



(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 09 ATEX 1109

(4) Equipment: Control and distribution box type 8150/5-.....-.....-.....

(5) Manufacturer: R. STAHL Schaltgeräte GmbH

(6) Address: Am Bahnhof 30, 74638 Waldenburg (Württ.), Germany

(7) This equipment 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 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 confidential assessment and test report PTB Ex 09-18162.

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

**EN 60079-0:2009, EN 60079-1:2007, EN 60079-5:2007, EN 60079-7:2007,
EN 60079-11:2007, EN 60079-18:2009, EN 60079-31:2009**

(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 schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the 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 G Ex db eb ia/ib [ia/ib] ma mb qb IIA, IIB, IIC T6, T5, T4 oder

II 2 G Ex d e ia/ib (ia/ib) ma mb q IIA, IIB, IIC T6, T5, T4 Gb

II 2 D Ex tb IIIC IP66 T80°C, T95°C, T130°C oder

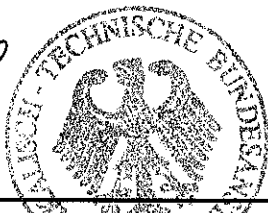
II 2 D Ex t IIIC IP66 T80°C, T95°C, T130°C Db

Zertifizierungssektor Explosionsschutz

Braunschweig, January 15, 2010

By order:

Dr.-Ing. M. Thedens
Oberregierungsrat



sheet 1/3

EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts of alterations are subject to approval by the Physikalisch-Technische Bundesanstalt. In case of dispute, the German text shall prevail.

(13)

SCHEDULE

(14)

EC-TYPE-EXAMINATION CERTIFICATE PTB 09 ATEX 1109

(15) Description of equipment

The control and distribution box of type 8150/5-....-....-.... consists of enclosures out of steel or stainless steel in the type of protection Increased Safety "e" and protection by enclosures "t", which may be provided with flanges. Several boxes can be combined with each other.

It is to accommodate switch and control gear, measuring instruments, as well as terminals for intrinsically safe and non-intrinsically safe circuits. Where required it may be fitted with actuator elements and pilot lamps. The box section for intrinsically safe circuits will be identified, e.g. by a light-blue colour.

Connection is by means of explosion-proof cable entries.

All internally and externally fitted elements are tested and certified under separate examination certificates.

Technical data

Rated voltage*	up to	1100 V
Rated current*	max.	630 A
Rated cross section*	max.	300 mm ²

*) depending on type of terminal and ex-components used

Ambient temperature -60 °C up to +55 °C

Protection against contact,
foreign bodies and water

IP66 according to EN 60529

The rated values are maximum values, the actual electrical values depend on the electrical equipment incorporated. Within the scope of these maximum permissible values and with due regard to the standards, the manufacturer specifies the final rated values dependent on the system conditions, mode of operation, utilization category, etc. The characteristic values of the intrinsically safe circuits are to be given by the manufacturer on his own responsibility.

The maximum permissible ambient temperature range of the control and distribution box can be limited by the maximum permissible ambient temperature ranges of the separately certified components.

The composition of the protection symbol will be based on the types of protection of components actually used.

(16) Assessment and test report PTB Ex 09-18162

(17) Special conditions for safe use

None

Notes for manufacture and operation

Equipment of the type of protection intrinsic safety "i" is to be installed in such a way that the distances required according EN 60079-14 and the creepage distances und clearances between intrinsically safe circuits and non-intrinsically safe circuits are complied with.

When more than one intrinsically safe circuit is used, the rules for interconnection are to be observed

The control and distribution box with a coating of polyester powder 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.

(18) Essential health and safety requirements

Met by compliance with the aforementioned standards.

Zertifizierungssektor Explosionsschutz
By order:

Braunschweig, January 15, 2010



Dr.-Ing. M. Thepelt
Oberregierungsrat





1st SUPPLEMENT

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

to EC-TYPE-EXAMINATION CERTIFICATE PTB 09 ATEX 1109

(Translation)

Equipment: Control and Distribution box, type 8150/5-.....-.....-.....

Marking:  **II 2 G Ex db eb ia/ib [ia/ib] ma mb qb IIA,IIB,IIC T6, T5, T4** or
Ex d e ia/ib [ia/ib] ma mb q IIA,IIB,IIC, T6,T5,T4 Gb
 **II 2 D Ex tb IIIC T80°C, T95°C, T130°C IP66** or
Ex tb IIIC T80°C, T95°C, T130°C Db IP66

Manufacturer: R. STAHL Schaltgeräte GmbH

Address: Am Bahnhof 30, 74638 Waldenburg (Württ.), Germany

Description of supplements and modifications

The control and distribution box, type 8150/5-.....-.....-..... is modified as listed below:

- 1) The type designation changes to type 8150/5-.....-.....-.....
- 2) The control and distribution box can be provided with different gaskets.
The permissible ambient temperature depends on the gasket actually used.

Technical data

Rated voltage* up to	1100 V
Rated current* max.	630 A
Rated cross section* max.	300 mm ²

*) depending on type of terminal and ex-components used

Ambient temperature dependent on the gasket

Gasket 1	-60 °C to +55 °C
Gasket 2	-58 °C to +55 °C
Gasket 3	-25 °C to +55 °C

Protection against contact, IP66 according to IEC 60529
Foreign bodies and water

Braunschweig und Berlin

1st SUPPLEMENT TO EC-TYPE EXAMINATION CERTIFICATE PTB 09 ATEX 1109

The rated values are maximum values, the actual electrical values depend on the electrical equipment installed. Within the scope of these maximum permissible values and with due regard to the standards, the manufacturer specifies the final rated values dependent on the system conditions, mode of operation, utilization category, etc. The characteristic values of the intrinsically safe circuits are to be given by the manufacturer on his own responsibility.

The maximum permissible ambient temperature range of the terminal housing can be limited by the maximum permissible ambient temperature ranges of the separately certified equipment.

The composition of the marking will be based on the types of protection of components actually used.

Notes for manufacturing and operation

Equipment of the type of protection intrinsic safety "I" is to be installed in such a way that the distances, creepage distances and clearances between intrinsically safe circuits and non-intrinsically safe circuits comply with the requirements of EN 60079-14.

When more than one intrinsically safe circuit is used, the rules for interconnection are to be observed.

The control and distribution box with a coating of polyester powder 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 60079-1:2007, EN 60079-5:2007, EN 60079-7:2007, EN 60079-11:2007, EN 60079-18:2009, EN 60079-31:2009

Assessment and test report: PTB Ex 11-10334

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, March 16, 2011




Dr.-Ing. U. Klausmeyer
Direktor und Professor



2nd SUPPLEMENT according to Directive 94/9/EC Annex III.6

to EC-TYPE-EXAMINATION CERTIFICATE PTB 09 ATEX 1109 (Translation)

Equipment: Control and Distribution box, type 8150/5-****-****-***-****

Marking:  II 2 G Ex db eb ia/ib [ia/ib] ma mb qb IIA,IIB,IIC T6, T5, T4 or
Ex d e ia/ib [ia/ib] ma mb q IIA,IIB,IIC, T6,T5,T4 Gb
 II 2 D Ex tb IIIC T80°C, T95°C, T130°C IP66 or
Ex tb IIIC T80°C, T95°C, T130°C Db IP66


Manufacturer: R. STAHL Schaltgeräte GmbH

Address: Am Bahnhof 30, 74638 Waldenburg (Württ.), Germany

Description of supplements and modifications

The control and distribution box, type 8150/5-****-****-***-**** is modified in the following respects:

- 1) The ambient temperature is extended to a range of -60 °C to +135 °C.
- 2) The temperature class T3 is added.
- 3) The control and distribution box has been re-assessed on the basis of standard EN 60079-0:2012.
- 4) The marking therefore changes to:

 II 2 G Ex d e ia ib [ia Ga] mb q IIA, IIB, IIC T6, T5, T4, T3 Gb

or

 II 2 G Ex db eb ia ib [ia] mb qb IIA, IIB, IIC T6, T5, T4, T3

 II 2 D Ex tb IIIC T80 °C, T95 °C, T130 °C, T135 °C Db

or

 II 2 D Ex tb IIIC T80 °C, T95 °C, T130 °C, T135 °C

Technical data

Rated voltage*	up to	1100 V
Rated current*	max.	630 A
Rated cross section*	max.	300 mm ²

*) depending on type of terminal and ex-components used

Ambient temperature dependent on the gasket

Gasket 1	-60 °C to +135 °C
Gasket 2	-58 °C to +55 °C
Gasket 3	-25 °C to +55 °C

Protection against contact,
Foreign bodies and water IP66 according to IEC 60529

The rated values are maximum values, the actual electrical values depend on the electrical equipment installed. Within the scope of these maximum permissible values and with due regard to the standards, the manufacturer specifies the final rated values dependent on the system conditions, mode of operation, utilization category, etc. The characteristic values of the intrinsically safe circuits are to be given by the manufacturer on his own responsibility.

The maximum permissible ambient temperature range of the control and distribution box can be limited by the maximum permissible ambient temperature ranges of the separately certified equipment.

The composition of the marking will be based on the types of protection of components actually used.

Notes for manufacturing and operation

Equipment of type of protection Intrinsic Safety "i" shall be installed such that the clearance and creepage distances that are required according to EN 60079-14 between intrinsically safe and non-intrinsically safe circuits are duly complied with.

When connecting more than one intrinsically safe circuit, the rules and regulations for interconnection have to be observed.

Terminal boxes with a coating of polyester powder finish 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.

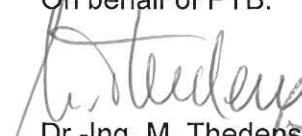
Applied standards

EN 60079-0:2012, EN 60079-1:2007, EN 60079-5:2007, EN 60079-7:2007,
EN 60079-11:2007, EN 60079-18:2009, EN 60079-31:2009

Test report: PTB Ex 12-11246

Zertifizierungssektor Explosionsschutz
On behalf of PTB:

Braunschweig, November 29, 2012


Dr.-Ing. M. Thedens
Oberregierungsrat



3rd SUPPLEMENT


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


to EC-TYPE-EXAMINATION CERTIFICATE PTB 09 ATEX 1109

(Translation)

Equipment: Control and distribution box, type 8150/5-****_****_***_****

Marking:  II 2 G Ex d e ia ib [ia Ga] mb q IIA, IIB, IIC T6, T5, T4, T3 Gb
or

 II 2 G Ex db eb ia ib [ia] mb qb IIA, IIB, IIC T6, T5, T4, T3

 II 2 D Ex tb IIIC T80 °C, T95 °C, T130 °C, T135 °C Db
or

 II 2 D Ex tb IIIC T80 °C, T95 °C, T130 °C, T135 °C


Manufacturer: R. STAHL Schaltgeräte GmbH

Address: Am Bahnhof 30, 74638 Waldenburg (Württ.), Germany

Description of supplements and modifications

The 8150/5****-** control and distribution box is modified in the following respects:

- 1) Additional Ex components have been added to the list of components.
- 2) The following customised types have been added: "8150/5-C***; /5-E***; /5-K***; /5-V****"
- 3) The marking has been changed, because the "op is" and "op pr" types of protection have been added. The marking is now:

 II 2 G Ex d e ia ib [ia Ga] mb op pr op is q IIA, IIB, IIC T6, T5, T4, T3 Gb

 II 2 D Ex tb IIIA, IIIB, IIIC T80 °C, T95 °C, T130 °C Db

Type code

General type code

8150	/	*	-	*	*	*	*	-	*	*	*	*	-	*	*	*	-	*	*	*	*
a	/	b	-	c				-	d				-	e			-	f	g	h	i

a	control and distribution box																				
b	design	5	=	switchgear combination Ex e...																	
c	enclosure dim., width [mm]:	0100	=	100 mm																	
		up to																			
		1200	=	1200 mm																	
d	enclosure dim., height [mm]:	0100	=	100 mm																	
		up to																			
		2200	=	2200 mm																	
e	enclosure dim., depth [mm]:	060	=	60 mm																	
		up to																			
		800	=	800 mm																	
f	material	1	=	1.0330																	
		2	=	1.4301																	
		3	=	1.4404 or 1.4571																	
g	coating	1	=	powder-coated																	
		3	=	polished, 240 grain																	
		4	=	electropolished																	
h	version	1	=	screwed cover																	
		2	=	hinge / cam lock																	
		3	=	hinge / screwed cover																	
i	gasket material	1	=	(D0067)																	
		2	=	(D0068)																	
		3	=	(D0069)																	

Series type code

8150	/	*
a	/	b

a	control and distribution box																				
b	design	5-C***	=	customised series-produced product																	
		5-E***	=	modular construction (enclosure combination)																	
		5-K***	=	configured control box																	
		5-V***	=	series-produced product, e.g.																	
		5-V11	=	load and motor switch																	
		5-V37	=	safety switch																	

Technical data

Rated voltage*:	max. 1100 V
Rated current*:	max. 630 A
Rated cross section*:	max. 300 mm ²

*) subject to the type of terminal and Ex components that are actually used

Ambient temperature	subject to the gasket material used
Gasket 1 (D0067)	-60 °C to +135 °C
Gasket 2 (D0068)	-58 °C to +55 °C
Gasket 3 (D0069)	-25 °C to +55 °C

Protection against solid foreign objects, water and contact IP in accordance with EN 60529

Rated values are maximum values, the actual electrical values are determined by mounted electrical apparatus. Within these limiting values complying with the appropriate standards the manufacturer specifies the final limiting values dependent on power supply specifications, operating mode, utilisation category, etc. It is the manufacturer's responsibility to specify the characteristic values of the intrinsically safe circuits.

The maximum permissible ambient temperatures for the control and distribution box can be restricted by the maximum permissible ambient temperatures of the separately certified components.

The composition of the protection symbol depends on the types of protection of the components actually used.

Notes for manufacturing and operation

Equipment of Intrinsic Safety "i" type of protection shall be installed, so the clearances and creepage distances between intrinsically safe and non-intrinsically safe circuits, which are specified in EN 60079-14 are complied with.

When connecting more than one intrinsically safe circuit, the rules and regulations for interconnection must be observed.

The control and distribution box provided with a polyester-powder coat of paint must not be used in areas that are affected by high charge producing processes, mechanical friction and separation processes, electron emission (e.g. near electrostatic coating equipment), and pneumatically conveyed dust.

Applied standards

EN 60079-0:2012

EN 60079-1:2007

EN 60079-5:2007

EN 60079-7:2007

EN 60079-11:2012

EN 60079-18:2009

EN 60079-28:2007

EN 60079-31:2009

Test Report: PTB Ex 14-14128

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, 13. November 2014


Dr.-Ing. D. Markus
Oberregierungsrat



4th SUPPLEMENT
according to Directive 94/9/EC Annex III.6
to EC-TYPE-EXAMINATION CERTIFICATE PTB 09 ATEX 1109
(Translation)

Equipment: Control and distribution box, type 8150/5-****-****-***-****

Marking:  **II 2 G Ex d e ia/ib [ia Ga] mb op pr/op is q IIA, IIB, IIC T6, T5, T4,
T3 Gb**

 **II 2 D Ex tb IIIA, IIIB, IIIC T80 °C, T95 °C, T130 °C Db**

Manufacturer: R. STAHL Schaltgeräte GmbH

Address: Am Bahnhof 30, 74638 Waldenburg, Germany

Description of supplements and modifications

The 8150/5****-** control and distribution box is modified in the following respects:

- 1) Additional Ex components have been added to the list of components.

The marking is the same as before.

4th SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 09 ATEX 1109

Type code

General type code

8150	/	*	-	*	*	*	*	-	*	*	*	*	-	*	*	*	-	*	*	*	*
a	/	b	-	c				-	d				-	e			-	f	g	h	i

- a control and distribution box
- b design
 - 5 = switchgear combination Ex e...
- c enclosure dim., width [mm]:
 - 0100 = 100 mm
 - up to
 - 1200 = 1200 mm
- d enclosure dim., height [mm]:
 - 0100 = 100 mm
 - up to
 - 2200 = 2200 mm
- e enclosure dim., depth [mm]:
 - 060 = 60 mm
 - up to
 - 800 = 800 mm
- f material
 - 1 = 1.0330
 - 2 = 1.4301
 - 3 = 1.4404 or 1.4571
- g coating
 - 1 = powder-coated
 - 3 = polished, 240 grain
 - 4 = electropolished
- h version
 - 1 = screw
 - 2 = hinge / cam lock
 - 3 = hinge / screw
- i gasket
 - 1 = (D0067)
 - 2 = (D0068)
 - 3 = (D0069)

Series type code

8150	/	*
a	/	b

- a control and distribution box
- b design
 - 5-C*** = customised series-produced product
 - 5-E*** = modular construction (enclosure combination)
 - 5-K*** = configured control box
 - 5-V*** = series-produced product, e.g.
 - 5-V11 = load and motor switch
 - 5-V37 = safety switch
 - 5-V* = others

4th SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 09 ATEX 1109

Technical data

Rated voltage*:	max. 1100 V
Rated current*:	max. 630 A
Rated cross section*:	max. 300 mm ²

*) subject to the type of terminal and Ex components that are actually used

Ambient temperature	subject to the gasket material used
Gasket 1 (D0067)	-60 °C to +135 °C
Gasket 2 (D0068)	-58 °C to +55 °C
Gasket 3 (D0069)	-25 °C to +55 °C

Protection against contact,
foreign bodies and water IP66 in accordance with EN 60529

Rated values are maximum values, the actual electrical values are determined by mounted electrical apparatus. Within these limiting values complying with the appropriate standards the manufacturer specifies the final limiting values dependent on power supply specifications, operating mode, utilisation category, etc. It is the manufacturer's responsibility to specify the characteristic values of the intrinsically safe circuits.

The maximum permissible ambient temperatures for the control and distribution box can be restricted by the maximum permissible ambient temperatures of the separately certified components.

The composition of the protection symbol depends on the types of protection of the components actually used.

Notes for manufacturing and operation

Equipment of Intrinsic Safety "i" type of protection shall be installed, so the clearances and creepage distances between intrinsically safe and non-intrinsically safe circuits, which are specified in EN 60079-14 are complied with.

When connecting more than one intrinsically safe circuit, the rules and regulations for interconnection must be observed.

The control and distribution box provided with a polyester-powder coat of paint must not be used in areas that are affected by high charge producing processes, mechanical friction and separation processes, electron emission (e.g. near electrostatic coating equipment), and pneumatically conveyed dust.



4th SUPPLEMENT TO EC-TYPE-EXAMINATION CERTIFICATE PTB 09 ATEX 1109

Applied standards

EN 60079-0:2012

EN 60079-1:2014

EN 60079-5:2007

EN 60079-7:2007

EN 60079-11:2012

EN 60079-18:2009

EN 60079-28:2007

EN 60079-31:2009

Test report: PTB Ex 15-15020

Konformitätsbewertungsstelle, Sektor Explosionsschutz
On behalf of PTB:

Braunschweig, 11 February 2015


Dr.-Ing. U. Klausmeyer
Direktor und Professor

