

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: **BAS21UKEX0531**
4 Product: **Light Sensor Type MiniVLS**
5 Manufacturer: **Compact Instruments Limited**
6 Address: **61-65 Lever Street, Bolton, Lancashire, BL3 2AB**

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. **GB/BAS/ExTR21.0144/00**

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 60079-28: 2015

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 :

⊕ II 1 G Ex ia op is IIC T4 Ga (-20 °C ≤ Ta ≤ +40 °C)

SGS Baseefa Customer Reference No. **4099**

Project File No. **21/0345**

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R S SINCLAIR
TECHNICAL MANAGER
On behalf of SGS Baseefa Limited

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Schedule

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Certificate Number BAS21UKEX0531

15 Description of Product

The Light Sensor Type MiniVLS is an optical sensor designed to measure the speed of rotating shafts. It produces an optical beam and the reflection of the beam from a reflective surface, e.g. on a rotating shaft, is detected by a photo-transistor. Any reflections from a target will be processed by the signal conditioning, an event which is indicated by the LED on the unit and a change in voltage on the output.

The Light Sensor Type MiniVLS contains electronic components mounted on a printed circuit board (PCB). The PCB is mounted on the optical block assembly, along with an optical source and a phototransistor. Lenses at the front of the assembly focus the outgoing and incoming reflected light.

The whole assembly is housed in stainless steel tube with a sealing 'O' ring between an internal tube ridge and the lens inside. The unit is filled with epoxy potting compound.

External connections are made at the screw-locking connector which is mounted in the end cap.

The type number MiniVLS may be suffixed with various characters to signify the following variants:

MiniVLS111/ia	Threaded Body, Laser
MiniVLS211/ia	Plain Body, Laser

Terminal Parameters

Pin 1 w.r.t Pin 3	Pin 2 w.r.t Pin 3
$U_i = 6V$	$U_o = 6V$
$I_i = \text{self-limiting}$	$I_o = 12mA$
$P_i = \text{self-limiting}$	$P_o = 14mW$
$C_i = 3.2\mu F$	$C_i = \text{zero}$
$L_i = \text{zero}$	$L_i = \text{zero}$

16 Report Number

GB/BAS/ExTR21.0144/00

17 Specific Conditions of Use

None

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
1.2.7	LVD type requirements
1.2.8	Overloading of equipment (protection relays, etc.)
1.4.1	External effects
1.4.2	Aggressive substances, etc.

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
P0654	1 of 1	1.2	26/07/2021	MiniVLS Type 'ia' label details Certificate No. Baseefa15ATEX0142, IECEX BAS 15.0032
C001036	1 of 1	1.2	26-08-2015	EX MiniVLS Schematic
P0652	1 of 1	1.0	29-07-2015	MiniVLS Ex Assembly Drawing Schedule Cased
P0653	1 of 1	1.1	09/08/2016	Ex minivls pcb

The above drawings are common to Baseefa15ATEX0142, and held with, IECEX BAS 15.0032.