IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx PTB 06.0020 issue No.:1

Certificate history:
Issue No. 1 (2010-8-11)
Issue No. 0 (2006-3-16)

Status: **Current**

Date of Issue: **2010-08-11** Page 1 of 4

Applicant: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30
74638 Waldenburg
Germany

Electrical Apparatus: **Plug-and-socket device, type 8579/..-…-.**
Optional accessory:

Type of Protection: **Flameproof enclosure “d”, Increased Safety “e”, Intrinsic Safety “i”, Protection by enclosure “tD”**

Marking: **Ex d e IIC T6, T5, T4 resp. Ex d e [ib] IIC T6, T5, T4**
Ex tD A21 IP66 T60°C ... T105°C

Approved for issue on behalf of the IECEx Certification Body: Uwe Voelkel

Position: Section "Flameproof Enclosures"

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

Physikalisch-Technische Bundesanstalt (PTB)
Bundesallee 100
38116 Braunschweig
Germany

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Manufacturer: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30
74638 Waldenburg
Germany

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-1 : 2007-04 Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-11 : 2006 Edition: 5	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

DE/PTB/ExTR10.0050/00

Quality Assessment Report:
DE/BVS/QAR10.0002/00

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Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

Description of equipment
The plug-and-socket device, Type 8579/..-…-., is used for connection of mobile electrical equipment or for connecting cables in potentially explosive atmospheres. If required, the auxiliary circuit may be equipped to form an intrinsically safe circuit. Staggered slots safeguard that only plugs or socket contacts of identical voltage rating can be used together.

Nomenclature

Plug-and-socket device		**Type**	**8579/ab-cde-f**
a	type: 1 = standard; 2 = for North American market		
b	type of construction: 1 = switch socket; 2 = plug		
c	number of poles: 4 = 3P+PE; 5 = 3P+N+PE		
d, e, f	numerals or letters without influence to explosion-protection		

Technical data

		Plug-and-socket device	Auxiliary contact
Rated operating voltage	up to	690 V	415 V
Rated current I_e	max.	63 A	6 A
Utilisation category		AC-3	AC-3
Rated connection			
Switched socket		35 mm^2	2.5 mm^2
Plug		16 mm^2	

Provided the making and breaking capacities are met, rated values other than those specified above are acceptable and will be defined by the manufacturer on the basis of the operating mode, utilisation category, etc.

Ambient temperature	
Temperature class T5	-45 °C to +50 °C
Temperature class T4	-45 °C to +55 °C

Auxiliary contacts designed to type of protection Intrinsic Safety “i”
The switch shall be fitted in the enclosure in such a way that the clearance and creepage distances between intrinsically safe and non-intrinsically safe circuits as required in IEC 60079-11 are complied with.
If system installation and layout does not provide for the clearance requirements for connectors as specified in IEC 60079-11, wiring that meets the quality criterion Increased Safety “e” shall be used, or the wiring shall be mechanically fail -safe according to IEC 60079-11.
Should the above clearance requirements not be met, local wiring measures will be accepted only, if an explosion risk can positively be excluded along all the lines.
When using more than one intrinsically safe circuit, the rules and regulations for interconnection shall duly be observed.
The composition of the protection symbol will be based on the types of protection of components actually used.

CONDITIONS OF CERTIFICATION: NO

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

See attachment.

Annexe: 06.0020_Issue1_attachment.pdf

General product information:

Description
The plug-and-socket device, Type 8579/..-…-., is used for connection of mobile electrical equipment or for connecting cables in potentially explosive atmospheres. If required, the auxiliary circuit may be equipped to form an intrinsically safe circuit. Staggered slots safeguard that only plugs or socket contacts of identical voltage rating can be used together.

Description of supplements and modifications
The plug-and-socket device type 8579/..-…-. will be extended to the design variation type 8573/31 and type 8579/41 with the switch type 8544.
The standards were adapted.

Nomenclature

Plug-and-socket device	Type 8579/ab-cde-f
a	type: 1 = standard with 8543; 2 = North American market with 8543; type: 3 = standard with 8544; type: 4 = North American market with 8544
b	type of construction: 1 = switch socket; 2 = plug
c	number of poles: 4 = 3P+PE; 5 = 3P+N+PE
d, e, f	numerals or letters without influence to explosion-protection

Technical data

Rated data:

	Main contact	Auxiliary contact
Rated voltage	Up to 690 V	Up to 415 V
Rated current	Up to 63 A	Up to 6 A
Utilization category	AC-3	AC-3

Rated cross-section:

	Main contact	Auxiliary contact
Switched socket with 8543 insert	35 mm^2	2.5 mm^2
Switched socket with 8544 insert	16 mm^2 - 50 mm^2	1.5mm^2 - 2.5 mm^2
Plug	16 mm^2	

Temperature classification:
Plug-and-socket device with 8543 switch insert:

Ambient Temperature	Temperature class	Max. surface temperature
Up to 50°C	T5	T 90°C
Up to 55°C	T4	T 105°C

Plug-and-socket device with 8544 switch insert:

Ambient Temperature	Max. operating current		Temperature class	Max. surface temperature
	Main contact	Auxiliary contact		
Up to 40°C	63 A	6 A	T6	T 60°C
Up o 50°C	50 A	4 A	T6	T 70°C
Up to 55°C	63 A	6 A	T5	T 75°C

Notes for manufacture and operation

Components attached or installed (e.g. terminal compartments, bushings, cable glands, connectors) must be of a technical standard that complies with the specifications on the cover sheet. They must be suited for the operating conditions and be covered by a separate examination certificate. The special conditions specified for the components must be complied with, and the components have to be included in the type test, if necessary. This equally applies to the components mentioned in the technical description.
For the installation of intrinsically safe devices are those admitted that correspond to the IEC 60079-11:2006 standard.

A warning with the inscription “WARNING - DO NOT OPEN WHEN ENERGIZED” or similar has to be fitted on the enclosure.

Manufacturer’s Documents
See ATEX certificate PTB 01 ATEX 1150.