PT31.** * * * * * * (*)*

- Measuring length
  (length of the sensor rod max . 305 mm)
- Additional equipment
  without relevance for explosion protection
- Indicating / Adjustment module (PLICSCOM)
  X - Without
  B - Side mounted
- Cable entry
  M - M20x1.5
  N - 1/2 NPT
- Housing / Protection
  D - Aluminium / IP66/IP67
  W - 316L SS / IP66/IP67
- Electronics
  A - Four-wire 4...20 mA/HART®
  (Explosion Proof Output)
  B - Four-wire 4...20 mA/HART®
  (Intrinsic Safe Output)
  I - Four-wire 4...20 mA/HART®
  (Explosion Proof Output) with SIL qualification
  L - Four-wire 4...20 mA/HART®
  (Intrinsic Safe Output) with SIL qualification
  C - Four-wire Foundation Fieldbus
  (Explosion Proof Output)
  D - Four-wire Foundation Fieldbus
  (Intrinsic Safe Output)
  E - Four-wire Profibus PA
  (Explosion Proof Output)
  G - Four-wire Profibus PA
  (Intrinsic safe Output)
- Version / Ambient temperature
  1 - Standard / -40 °C...+60 °C
- Approval
  TX - ATEX I M2 (M1) Ex d [ia Ma] I Mb
  DK - ATEX II 2(1)G Ex d [ia Ga] IIC T6 Gb
  II 1D Ex ta [ia Da] IIIC T...Da IP66
  II 2(1)D Ex tb [ia Da] IIIC T...Db IP66

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

PROTRAC Typ
WEIGHTRAC WT31.** * * * * * * * * * * *



Source holder configuration
X - without
B - Single SHLD-1 Mounting plate
V – Adapter flange VEGASOURCE

Measurement width (A) / frame upright height (E)
NX - 500 mm (only if option „Frame construction" = X)
N1 - 500 mm / 435 mm
PX - 800 mm (only if option „Frame construction" = X)
P1 - 800 mm / 705 mm
QX - 1000 mm (only if option „Frame construction" = X)
Q1 - 1000 mm / 935 mm
RX - 1200 mm (only if option „Frame construction" = X)
R1 - 1200 mm / 1115 mm
SX - 1600 mm (only if option „Frame construction" = X)
S1 - 1600 mm / 1485 mm

Frame construction
X - Without
A - Galvanized steel
C - 316L SS

Additional equipment
without relevance for explosion protection

Indicating / Adjustment module (PLICSCOM)
X - Without
B - Side mounted

Cable entry
M - M20x1.5
N - 1/2 NPT

Housing / Protection
D - Aluminium / IP66/IP67
W - 316L SS / IP66/IP67

Electronics
A - Four-wire 4...20 mA/HART® (Explosion Proof Output)
B - Four-wire 4...20 mA/HART® (Intrinsic Safe Output)
C - Four-wire Foundation Fieldbus (Explosion Proof Output)
D - Four-wire Foundation Fieldbus (Intrinsic Safe Output)
E - Four-wire Profibus PA (Explosion Proof Output)
G - Four-wire Profibus PA (Intrinsic safe Output)

Version / Ambient temperature
1 - Standard / -40 °C...+60 °C

Approval
TX - ATEX I M2 (M1) Ex d [ia Ma] I Mb
DK - ATEX II 2(1)G Ex d [ia Ga] IIC T6 Gb
II 1D Ex ta [ia Da] IIIC T...Da IP66
II 2(1)D Ex tb [ia Da] IIIC T...Db IP66

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

PROTRAC Typ
WEIGHTRAC WT32.** * * * * * * * * * * *

Source holder configuration
X - without
B - Single SHLD-1 Mounting plate
V - Adapter flange VEGASOURCE

Measurement width (A) / frame upright height (E)
NX - 500 mm (only if option „Frame construction" = X)
N1 - 500 mm / 435 mm
PX - 800 mm (only if option „Frame construction" = X)
P1 - 800 mm / 705 mm
QX - 1000 mm (only if option „Frame construction" = X)
Q1 - 1000 mm / 935 mm
RX - 1200 mm (only if option „Frame construction" = X)
R1 - 1200 mm / 1115 mm
SX - 1600 mm (only if option „Frame construction" = X)
S1 - 1600 mm / 1485 mm

Frame construction
X - Without
A - Galvanized steel
C - 316L SS

Additional equipment
without relevance for explosion protection

Indicating / Adjustment module (PLICSCOM)
X - Without
B - Side mounted

Cable entry
M - M20x1.5
N - 1/2 NPT

Housing / Protection
D - Aluminium / IP66/IP67
W - 316L SS / IP66/IP67

Electronics
A - Four-wire 4...20 mA/HART® (Explosion Proof Output)
B - Four-wire 4...20 mA/HART® (Intrinsic Safe Output)
C - Four-wire Foundation Fieldbus (Explosion Proof Output)
D - Four-wire Foundation Fieldbus (Intrinsic Safe Output)
E - Four-wire Profibus PA (Explosion Proof Output)
G - Four-wire Profibus PA (Intrinsic safe Output)

Version / Ambient temperature
1 - Standard / -40 °C...+60 °C

Approval
TX - ATEX I M2 (M1) Ex d [ia Ma] I Mb
DK - ATEX II 2(1)G Ex d [ia Ga] IIC T6 Gb
II 1D Ex ta [ia Da] IIIC T...Da IP66
II 2(1)D Ex tb [ia Da] IIIC T...Db IP66

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

15.2 Description

The radiometric sensor PROTRAC type FIBERTRAC and type SOLITRAC is used for the contact-free continuous measurement of filling level and level limit, type MINITRAC is used for the contact-free continuous measurement of density and concentration of bulk goods or fluids.

Type WEIGHTRAC is used for measuring on conveyor belts.
Type POINTRAC is for level limit measuring.

Type FIBERTRAC is equipped with a flexible plastic sensor, types SOLITRAC, WEIGHTRAC and POINTRAC with a metallic PVT rod detector and type MINITRAC with an extra sensitive PVT detector.

The sensor consists of a metallic enclosure in type of protection Flameproof enclosure „d" or Protection by enclosures „t".

The indicating- and adjustment circuits are in type of protection Intrinsic safety (standard). Another optional current loop output can be intrinsic safe or non intrinsic safe.

These differences in the electronic are shown in the model code in the type A or type B of the electronic.

The difference is:

Electronic type "A" and "I" has a non-intrinsic safe current loop output.
Electronic type "B" and "L" has an intrinsic safe current loop output.

Electronic type "C" has a non-intrinsic safe Foundation Fieldbus interface
Electronic type "D" has an intrinsic safe Foundation Fieldbus interface.

Electronic type "E" has a non-intrinsic safe Profibus PA interface.
Electronic type "G" has an intrinsic safe Profibus PA interface.

For use in mining the interconnection of the intrinsic safety circuits with other apparatus has to be tested and certified separately.

The radiometric sensor PROTRAC can be modified according to the descriptive documents as mentioned in the pertinent test and assessment report.

15.3 Parameters

15.3.1 electrical data

15.3.1.1 non intrinsically safe circuits (in the Ex d compartment)

15.3.1.1.1 power supply -terminals 1 and 2

for the following versions:
FIBERTRAC FT31.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT32.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT31.TX*B/D/G****(*)**
SOLITRAC ST31.DK*A/B/I/L/C/D/E/G****(*)**
SOLITRAC ST31.TX*B/D/G****(*)**
MINITRAC MT31.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT32.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT31.TX*B/D/G****(*)**
MINITRAC MT32.TX*B/D/G****(*)**
POINTRAC PT31.DK*A/B/I/L/C/D/E/G*****(*)
POINTRAC PT31.TX*B/D/G*****(*)
WEIGHTRAC WT31.DK*A/B/C/D/E/G********
WEIGHTRAC WT32.DK*A/B/C/D/E/G********
WEIGHTRAC WT31.TX*B/D/G********
WEIGHTRAC WT32.TX*B/D/G********

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

input voltage

U 20 ... 72 VDC
U 20 ... 253 VAC
Um 253 VAC

15.3.1.1.2 Relais circuit - terminals 4, 5 and 6

for the following versions:
FIBERTRAC FT31.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT32.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT31.TX*B/D/G****(*)**
SOLITRAC ST31.DK*A/B/I/L/C/D/E/G****(*)**
SOLITRAC ST31.TX*B/D/G****(*)**
MINITRAC MT31.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT32.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT31.TX*B/D/G****(*)**
MINITRAC MT32.TX*B/D/G****(*)**
POINTRAC PT31.DK*A/B/I/L/C/D/E/G*****(*)
POINTRAC PT31.TX*B/D/G*****(*)
WEIGHTRAC WT31.DK*A/B/C/D/E/G********
WEIGHTRAC WT32.DK*A/B/C/D/E/G********
WEIGHTRAC WT31.TX*B/D/G********
WEIGHTRAC WT32.TX*B/D/G********

maximal values

253 V AC, 3 A, 500 VA
253 V AC, 1 A, 41 W

15.3.1.1.3 optional current output 4 .. 20 mA – terminals 9, 10 and 11

for the following versions:
FIBERTRAC FT31.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT32.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT31.TX*B/D/G****(*)**
SOLITRAC ST31.DK*A/B/I/L/C/D/E/G****(*)**
SOLITRAC ST31.TX*B/D/G****(*)**
MINITRAC MT31.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT32.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT31.TX*B/D/G****(*)**
MINITRAC MT32.TX*B/D/G****(*)**
POINTRAC PT31.DK*A/B/I/L/C/D/E/G*****(*)
POINTRAC PT31.TX*B/D/G*****(*)
WEIGHTRAC WT31.DK*A/B/C/D/E/G********
WEIGHTRAC WT32.DK*A/B/C/D/E/G********
WEIGHTRAC WT31.TX*B/D/G********
WEIGHTRAC WT32.TX*B/D/G********

current

4 ... 20 mA

15.3.1.1.4 Optional Profibus PA or Foundation Fieldbus interface – terminals 10 and 11

for the following versions:
FIBERTRAC FT31.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT32.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT31.TX*B/D/G****(*)**
SOLITRAC ST31.DK*A/B/I/L/C/D/E/G****(*)**
SOLITRAC ST31.TX*B/D/G****(*)**
MINITRAC MT31.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT32.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT31.TX*B/D/G****(*)**
MINITRAC MT32.TX*B/D/G****(*)**
POINTRAC PT31.DK*A/B/I/L/C/D/E/G*****(*)
POINTRAC PT31.TX*B/D/G*****(*)
WEIGHTRAC WT31.DK*A/B/C/D/E/G********
WEIGHTRAC WT32.DK*A/B/C/D/E/G********
WEIGHTRAC WT31.TX*B/D/G********
WEIGHTRAC WT32.TX*B/D/G********

U = 9 ... 32 V

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

15.3.1.1.5 current input 4 .. 20 mA – terminals 12 and 13

for the following versions:
FIBERTRAC FT31.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT32.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT31.TX*B/D/G****(*)**
SOLITRAC ST31.DK*A/B/I/L/C/D/E/G****(*)**
SOLITRAC ST31.TX*B/D/G****(*)**
MINITRAC MT31.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT32.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT31.TX*B/D/G****(*)**
MINITRAC MT32.TX*B/D/G****(*)**
POINTRAC PT31.DK*A/B/I/L/C/D/E/G*****(*)
POINTRAC PT31.TX*B/D/G*****(*)
WEIGHTRAC WT31.DK*A/B/C/D/E/G********
WEIGHTRAC WT32.DK*A/B/C/D/E/G********
WEIGHTRAC WT31.TX*B/D/G********
WEIGHTRAC WT32.TX*B/D/G********

current 4 ... 20 mA

15.3.1.1.6 Digital input – terminals 14, 15 and 16

for the following versions:
FIBERTRAC FT31.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT32.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT31.TX*B/D/G****(*)**
SOLITRAC ST31.DK*A/B/I/L/C/D/E/G****(*)**
SOLITRAC ST31.TX*B/D/G****(*)**
MINITRAC MT31.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT32.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT31.TX*B/D/G****(*)**
MINITRAC MT32.TX*B/D/G****(*)**
POINTRAC PT31.DK*A/B/I/L/C/D/E/G*****(*)
POINTRAC PT31.TX*B/D/G*****(*)
WEIGHTRAC WT31.DK*A/B/C/D/E/G********
WEIGHTRAC WT32.DK*A/B/C/D/E/G********
WEIGHTRAC WT31.TX*B/D/G********
WEIGHTRAC WT32.TX*B/D/G********

Open collector inputs
between terminals 14 and 16 I 100 mA
between terminals 15 and 16 I 10 mA

15.3.1.1.7 digital output – terminals 17 and 18

for the following versions:
FIBERTRAC FT31.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT32.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT31.TX*B/D/G****(*)**
SOLITRAC ST31.DK*A/B/I/L/C/D/E/G****(*)**
SOLITRAC ST31.TX*B/D/G****(*)**
MINITRAC MT31.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT32.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT31.TX*B/D/G****(*)**
MINITRAC MT32.TX*B/D/G****(*)**
POINTRAC PT31.DK*A/B/I/L/C/D/E/G*****(*)
POINTRAC PT31.TX*B/D/G*****(*)
WEIGHTRAC WT31.DK*A/B/C/D/E/G********
WEIGHTRAC WT32.DK*A/B/C/D/E/G********
WEIGHTRAC WT31.TX*B/D/G********
WEIGHTRAC WT32.TX*B/D/G********
WEIGHTRAC WT32.DK*C/D/E/G********

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

	Output voltage (potential free)	55 V DC
	max output current	400 mA

15.3.1.1.8 communications circuit – terminals 19 up to 22
only for the communication with other PROTRAC Gauges

for the following versions:
FIBERTRAC FT31.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT32.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT31.TX*B/D/G****(*)**
SOLITRAC ST31.DK*A/B/I/L/C/D/E/G****(*)**
SOLITRAC ST31.TX*B/D/G****(*)**
MINITRAC MT31.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT32.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT31.TX*B/D/G****(*)**
MINITRAC MT32.TX*B/D/G****(*)**
POINTRAC PT31.DK*A/B/I/L/C/D/E/G*****(*)
POINTRAC PT31.TX*B/D/G*****(*)
WEIGHTRAC WT31.DK*A/B/C/D/E/G********
WEIGHTRAC WT32.DK*A/B/C/D/E/G********
WEIGHTRAC WT31.TX*B/D/G********
WEIGHTRAC WT32.TX*B/D/G********

Output voltage	3.3 V

15.3.2 outputs (intrinsically safe) in the Ex i compartment

for the following versions:
FIBERTRAC FT31.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT32.DK*A/B/I/L/C/D/E/G****(*)**
FIBERTRAC FT31.TX*B/D/G****(*)**
SOLITRAC ST31.DK*A/B/I/L/C/D/E/G****(*)**
SOLITRAC ST31.TX*B/D/G****(*)**
MINITRAC MT31.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT32.DK*A/B/I/L/C/D/E/G****(*)**
MINITRAC MT31.TX*B/D/G****(*)**
MINITRAC MT32.TX*B/D/G****(*)**
POINTRAC PT31.DK*A/B/I/L/C/D/E/G*****(*)
POINTRAC PT31.TX*B/D/G*****(*)
WEIGHTRAC WT31.DK*A/B/C/D/E/G********
WEIGHTRAC WT32.DK*A/B/C/D/E/G********
WEIGHTRAC WT31.TX*B/D/G********
WEIGHTRAC WT32.TX*B/D/G********

15.3.2.1 Display- and adjustment output
(intrinsically safe Ex ia IIC, Ex ia IIB and Ex ia I)
(intrinsically safe Ex i terminals 5, 6, 7 and 8)

For connection to the intrinsically safe circuit of the associated external indicating instrument VEDADIS 61 (PTB 02 ATEX 2136 X und BVS 05 ATEX E 023).

max. output voltage	Uo	6.0 V DC
max. output current	Io	209.7 mA
max. output power	Po	314.6 mW

output characteristic linear

effective internal capacitance	Ci	negligible
effective internal inductance	Li	negligible

Connectable values for group IIC and group I (in combination)

External inductance	Lo	1.00 mH
External capacitance	Co	1.40 uF

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

15.3.2.2 Circuit of the indicating and adjustment module
(spring contacts in the intrinsically safe compartment)
(intrinsically safe Ex ia IIC)

Only for connection to the indicating and adjustment module PLICSCOM or VEGACONNECT (PTB 07 ATEX 2013 X).

15.3.2.3 optional current loop circuit ia IIC or ia I
(intrinsically safe Ex i terminals 1 and 2)

for the following versions:
FIBERTRAC FT31.DK*B/L****(*)**
FIBERTRAC FT32.DK*B/L****(*)**
FIBERTRAC FT31.TX*B****(*)**
SOLITRAC ST31.DK*B/L****(*)**
SOLITRAC ST31.TX*B****(*)**
MINITRAC MT31.DK*B/L****(*)**
MINITRAC MT32.DK*B/L****(*)**
MINITRAC MT31.TX*B****(*)**
MINITRAC MT32.TX*B****(*)**
POINTRAC PT31.TX*B*****(*)
POINTRAC PT31.DK*B/L*****(*)
WEIGHTRAC WT31.TX*B********
WEIGHTRAC WT31.DK*B********
WEIGHTRAC WT32.TX*B********
WEIGHTRAC WT32.DK*B********

max. output voltage	Uo	22.16 V DC
max. output current	Io	111.90 mA
max. output power	Po	620.03 mW
output characteristic	linear	
effective internal capacitance	Ci	negligible
effective internal inductance	Li	negligible

Connectable values for group IIC (in combination)

External inductance	Lo 1.00 mH	0.50 mH
External capacitance	Co 0.08 uF	0.098 uF

Connectable values for group IIB (in combination)

External inductance	Lo 5.00 mH	0.50 mH
External capacitance	Co 0.58 uF	0.65 uF

Connectable values for group I (in combination)

External inductance	Lo 5.00 mH
External capacitance	Co 1.3 uF

15.3.2.4 optional Profibus PA or Foundation Fieldbus interface circuit ia IIC or ia I
(intrinsically safe Ex i terminals 1 and 2)

for the following versions:
FIBERTRAC FT31.DK*D/G****(*)**
FIBERTRAC FT32.DK*D/G****(*)**
FIBERTRAC FT31.TX*D****(*)**
SOLITRAC ST31.DK*D/G****(*)**
SOLITRAC ST31.TX*D****(*)**
MINITRAC MT31.DK*D/G****(*)**
MINITRAC MT32.DK*D/G****(*)**
MINITRAC MT31.TX*D****(*)**
MINITRAC MT32.TX*D****(*)**

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

POINTRAC PT31.TX*D*****(*)
POINTRAC PT31.DK*D/G*****(*)
WEIGHTRAC WT31.TX*D********
WEIGHTRAC WT31.DK*D/G********
WEIGHTRAC WT32.TX*D********
WEIGHTRAC WT32.DK*D/G********

max. input voltage	Ui	17.5 V
max. input current	Ii	500 mA
max. input power	Pi	5.5 W
effective internal capacitance	Ci	negligible
effective internal inductance	Li	≤ 5 µH

The instrument (FISCO FIELD DEVICE) is suitable for connection to a field bus system according to the FISCO model (EN 60079-11:2012), e.g. Profibus PA or Foundation Fieldbus.

max. input voltage	Ui	24 V
max. input current	Ii	250 mA
max. input power	Pi	1.2 W
effective internal capacitance	Ci	negligible
effective internal inductance	Li	≤ 5 µH

15.3.3 thermal data

15.3.3.1 permitted ambient temperature range

15.3.3.1.1 PROTRAC type FIBERTRAC FT3*.********(*)**
-20 °C ....+50 °C

15.3.3.1.2 PROTRAC type MINITRAC MT3*.********
PROTRAC type SOLITRAC ST3*.********(*)**
PROTRAC type POINTRAC PT3*.*********(*)
PROTRAC type WEIGHTRAC WT3*.**********
-40 °C ....+60 °C

15.3.2.2 max. surface temperature T
with thermo fuse limited to 98 °C

15.3.2.3 temperature class T6

15.3.3 degrees of protection according to EN 60529 IP66

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com

(16) Test and assessment report

BVS PP 10.2202 EG as of 29.10.2012

(17) Special conditions for safe use
none

We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

DEKRA EXAM GmbH
44809 Bochum, 29.10.2012
BVS-Ha/Sch A 20110333

Certification body

Special services unit

DEKRA EXAM GmbH Dinnendahlstrasse 9 44809 Bochum Phone +49.234.3696-105 Fax +49.234.3696-110 zs-exam@dekra.com