[1] **UNITED KINGDOM CONFORMITY ASSESSMENT**

UK-TYPE EXAMINATION CERTIFICATE

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

[3] UK-Type Examination Certificate No.: **UL25UKEX3017X Rev. 0**

[4] Product: **Limit Switch Boxes, SB-XP1 and SB-XP2 Series**

[5] Manufacturer: **Longvale Ltd.**

[6] Address: **Lancaster Park, Needwood, Burton On Trent, Staffordshire, DE13 9PD, United Kingdom**

[7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8] UL International (UK) Ltd, Approved Body number 0843, in accordance with Regulation 42 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 the confidential report **DK/ULD/ExTR25.0002/01.**

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

EN IEC 60079-0:2018 **EN 60079-1:2014**
EN 60079-31:2014 **EN IEC 60079-31:2024**

Except in respect of those requirements listed at section 19 of the schedule to this certificate.

[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:

Ex II 2 G Ex db IIB + H_2 T6…T4 Gb (SB-XP1 Series)

Ex II 2 G Ex db IIC T6…T4 Gb (SB-XP2 Series)

Ex II 2 D Ex tb IIIC T85°C…T135°C Db

Certification Officer
Andrew Moffat

This is to certify that the sample(s) of the Product described herein (“Certified Product”) has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the UKEx Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Regulations. The test results may not be used, in whole or in part, in any other document without UL’s prior written approval.

Date of issue: 2025-10-01

Approved Body UL International (UK) Ltd Unit 1-4 Horizon Kingsland Business Park Wade Road, Basingstoke RG24 8AH, UK
Phone : +44 (0)1256 312100

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[15] Description of Product

Limit Switchbox, SB-XP1 Series, are flameproof / dust-ignition proof enclosures containing up to four Ferro switches, up to six Reed switches, up to six mechanical switches or up to six Proximity sensors/switches, with or without optional electronic transmitter module and/or potentiometer, with terminals to connect remote mount Ex equipment. Limit switch box, SB-XP1 Series might be additionally provided with LED Indicator.

Limit switch box, SB-XP2 Series, are flameproof / dust-ignition proof enclosures containing up to four Ferro switches, up to four Reed switches, up to four mechanical switches or up to four Proximity sensors/switches, with or without optional electronic transmitter module and/or potentiometer, with terminals to connect remote mount equipment.

They are used to indicate the position of a linear or rotary valves and actuators, by means of electrical signal with optional visual indicator. They can be directly or via suitable bracketry mounted to powered / manual rotary or linear actuators or valves. The metallic enclosure of the equipment may be provided with up to four cable entries M20x1.5, M25x1.5 or 1/2" NPT, 3/4" NPT to accommodate suitable Ex certified cable entry devices.

Silicone seals provided:
IP66/IP67/IP68 (50m, 168h) in accordance with EN IEC 60079-0.

Nitrile seals provided:
IP66/IP67 in accordance with EN IEC 60079-0.

Nomenclature for type SB-XP1*:*

SB	-	XP1	-	A	3B	T1	-	MS1	2	-	9	N	G	-	M22	-	***	X000001
I	-	II	-	III	IV	V	-	VI	VII	-	VIII	IX	X	-	XI	-	XII	XIII

I- Product Series:
SB – Switch Boxes

II- Product range:
XP1 – Limit switch

III- Material:
A – Aluminum Alloy A360 / ADC3
S – 316/316L Stainless Steel
T – 317/317L Stainless Steel
D – Duplex Steel
E – Super Duplex Steel

IV- Certification:
3B – ATEX/IECEx/UKCA Ex db, tb
B2 – Dual Marking ATEX/IECEx and cULus
D* – * Alphanumeric or numeric character signifies Dual certification with other global approvals

V- Transmitter:
00 – No Transmitter fitted
T*, H*, P*, F*, X* – Transmitter type.
A*, B*, C*, D*, L* – Electronic circuit
*P – Potentiometer fitted
L or L – LED electronic module fitted.
Where * = Alphanumeric or numeric character.

VI- Switch Type

Switch Designation	Max. Quantity (per model)	Description	Electrical rating
FS*, FSE*	4	Ferro switch SPDT (Optional LFM)	3A@24V dc, 4A@110/120V ac, 2A@230/240V ac
FD*, FDE*	4	Ferro switch DPDT (Optional LFM)	1A@24V dc, 3A@110/120V ac, 1.5@230/240V ac
MS*, ME*, MK*	6	Mechanical switch SPDT	10A@36V dc, 16A@110/120V ac, 16A@230/240V ac
MSZ*, MEZ*	6	Mechanical switch SPDT (Class 2 / LVLC)	24V ac, 60V dc, 100VA max
MD*, MF*	4	Mechanical switch DPDT	10A@36V dc, 16A@110/120V ac, 16A@230/240V ac
MDZ*, MFZ*	4	Mechanical switch DPDT (Class 2 / LVLC)	24V ac, 60V dc, 100VA max

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Switch Designation	Max. Quantity (per model)	Description	Electrical rating
R1*, RD*	6	Reed switch Rhodium SPDT (Optional LFM)	240V ac/dc max,1A, 25W max
RA*, RF*	6	Reed switch Rhodium SPDT (Optional LFM)	<30V ac/dc max, 1A, 25W max
RB*, RF*	6	Reed switch Tungsten SPDT (Optional LFM)	<60V ac/dc max, 1A, 100W max
R3*, RE*	6	Reed switch Tungsten SPDT (Optional LFM)	240V ac/dc max,3.5A, 100W max
E**	6	Inductive Sensor	<30V dc, 0.5A max
F**	6	Inductive Sensor	<60V dc, 0.5A max
N**	6	Prox sensor <30V options	30V dc max, 500mA max
	6	Prox sensor <60V options	60V dc max, 250mA max
NH*	6	Proximity sensor	250V ac/dc, 0.5A max

Where * or ** may be alphanumeric or number and signifies switch type used.

VII- Switch Quantity:
1 to 6

VIII- Temperature range:
* – Alphanumeric or numeric character signifies ambient temperature range between -65°C to +120°C
N – Only for Nitrile seals -40°C to +75°C max

IX- Drive Type:
* – may be one alphanumeric or numeric character to signify external drive form

X- Indicator:
* – may be one alphanumeric or numeric character to signify indicator colour / type

XI- Conduit entry and quantity:
N1* – 1/2” NPT
N3* – 3/4” NPT
N4* – 3/4” NPT and 1/2” NPT
M2* – M20
M5* – M25
M6* – M25 and M20
where * one numeric character between 1 and 4 to show conduit type quantity.

XII- Additional options (optional, not safety relevant):
Up to three optional alphanumeric or numeric characters.
Prefix: H*, V* = Terminal up to +95°C
Prefix: W*, Z* = Terminal up to +120°C

XIII- Custom number (optional, not safety relevant):
#****** – #one optional alphanumeric character followed by up to 6 optional numeric characters for non standard product register

Nomenclature for type SB-XP2*:*

SB	-	XP2	-	A	3A	T1	-	MS1	2	-	9	N	G	-	M22	-	***	X000001
I	-	II	-	III	IV	V	-	VI	VII	-	VIII	IX	X	-	XI	-	XII	XIII

I- Product Series:
SB – Switch Boxes

II- Product range:
XP2 – Limit switch

III- Material:
A – Aluminum Alloy A360 / ADC3
S – 316/316L Stainless Steel
T – 317/317L Stainless Steel
D – Duplex Steel
E – Super Duplex Steel

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IV- Certification:

3A – ATEX/IECEx/UKCA Ex db, tb
B1 – Dual Marking ATEX/IECEx and cULus
D* – * Alphanumeric or numeric character signifies Dual certification with other global approvals

V- Transmitter:

00 – No Transmitter fitted
T*, H*, P*, F*, X* = Transmitter type
A*, B*, C*, D*, L* = Electronic circuit, except LED electronic module
*P – Potentiometer fitted.
Where * = Alphanumeric or numeric character.

VI- Switch Type:

Switch Designation	Max. Quantity (per model)	Description	Electrical rating
FS*, FSE*	4	Ferro switch SPDT (Optional LFM)	3A@24V dc, 4A@110/120V ac, 2A@230/240V ac
FD*, FDE*	4	Ferro switch DPDT (Optional LFM)	1A@24V dc, 3A@110/120V ac, 1.5@230/240V ac
MS*, ME*, MK*	4	Mechanical switch SPDT	10A@36V dc, 16A@110/120V ac, 16A@230/240V ac
MSZ*, MEZ*	4	Mechanical switch SPDT (Class 2 / LVLC)	24V ac, 60V dc, 100VA max
MD*, MF*	4	Mechanical switch DPDT	10A@36V dc, 16A@110/120V ac, 16A@230/240V ac
MDZ*, MFZ*	4	Mechanical switch DPDT (Class 2 / LVLC)	24V ac, 60V dc, 100VA max
R1*, RD*	4	Reed switch Rhodium SPDT (Optional LFM)	240V ac/dc max,1A, 25W max
RA*, RF*	4	Reed switch Rhodium SPDT (Optional LFM)	<30V ac/dc max, 1A, 25W max
RB*, RF*	4	Reed switch Tungsten SPDT (Optional LFM)	<60V ac/dc max, 1A, 100W max
R3*, RE*	4	Reed switch Tungsten SPDT (Optional LFM)	240V ac/dc max,3.5A, 100W max
E**	4	Inductive Sensor	<30V dc, 0.5A max
F**	4	Inductive Sensor	<60V dc, 0.5A max
N**	4	Prox sensor <30V options	30V dc max, 500mA max
	4	Prox sensor <60V options	60V dc max, 250mA max
NH*	4	Proximity sensor	250V ac/dc, 0.5A max

Where * or ** may be alphanumeric or number and signifies switch type reference number.

VII- Switch Quantity:

1 to 4

VIII- Temperature range:

* – Alphanumeric or numeric character signifies ambient temperature range between -65°C to +120°C
N – only for Nitrile seals -40°C to +75°C max

IX- Drive Type:

* – may be one alphanumeric or numeric character to signify external drive form

X- Indicator:

* – may be one alphanumeric or numeric character to signify indicator colour / type

XI- Conduit entry:

N1* – 1/2" NPT
N3* – 3/4" NPT
N4* – 3/4" NPT and 1/2" NPT
M2* – M20
M5* – M25
M6* – M25 and M20
X** – Any combination of the above (NPT and Metric entries).

where * one numeric character between 1 and 4 to show conduit type quantity.

XII- Additional options (optional, not safety relevant):
Up to three optional alphanumeric or numeric characters.
Prefix: H*, V* = Terminal up to +95°C
Prefix: W*, Z* = Terminal up to +120°C

XIII- Custom number (optional, not safety relevant):
#****** – #one optional alphanumeric character followed by up to 6 optional numeric characters for non standard product register

Performance testing
The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is covered in this certificate based on Exception 2) to the scope of EN 60079-28:2015.

Temperature range
The relationship between ambient temperature range, current rating and temperature class / Maximum surface temperature / T cable is as follows:

Model	Max. Current	Type of seal	Min. Ambient	Max. Ambient	T code / Max. Surface Temp.	T Cable
SB-XP1	10A	Silicone	-65°C	+79°C	T6 / T85°C	80°C
				+94°C	T5 / T100°C	95°C
				+120°C	T4 / T135°C	121°C
	15A			+79°C	T6 / T85°C	81°C
				+94°C	T5 / T100°C	96°C
				+120°C	T4 / T135°C	122°C
	20A			+76°C	T6 / T85°C	79°C
				+91°C	T5 / T100°C	94°C
				+120°C	T4 / T135°C	123°C
SB-XP2	10A	Silicone	-65°C	79°C	T6 / T85°C	79°C
				94°C	T5 / T100°C	94°C
				120°C	T4 / T135°C	120°C
	15A			79°C	T6 / T85°C	80°C
				94°C	T5 / T100°C	95°C
				120°C	T4 / T135°C	121°C
	20A			76°C	T6 / T85°C	81°C
				91°C	T5 / T100°C	96°C
				120°C	T4 / T135°C	125°C

Model	Max. Current	Type of seal	Min. Ambient	Max. Ambient	T code / Max. Surface Temp.	T Cable
SB-XP1	10A	Nitrile	-40°C	+75°C	T6 / T85°C	76°C
				+75°C	T5 / T100°C	76°C
				+75°C	T4 / T135°C	76°C
	15A			+75°C	T6 / T85°C	77°C
				+75°C	T5 / T100°C	77°C
				+75°C	T4 / T135°C	77°C
	20A			+75°C	T6 / T85°C	78°C
				+75°C	T5 / T100°C	78°C
				+75°C	T4 / T135°C	78°C
SB-XP2	10A	Nitrile	-40°C	+75°C	T6 / T85°C	75°C
				+75°C	T5 / T100°C	75°C
				+75°C	T4 / T135°C	75°C
	15A			+75°C	T6 / T85°C	76°C
				+75°C	T5 / T100°C	76°C
				+75°C	T4 / T135°C	76°C
	20A			+75°C	T6 / T85°C	80°C
				+75°C	T5 / T100°C	80°C
				+75°C	T4 / T135°C	80°C

Electrical data
0-250V dc, 0.01-20A
0-250V ac, 0.01-20A

Routine tests
Routine tests according to EN 60079-1 cl. 16 are not required, as the enclosures have been successfully tested at four times the reference pressure.

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[16] Test Report No. (associated with this certificate issue)
The test report no. is provided under item no. [8] on page 1 of this UK-Type Examination Certificate.

[17] Specific conditions of use:
- Flameproof joints are not intended to be repaired.
- Ambient temperature and Surface temperature – See installation instructions.
- Take care to prevent accumulation of electrostatic charges. See installation instructions.
- Use reduced shank fasteners with property A4 Class 80, M8x1.25p, stainless steel 316, 316L, 317L or Duplex Steel UNS S31803 or Super Duplex 254-SM0, UNS S31254.

[18] Conditions of certification:
None

[19] Essential Health and Safety Requirements (Regulations Schedule 1)
In addition to the Essential Health and Safety Requirements covered by the standards listed at item 9, all other requirements are demonstrated in the relevant reports.

The manufacturer shall inform the approved body concerning all modifications to the technical documentation as described in UKSI 2016:1107 (as amended) – Schedule 3A, Part 1.

[20] Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
XP1 certification drawing ATEX/IECEx Flameproof	SB1002 sheet 1	3	2025-06-30
XP1 certification drawing ferro switch layout	SB1002 sheet 2	2	2023-08-21
XP1 certification drawing mechanical switch layout	SB1002 sheet 3	2	2023-08-21
XP1 certification drawing ATEX/IECEx Flameproof (Reed switches)	SB1002 sheet 4	2	2023-08-21
XP1 certification drawing ATEX/IECEx Flameproof (Proximity sensor)	SB1002 sheet 5	2	2023-08-21
XP1 certification drawing UKEX Flameproof (Label drawing)	SB1004	1	2025-09-08
XP1 certification drawing ATEX/IECEx Flameproof (LED module)	SB1002 sheet 7	2	2023-08-21
XP1 certification drawing ATEX/IECEx Flameproof (Alternate enclosure design with internal welded plate)	SB1002 sheet 8	2	2023-08-21
XP2 certification drawing ATEX/IECEx Flameproof	SB1022 sheet 1	3	2025-07-02
XP2 certification drawing ferro switch layout	SB1022 sheet 2	2	2023-08-21
XP2 certification drawing mechanical switch layout	SB1022 sheet 3	2	2023-08-21
XP2 certification drawing ATEX/IECEx Flameproof (Reed switches)	SB1022 sheet 4	2	2023-08-21
XP2 certification drawing ATEX/IECEx Flameproof (Proximity sensor)	SB1022 sheet 5	2	2023-08-21
XP2 certification drawing UKEX Flameproof (Label drawing)	SB1023	1	2025-09-08
XP2 certification drawing ATEX/IECEx Flameproof (Alternate enclosure design with internal welded plate)	SB1022 sheet 7	2	2023-08-21
UKEX Safe Use Instructions for Switchbox™ XP1 & XP2	SB1003	1A	-