

CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION COMPONENT PER US REQUIREMENTS**
2. **Certificate No:** FM16US0153U
3. **Component:** Series 8510. Explosion-Protected Control Device.
(Type Reference and Name) Series 8523. Explosion-Protected Motor Protector.
4. **Name of Listing Company:** R STAHL Schaltgeräte GmbH
5. **Address of Listing Company:** am Bahnhof 30
74638 Waldenburg
GERMANY
6. The examination and test results are recorded in confidential report number:

3051590 dated 4th July 2016
7. FM Approvals LLC, certifies that the component described has been found to comply with the following Approval standards and other documents:

FM Approvals Class 3600:2018, ANSI/UL 60079-0:2019, ANSI/UL 60079-1:2015;
ANSI/UL 60079-7:2017; ANSI/UL 508:2008, ANSI/UL 60947-1:2013; ANSI/UL 60947-4-1:2014
8. The sign 'U' placed after the certificate number indicates that this certificate must not be mistaken for a certificate for equipment or a protective system. This certificate may only be used as the basis for the certification of equipment or a protective system. This certificate is issued to the manufacturer also intended to be the holder of the equipment certificate which includes this component.
9. This certificate relates to the design, examination and testing of the component specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the component as examined, tested and Approved.

Certificate issued by:



J.E. Marquedant
VP, Manager - Electrical Systems

16 August 2019

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

SCHEDULE



US Certificate Of Conformity No: FM16US0153U

10. Component Ratings:

Series 8510:

Class I, Zone 1, AEx db eb IIC T5 Gb Ta = -20 °C to +55 °C

Class I, Division 2, Groups A, B, C, D, T5 Ta = -20 °C to +55 °C

Series 8523:

Class I, Zone 1, AEx db eb IIC T5 Gb Ta = -20 °C to +55 °C

Class I, Division 2, Groups A, B, C, D, T5 Ta = -20 °C to +55 °C

11. The marking of the component shall include:

for both Series 8510 and 8523:

CI I, Zn 1, AEx/Ex db eb IIC T5 Gb

CI I, Div 2, Gps ABCD

Ambient temperature rating

Certificate numbers

Manufacturer's name and address

Type number

Date Code

Electrical ratings

12. **Description of Equipment:**

The control devices in the 8510 and 8523 series are general purpose electrical units mounted in a sealed flameproof enclosure. The internal device may be a controller, a switch, a relay, a contactor, or an overload relay. The connection to the internal device is via a set of bushings that connect to the increased safety terminals on the outside of the flameproof enclosure.

8510/111-02-209-g0-0. Control Relay.

I / 1 / AEx db eb IIC / T5 / Gb Ta = -20 °C to +55 °C

S / 1 / 2 / ABCD / T5 Ta = -20 °C to +55 °C

g = Coil voltage 01, 02, 03, 04, 05, 06, 07, 21, 22, 23, or 24.

Schedule of Limitations:

1. For Class I, Zone 1 applications, the Control Relay shall be installed in an Increased Safety "eb" enclosure.
2. For Class I, Zone 1 applications, the Control Relay shall be installed in the enclosure such that the creepage and clearance complies with the Increased Safety spacing requirements ANSI/UL 60079-7.
3. For Class I, Division 2 applications, the Control Relay shall be installed in an enclosure that complies with the requirements for the specific application.
4. For Class I, Division 2 applications, the Control Relay shall be installed in the enclosure such that the creepage and clearance comply with the requirements of specific application.
5. The flameproof joints cannot be repaired.
6. Circuit shall be protected by a Class J fuse rated not more than 8 A.

8510/1b2-03-def-g0-0. Motor Contactor.

I / 1 / AEx db eb IIC / T5 / Gb Ta = -20 °C to +55 °C

S / 1 / 2 / ABCD / T5 Ta = -20 °C to +55 °C

b = Enclosure size 2 or 3

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmaprovals.com www.fmaprovals.com

SCHEDULE



US Certificate Of Conformity No: FM16US0153U

- d* = Contactor size 1, 3, 4, 5, 6, 7, 8, A or B.
e = Number of main contacts 1, 2, 3, 4, 5, or 0.
f = Auxiliary contacts 1, 2, 3, 4, 5, 6, 7, 8, or 9.
g = Coil voltage 01, 02, 03, 04, 05, 06, 07, 08, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 28, 29, 30, 31, 32, 33, 34, 35, 51, 52, 53, 54, 55, 71, 72, or 73.

Schedule of Limitations:

1. For Class I, Zone 1 applications, the Motor Contactor shall be installed in an Increased Safety "eb" enclosure.
2. For Class I, Zone 1 applications, the Motor Contactor shall be installed in the enclosure such that the creepage and clearance complies with the Increased Safety spacing requirements ANSI/UL 60079-7.
3. For Class I, Division 2 applications, the Motor Contactor shall be installed in an enclosure that complies with the requirements for the specific application.
4. For Class I, Division 2 applications, the Motor Contactor shall be installed in the enclosure such that the creepage and clearance comply with the requirements of specific application.
5. The flameproof joints cannot be repaired.
6. Main circuit shall be protected by a Class J fuse rated not more than 225% of the rated full load current.
7. Auxiliary circuit shall be protected by a Class J fuse rated not more than 10 A.

8510/132-04-d36-g0-i. Motor Contactor with Overload Protection.

I / 1 / AEx db eb IIC / T5 / Gb Ta = -20 °C to +55 °C

S / I / 2 / ABCD / T5 Ta = -20 °C to +55 °C

d = Contactor size 1, 3, 4,

g = Coil voltage 01, 02, 03, 04, 05, 06, 07, 08, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 28, 29, 30, 31, 32, 33, 34, 35, 51, 52, 53, 54, 55, 71, 72, or 73.

i = Current 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14.

Schedule of Limitations:

1. For Class I, Zone 1 applications, the Motor Contactor shall be installed in an Increased Safety "eb" enclosure.
2. For Class I, Zone 1 applications, the Motor Contactor shall be installed in the enclosure such that the creepage and clearance complies with the Increased Safety spacing requirements ANSI/UL 60079-7.
3. For Class I, Division 2 applications, the Motor Contactor shall be installed in an enclosure that complies with the requirements for the specific application.
4. For Class I, Division 2 applications, the Motor Contactor shall be installed in the enclosure such that the creepage and clearance comply with the requirements of specific application.
5. The flameproof joints cannot be repaired.
6. Main circuit shall be protected by a Class J fuse rated not more than 225% of the rated full load current.
7. Auxiliary circuit shall be protected by a Class J fuse rated not more than 10 A.

8510/1a-05-d35-i. Overload Protector.

I / 1 / AEx db eb IIC / T5 / Gb Ta = -20 °C to +55 °C

S / I / 2 / ABCD / T5 Ta = -20 °C to +55 °C

a = Housing size 22 or 41

d = Type 2 or 3.

i = Current 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, or 20.

Schedule of Limitations:

1. For Class I, Zone 1 applications, the Overload Protector shall be installed in an Increased Safety "eb" enclosure.
2. For Class I, Zone 1 applications, the Overload Protector shall be installed in the enclosure such that the creepage and clearance complies with the Increased Safety spacing requirements ANSI/UL 60079-7.
3. For Class I, Division 2 applications, the Overload Protector shall be installed in an enclosure that complies with the requirements for the specific application.
4. For Class I, Division 2 applications, the Overload Protector shall be installed in the enclosure such that the creepage and clearance comply with the requirements of specific application.

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

SCHEDULE



US Certificate Of Conformity No: FM16US0153U

5. The flameproof joints cannot be repaired.
6. Main circuit shall be protected by a Class J fuse rated not more than 225% of the rated full load current.
7. Auxiliary circuit shall be protected by a Class J fuse rated not more than 10 A.

8510/132-05-335-30h. Electronic Overload Protector.

I / 1 / AEx db eb IIC / T5 / Gb Ta = -20 °C to +55 °C

S / 1 / 2 / ABCD / T5 Ta = -20 °C to +55 °C

h = Options 0 or 1

Schedule of Limitations:

1. For Class I, Zone 1 applications, the Electronic Overload Protector shall be installed in an Increased Safety "eb" enclosure.
2. For Class I, Zone 1 applications, the Electronic Overload Protector shall be installed in the enclosure such that the creepage and clearance complies with the Increased Safety spacing requirements ANSI/UL 60079-7.
3. For Class I, Division 2 applications, the Electronic Overload Protector shall be installed in an enclosure that complies with the requirements for the specific application.
4. For Class I, Division 2 applications, the Electronic Overload Protector shall be installed in the enclosure such that the creepage and clearance comply with the requirements of specific application.
5. The flameproof joints cannot be repaired.
6. Main circuit shall be protected by a Class J fuse rated not more than 225% of the rated full load current.
7. Auxiliary circuit shall be protected by a Class J fuse rated not more than 6 A.

8510/122-05-335-gh. Electronic Overload Protector.

I / 1 / AEx db eb IIC / T5 / Gb Ta = -20 °C to +55 °C

S / 1 / 2 / ABCD / T5 Ta = -20 °C to +55 °C

g = Trip current range 25, 26, 27, 28, or 29.

h = Options 0 or 1

Schedule of Limitations:

1. For Class I, Zone 1 applications, the Electronic Overload Protector shall be installed in an Increased Safety "eb" enclosure.
2. For Class I, Zone 1 applications, the Electronic Overload Protector shall be installed in the enclosure such that the creepage and clearance complies with the Increased Safety spacing requirements ANSI/UL 60079-7.
3. For Class I, Division 2 applications, the Electronic Overload Protector shall be installed in an enclosure that complies with the requirements for the specific application.
4. For Class I, Division 2 applications, the Electronic Overload Protector shall be installed in the enclosure such that the creepage and clearance comply with the requirements of specific application.
5. The flameproof joints cannot be repaired.
6. Main circuit shall be protected by a Class J fuse rated not more than 225% of the rated full load current.
7. Auxiliary circuit shall be protected by a Class J fuse rated not more than 6 A.

8510/132-08-d3f-g0-0. Reversing Contactor.

I / 1 / AEx db eb IIC / T5 / Gb Ta = -20 °C to +55 °C

S / 1 / 2 / ABCD / T5 Ta = -20 °C to +55 °C

d = Contactor size 1, 3, or 4.

f = Auxiliary contacts 1, 2, 4, or 5.

g = Coil voltage 01, 02, 03, 04, 05, 06, 07, 08, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 28, 29, 30, 31, 32, 33, 34, 35, 51, 52, 53, 54, 55, 71, 72, or 73.

Schedule of Limitations:

1. For Class I, Zone 1 applications, the Reversing Contactor shall be installed in an Increased Safety "eb" enclosure.

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmaprovals.com www.fmaprovals.com

SCHEDULE



US Certificate Of Conformity No: FM16US0153U

2. For Class I, Zone 1 applications, the Reversing Contactor shall be installed in the enclosure such that the creepage and clearance complies with the Increased Safety spacing requirements ANSI/UL 60079-7.
3. For Class I, Division 2 applications, the Reversing Contactor shall be installed in an enclosure that complies with the requirements for the specific application.
4. For Class I, Division 2 applications, the Reversing Contactor shall be installed in the enclosure such that the creepage and clearance comply with the requirements of specific application.
5. The flameproof joints cannot be repaired.
6. Main circuit shall be protected by a Class J fuse rated not more than 225% of the rated full load current.
7. Auxiliary circuit shall be protected by a Class J fuse rated not more than 10 A.

8510/112-07-d09-gh-0. Time Relay

I / 1 / AEx db eb IIC / T5 / Gb Ta = -20 °C to +55 °C

S / 1 / 2 / ABCD / T5 Ta = -20 °C to +55 °C

d = Relay type 1, 2, 3, or 4.

g = Coil voltage 01, 02, 03, 04, 05, 06, or 07.

h = Delay 1 or 2

Schedule of Limitations:

1. For Class I, Zone 1 applications, the Time Relay shall be installed in an Increased Safety "eb" enclosure.
2. For Class I, Zone 1 applications, the Time Relay shall be installed in the enclosure such that the creepage and clearance complies with the Increased Safety spacing requirements ANSI/UL 60079-7.
3. For Class I, Division 2 applications, the Time Relay shall be installed in an enclosure that complies with the requirements for the specific application.
4. For Class I, Division 2 applications, the Time Relay shall be installed in the enclosure such that the creepage and clearance comply with the requirements of specific application.
5. The flameproof joints cannot be repaired.
6. Circuit shall be protected by a Class J fuse rated not more than 5 A.

8523/8b-c-def. Manual Motor Starter with Short-circuit, Overload, and Phase Failure Protection

I / 1 / AEx db eb IIC / T5 / Gb Ta = -20 °C to +55 °C

S / 1 / 2 / ABCD / T5 Ta = -20 °C to +55 °C

b = Enclosure size 1 or 2.

c = Adjustment range 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, or 14.

d = Release 0, 1, or 2

e = Additional contacts 0, 2, 4, or 6.

f = Release voltage 0, 1, 2, 3, 4, 5, 6, 7, 8, or 9

Schedule of Limitations:

1. For Class I, Zone 1 applications, the Motor Protector shall be installed in an Increased Safety "eb" enclosure.
2. For Class I, Zone 1 applications, the Motor Protector shall be installed in the enclosure such that the creepage and clearance complies with the Increased Safety spacing requirements of ANSI/UL 60079-7.
3. For Class I, Division 2 applications, the Motor Protector shall be installed in an enclosure that complies with the requirements for the specific application.
4. For Class I, Division 2 applications, the Motor Protector shall be installed in the enclosure such that the creepage and clearance comply with the requirements of specific application.
5. The flameproof joints cannot be repaired.
6. Auxiliary circuit shall be protected by a Class J fuse rated not more than 10 A.

8523/Ab-c-0e0. Manual Motor Starter with Short-circuit Protection

I / 1 / AEx db eb IIC / T5 / Gb Ta = -20 °C to +55 °C

S / 1 / 2 / ABCD / T5 Ta = -20 °C to +55 °C

b = Enclosure size 1 or 2.

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmaprovals.com www.fmaprovals.com

SCHEDULE



US Certificate Of Conformity No: FM16US0153U

c = Adjustment range 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, or 14.
e = Additional contacts 0, 2, 4, or 6.

Schedule of Limitations:

1. For Class I, Zone 1 applications, the Motor Protector shall be installed in an Increased Safety "eb" enclosure.
2. For Class I, Zone 1 applications, the Motor Protector shall be installed in the enclosure such that the creepage and clearance complies with the Increased Safety spacing requirements of ANSI/UL 60079-7.
3. For Class I, Division 2 applications, the Motor Protector shall be installed in an enclosure that complies with the requirements for the specific application.
4. For Class I, Division 2 applications, the Motor Protector shall be installed in the enclosure such that the creepage and clearance comply with the requirements of specific application.
5. The flameproof joints cannot be repaired.
6. Auxiliary circuit shall be protected by a Class J fuse rated not more than 10 A.

=

13. Schedule of Limitations:

See Description of Equipment

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
4 th July 2016	Original Issue.
27 th January 2017	Supplement 01: 3061060 dated 27 th January 2017. Description of the Change: Addition of Electronic Overload Protector.
4 th August 2017	Supplement 02: 3061449 dated 4 th August 2017. Description of the Change: Additional ratings for 8510/...-03; evaluation of short circuit protection of 8523.
16 th August 2019	Supplement 03: PR454216 dated 16 th August 2019. Description of the Change: Additional constructions Series 8510; Update to latest editions of 60079-0 and 60079-7.

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmaprovals.com www.fmaprovals.com