



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 13.0047U Issue No: 2 Certificate history:
Status: **Current** Issue No. 2 (2017-10-26)
Date of Issue: **2017-10-26** Page 1 of 4 Issue No. 1 (2015-07-13)
Applicant: **R. STAHL Schaltgeräte GmbH** Issue No. 0 (2014-01-16)
Am Bahnhof 30
74638 Waldenburg
Germany
Equipment: **Actuator attachment type 8602*3-***_*_***_***_******
Optional accessory:
Type of Protection: **Increased Safety "eb" and Protection by Enclosure "tb"**
Marking:
Ex eb IIC Gb and
Ex tb IIIC Db

*Approved for issue on behalf of the IECEx
Certification Body:*

Dr.-Ing. D. Markus

Position:

Head of Department "Explosion Protection in Energy Technology"

*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](http://www.iecex.com).

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

Additional 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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0
IEC 60079-31 : 2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2
IEC 60079-7 : 2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"
Edition:5.0

*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/ExTR13.0066/02](#)

Quality Assessment Report:

[DE/BVS/QAR10.0002/12](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The actuator attachments type 8602*3-***_***_***_***, mainly made of polyamide, can be mounted on enclosure covers and enclosure walls of electrical equipment in the types of protection Increased Safety “eb” and Protection by Enclosure “tb”.

For further technical information, notes for installation and operation and schedule of limitations see Annex.

SPECIFIC CONDITIONS OF USE: NO

Coated protective metallic collars 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.

The use of this component requires a further assessment by an ExCB.



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

- 1) The actuator attachment, type 8602/3-***-*_*_*_*_*_****, has been retested according to IEC 60079-7:2015. Therefore, the marking changes.
- 2) The protection collar, type 8602/3-751-*_*_*_*_*_*_*_*_*_*_****, is also made of D0009-02.
- 3) New actuator attachment (rotary actuator small), type 8602/3-732-*_*_*_*_*_*_*_*_*_*_****.
- 4) A "oil seal spring" is used as a new fastening system for the bellows seal as an alternative.

Annex:

[COCA130047U-02.pdf](#)



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

Electrical Apparatus: Actuator attachment type 8602*3-***_*-***_***_****

Description:

The actuator attachments type 8602*3-***_*-***_***_****, mainly made of polyamide, can be mounted on any enclosure cover and enclosure wall of electrical equipment in the types of protection Increased Safety “eb” and Protection by Enclosure “tb”.

Nomenclature:

8602	*	3	-	***	-	*	-	***	-	***	-	****
1	2	3	-	4	-	5	-	6	-	7	-	8

- 1) Product Type / Series
- 2) Assembly
 - / = Complete actuator
 - A = Assembly internal
 - C = Customer assembly
- 3) Version
- 4) Design (see Appendix)
- 5) Gasket
 - B = NBR
 - S = Silicon
- 6) Switching function / lockable position / color filter / potentiometer-actuator scale
- 7) Switching position
- 8) Lock cylinder

Technical data:

Mounting on enclosure with wall thicknesses	see table
Diameter of the through bore-hole	30.5 mm
Torque of the threaded ring	3 Nm
Maximum permissible service temperature range	-20°C ≤ T _S ≤ +60°C (Seal D0114, D0117, D0129 and D0138) and -60°C ≤ T _S ≤ +70°C (Seal D0115, D0116, D0130 and D0131)



Maximum permissible service temperature range: -20 °C up to +60 °C		
Types 8602*3	Max. wall thickness in mm	Designation
8602*3-001-B	5	Push button
8602*3-003-B	5	Mushroom push button, black Ø38
8602*3-004-B	5	Mushroom push button, red Ø38
8602*3-006-B	5	Mushroom stay-put button with key lock, black
8602*3-008-B	5	Key-operated switch with 2 or 3 switching positions
8602*3-009-B	5	Mushroom stay-put button with key lock, Emergency stop
8602*3-010-B	5	Mushroom stay-put button, Emergency stop
8602*3-012-B	5	Mushroom stay-put button, black
8602*3-014-B	5	Mushroom push button, red Ø55
8602*3-015-B	5	Mushroom stay-put button Emergency Stop, Ø55
8602*3-023-B	5	Twin push button
8602*3-054-B	5	Indicator lamp bezel
8602*3-092-B	5	Potentiometer
8602*3-703-B	5	Mushroom push button, black Ø55
8602*3-712-B	5	Mushroom stay-put button, black-black, black-red, Ø55
8602*3-726-B	5	Rotary actuator axial with 2 or 3 switching positions
8602*3-727-B	5	Rotary actuator axial, lockable pad with 2 or 3 switching positions
8602*3-728-B	3	Rotary actuator, large, increased height, black-black
8602*3-729-B	3	Rotary actuator, large, increased height, red-yellow
8602*3-730-B	3	Rotary actuator, large, red-yellow
8602*3-731-B	3	Rotary actuator, large, black-black
8602*3-732-B	3	Rotary actuator small
8602*3-733-B	5	Closure part
8602*3-734-B	3	Rotary actuator small, lockable
8602*3-735-B	5	Illuminated push button
8602*3-751-B	5	Protective collar, mushroom stay-put button / mushroom stay-put button with key lock
8602*3-752-B	5	Locking device for actuated mushroom stay-put button, protective lid
8602*3-753-B	5	Locking device for not actuated pushbutton, protective lid
8602*3-754-B	5	Locking device for actuated push button
8602*3-755-B	5	Locking device for not actuated push button



Maximum permissible service temperature range: -20 °C up to +60 °C		
Types 8602*3	Max. wall thickness in mm	Designation
8602*3-756-B	5	Locking device for actuated mushroom stay-put button, locking bolt
8602*3-758-B	5	Locking device for not actuated mushroom stay-put button, protective lid

Maximum permissible service temperature range: -60 °C up to +70 °C		
Types 8602*3	Max. wall thickness in mm	Designation
8602*3-001-S	5	Push button
8602*3-003-S	5	Mushroom push button, black Ø38
8602*3-004-S	5	Mushroom push button, red Ø38
8602*3-006-S	5	Mushroom stay-put button with key lock, black
8602*3-008-S	5	Key-operated switch with 2 or 3 switching positions
8602*3-009-S	5	Mushroom stay-put button with key lock, Emergency stop
8602*3-010-S	5	Mushroom stay-put button, Emergency stop
8602*3-012-S	5	Mushroom stay-put button, black
8602*3-014-S	5	Mushroom push button, red Ø55
8602*3-015-S	5	Mushroom stay-put button Emergency Stop, Ø55
8602*3-023-S	5	Twin push button
8602*3-054-S	5	Indicator lamp bezel
8602*3-092-S	5	Potentiometer
8602*3-703-S	5	Mushroom push button, black Ø55
8602*3-712-S	5	Mushroom stay-put button, black-black, black-red, Ø55
8602*3-726-S	5	Rotary actuator axial with 2 or 3 switching positions
8602*3-727-S	5	Rotary actuator axial, lockable pad with 2 or 3 switching positions
8602*3-728-S	3	Rotary actuator, large, increased height, black-black
8602*3-729-S	3	Rotary actuator, large, increased height, red-yellow
8602*3-730-S	3	Rotary actuator, large, red-yellow
8602*3-731-S	3	Rotary actuator, large, black-black
8602*3-732-S	3	Rotary actuator small
8602*3-733-S	5	Closure part
8602*3-734-S	3	Rotary actuator small, lockable
8602*3-735-S	5	Illuminated push button



Maximum permissible service temperature range: -60 °C up to +70 °C		
Types 8602*3	Max. wall thickness in mm	Designation
8602*3-751-S	5	Protective collar, mushroom stay-put button / mushroom stay-put button with key lock
8602*3-752-S	5	Locking device for actuated mushroom stay-put button, protective lid
8602*3-753-S	5	Locking device for not actuated pushbutton, protective lid
8602*3-754-S	5	Locking device for actuated push button
8602*3-755-S	5	Locking device for not actuated push button
8602*3-756-S	5	Locking device for actuated mushroom stay-put button, locking bolt
8602*3-758-S	5	Locking device for not actuated mushroom stay-put button, protective lid

Ingress protection according to IEC 60079				
Type	Designation	Sealing material	Front piece material	Ingress protection according to IEC 60079
8602*3-735-S-***_***_****	Illuminated push button	D0131 D0115	D0012	IP64
8602*3-735-B-***_***_****		D0138 D0114	D0012	IP66
8602*3-735-B-***_***_****		D0117 D0114	D0012	IP64
8602*3-023-S-***_***_****	Twin push button	D0131 D0115	D0010	IP64
8602*3-023-B-***_***_****		D0138 D0114	D0010	IP66
8602*3-023-B-***_***_****		D0117 D0114	D0010	IP66
8602*3-092-S-***_***_****	Potentiometer attachment	D0116 D0115	D0012	IP66
8602*3-092-B-***_***_****		D0117 D0114	D0012	IP66
8602*3-727-S-***_***_****	Rotary actuator axial, lockable pad, with 2 or 3 switching positions	D0116 D0115	D0010	IP66
8602*3-727-S-***_***_****		D0116 D0115	D0012	IP66
8602*3-727-B-***_***_****		D0117 D0114	D0012	IP66
8602*3-726-S-***_***_****	Rotary actuator axial, un-	D0116	D0010	IP66



Ingress protection according to IEC 60079				
Type	Designation	Sealing material	Front piece material	Ingress protection according to IEC 60079
8602*3-726-S-***_***_****	lockable pad, with 2 or 3 switching positions	D0115		
		D0116 D0115	D0012	IP66
		D0117 D0114	D0012	IP64
8602*3-726-B-***_***_****				
8602*3-732-S-***_***_****	Rotary actuator small	D0116 D0115	D0010	IP66
		D0116 D0115	D0012	IP66
		D0117 D0114	D0012	IP64
8602*3-732-B-***_***_****				
8602*3-734-S-***_***_****	Rotary actuator small, lockable	D0116 D0115	D0010	IP66
		D0116 D0115	D0012	IP66
		D0117 D0114	D0012	IP64
8602*3-734-B-***_***_****				
8602*3-008-S-***_***_****	Key operated switch MS, with 2 or 3 switching positions	D0116 D0115	D0010	IP66
		D0116 D0115	D0012	IP66
		D0117 D0114	D0012	IP64
8602*3-008-B-***_***_****				
8602*3-008-S-***_***_****	Key operated switch KMS, with 2 or 3 switching positions	D0116 D0115	D0010	IP66
		D0116 D0115	D0012	IP66
		D0117 D0114	D0012	IP64
8602*3-008-B-***_***_****				
8602*3-003-S-***_***_****	Mushroom push button, black Ø38	D0131 D0115	D0010	IP64
		D0131 D0115	D0012	IP64
		D0138 D0114	D0012	IP66
		D0117 D0114	D0012	IP64
8602*3-003-B-***_***_****				
8602*3-004-S-***_***_****	Mushroom push button, red Ø38	D0131 D0115	D0010	IP64
		D0131 D0115	D0012	IP64
		D0138 D0114	D0012	IP66
		D0117	D0012	IP64
8602*3-004-B-***_***_****				



Ingress protection according to IEC 60079				
Type	Designation	Sealing material	Front piece material	Ingress protection according to IEC 60079
		D0114		
8602*3-014-S-***_***_****	Mushroom push button, red Ø55	D0131 D0115	D0010	IP64
8602*3-014-S-***_***_****		D0131 D0115	D0012	IP66
8602*3-014-B-***_***_****		D0138 D0114	D0012	IP66
8602*3-014-B-***_***_****		D0117 D0114	D0012	IP66
8602*3-015-S-***_***_****	Mushroom stay-put button - Emergency Stop, Ø55	D0131 D0115 D0130	D0010	IP66
8602*3-015-S-***_***_****		D0131 D0115 D0130	D0012	IP66
8602*3-015-B-***_***_****		D0138 D0114 D0129	D0012	IP66
8602*3-015-B-***_***_****		D0117 D0114 D0129	D0012	IP66
8602*3-703-S-***_***_****	Mushroom push button, black Ø55	D0131 D0115	D0010	IP64
8602*3-703-S-***_***_****		D0131 D0115	D0012	IP66
8602*3-703-B-***_***_****		D0138 D0114	D0012	IP66
8602*3-703-B-***_***_****		D0117 D0114	D0012	IP66
8602*3-712-S-***_***_****	Mushroom push button, Ø55	D0131 D0115	D0010	IP64
8602*3-712-S-***_***_****		D0131 D0115	D0012	IP66
8602*3-712-B-***_***_****		D0138 D0114	D0012	IP66
8602*3-712-B-***_***_****		D0117 D0114	D0012	IP66
8602*3-010-B-***_***_****	Mushroom stay-put button	D0138 D0114 D0129	D0012	IP66
8602*3-010-B-***_***_****		D0117 D0114 D0129	D0012	IP66
8602*3-009-B-***_***_****	Mushroom stay-put button	D0138	D0012	IP66



Ingress protection according to IEC 60079				
Type	Designation	Sealing material	Front piece material	Ingress protection according to IEC 60079
	with key lock	D0114 D0129		
8602*3-009-B-***_***_****		D0117 D0114 D0129	D0012	IP66
8602*3-733-B-***_***_****	Closure part	D0114	D0012	IP66
8602*3-733-S-***_***_****		D0115	D0012	IP66

Notes for installation and operation:

1. The actuator attachment type 8602*3-***_*-***_***_**** shall be installed in an enclosure that meets the requirements of an approved type of protection in accordance with IEC 60079-0, section 1.
2. The degree of protection according to IEC 60529 will only be safeguarded if the component is properly installed in the electrical equipment. Electrical equipment must be suited for the operating conditions, and have a separate examination certificate.
3. Each actuator attachment type 8602*3-***_*-***_***_**** shall be placed by the threaded part into the corresponding bore-hole (\varnothing 30.5 mm) of an enclosure cover or enclosure wall and shall be fixed with a threaded ring and the appropriate torque.
4. The torque of the threaded ring of the actuator attachment must be checked during revision work.
5. The types of protection can be ensured only, if the information and instructions provided by the manufacturer are followed and the items are properly installed in the enclosure, the enclosure cover and/or the electrical equipment.
6. When installing the component in the electrical equipment, measures must be taken to ensure that the temperatures at the place of installation remain within the range of ambient temperatures.
7. The installation of electrical components is subject to re-assessment by a notified body.

This information must accompany each device in an adequate form.

Schedule of Limitations:

Coated protective metallic collars 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.

The use of this component requires a further assessment by an ExCB.