Fiditas
explosion safety solutions

17065 · HAA
3635

EU – TYPE EXAMINATION CERTIFICATE

[1]

[2] Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU.

[3] EU-Type Examination Certificate Number: **FIDI 25 ATEX 0013X** Issue: **0**

[4] Product: **Command and control units**

Type: **Series EJB *** ***

[5] Manufacturer: **SUPERMEC Private Limited**

[6] Address: **17, Tuas Ave 20; Singapore 638828; Singapore**

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

[8] FIDITAS Ltd., Notified Body number 2829 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 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 Annex II of the Directive.

The examination and test results are recorded in confidential Report No: **FIDI 25 CR 033**

[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 60079-11:2012**
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 Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU-Type Examination Certificate relates only to the design, examination and test of the specified product in accordance with Annex III. Further requirements of the Directive apply to the manufacturing process and supply of this products. These are not covered by this certificate.

[12] The marking of the product shall include the following:

II 2G Ex db IIB T6...T4 Gb
II 2(1)G Ex db [ia Ga] IIB T6...T4 Gb
II 2G Ex db IIB+H2 T6...T4 Gb
II 2(1)G Ex db [ia Ga] IIB+H2 T6...T4 Gb
II 2D Ex tb IIIC T85°C... T135°C Db
II 2(1)D Ex tb [ia Da] IIIC T85°C... T135°C Db

Our ref.: 25.CRT.50

Date: 30.09.2025

Fiditas d.o.o. ZAGREB

FIDITAS Ltd.
Certification department
Approved:

Marino Kelava, M.E.Eng.

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

[13] **SCHEDULE**

[14] **EU - TYPE EXAMINATION CERTIFICATE No.:** **FIDI 25 ATEX 0013X**

[15] **Description of product**

The EJB *** * command and control units are equipment composed by an 'db' flameproof enclosure used to install common electrical devices such as terminals, bus bars, transformers, resistors, breakers, analogic and digital instruments, fuses, relays, ballast, PLC, electronic equipment, etc.
The flanged joint between the body and the covers are fixed with quality A2-70 or A2-80 stainless steel screws (depend on enclosure size).
The cover can be provided with round or square glass window. Enclosures are made in stainless steel or in aluminium alloy.
Units may also contain additional Ex equipment (associated apparatus) in type of protection intrinsic safety. Potential possible applications include 'ia' or 'ib' associated apparatus used to provide intrinsically safe inputs or outputs to external devices in the field.

Typical devices are shown in table below:

Type and manufacturer	Certificate number	Ambient temperature range	Ratings	Ex marking
Z-Series Shunt Zener Diode Safety Barriers Pepperl+Fuchs SE	BAS 01 ATEX 7005	-20°C to +60°C	Um = 250 V Other data depend on version (listed in certificate)	II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC
MTL7700 Series Shunt Zener Diode Barriers Eaton Electric Limited	BAS 01 ATEX 7217	-20°C to +60°C	Um = 250 V Other data depend on version (listed in certificate)	II (1)G [Ex ia Ga] IIB II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC
9002/**-***-***-** Safety barrier R. STAHL	PTB 01 ATEX 2053X	-20°C to +60°C	Um = 253 V Other data depend on version (listed in certificate)	II 3(1)G Ex ec [ia Ga] IIC T4 Gc II (1)D [Ex ia Da] IIIC
9001/**-***-***-** Safety barrier R. STAHL	PTB 01 ATEX 2088X	-20°C to +60°C	Um = 253 V Other data depend on version (listed in certificate)	II 3(1)G Ex ec [ia Ga] IIC T4 Gc II (1)D [Ex ia Da] IIIC
DIN Rail Isolator Relay Output Switch/Proximity Detector repeater type D5****, D5****-xxx G.M. International S.R.L.	BVS 10 ATEX E 113 X	-40°C to +70°C	Um = 250 V Other data depend on version (listed in certificate)	II 3(1)G Ex ec nC [ia Ga] IIC T4 Gc II (1)D [Ex ia Da] IIIC II 3(1)G Ex ec [ia Ga] IIC T4 Gc

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If the radio antenna is installed into the 'db' enclosure it shall respect the following characteristics:

Radio frequency: from 9 kHz to 60 GHz

Threshold power, effective output power of the transmitter multiplied by the antenna gain:

for Group IIB = 3,5 W;

for Group IIB+H2 = 2,0 W.

Thermal initiation time:

for Group IIB = 80 µs;

for Group IIB+H2 = 20 µs.

For pulsed radar and other transmissions where the pulses are not short compared with the thermal initiation time, the threshold energy values shall not exceed those given follow:

for Group IIB = 250 µJ;

for Group IIB+H2 = 50 µJ.

The general electrical characteristics are:

- max. nominal voltage up to 1000 V AC
- nominal frequency 0/50/60 Hz
- max. current up to 1500 A

Ingress protection:

- IP66
- IP6x if enclosure is fitted with valve UVB or UVD.

Permitted ambient temperatures are listed in the table below.

	Ambient temperature (T_a)		
	-60 °C to 60 °C / 80 °C	-40 °C to 60 °C / 80 °C	-20 °C to 60 °C/ 80 °C
EJB...A	EJB1A, EJB15A, EJB2A, EJB3A, EJB3LA, EJB35A, EJB35LA, EJB4A, EJB4LA, EJB45A, EJB45LA, EJB5A, EJB5LA, EJB55A, EJB55LA, EJB11A, EJB151A, EJB21A, EJB31A, EJB31LA, EJB351A, EJB351LA, EJB41A, EJB41LA, EJB451A, EJB451LA, EJB51A, EJB51LA	All models	All models
EJB...S	EJB1S, EJB15S, EJB2S, EJB3S, EJB3LS, EJB35S, EJB35LS, EJB4S, EJB4LS, EJB45S, EJB45LS, EJB5S, EJB5LS, EJB55S, EJB55LS, EJB6S, EJB6LS, EJB65S, EJB65LS, EJB7S, EJB7LS, EJB11S, EJB151S, EJB21S, EJB31S, EJB31LS, EJB351S, EJB351LS, EJB41S, EJB41LS, EJB451S, EJB451LS, EJB51S, EJB51LS, EJB551S, EJB551LS, EJB61S, EJB61LS	All models	All models
EJB...AS	-	All models	All models

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- Command and control units intended for gas group IIB can have a maximum ambient temperature of 80°C.
- Command and control units intended for gas group IIB+H2 have a maximum ambient temperature of 60 °C.
- Command and control units with plastic activators are suitable for minimum ambient temperature ≥ -40°C.
- Command and control units with glass window are applicable to units intended for temperature classes T6 and T5 only.
- Sizes EJB 5, EJB 5L, EJB 55, EJB 55L, EJB 6, EJB 6L, EJB 65, EJB 65L, EJB 7, EJB 7L, EJB 41, EJB 451, EJB 451L, EJB51, EJB 51L, EJB 551, EJB 551L, EJB 61 and EJB 61L of command and control units with glass window are suitable for minimum ambient temperature ≥-40°C only.

Identification marking/code:

EJB (1) (2)
- (2): Material: **A** – aluminium alloy; **S** – stainless steel; **AS** - aluminium, stainless steel cover
- (1): Dimensions mark - dimensions according to tables below

Rectangular sizes

Code	Overall dimensions [mm]		
	A (length)	B (width)	C (height)
EJB 1 (2)	300	230	200
EJB 15 (2)	340	250	210
EJB 2 (2)	380	270	210
EJB 3 (2)	390	300	260
EJB 3L (2)	390	300	200
EJB 35 (2)	430	320	270
EJB 35L (2)	430	320	210
EJB 4 (2)	460	340	280
EJB 4L (2)	460	340	220
EJB 45 (2)	540	380	280
EJB 45L (2)	540	380	220
EJB 5 (2)	640	460	330
EJB 5L (2)	640	460	250
EJB 55 (2)	720	540	350
EJB 55L (2)	720	540	250
EJB 6 (2)	840	640	440
EJB 6L (2)	840	640	340
EJB 65 (2)	920	680	445
EJB 65L (2)	920	680	345
EJB 7 (2)	1000	700	445
EJB 7L (2)	1000	700	345
EJB 8 (2)	1200	850	450
EJB 8L (2)	1200	850	350

Squared sizes

Code	Overall dimensions [mm]		
	A (length)	B (width)	C (height)
EJB 11 (2)	240	240	200
EJB 151 (2)	280	280	210
EJB 21 (2)	320	320	230
EJB 31 (2)	390	390	260
EJB 31L (2)	390	390	200
EJB 351 (2)	440	440	270
EJB 351L (2)	440	440	210
EJB 41 (2)	480	480	280
EJB 4L1 (2)	480	480	220
EJB 451 (2)	560	560	280
EJB 451L (2)	560	560	220
EJB 51 (2)	640	640	330
EJB 51L (2)	640	640	250
EJB 551 (2)	720	720	350
EJB 551L (2)	720	720	250
EJB 61 (2)	820	820	440
EJB 61L (2)	820	820	340
EJB 651 (2)	900	900	445
EJB 651L (2)	900	900	345
EJB 71 (2)	980	980	450
EJB 71L (2)	980	980	350

With reference to key code: dimensions (A) (B) (C) can be decreased or increased up to 10%.

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Maximum dissipated power:

Temperature class can be different for each different configuration. It depends on ambient temperature and temperature rise related to maximum dissipated power of the internal components and the wires. The respective rating is shown on the marking plate. The determined nominal values for current and voltage are subject of the marking. Calculation of the maximum permitted dissipated power based on test report results: the temperature coefficient (K/W) were determined for each size of enclosure.
The temperature coefficient (K/W) and maximum permitted dissipated power for each size of enclosure is defined in manufacturer's documentation.

Caution and Warning labels:

- "Warning - do not open when energized".
- "Warning – Do not open when an explosive atmosphere is present".
- "Use screws of quality A2-80 according to UNI 7323 with tensile strength of at least 800 N/mm^2".
- "Use screws of quality A2-70 according to UNI 7323 with tensile strength of at least 800 N/mm^2".
- In case of boxes with capacitors: "After de-energizing, delay 15 minutes before opening".
- For equipment with temperature class T5: "Use cables suitable for temperature of 90°C".
- For equipment with temperature class T4: "Use cables suitable for temperature of 100°C" or "Use cables suitable for temperature of 130°C".
- "Warning – Potential electrostatic charging hazard – for cleaning use only a damp cloth".

[16] Confidential Report No. FIDI 25 CR 033

[16.1] Routine testing

The routine overpressure test shall be carried out on unit's enclosure with the static method (paragraph 15.2.3.2 of IEC 60079-1 standard), with:

- 11 bar on enclosures sizes EJB 1, EJB 15, EJB 2, EJB 3L, EJB 3, EJB 11, EJB 151, EJB 21 and EJB 31L for minimum ambient temperature until -20 °C.
- 12,3 bar on enclosures sizes EJB 35, EJB 35L, EJB 4, EJB 4L, EJB 45, EJB 45L, EJB 31, EJB 351, EJB 351L and EJB 4L for minimum ambient temperature until -20 °C.
- 13,9 bar on enclosures sizes EJB 5, EJB 5L, EJB 55, EJB 55L, EJB 6, EJB 6L, EJB 65, EJB 65L, EJB 7, EJB 7L, EJB 41, EJB 451, EJB 451L, EJB51, EJB 51L, EJB 551, EJB 551L, EJB 61, EJB 61L and EJB 651L for minimum ambient temperature until -20 °C
- 16,1 bar on enclosures sizes EJB 8, EJB 8L, EJB 651, EJB 71 and EJB 71L for minimum ambient temperature until -20 °C.
- 14 bar on enclosures sizes EJB 1, EJB 15, EJB 2, EJB 3L, EJB 3, EJB 11, EJB 151, EJB 21, EJB 31L EJB 35, EJB 35L, EJB 4, EJB 4L, EJB 45, EJB 45L, EJB 31, EJB 351, EJB 351L and EJB 4L for minimum ambient temperature until -40 °C.
- 14,5 bar on enclosures sizes EJB 5, EJB 5L, EJB 55, EJB 55L, EJB 6, EJB 6L, EJB 65, EJB 65L, EJB 7, EJB 7L, EJB 41, EJB 451, EJB 451L, EJB51, EJB 51L, EJB 551, EJB 551L, EJB 61, EJB 61L and EJB 651L for minimum ambient temperature until -40 °C
- 16,1 bar on enclosures sizes EJB 8, EJB 8L, EJB 651, EJB 71 and EJB 71L for minimum ambient temperature until -40 °C.
- 14 bar on enclosures sizes EJB 1, EJB 15, EJB 2, EJB 3L, EJB 3, EJB 11, EJB 151, EJB 21, EJB 31L EJB 35, EJB 35L, EJB 4, EJB 4L, EJB 45, EJB 45L, EJB 31, EJB 351, EJB 351L and EJB 4L for minimum ambient temperature until -60 °C.
- 19,5 bar on enclosures sizes EJB 5, EJB 5L, EJB 55, EJB 55L, EJB 6, EJB 6L, EJB 65, EJB 65L, EJB 7, EJB 7L, EJB 41, EJB 451, EJB 451L, EJB51, EJB 51L, EJB 551, EJB 551L, EJB 61 and EJB 61L for minimum ambient temperature until -60 °C.

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[17] Specific Conditions of Use

1) The accessories used for cable entries and for closing unused openings shall be certified according to EN IEC 60079-0, EN 60079-1 and EN 60079-31. A minimum degree of protection IP66/6X shall be guaranteed according to EN 60529 standard.
2) The flameproof joints have different values from those specified in the tables of the EN 60079-1 standard. For information regarding the dimensions of the flameproof joints contact the manufacturer.
3) The minimum distance between flameproof flanged joint of the enclosure and external obstacle shall be:
   - 20 mm for Group IIB
   - 30 mm for Group IIB+H2.
4) For equipment Group III with painted enclosure, to reduce the risk of ignition due to static discharge the equipment may only be used in area where charging mechanisms such as fast-moving particles along a surface are not present (as example: pneumatic transfer of powders).

[18] Essential Health and Safety Requirements

Covered by the conformity with harmonized standards listed under item 9

[19] Drawings and Documents

Title:	Drawing No.:	Rev. level:	Date:
Technical Note	MS-1145-4	0	29.01.2025
Technical Note Annex 1 – safety barrier data	MS-1145-4-00 Annex 1	0	29.01.2025
Safety, maintenance, mounting instructions	MS-1144-4	0	29.01.2025
Certification labels	MS-1115-3-00	0	29.01.2025
Attachment to safety instructions	MS12591-03	03	2014-10-29
EJB..A body dimensional table	MS-1100-1-00	0	29.01.2025
EJB..A cover dimensional table	MS-1101-1-00	0	29.01.2025
EJB..S body dimensional table	MS-1106-1-00	0	29.01.2025
EJB..S squared body dimensional table	MS-1116-1-00	0	29.01.2025
EJB..S cover dimensional table	MS-1107-1-00	0	29.01.2025
EJB..S squared cover dimensional table	MS-1117-1-00	0	29.01.2025
Gasket details	MS-1104-3-00	0	29.01.2025
Gasket cover	MS-1114-3-00	0	29.01.2025
Earthing connections	MS-1103-3-00	0	29.01.2025
Cover entries	MS-1110-1-00	0	29.01.2025
Installation table for electrical equipment	MS-1108-1-00	0	29.01.2025
Wall entries	MS-1109-1-00	0	29.01.2025

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Title:	Drawing No.:	Rev. level:	Date:
Glass window installation system	MS-1143-2-00	0	29.01.2025
Window on large covers	MS-1111-2-00	0	29.01.2025
Rectangular glasses dimensional table	MS-1112-3-00	0	29.01.2025
Round glasses dimensional table	MS-1113-3-00	0	29.01.2025
Earthing block/plate support	MS-1105-4-00	0	29.01.2025
Flame path dimensional table	MS-1102-3-00	0	29.01.2025
MCCB Handle – ON/OFF marking	MS-1139-3-00	0	29.01.2025
UPB universal push button complete set	MS-0120-3	0	30.06.2012
UPB spring holder	MS-0213-4-00	0	02.04.2013
UPB-UPBL spring	MS-0053-4	0	02.04.2013
UPB-UPL main body	MS-1127-3-00	0	29.01.2025
UPB bushing	MS-1141-3-00	0	29.01.2025
UPB shaft	MS-1123-4-00	0	29.01.2025
UPB shaft nut	MS-0089-4	0	02.04.2013
UPBR -60 °C push button complete set	MS-0051-3	0	30.06.2012
UPBR shaft	MS-0044-4	0	02.04.2013
UPBR metal button	MS-0045-4	0	02.04.2013
UPB2 Double push button complete set	MS-0261-3	0	30.06.2012
UPB2 bushing	MS-1140-3-00	0	29.01.2025
UPB2 shaft	MS-1142-4-00	0	29.01.2025
UPB2 spring	MS-0257-4	0	02.04.2013
UPL Pilot light unit complete set	MS-0097-3	0	30.06.2012
UPL glass holder body	MS-0099-3	0	02.04.2013
UPL internal glass	MS-1122-4-00	0	29.01.2025
UPBL Luminaire push button complete set	MS-0052-3	0	30.06.2012
UPBL body	MS-1124-3-00	0	29.01.2025
UPBL internal body	MS-1125-3-00	0	29.01.2025
UPBL cover	MS-0048-4	0	02.04.2013
UPBL glass locknut	MS-0050-4	0	02.04.2013
UPBL internal glass	MS-1126-4-00	0	29.01.2025
UHLB MCCB unit complete set	MS-0135-2	0	30.06.2012
UHLB bushing	MS-1119-4-00	0	29.01.2025
UHLB shaft	MS-1130-4-00	0	29.01.2025

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Title:	Drawing No.:	Rev. level:	Date:
UHB MCB unit complete set	MS-0136-2	0	30.06.2012
UHB bushing	MS-1118-4-00	0	29.01.2025
UHB shaft	MS-1129-4-00	0	29.01.2025
UHS RS unit	MS-0137-2	0	30.06.2012
UHS bushing	MS-1120-3-00	0	29.01.2025
UHS shaft	MS-1121-4-00	0	29.01.2025
UVD drain valve complete set	MS-1131-3-00	0	29.01.2025
UVD bushing NPT	MS-1132-4-00	0	29.01.2025
UVD bushing M16	MS-1133-4-00	0	29.01.2025
UVD shaft	MS-1134-4-00	0	29.01.2025
UVB breather valve complete set	MS-1135-3-00	0	29.01.2025
UVB bushing NPT	MS-1136-4-00	0	29.01.2025
UVB bushing M16	MS-1137-4-00	0	29.01.2025
UVB shaft	MS-1138-4-00	0	29.01.2025
Flame paths Dimensional table	MS-1128-3-00	0	29.01.2025
EJB..A squared body dimensional table	MS-1146-1-00	0	29.01.2025
EJB..A squared cover dimensional table	MS-1147-1-00	0	29.01.2025

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