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 BAS 08.0085U

Issue No: 2

Certificate history:
Issue No. 2 (2017-11-08)
Issue No. 1 (2016-01-25)
Issue No. 0 (2009-09-28)

Status: **Current**

Date of Issue: **2017-11-08**

Applicant: **Hawke International**
A Division of Hubbell Limited
A Member of the Hubbell Group of Companies
Oxford Street West
Ashton-under-Lyne
Lancashire
OL7 0NA
United Kingdom

Equipment: **HTB Terminal Block and HPB Terminal Block**

Optional accessory:

Type of Protection: **Increased Safety Ex e II**

Marking:
Ex eb IIC Gb

Approved for issue on behalf of the IECEx Certification Body: R S Sinclair

Position: Technical Manager

Signature:
(for printed version)

Date: 8/11/17

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:

SGS Baseefa Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire, SK17 9RZ
United Kingdom

IECEx Certificate of Conformity

Certificate No:	IECEx BAS 08.0085U	Issue No: 2
Date of Issue:	**2017-11-08**	Page 2 of 4

Manufacturer: **Hawke International**
A Division of Hubbell Limited
A Member of the Hubbell Group of Companies
Oxford Street West
Ashton-under-Lyne
Lancashire
OL7 0NA
United Kingdom

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 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*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:

GB/BAS/ExTR08.0185/00 GB/BAS/ExTR15.0360/00 GB/BAS/ExTR17.0293/00

Quality Assessment Report:

GB/BAS/QAR06.0061/06

IECEx Certificate of Conformity

Certificate No: IECEx BAS 08.0085U Issue No: 2

Date of Issue: **2017-11-08**

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The HTB Terminal Block comprises a circular nylon base into which are moulded between 2 and 6 nickel-plated brass terminal pillars. The terminal block is rated at 37Amps and 550Volts.

The terminals are separated by 6 integrally moulded barriers. The threaded terminal pillar has a slot to receive conductors. The conductors are secured by a threaded terminal cap, which is screwed onto the top of the pillar. The cap has a screwdriver slot on top and an optional knurl on its outer diameter.

See annex for full description.

See annex for Schedule of Limitations

SPECIFIC CONDITIONS OF USE: NO

IECEx Certificate of Conformity

Certificate No: IECEx BAS 08.0085U Issue No: 2

Date of Issue: **2017-11-08**

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

Variation 2.1

To confirm that the HTB Terminal Block and the HPB Terminal Block covered by this certificate have been reviewed against the requirements of IEC 60079-0: 2011 and IEC 60079-7: 2015 in respect of the differences from IEC 60079-0: 2007 and IEC 60079-7: 2006, and comply with the requirements of the latest standards.

The marking code changes to Ex eb. The marking is now as follows:

HTB*: Ex eb IIC Gb Service Temperature -60°C to +100°C

HPB*: Ex eb IIC Gb Service Temperature -60°C to +75°C

Variation 2.2

HTB and HBP Terminal Block:

The specified tightening torque for each pillar is 1 to 2 Nm.

The terminal resistance for each pillar is 0.0003 Ohms.

Each terminal pillar at 37A (+10%), fitted with 2 x 10mm² conductors has a rise of 11K.

Variation 2.3

Schedule of Limitation number 2 updated.

See Annex for full description.

ExTR: **GB/BAS/ExTR17.0293/00** File Reference: **17/0618**

Annex:

IECEx BAS 08.0085U-02 ANNEX 2.pdf

SGS Baseefa Limited
Rockhead Business Park
Staden lane, Buxton, Derbyshire
SK17 9RZ
United Kingdom

ANNEX to IECEx BAS 08.0085U Issue No. 2 Date: 8/11/2017

The HTB Terminal Block comprises a circular nylon base into which are moulded between 2 and 6 nickel-plated brass terminal pillars rated. The terminal block is rated at 37Amps and 550Volts.

The terminals are separated by 6 integrally moulded barriers. The threaded terminal pillar has a slot to receive conductors. The conductors are secured by a threaded terminal cap, which is screwed onto the top of the pillar. The cap has a screwdriver slot on top and an optional knurl on its outer diameter.

Inside the terminal cap cavity is a pressure bar which can slide up and down the slot inside the pillar as the terminal cap is rotated. A pressure bar spindle sits above the pressure bar. It has a flange at its top, and is secured at the top of the cavity by a self locking ring under its flange, which locks against the cavity wall. It also contributes to clamping the assembly of parts inside the cavity. The pressure bar spindle passes down through the top of the pressure bar and the end of the spindle is swaged over. This completes the securing of the assembly of parts inside the cavity and also enables the over pressure to slide up and down the spindle. The pressure bar also has a flange at the top. A helical compression spring is positioned between the top of this flange and the underside of the self locking ring.

When the conductors are connected to the terminal they are held in the slot under the pressure of the bar, with the spring fully compressed, which locks the connection.

The voltage rating is an absolute condition of use and includes the 10% margin permitted in EN 60079-7. The current ratings below are not absolute maximums but are recommended values when used in general purpose junction boxes or marshalling boxes:

Cable Size (mm^2)	Maximum Current (Amps)
0.5	1
0.75	1
1	8
1.5	10
2.5	15
4	21
6	26
10	37

Higher currents may be permitted subject to individual examination of each specific application.

Maximum Number of Conductors of the Same Size Connected to each Terminal:

Conductor Size (mm^2)	Maximum Number of Conductors
10	2
6	3
4	4
Smaller conductors ≥ 0.5mm^2	4

Conductors to be either all solid or all stranded.

Alternatively the following **PAIRS** of conductor combinations may be fitted:

1.5mm^2 solid with:	Stranded: 2.5mm^2 or 4mm^2 or 6mm^2 or 10mm^2 Solid: 1.5mm^2
1.5mm^2 stranded with:	Stranded only: 0.9mm^2 or 1.2mm^2 or 1.5mm^2 or 2.2mm^2 or 2.5mm^2 or 4mm^2 or 6mm^2 or 10mm^2
2.5mm^2 solid with:	Stranded: 0.9mm^2 or 1.2mm^2 or 6mm^2 or 10mm^2 Solid: 2.5mm^2 or 4mm^2
2.5mm^2 stranded with:	Stranded only: 2.5mm^2 or 4mm^2 or 6mm^2 or 10mm^2
4mm^2 stranded with:	Stranded only: 4mm^2 or 6mm^2 or 10mm^2
6mm^2 stranded with:	Stranded only: 6mm^2 or 10mm^2
10mm^2 stranded with:	Stranded only: 10mm^2

Alternatively the following THREE conductors may be fitted in one terminal:
Two solid 2.5mm^2 conductors and one 6mm^2 stranded conductor.

SGS Baseefa Limited
Rockhead Business Park
Staden lane, Buxton, Derbyshire
SK17 9RZ
United Kingdom

ANNEX to IECEx BAS 08.0085U Issue No. 2 Date: 8/11/2017

The HPB* Terminal Block is very similar to the existing circular HTB* Terminal Block.

The HPB* comprises a rectangular moulded plastic/insulated base with 4 partitioned sections, with 2 to 4 pillar type terminals, one per section. The Terminal Block is coded HPB2, HPB3 or HPB4. Any two adjacent pillars may be fitted with a terminal link to drawing number 9476.

The pillar terminal is the same as that already used in the existing HTB4 and HTB6 Terminal Blocks, therefore the conductor sizes, associated current ratings and conductor combinations per pillar are in-line with the existing HTB* Terminal Block.

The HPB terminal block is rated at 37A and 550V.

HTB and HPB Terminal Block:

The specified tightening torque for each pillar is 1 to 2 Nm.

The terminal resistance for each pillar is 0.0003 Ohms.

Each terminal pillar at 37A (+10%), fitted with 2 x 10mm² conductors has a rise of 11K.

Schedule of Limitations

1. Leads connected to the terminals shall have insulation extending to within 3mm of the terminal throat and the bare end of each lead shall not extend more than 3mm beyond the other side of the slot and shall remain straight.
2. The terminal cap of each terminal, used and unused, shall be fully tightened down by the end user. The tightening torque is 1 to 2 Nm.
3. Conductors of different sizes and configurations shall not be inserted into the same terminal throat/slot except for the specific combinations listed in this certificate schedule.
4. When installed in an enclosure the creepage and clearance distances between the terminals, adjacent equipment and enclosure walls must comply with the requirements of EN 60079-7.
5. When installed in plastic enclosures there shall be at least 3mm clearance between the inside of the removable cover/lid of the enclosure and the terminal screws, after the connections have been made and the terminal screws and cover/lid have been fully tightened down.
6. For conductor sizes less than 1mm² but not less than 0.5mm², the maximum current rating shall not exceed 1 amp.
7. The service temperature range for the HTB* Terminal Block shall not exceed -60°C to +100°C.
8. The service temperature range of the HPB* Terminal Block shall not exceed -60°C to +75°C.
9. When the HPB* is fitted with terminal link to drawing number 9476, the clearance distances may be affected.