Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(1) # EC-TYPE-EXAMINATION CERTIFICATE

(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 00 ATEX 1101 U

(4) Component: Empty enclosure, type 34. .....

(5) Manufacturer: ROSE Systemtechnik GmbH + Co. KG

(6) Address: Erbeweg 13, D-32457 Porta Westfalica

(7) This component and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this component 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 confidential report PTB Ex 00-10220.

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

EN 50014:1997 + A1 + A2 **EN 50019:1994**

(10) The sign "U" placed behind the certificate number indicates that this certificate should not be confounded with certificates issued for equipment or protective systems. This Component Certificate only serves as a basis for the issuing of certificates for equipment or protective systems.

(11) This EC-type-examination Certificate relates only to the design and construction of the specified component in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this component.

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

II 2 G EEx e II

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

Braunschweig, January 19, 2001

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(13) # S C H E D U L E

(14) ## EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1101 U

(15) Description of component

Empty enclosure of type 34. ....., made from sheet steel or stainless steel, which may be provided with flanges and a glass or plastic inspection window.

Technical data

Sizes:	Length	Width	Height
smallest	100 mm	100 mm	60 mm
largest	920 mm	610 mm	350 mm

Ambient temperatures: -20 °C to +80 °C with CR, NBR and PU-Fermapor sealing
-55 °C to +100 °C with silicone and HF sealing
-20 °C to +100 °C with silicone and HF sealing, and glass or polycarbonate window

Touch guard, protection against ingress of foreign matter and water:
IP54 in accordance with EN 60529:1991 as minimum standard

(16) Test report PTB Ex 00-10220

(17) Special conditions for safe use

None;

Notes for installation and use

The EC type examination certificate and any future supplements thereto shall at the same time be regarded as supplements for Component Certificate PTB No. Ex-93.C.3118 U.

(18) Essential health and safety requirements

The tests and the favourable results these have produced reveal that the empty enclosure of type 34. ..... meets the requirements of directive 94/9/EC as well as those of the standards quoted on the cover sheet.

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

Braunschweig, January 19, 2001

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

1st SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1101 U

(Translation)

Equipment: Empty enclosure, type 34. .....

Marking: ⟨Ex⟩ **II 2 G EEx e II**

Manufacturer: ROSE Systemtechnik GmbH + Co. KG

Address: Erbeweg 13, 32457 Porta Westfalica, Germany

Description of supplements and modifications

The empty enclosure of type 34. ..... , made from sheet metal or stainless steel is supplemented to include a two-door switchgear cubicle version. The range of sizes has been expanded. The silicone-foam seal produced by SICO may be used.

The empty enclosure may also be employed in areas in which explosive atmospheres with dust/air mixtures have to be expected to occur. The marking, therefore, changes to read:

⟨Ex⟩ **II 2 G/D EEx e II IP66**

Technical data

Sizes:	Length	Width	Depth
Smallest	100 mm	100 mm	60 mm
Largest	1,200 mm	2,000 mm	500 mm

Shock protection, protection against solid bodies, and protection against ingress of water: IP66 acc. to EN 60529:1991 as a minimum

Ambient temperatures: -55 °C to +155 °C with silicone foam seal produced by SICO

Test report: PTB Ex 03-13124

Zertifizierungsstelle Explosionsschutz
By order:

Dr.-Ing. U. Klausmeyer
Regierungsdirektor

Braunschweig, June, 19 2003

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1101 U

(Translation)

Equipment: Empty enclosure, type 34. .....

Marking: **II 2 G EEx e II**

II 2 D IP66

Manufacturer: ROSE Systemtechnik GmbH

Address: Erbeweg 13 - 15, 32457 Porta Westfalica, Deutschland

Description of supplements and modifications

The Empty enclosure of type 34. ....., made from sheet steel or stainless steel has been re-inspected on the basis of the Standards EN 60079-0, EN 60079-7, EN 61241-0 and EN 61241-1. The marking will thus change to

II 2 G Ex e II

II 2 D Ex tD A21 IP66

Technical data

Sizes:		Length	Width	Height
	smallest	100 mm	100 mm	60 mm
	largest	1200 mm	2000 mm	500 mm

Protection against contact, foreign bodies and water: IP 66 in compliance with EN 60529

Ambient temperatures
-55 °C to + 135 °C with silicone gasket (Sico, Silex, Gummi Jäger) and HF gasket (Chomerics)
-40 °C to + 100 °C with HF gasket (Neuhaus Elektronik, Bavaria Elektronik)
-40 °C to + 100 °C with PU-foam (Sonderhoff)
-20 °C to + 100 °C with EPDM HF gasket (Meteor)
-20 °C to + 100 °C with EPDM gasket
-20 °C to + 85 °C with CR and NBR gasket
-20 °C to + 100 °C with window out of glass or conductive polycarbonate

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

2. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1101 U

Applied standards

EN 60079-0:2006 **EN 60079-7:2007** **EN 61241-0:2006** **EN 61241-1:2004**

Test report: PTB Ex 08-17302

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig, March 3, 2008

Dr.-Ing. U. Klausmeyer
Direktor und Professor

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

3rd S U P P L E M E N T

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1101 U

(Translation)

Equipment: Empty enclosure, type 34. .....

Marking: **II 2 G Ex e II**

II 2 D Ex tD A21 IP66

Manufacturer: ROSE Systemtechnik GmbH

Address: Erbeweg 13 - 15, 32457 Porta Westfalica, Germany

Description of supplements and modifications

The type designation of the emtpy enclosure is changed to type 34.XX XX XX

The empty enclosure made from sheet steel or stainless steel is splitted in different product lines as follows:

Ex stainless steel standard	Type 34.XX XX XX
Ex stainless steel cabinets	Type 34.00 XX XX
Ex stainless steel flange 1. generation	Type 34.XX XX XX
Ex stainless steel flange 2. generation	Type 34.03 XX XX
ProtEx electropolish	Type 34.04 XX XX
ProtEx electropolish / return flange	Type 34.05 XX XX
ProtEx grinded	Type 34.06 XX XX
ProtEx grinded / return flange	Type 34.07 XX XX
Ex stainless steel special sizes	Type 34.XX XX XX

A new gasket type Silicon-Profil COEX (Fa. Silex) is additionally approved. The ambient temperature range is -55 °C to +135 °C.

ZSEx10101e.dot

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

3 SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1101 U

Technical data

Sizes:	Length	Width	Depth
smallest	100 mm	100 mm	60 mm
largest	1200 mm	2000 mm	500 mm

Protection against contact, foreign
bodies and water: ..... IP 66 in compliance with EN 60529

Ambient temperatures

-55 °C to + 135 °C with silicone gasket (Sico, Silex, Gummi Jäger) and HF gasket (Chomerics)
-55 °C to + 135 °C with silicone gasket Silicon-Profil COEX (Fa. Silex)
-40 °C to + 100 °C with HF gasket (Neuhaus Elektronik, Bavaria Elektronik)
-40 °C to + 100 °C with PU-foam (Sonderhoff)
-20 °C to + 100 °C with EPDM HF gasket (Meteor)
-20 °C to + 100 °C with EPDM gasket
-20 °C to + 85 °C with CR and NBR gasket
-20 °C to + 100 °C with window out of glass or conductive polycarbonate

Applied standards

EN 60079-0:2006 **EN 60079-7:2007** **EN 61241-0:2006** **EN 61241-1:2004**

Assessment and test report: PTB Ex 10-10260

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, January 13, 2011

Dr.-Ing. M. Thedens
Oberregierungsrat

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

4th SUPPLEMENT

according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1101 U

(Translation)

Equipment: Empty enclosure, type 34.XX XX XX

Marking: ⟨Ex⟩ **II 2 G Ex e II**

⟨Ex⟩ **II 2 D Ex tD A21 IP66**

Manufacturer: ROSE Systemtechnik GmbH

Address: Erbeweg 13 - 15, 32457 Porta Westfalica, Germany

Description of supplements and modifications

The empty enclosure type 34.XX XX XX made of sheet steel or stainless steel has been re-examined on the basis of standards EN 60079-0:2009 and EN 60079-31:2009.

The marking therefore changes to:

⟨Ex⟩ **II 2 G Ex e IIC Gb**

⟨Ex⟩ **II 2 D Ex tb IIIC Db IP66**

Technical data

Sizes:	Length	Width	Depth
smallest	100 mm	100 mm	60 mm
largest	1200 mm	2000 mm	500 mm

Product lines

Ex stainless steel standard	Type 34.XX XX XX
Ex stainless steel cabinets	Type 34.00 XX XX
Ex stainless steel flange 1. generation	Type 34.XX XX XX
Ex stainless steel flange 2. generation	Type 34.03 XX XX
ProtEx electropolish	Type 34.04 XX XX
ProtEx electropolish / return flange	Type 34.05 XX XX
ProtEx grinded	Type 34.06 XX XX
ProtEx grinded / return flange	Type 34.07 XX XX
Ex stainless steel special sizes	Type 34.XX XX XX

ZSEx10101e.dot

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

4. SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 00 ATEX 1101 U

Protection against contact, foreign bodies and water: ..... IP 66 in compliance with EN 60529

Ambient temperatures

-55 °C to +135 °C with silicone gasket (manufacturer: Sico, Silex, Gummi Jäger)
-55 °C to +135 °C with silicone-profile COEX (manufacturer: Silex)
-40 °C to +100 °C with HF gasket (manufacturer: Chomerics)
-20 °C to +100 °C with window out of glass
-50 °C to +100 °C with PC-window mono duro clear 8099, conductive

Notes for manufacturing and operation

The empty enclosure with a coating must not be used in areas affected by charge-producing processes, mechanical friction and separation processes, electron emission (e.g. in the vicinity of electrostatic coating equipment), and pneumatically conveyed dust.

Applied standards

EN 60079-0:2009 **EN 60079-7:2007** **EN 60079-31:2009**

Test report: PTB Ex 12-11155

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, April 17, 2012

Dr.-Ing. U. Klausmeyer
Direktor und Professor

EG Konformitätserklärung für Komponenten
EC Attestation of Conformity for Componentes

ROSE
A Phoenix Mecano Company

ROSE Systemtechnik GmbH

(Name des Anbieters –*offerer's name*)

D-32457 Porta Westfalica; Erbeweg 13-15

(Anschrift - *adress*)

erklären in alleiniger Verantwortung, dass die Produkte
hereby declare in our sole responsibility, that the products

ROSE Ex-Leergehäuse: *ROSE Ex-empty enclosures:*	Aluminium *Aluminium*	25.06 06 03 – 25.60 60 20
	Polyester *Polyester*	26.08 08 06 – 26.41 40 20 26.01 22 15 – 26.01 44 15 26.88 01 00 – 26.88 03 00 26.14 01 00 – 26.14 03 00 26.20 20 00 – 26.40 60 00
	Edelstahl *Stainless steel* Edelstahlschaltschränke *Stainless steel cabinets*	34.10 10 06 – 34.92 61 35 34.03 33 01 – 34.03 97 04 34.00 22 09 – 34.00 64 21 34.04 02 00 – 34.04 13 00 34.06 02 00 – 34.06 13 00
	Polyamid *Polyamide*	28.02 02 00 – 28.02 05 01 28.10 01 00 – 28.10 03 05

(Bezeichnung, Typ oder Modell – *designation, type or model*)

auf das sich diese Erklärung bezieht, mit der/den folgenden Norm(en) oder normativen Dokument(en) gemäß den Bestimmungen der ATEX Richtlinie 94/9/EG übereinstimmt.
which is the subject of this declaration, is in conformity with the following standards or Normative documents according the terms of the ATEX directive 94/9/EC..

EN 60079-0: 2009; EN 60079-7: 2007; EN 60079-31: 2009

(Titel und/oder Nummer der Norm(en) – *title and/or number of issue)*

1. Allgemeine Hinweise/ *General instructions:*

Die Ex Leergehäuse sind teilbescheinigte Basiskomponenten mit U- Zertifizierung für Einbauten von elektrischen/ elektronischen Komponenten und dürfen nur im Rahmen einer Komplettzertifizierung im Ex- Bereich verwendet werden.
Die Anforderungen der EN 60079-0 und EN 60079-31 , u.a. in Bezug auf übermäßige Staubablagerungen und Temperatur, sind vom Anwender zu beachten.

Bearbeitungen an den bescheinigten Leergehäusen sind rechtlich wie folgt möglich:
- Durchgangsbohrungen oder Gewindebohrungen für Kabelverschraubungen

- Bearbeitungen für Steckereingänge und Anzeigeelemente
- Bohrungen und Ausbrüche für elektromechanische Elemente usw.

Die ROSE Baumusterprüfbescheinigung für Leergehäuse schließt Sichtscheiben mit ein; d.h. ***diese dürfen nur von ROSE eingebracht werden.***

Als Ersatz und zur Reparatur dürfen nur Originalteile von ROSE verwendet werden. Reparaturen, die den Explosionsschutz betreffen, dürfen nur von ROSE oder einer qualifizierten Elektrofachkraft in Übereinstimmung mit national geltenden Regeln durchgeführt werden.
Im Rahmen der Elektrostatikverordnung sind entsprechende Schutzmaßnahmen zu ergreifen.
Ex Gehäuse sind gemäß den Vorgaben in EN 60079 sowie EN 60439-1 zu erden.
Für die elektrische Erdung ist immer sicherzustellen, dass alle Erdungsquerschnitte im Hinblick auf den realen Anschlussquerschnitt entsprechend dimensioniert sind. Metallflansche, Deckel, Metallplatten und Metallverschraubungen müssen in den Potenzialausgleich mit einbezogen werden!
Bei Verwendung von Schutzleitersammelschienen darf jeder der Klemmbügel 2 Leiter bis 6 mm² aufnehmen. Wird nur 1 Leiter angeschlossen, muss dieser zur Schlaufe gebogen werden, damit ein gleichmäßiger Anpressdruck durch den Bügel erfolgt.
Bei Kunststoffgehäusen sind besondere Maßnahmen zur elektrostatischen Erdung gem. EN/IEC 60079-0 zu treffen. Wird kein PE Leiter im elektrischen Sinn angeschlossen, ist mittels der im Beipack mitgelieferten Erdschraube eine Erdverbindung herzustellen

Ex empty enclosures are component certified boxes (with U- approval) and are only allowed to be used within an Ex area when assembled and reapproved as complete Ex device.
The user has to consider all demands as per particulars given in EN60079-0 as well as in EN60079-31, especially to excessive dust deposits and temperatures.
Modifications and machining of the approved enclosures can only be done legally as follows:

- through – holes or thread holes for cable glands and stopping plugs
- machining of plug entries and display elements
- drillings and cut out for electromechanical elements ….

ROSE type examination of empty enclosures include windows.
Therefore only ROSE is allowed to machine and insert windows into Ex approved ROSE enclosures.

Only original parts supplied by ROSE are permissible for spares and repair work.
Repairs affecting explosion protection may only be carried out by ROSE or a qualified electrical engineer in conformity with the nationally applicable regulations There have to be taken special protective measures acc. electrostatics regulation.
Ex enclosures have to be grounded in accordance with the defaults in EN 60079 as well as EN 60439-1. For the electrical grounding it must always guaranteed that all grounding cross sections are dimensioned regarding the active nominal cross section. Metal flanges, covers, metal plates, plugs and metal glands have to be included within the potential equalisation!

Each terminal clamp of PE bars may accept two cables of up to 6 mm².
If only one cable is connected, this must be bent into a loop so that the terminal clamp exerts an even contact pressure (see fig.).
With plastic enclosures special measures for electrostatic earthing according IEC/EN 60079-0 are to be done. If no PE connection in electric way is given, the electrostatic earthing is to be done by earthing screw within the accessory kit.

2. Technische Daten/ *Technical Data:*

Hersteller: *Manufacturer*	ROSE Systemtechnik GmbH Erbeweg 13-15 D-32457 Porta Westfalica
Explosionsschutz: *Explosion protection*	Ex II 2G Ex e IIC Gb Ex II 2D Ex tb IIIC Db IP 66
Baumusterprüfbescheinigung: *EC Examination test certificate*	Edelstahl: PTB 00 ATEX 1101 U *Stainless steel* Polyester: PTB 01ATEX 1061 U *Polyester* Aluminium: PTB 98 ATEX 3101 U *Aluminium:* Polyamid: PTB 02 ATEX 1076 U *Polyamide*
Gehäusematerial: *Enclosure material:*	Aluminium, Polyester, Edelstahl, Polyamid *Aluminium, Polyester, Stainless steel, Polyamide*
Schutzart Aluminium, Polyester, Edelstahl Beluga Polyamid *Ingress protection* *Aluminium, Polyester, Stainless steel:* *Beluga Polyamide*	 IP 66 nach EN 60529 IP 65 nach EN 60529 *IP 66 acc. EN 60529* *IP 65 acc. EN 60529*
Zulässige Umgebungstemperaturen: *Permissible surrounding temperature:*	max. -55°C bis +100°C, *max. -55°C to +100°C*

Porta Westfalica, 17. Juli 2012

(Ort und Datum der Ausstellung)
(Place and date of issue)

i.V. Thomas Waschek
Ex-Schutzbeauftragter
Ex-protection authorized person

i.V. Klaus Steinhauer
Leiter Marketing