EU Type Examination Certificate CML 20ATEX2252X Issue 1

1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

2 Equipment **BA3101 Display Unit**

3 Manufacturer **BEKA associates Ltd.**

4 Address **Old Charlton Road, Hitchin, Herts. SG5 2DA, UK**

5 The equipment is specified in the description of this certificate and the documents to which it refers.

6 CML B.V., Chamber of Commerce No 6738671, Koopvaardijweg 32, 4906CV Oosterhout, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.

7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.

8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN IEC 60079-0:2018 EN 60079-11:2012

10 The equipment shall be marked with the following:

II 1 G D

Ex ia IIC T4 Ga

Ex ia IIIC T135°C Da

-40°C ≤ Ta ≤ +65°C

A Snowdon

A Snowdon
Certification Manager

11 Description

The BA3101 Display Unit is the heart of the Pageant system and comprises a motherboard, LCD, backlight, touch buttons, and associated electronics housed within a non-metallic enclosure.

The front face of the equipment incorporates a window for the display and buttons. The rear of the equipment contains 8 slots for the connection of up to 8, separately certified, intrinsically safe modules.

The equipment is certified for use in areas requiring equipment protection levels Ga and Da and intrinsic safety is achieved by limiting energy storage and discharge, and by connecting to other intrinsically safe equipment.

The sockets have the following intrinsic safety parameters:

SK1 (CPU interface, Slot C)			**SK2 – SK8 (I/O module, slots 1-7)**	
Barrier Power in **Terminals 39, 40**	**3V3_CPU supply** **Terminals 29, 31**	**Data Buses** **Terminals 1-14, 17-22, 24, 26, 28, 30, 32**	**Barrier Power out** **Terminals 1-4**	**Data/supply** **Terminals 21-40**
Ui = 12.4V		Ui = 4.1V		Ui = 0
Ii = 2.68A		Ii = 203mA		Ii =0
Pi = 5.44W		Pi = 208mW		Pi = 0
	Uo = 4.0V	Uo = 4.1V	Uo = 12.4V	Uo = 4.1V
	Io = 2.25A	Io = 2.5A	Io = 2.68A	Io = 2.7A
	Po = 1.06W	Po = 1.06W	Po = 5.44W	Po = 1.27W
Ci = 0	Ci = 3.40µF	Ci = 34.02µF	Ci = 0	Ci = 34.02µF
Li = 0	Li = 0	Li = 0	Li = 0	Li = 0

Variation 1

This variation introduces the following modifications to the BA3101 Display Unit:

i. Minor change to PCB layout.
ii. Component value changes.
iii. Other minor documentation updates.

12 Certificate history and evaluation reports

Issue	**Date**	**Associated report**	**Notes**
0	25 Jun 2021	R13600A/00	Issue of prime certificate
1	22 Mar 2023	R16296A/00	The introduction of variation 1

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of Manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

i. Where the product incorporates certified parts or safety critical components, the manufacturer of the product defined on this certificate shall continually monitor these parts/components for any modifications introduced by the manufacturer(s) of these constituent parts. If the manufacturer of any constituent part introduces any changes which affect the compliance of the certified product that is the subject of this certificate, the manufacturer is required to have this certificate updated.

ii. The manufacturer shall ensure that sufficient documentation is provided with the equipment pertaining to the architecture and design of the BEKA Pageant System, to permit the user to make the necessary intrinsically safe system calculations and documentation.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

i. Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore, the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. In addition, the equipment shall only be cleaned with a damp cloth.

ii. The metal bezel of the equipment shall be connected to earth via the integral earth stud.

iii. In installations requiring EPLs Da, Db, or Dc, the surface temperature assigned to this equipment shall take precedence over the surface temperature assigned to any module which may be installed within its enclosure.

iv. In installations requiring EPL Da, Db, or Dc, the equipment shall be mounted as part of an enclosure which provides a minimum degree of protection of IP5X and which meets the requirements of EN 60079-0 Clause 8.4 (material composition requirements for metallic enclosures for Group III) and/or EN 60079-0 Clause 7.4.3 (Avoidance of a build-up of electrostatic charge for Group III) as appropriate.

All cable entries into the equipment shall be made via cable glands which provide a minimum degree of protection of IP5X.

v. This equipment shall only be used as part of a BEKA Pageant System.

Certificate Annex

Certificate Number	**CML 20ATEX2252X**
Equipment	**BA3101 Display Unit**
Manufacturer	**BEKA associates Ltd.**

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
CI3101-01	1 to 33	1	25 Jun 2021	ATEX & IECEx Certification Information for BEKA BA3101 Display Unit

Issue 1

Drawing No	Sheets	Rev	Approved date	Title
CI3101-01	1 to 33	2	21 Mar 2023	ATEX & IECEx Certification Information for BEKA BA3101 Display Unit