IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

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

Ex COMPONENT CERTIFICATE

Certificate No.: **IECEx PTB 06.0018U**

Page 1 of 5

Certificate history:

Status: **Current**

Issue No: 4

Issue 3 (2020-12-09)
Issue 2 (2013-07-16)
Issue 1 (2010-04-13)
Issue 0 (2006-03-16)

Date of Issue: 2023-04-24

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

Ex Component: Load and motor switch, type 8006/4-***-**

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Flameproof enclosure "d", Increased Safety "e" and Intrinsic Safety "i"**

Marking: Ex db eb IIC Gb or Ex db eb ia IIC Gb
Ex db eb I Mb or Ex db eb ia I Mb

Approved for issue on behalf of the IECEx Certification Body: **Dr. -Ing. D. Markus**

Position: **Head of Departament "Explosion Protection in Energy Technology"**

Signature: (for printed version)

Date: (for printed version) 23.04.23

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 www.iecex.com or use of this QR Code.

Certificate issued by:

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

Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

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Manufacturer: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30
74638 Waldenburg
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Manufacturing locations: **R. STAHL Schaltgeräte GmbH**
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74638 Waldenburg
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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 component 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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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

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

Test Report:

DE/PTB/ExTR06.0021/03

Quality Assessment Report:

DE/BVS/QAR10.0002/18

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Ex Component(s) covered by this certificate is described below:

Description

The load and motor switch of type 8006/4-***-** consists of flameproof switch decks which can be combined to form a package or gang switch.

The switch is connected to the integrated screw terminals.

For more informations see annex.

SCHEDULE OF LIMITATIONS:

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. New bolt made of thermoplastic D0312
2. 6 mm² cable cross section for 32 A application

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Additional information:
None.

Annex:

COCA060018U-04.pdf

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Electrical Apparatus: Load and Motor Switch type 8006/4-***-**

Description

The load and motor switch type 8006/4-***-** consists of flameproof switch decks which can be combined to form a package or gang switch.

The connection is made to the integrated screw terminals.

Nomenclature

8006	/	*	-	*	*	*	-	*	*
1)	/	2	-	3)					

1) Type / Series
2) Design 4 – Load and Motor Switch
3) Additional variations filled in, if required not affecting certification

Technical data

Rated insulation voltage	max.	690 V AC
Rated operational voltage	max.	690 V AC
Rated current I_e	max.	32 A
Rated cross section	min.	2.5 mm² / 14 AWG solid, stranded or fine-stranded with wire end ferrule
	max.	10 mm² / 8 AWG solid, stranded or fine-stranded with wire end ferrule
PE conductor size		Same or larger than line / load cross section
Tightening torque of the terminals		2 Nm
8006/4 – Ex i Version:		
Rated operation voltage	max.	690 V AC
Safety specific values		$U_i \leq 40$ V; $I_i \leq 200$ mA; Inductance L_i and capacity C_i negligible

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Service temperature

$-60\ °C \leq T_S \leq +100\ °C$
The maximum permitted service temperature of the device is 100 °C and it shall not be exceeded. See table below for measured results at 100 % rated current with min. cross section at max. ambient temperature.

Max. rated current	Max. ambient temperature					
	+40 °C	+50 °C	+55 °C	+60 °C	+70 °C	+80 °C
	Max. surface temperature					
16 A Min. cross section 2.5 mm²	55.4 °C	65.4 °C	70.4 °C	75.4 °C	85.4 °C	95.4 °C
25 A Min. cross section 4.0 mm²	68.1 °C	78.1 °C	83.1 °C	88.1 °C	98.1 °C	---
32 A Min. cross section 10 mm²	67.6 °C	77.6 °C	82.6 °C	87.6 °C	97.6 °C	---

Ambient temperature

$-60\ °C \leq T_a \leq +55\ °C \ldots +80\ °C$ *
* Depends on rated current and cross section of conductor connection.

Maximum surface temperature

Max. rated current	Max. ambient temperature					
	+40 °C	+50 °C	+55 °C	+60 °C	+70 °C	+80 °C
	Max. surface temperature					
16 A Min. cross section 2.5 mm²	56.3 °C	66.3 °C	71.3 °C	76.3 °C	86.3 °C	96.3 °C
25 A Min. cross section 4.0 mm²	66.9 °C	76.9 °C	81.9 °C	86.9 °C	96.9 °C	---
32 A Min. cross section 10 mm²	70 °C	80 °C	85 °C	90 °C	100 °C	---

Temperature class

Max. rated current	Max. ambient temperature					
	+40 °C	+50 °C	+55 °C	+60 °C	+70 °C	+80 °C
	Temperature class					
16 A Min. cross section 2.5 mm²	T6	T6	T6	T6	T5	T4
25 A Min. cross section 4.0 mm²	T6	T6	T5	T5	T4	---
32 A Min. cross section 10 mm²	T6	T6	T5	T5	T4	---

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Notes for installation and operation

1. The load and motor switch Type 8006/4-***-** shall be mounted in an enclosure that meets the requirements of an approved type of protection as specified in IEC 60079-0, section 1 and has an ingress protection of at least IP54 according to IEC 60079-0 and IEC 60079-7.
2. When installing the load and motor switch Type 8006/4-***-** in an enclosure designed to Increased Safety "e" type of protection in compliance with IEC 60079-7, the clearance and creepage distances shall be maintained.
3. The connecting cables of the load and motor switch Type 8006/4-***-** shall be fixed and routed so that it will be adequately protected against mechanical damage.

This information must accompany each device in an adequate form.

Schedule of Limitations

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

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