

1 **UK-TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres**  
**UKSI 2016:1107 (as amended) – Schedule 3A, Part 1**

- 3 UK-Type Examination Certificate Number: **BAS21UKEX0672X**
- 4 Product: **K5 and K7 Series Control Centre**
- 5 Manufacturer: **Topworx Incorporated**
- 6 Address: **3300 Fern Valley Road, Louisville, Kentucky, 40213 United States of America**
- 7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- 8 SGS Baseefa, Approved Body number 1180, in accordance with Regulation 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.
- The examination and test results are recorded in confidential Report No. **21(C)0357/02**
- 9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:  
**EN IEC 60079-0: 2018 EN 60079-11: 2012 EN 60079-31: 2014**  
except in respect of those requirements listed at item 18 of the Schedule.
- 10 If the sign “X” is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.
- 11 This UK-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- 12 The marking of the product shall include the following :

⊗ See Certificate Schedule

SGS Baseefa Customer Reference No. **2191**

Project File No. **21/0357**


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**R S SINCLAIR**  
TECHNICAL MANAGER  
On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number BAS21UKEX0672X**

15 **Description of Product**

The K7 Series Control Centre comprises an aluminium or stainless steel enclosure containing up to two sets of terminal block, up to four voltage free switches or up to four certified proximity sensors in any combination and up to two solenoid valves activated by a rotary mechanism. The K5 Series Control Centre is of a similar construction to the K7 but is housed in a low profile enclosure. Both K5 & K7 versions may include an optional mechanical visual indicator. External electrical connections are made via up to four tapped holes.

Models of the equipment with a 'D' in the model number are gas and dust certified. The installation of the external connections and plugging of the unused entries in these variants must be carried out using appropriately certified IP6X cable glands and blanking plugs.

Other models of the equipment marked with a 'G' in the model number are only gas certified. The installation of the external connections and plugging of the unused entries in these variants must be carried out using appropriate cable glands and blanking plugs with a minimum ingress protection of at least IP20. These variants may also be optionally fitted with plug and socket connections fitted to the entries of the enclosure.

The following tables list the markings and parameters of the model covered by the certificate: -

**Models of the Gas & Dust Certified Rotary Drive K5 & K7 Series Control Centre containing up to four voltage free (VF) contacts and two solenoid valves are designated as follows:**

**Type C-M-D/\*\* where /\*\* defines which type of solenoid is fitted (see table 1)**

No indicator or indicator  $\leq 20\text{cm}^2$  surface area

	Ex ia IIC T6 Gb (-10°C $\leq$ Ta $\leq$ +40°C)				
⊕ II 2 GD	Ex tb IIIC T85°C Db (-10°C $\leq$ Ta $\leq$ +40°C)				
VF Contacts	$U_i = 28\text{V}$	$I_i = 120\text{mA}$	$P_i = 1.3\text{W}$	$C_i = 0$	$L_i = 0$
Each Solenoid	$U_i = **\text{V}$	$I_i = ***\text{mA}$	$P_i = **\text{W}$	$C_i = **$	$L_i = **$

**Models of the Gas & Dust Certified Rotary Drive K5 & K7 Series Control Centre that contain up to four proximity sensors and two solenoid valves are designated as follows:**

**Type C-P-D/\*\* where /\*\* defines which type of solenoid is fitted (see table 1)**

No indicator or indicator  $\leq 20\text{cm}^2$  surface area

	Ex ia IIC T5 Gb (-10°C $\leq$ Ta $\leq$ +50°C)				
⊕ II 2 GD	Ex tb IIIC T100°C Db (-10°C $\leq$ Ta $\leq$ +50°C)				
	Ex ia IIC T6 Gb (-10°C $\leq$ Ta $\leq$ +40°C)				
⊕ II 2 GD	Ex tb IIIC T85°C Db (-10°C $\leq$ Ta $\leq$ +40°C)				
Each Sensor	$U_i = 15\text{V}$	$I_i = 50\text{mA}$	$P_i = 0.12\text{W}$	$C_i = 150\text{nF}$	$L_i = 550\mu\text{H}$
Each Solenoid	$U_i = **\text{V}$	$I_i = ***\text{mA}$	$P_i = **\text{W}$	$C_i = **$	$L_i = **$

**Models of the Gas & Dust Certified Rotary Drive K5 & K7 Series Control Centre containing up to four proximity sensors NCB2-V3-N0 in the 2:1 mode (AC function), are designated as follows:**

**Type C-A-D/\*\* where /\*\* defines which type of solenoid is fitted (see table 1)**

No indicator or indicator  $\leq 20\text{cm}^2$  surface area

	Ex ia IIC T5 Gb (-10°C $\leq$ Ta $\leq$ +50°C)	
⊕ II 2 GD	Ex tb IIIC T100°C Db (-10°C $\leq$ Ta $\leq$ +50°C)	
	Ex ia IIC T6 Gb (-10°C $\leq$ Ta $\leq$ +40°C)	
⊕ II 2 GD	Ex tb IIIC T85°C Db (-10°C $\leq$ Ta $\leq$ +40°C)	

Each Sensor	$U_i = 15V$	$I_i = 50mA$	$P_i = 0.12W$	$C_i = 200nF$	$L_i = 200\mu H$
Each Solenoid	$U_i = **V$	$I_i = ***mA$	$P_i = **W$	$C_i = **$	$L_i = **$

**Models of the Gas & Dust Certified Rotary Drive K5 & K7 Series Control Centre that contain volt-free contacts, proximity sensors and two solenoid valves are designated as follows:**

**Type C-MP-D/\*\* where /\*\* defines which type of solenoid is fitted (see table 1)**

No indicator or indicator  $\leq 20cm^2$  surface area

$\langle \text{Ex} \rangle$ II 2 GD	Ex ia IIC T5 Gb (-10°C $\leq$ Ta $\leq$ +50°C)				
	Ex tb IIIC T100°C Db (-10°C $\leq$ Ta $\leq$ +50°C)				
$\langle \text{Ex} \rangle$ II 2 GD	Ex ia IIC T6 Gb (-10°C $\leq$ Ta $\leq$ +40°C)				
	Ex tb IIIC T85°C Db (-10°C $\leq$ Ta $\leq$ +40°C)				
VF Contacts	$U_i = 28V$	$I_i = 120mA$	$P_i = 1.3W$	$C_i = 0$	$L_i = 0$
Sensor	$U_i = 15V$	$I_i = 50mA$	$P_i = 0.12W$	$C_i = 150nF$	$L_i = 550\mu H$
Solenoid	$U_i = **V$	$I_i = ***mA$	$P_i = **W$	$C_i = **$	$L_i = **$

**Models of the Gas Only Certified Rotary Drive K5 & K7 Series Control Centre containing up to four voltage free (VF) contacts and two solenoid valves are designated as follows:**

**Type CC-M-G/\*\* where /\*\* defines which type of solenoid is fitted (see table 1)**

No indicator or indicator  $\leq 20cm^2$  surface area

$\langle \text{Ex} \rangle$ II 2 G	Ex ia IIC T6 Gb (-10°C $\leq$ Ta $\leq$ +40°C)				
VF Contacts	$U_i = 28V$	$I_i = 120mA$	$P_i = 1.3W$	$C_i = 0$	$L_i = 0$
Each Solenoid	$U_i = **V$	$I_i = ***mA$	$P_i = **W$	$C_i = **$	$L_i = **$

**Models of the Gas Only Certified Rotary Drive K5 & K7 Series Control Centre that contain up to four proximity sensors and two solenoid valves are designated as follows:**

**Type CC-P-G/\*\* where /\*\* defines which type of solenoid is fitted (see table 1)**

No indicator or indicator  $\leq 20cm^2$  surface area

$\langle \text{Ex} \rangle$ II 2 G	Ex ia IIC T5 Gb (-10°C $\leq$ Ta $\leq$ +50°C)				
$\langle \text{Ex} \rangle$ II 2 G	Ex ia IIC T6 Gb (-10°C $\leq$ Ta $\leq$ +40°C)				
Each Sensor	$U_i = 15V$	$I_i = 50mA$	$P_i = 0.12W$	$C_i = 150nF$	$L_i = 550\mu H$
Each Solenoid	$U_i = **V$	$I_i = ***mA$	$P_i = **W$	$C_i = **$	$L_i = **$

**Models of the Gas Only Certified Rotary Drive K5 & K7 Series Control Centre containing up to four proximity sensors NCB2-V3-N0 in the 2:1 mode (AC function), are designated as follows:**

**Type CC-A-G/\*\* where /\*\* defines which type of solenoid is fitted (see table 1)**

No indicator or indicator  $\leq 20cm^2$  surface area

$\langle \text{Ex} \rangle$ II 2 G	Ex ia IIC T5 Gb (-10°C $\leq$ Ta $\leq$ +50°C)				
$\langle \text{Ex} \rangle$ II 2 G	Ex ia IIC T6 Gb (-10°C $\leq$ Ta $\leq$ +40°C)				
Each Sensor	$U_i = 15V$	$I_i = 50mA$	$P_i = 0.12W$	$C_i = 200nF$	$L_i = 200\mu H$
Each Solenoid	$U_i = **V$	$I_i = ***mA$	$P_i = **W$	$C_i = **$	$L_i = **$

**Models of the Gas Only Certified Rotary Drive K5 & K7 Series Control Centre that contain volt-free contacts, proximity sensors and two solenoid valves are designated as follows:**

**Type CC-MP-G/\*\* where /\*\* defines which type of solenoid is fitted (see table 1)**

No indicator or indicator  $\leq 20cm^2$  surface area

$\langle \text{Ex} \rangle$ II 2 G	Ex ia IIC T5 Gb (-10°C $\leq$ Ta $\leq$ +50°C)				
$\langle \text{Ex} \rangle$ II 2 G	Ex ia IIC T6 Gb (-10°C $\leq$ Ta $\leq$ +40°C)				

VF Contacts	$U_i = 28V$	$I_i = 120mA$	$P_i = 1.3W$	$C_i = 0$	$L_i = 0$
Sensor	$U_i = 15V$	$I_i = 50mA$	$P_i = 0.12W$	$C_i = 150nF$	$L_i = 550\mu H$
Solenoid	$U_i = **V$	$I_i = ***mA$	$P_i = **W$	$C_i = **$	$L_i = **$

**Table 1 – Solenoid Types**

	$U_i$	$I_i$	$P_i$	$C_i$	$L_i$
*****/01	18V	74mA	~	0	0.5mH
*****/02	28V	37mA	~	0	0.5mH
*****/03	30V	200mA	0.9W	0	0
*****/04	16V	330mA	~	0	0
*****/05	30V	330mA	~	0	0
*****/06	16V	840mA	~	0	0
*****/07	30V	840mA	~	0	0
*****/08	28V	300mA	1.6W	0	0

**16 Report Number**

21(C)0357/02

**17 Specific Conditions of Use**

- The cable glands used as entries to the enclosure must be suitably certified cable glands to the requirements of EN IEC 60079-0: 2018, including Annex A, with a minimum IP rating of IP6X in order to comply with the requirements of EN 60079-31: 2014.
- Any unused entries must be fitted with a suitably certified blanking plug certified to the requirements of EN IEC 60079-0: 2018 with a minimum IP rating of IP6X in order to comply with the requirements of EN 60079-31: 2014.

**18 Essential Health and Safety Requirements**

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report:

Clause	Subject
13	LVD type requirements
14	Overloading of equipment (protection relays, etc.)
21 (1)	External effects
21 (2)	Aggressive substances, etc.

**19 Drawings and Documents**

Number	Sheet	Issue	Date	Description
CERT-ES-09203-1	1 of 10	AC	2023-10-05	K5L/K7L Control Centre – Ex ia Certification Label – II 2 GD
CERT-ES-09203-1	2 of 10	AC	2023-10-05	K5L/K7L Control Centre – Ex ia Certification Label – II 2 G

For a complete drawing list refer to Baseefa16ATEX0139X.  
These drawings are also common to Baseefa16ATEX0139X.