



EC - TYPE EXAMINATION CERTIFICATE

**Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

EC - Type Examination Certificate Number: **Baseefa12ATEX0021X**

Equipment or Protective System: **Range of GRP Terminal Boxes**

Manufacturer: **iLECSYS**

Address: **Unit 4, Tring Industrial Estate, Upper Icknield Way, Tring,
HP23 4JX. UK**

This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

Baseefa, Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report No. **GB/BAS/ExTR12.0020/00**

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2009 EN 60079-7:2007 EN 60079-31:2009

except in respect of those requirements listed at item 18 of the Schedule.

If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

This EC - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

The marking of the equipment or protective system shall include the following :

Ex II 2G Ex e IIC T6 Gb (-50°C ≤ Ta ≤ +°C) * See equipment description
II 2D Ex tb IIIC T85°C Db IP66**

This certificate may only be reproduced in its entirety, without any change, schedule included.

Baseefa Customer Reference No. **6166**

Project File No. **08/0801**

This certificate is granted subject to the general terms and conditions of Baseefa. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

R S SINCLAIR
DIRECTOR
On behalf of
Baseefa

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Schedule

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Certificate Number Baseefa12ATEX0021X

15 Description of Equipment or Protective System

The range of GRP terminal boxes consists of a range of empty enclosures that are component certified. The range of terminal boxes is listed in the table below;

Box Type	Dimensions
GRP 80	80 x 75 x 55mm
GRP 110	110 x 75 x 55mm
OGRP 122	122 x 122 x 90mm
GRP 122	122 x 120 x 90mm
GRP 122D*	122 x 120 x 120mm
GRP 160	160 x 160 x 90mm
GRP 160D*	160 x 160 x 120mm
GRP 220	220 x 120 x 90mm
GRP 260	260 x 160 x 90mm
GRP 255	255 x 250 x 120mm
GRP 255D*	255 x 250 x 160mm
GRP 360*	360 x 160 x 90mm
GRP 4002	400 x 250 x 120mm
GRP 4002D*	400 x 250 x 160mm
GRP 400	400 x 405 x 120mm
GRP 400D*	400 x 405 x 160mm

* These types of terminal box are restricted to IP54 and for use in gas only atmospheres.

The ambient temperature range of the terminal boxes is -50°C to +40°C....+65°C dependant on the wattage rating, see below. The terminal boxes are rated IP66.

The enclosure is moulded with a fixing point situated on each corner of the enclosure which is accessible with the lid removed.

Various entries can be put into the enclosures these can be tapped or clearance holes; each enclosure has permitted entry sizes and positions for each face. The terminal boxes may also be supplied with un-drilled walls and earth continuity plate.

The following components below are permitted to be installed in the terminal boxes. The corresponding operating temperature range and IP rating of the components is taken into account when marking the certification plate of the equipment and thus affects the overall IP rating and ambient temperature range of the terminal boxes accordingly.



Component Description / Manufacturer	Component Type	Certificate No.	Operating Temperature Range / IP rating
Terminal Block / Weidmuller	SAK 2.5 SAK 4 SAK 6N SAK 10 SAK 16 SAK 35	IECEX KEM 06.0014U / KEMA97ATEX1798U	-50°C to +130°C (Melamine, KrG) -50°C to +80°C (Polyamide, PA 66)
Protective conductor Terminal Block / Weidmuller	EK 4 EK 10 EK 35		
Terminal Block / Weidmuller	WDU 2.5 WDU 4 WDU 6 WDU 10 WDU 16 WDU 35 WDU 50N WDU 70N	IECEX ULD 05.0008U / KEMA98ATEX1683U	-50°C to +100°C
Protective conductor Terminal Block / Weidmuller	WPE 2.5 WPE 4 WPE 6 WPE 10		



Terminal Block / Weidmuller	WDK 2.5	IECEX ULD 05.0008U / KEMA00ATEX2061U	-40°C to +80°C
	WDK 2.5V		
	WDK 2.5N		
	WDK 2.5N V		
	WDK 4N		
	WDK 4N V		
Protective conductor Terminal Block / Weidmuller	WDK 2.5DU/PE	KEMA02ATEX2114U	
	WDK 2.5N DU/PE		
	WDK 4N DU/PE		
Terminal Block / Wieland	WK 4/D 1/2U	KEMA02ATEX2114U	
	WK 4/D 2/2U		
	WK 4/D E/U		
	WK 4 E/U		
	WK 4 E/U V/B		
Protective conductor Terminal Block / Wieland	WK 4/D 2/2 SL U		
Terminal Block / Wieland	WK 2.5/U	KEMA02ATEX2114U	
	WK 4/U		
	WK 6/U		
	WK 10/U		
	WK 16/U		
	WKN 35/U		
	WKN 70/U		
	WKN 150/U		
Protective conductor Terminal Block / Wieland	WK 4 SL/U	KEMA02ATEX2114U	
	WK 6 SL/U		
	WK 10 SL/U		
	WK 16 SL/U		
	WK 35 SL/U		
	WK 70 SL/U		
Terminal Block / Weidmuller	BK 2/E	IECEX SIR 05.0035U / SIRA01ATEX3247U	-50°C to +130°C
	BK 3/E		
	BK 4/E		
	BK 6/E		
	BK 12/E		
Terminal Block / Weidmuller	MK 6	IECEX SIR 05.0037U / SIRA01ATEX3249U	-50°C to +130°C

Terminal Block / Weidmuller	AKZ 1.5	IECEX SIR 05.0038U / SIRA02ATEX3001U	-50°C to +130°C (Melamine, KrG) -50°C to +90°C (Polyamide, PA 66) -50°C to +110°C (Wemid) -50°C to +130°C (Stamin, KrS)
	AKZ 2.5		
	AKZ 4		
Protective conductor Terminal Block / Weidmuller	AKE		
Terminal Block / Weidmuller	DK 4	IECEX SIR 05.0041U / SIRA02ATEX3316U	-50°C to +90°C
	DK 4Q		
	DK 4QV		
Protective conductor Terminal Block / Weidmuller	DK 4Q / EN		
	DK 4QV / EN		
Terminal Block / Weidmuller	WFF 35	IECEX KEM 07.0053U / KEMA98ATEX1684U	-50°C to +80°C
	WFF 70		
	WFF 120		
	WFF 185		
	WFF 300		
<i>Protective conductor Secured Mantle Terminal * / WECO</i>	DFG-1-E-EN DFG-2-E-EN DFG-3-E-EN DFG-5-E-EN	PTB 03 ATEX 1117U	-20°C to +130°C
Breather Drains / Raxton	CT range	IECEX SIR 08.0127U / Sira08ATEX1288U	-30°C to +80°C (Nitrile o-ring) / IP66
Breather Drains / Raxton	CV type	IECEX SIR 09.0096U / Sira10ATEX3279U	-20°C to +40°C / IP66
Blanking elements / Redapt	PD-U and PD-E-4 type	IECEX SIR 05.0042U	PD-U -30°C to +180°C / IP66
			PD-E -20°C to +40°C (Nitrile o-ring) / IP66
Adaptors and reducers / Redapt	AD-E-4 and RD-E-4	Sira99ATEX3116U	-20°C to +40°C / IP66
Breather Drains / Redapt	DP-E range	Sira99ATEX3050U	-50°C to +85°C / IP66
Reducer and adaptors / R.Stahl	Type 8295	PTB02ATEX1067U	-55°C to +130°C / IP54 (Gas atmospheres only)



Reducer and adaptors / Raxton	Type AR and BR, and AU and AX	Sira10ATEX1226U	-20°C to +40°C / IP66
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* This terminal has a component certificate and is assessed only to EN 60079-0:2006 and EN 60079-7:2007. The terminal is only used as an earth connection facility.

Terminals can be mounted on horizontal rails, these are then in turn mounted to the base of the enclosure via either an earth continuity plate or base plate. Some terminal can be mounted either horizontal or diagonally directly to an earth continuity plate or base plate mounted to the base of the enclosure.

Various combinations of the terminals listed may be fitted within the terminal box, subject to calculation of the power dissipated within the enclosure. Power dissipated is calculated based on the actual rated currents, actual cable and terminal resistance values listed on the terminal schedule and with a cable length equal to the maximum diagonal length of the enclosure per terminal. These values are then used in the following formula:

$$\text{Power} = I^2 \times N (R_t + R_c) \text{ Watts}$$

Where:

I = Actual current through the conductor up to the maximum permitted certified de-rated current of the terminal(Amps).

N = Number of terminals

R_t = Terminal resistance (Ohms at 20°C)

R_c = Resistance of one conductor (Ohms at 20°C) when using the maximum diagonal cable length

The maximum allowed power dissipation within the range of terminal boxes is as follows:

Enclosure Type	Maximum Wattage (W)		
	Ta +40°C	Ta +55°C	Ta +65°C
GRP 80	1.5	0.9	0.5
GRP 110	1.9	1.2	0.7
OGRP 122	3.8	2.4	1.4
GRP 122	3.8	2.3	1.4
GRP 122D	4.6	2.8	1.7
GRP 160	5.7	3.5	2.1
GRP 160D	6.7	4.1	2.5
GRP 220	6.0	3.7	2.2
GRP 260	8.3	5.1	3.1
GRP 255	13.0	8.1	4.8
GRP 255D	15.1	9.4	5.6
GRP 360	9.0	5.6	3.3
GRP 4002	18.6	11.6	6.9
GRP 4002D	21.3	13.3	7.9
GRP 400	27	16.8	10.1
GRP 400D	30.362	18.9	11.3

When more than one type or size of terminal is fitted (i.e. terminals of different rated currents) then an adhesive label is fixed to the inside of the terminal box which states each type of terminal fitted with its corresponding maximum current allowed. When this optional label is fitted the current rating on the main certification plate is replaced with a ‘-‘ marking.



In addition to the power terminals at least one earth terminal is fitted of a size equal to or greater than the largest size of live terminals.

The following enclosure options are available:-

- earth continuity plates or bases may be fitted to the enclosure to provide continuity between cable glands. These are retro-fitted after the enclosure has been moulded. Earth continuity plates are fitted with anti-rotation dimples. If these dimples are not fitted then a shake proof washer or similar device must be fitted between the gland locknut and the earth continuity plate.
- a Bartec QS earth bar may optionally be fitted to the enclosure. When the QS3 earth bar is fitted this must not be used in conjunction with the BK12 terminal block and can only be used with a horizontal rail.
- internal/external M6 earth connection facilities can be fitted through any side face of the enclosure.
- Trade Agency markings can be incorporated into the certification plate, as per the relevant scheduled drawing.
- a decorative paint finish (RFS27) may be applied to the external faces of the enclosures not marked with a ' * ' above.
- an electrostatic warning label can be fitted to the enclosure at the manufactures discretion. This has to be fitted to all the boxes marked ' * ' in the table above.

16 Report Number

GB/BAS/ExTR12.0020/00

17 Specific Conditions of Use

1. All unused cable entries shall be fitted with a blanking element. The permitted component certified blanking elements for this terminal box are listed on this certificate above.
2. The end user must ensure that a minimum ingress protection of IP66 is achieved at each entry to the enclosure by use of a suitable IECEx/ATEX certified blanking element or cable entry device. The blanking element or cable entry device must be fitted with a sealing washer. If the ingress protection of the enclosure is lower than IP66, or the device fitted has a rating lower than IP66, then the overall rating of the enclosure will be restricted to the lowest rating. A minimum rating of IP54 is required for gas applications and a minimum of IP6X is required for dust applications.
3. When used in dust atmospheres any dust layers occurring shall have a maximum depth of no greater than 50mm.
4. The user may only drill entry holes into the terminal box faces and the earth continuity plate in the permitted positions verified by the manufacturer. When the earth continuity plate is drilled with a clearance hole and thus the plate is provided with no anti-rotation dimples, the end user shall be responsible for ensuring that a shake proof washer or similar device is fitted between the earth plate and locknut.
5. All terminal screws, used or unused, shall be fully tightened down by the end user.
6. The insulation of installed conductors must extend to within 1mm of the metal part of the given terminal throat, unless otherwise specified on the terminal component certificate.
7. All terminals and associated accessories i.e. cross-connectors shall be installed in accordance with the instructions of the terminal manufacturer and the terminal box.
8. Only one single or stranded conductor shall be connected to either side of any terminal fitted within the terminal box, unless otherwise indicated on the relating terminal component certificate.
9. The maximum current, voltage and dissipated power specified on the rating label must not be exceeded for the terminal box. When there is more than one type of terminal fitted the maximum current and voltage shown on the internal label given for each terminal must not be exceeded.



10. If a conductor is installed with a cross-sectional-area less than the rated cross-sectional-area for the given terminal (as shown on the terminal component certificate) then the maximum current value for the terminal shall be de-rated accordingly. Guidance should be taken from the manufacturer in this situation.

18 Essential Health and Safety Requirements

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
iLECSYS ATEX Label for GRP Terminal Boxes	1	A	13/12/11	ATEX Equipment Label for GRP Terminal Boxes
Labels GA	1	A	24/01/12	General Arrangement for Electrostatic and Entry Labels
Trade Agent ATEX Label for GRP Terminal Boxes	1	A	07/01/12	Trade Agent ATEX Label for GRP Terminal Boxes
GRP80-Equipment	1	A	24/01/12	GRP 80 Terminal Enclosure Equipment Drawing
GRP110-Equipment	1	A	24/01/12	GRP 110 Terminal Enclosure Equipment Drawing
OGRP122-Equipment	1	A	24/01/12	OGRP 122 Terminal Enclosure Equipment Drawing
GRP122-Equipment	1	A	24/01/12	GRP 122 Terminal Enclosure Equipment Drawing
GRP122-Deep Equipment	1	A	24/01/12	GRP 122 Deep Terminal Enclosure Equipment Drawing
GRP160-Equipment	1	A	24/01/12	GRP 160 Terminal Enclosure Equipment Drawing
GRP160-Deep Equipment	1	A	24/01/12	GRP 160 Deep Terminal Enclosure Equipment Drawing
GRP220-Equipment	1	A	24/01/12	GRP 220 Terminal Enclosure Equipment Drawing
GRP260-Equipment	1	A	24/01/12	GRP 260 Terminal Enclosure Equipment Drawing
GRP255-Equipment	1	A	24/01/12	GRP 255 Terminal Enclosure Equipment Drawing
GRP255-Deep Equipment	1	A	24/01/12	GRP 255 Deep Terminal Enclosure Equipment Drawing
GRP360-Equipment	1	A	24/01/12	GRP 360 Terminal Enclosure Equipment Drawing
GRP4002-Equipment	1	A	24/01/12	GRP 4002 Terminal Enclosure Equipment Drawing
GRP4002-Deep Equipment	1	A	24/01/12	GRP 4002 Deep Terminal Enclosure Equipment Drawing
GRP400-Equipment	1	A	24/01/12	GRP 400 Terminal Enclosure Equipment Drawing
GRP400-Deep Equipment	1	A	24/01/12	GRP 400 Deep Terminal Enclosure Equipment Drawing
Earth Stud GA	1	A	09/12/11	General Arrangement for the XE-1 & XE-2 Earth Studs
Earth Bar GA	1	A	09/12/11	General Arrangement for the QS & LS Earths Bars
Weidmuller SAK Terminal Schedule	1	A	25/01/12	Terminal Schedule for Weidmuller SAK Range
Weidmuller WDK Terminal Schedule	1	A	25/01/12	Terminal Schedule for Weidmuller WDK Range
Weidmuller WDU Terminal Schedule	1	A	25/01/12	Terminal Schedule for Weidmuller WDU Range



Number	Sheet	Issue	Date	Description
Weidmuller AKZ Terminal Schedule	1	A	31/03/10	Terminal Schedule for Weidmuller AKZ Range
Weidmuller BK Terminal Schedule	1	A	31/03/10	Terminal Schedule for Weidmuller BK Range
Weidmuller DK4 Terminal Schedule	1	A	31/03/10	Terminal Schedule for Weidmuller DK4 Range
Weidmuller MK6 Terminal Schedule	1	A	31/03/10	Terminal Schedule for Weidmuller MK6 Range
Weidmuller WFF Terminal Schedule	1	A	31/03/10	Terminal Schedule for Weidmuller WFF Range
Wieland WK4 Terminal Schedule	1	A	25/01/12	Terminal Schedule for Wieland WK4 Range
Wieland WK Terminal Schedule	1	A	25/01/12	Terminal Schedule for Wieland WK Range
WECO DFG Terminal Schedule	1	A	14/12/11	Terminal Schedule for WECO DFG Earth Pillars
Weidmuller Component Schedule For GRP Terminal Boxes	1	A	14/12/11	Weidmuller Component Schedules For GRP Terminal Boxes
Wieland Component Schedule - GRP	1	A	14/12/11	Wieland Component Schedules For GRP Terminal Boxes

The above drawings are common to, and held on, IECEx BAS 120014X.



1 SUPPLEMENTARY EC - TYPE EXAMINATION CERTIFICATE

**2 Equipment or Protective System Intended for use in Potentially Explosive Atmospheres
Directive 94/9/EC**

3 Supplementary EC - Type Examination Certificate Number: **Baseefa12ATEX0021X/1**

4 Equipment or Protective System: **Range of GRP Terminal Boxes**

5 Manufacturer: **iLECSYS**

6 Address: **Unit 4, Tring Industrial Estate, Upper Icknield Way, Tring,
HP23 4JX. UK**

7 This supplementary certificate extends EC – Type Examination Certificate No. Baseefa12ATEX0021X to apply to equipment or protective systems designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

This supplementary certificate shall be held with the original certificate.

This certificate may only be reproduced in its entirety, without any change, schedule included.



Baseefa Customer Reference No. **6166**

Project File No. **08/0801**

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DIRECTOR
On behalf of
Baseefa



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Schedule

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Certificate Number Baseefa12ATEX0021X/1

15 **Description of the variation to the Equipment or Protective System**

Variation 1.1

To amend 'Specific Conditions of Use' No. 3 to correct a typographical error.

16 **Report Number**

None

17 **Specific Conditions of Use**

None additional to those listed previously.

'Specific Conditions of Use' No. 3 is corrected as follows;

3. When used in dust atmospheres any dust layers occurring shall have a maximum depth of no greater than 5mm.

18 **Essential Health and Safety Requirements**

Compliance with the Essential Health and Safety Requirements is not affected by this variation.

19 **Drawings and Documents**

None.