IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx EXV 20.0022X**

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Certificate history:
Issue 1 (2023-05-26)
Issue 0 (2021-04-27)

Status: **Current**

Issue No: 2

Date of Issue: 2024-03-06

Applicant: **Deeter Electronics Limited**
Deeter House
Valley Road
Hughenden Valley
High Wycombe
Bucks HP14 4LW
United Kingdom

Equipment: **Deeter Zener Barrier DZB-□CH□-□□V-□□mA**

Optional accessory:

Type of Protection: **Intrinsically safe**

Marking: Marking depends on barrier type, please see annex for disambiguation.

Approved for issue on behalf of the IECEx Certification Body: **Sean Clarke CEng MSc FIET**

Position: **Certification Manager**

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

ExVeritas Limited
Units 16-18 Abenbury Way
Wrexham Ind. Est.
Wrexham LL 139UZ
United Kingdom

IECEx Certificate of Conformity

Certificate No.: **IECEx EXV 20.0022X**

Date of issue: 2024-03-06 Issue No: 2

Manufacturer: **Deeter Electronics Limited**
Deeter House
Valley Road
Hughenden Valley
High Wycombe
Bucks HP14 4LW
United Kingdom

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/EXV/ExTR20.0038/00 GB/EXV/ExTR23.0046/00 GB/EXV/ExTR24.0015/00

Quality Assessment Reports:

GB/SIR/QAR12.0004/08 GB/SIR/QAR12.0004/10

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The DZB Zener Barrier is designed for fixed installation into a DIN Rail with a rating of Um = 250 V.

The barrier has one, two, or three channels which have identical electrical parameters for Current, Voltage, and Power on each channel. There are also a select few variants which have 'mixed' channels where each of the two or three channels may have a differing electrical parameters to the alternate channels. The product types are differentiated using the following product code:

Product name: DZB-□CH□-□□V-□□mA

The product name uses the character '□' to reveal the barrier characteristics following from left to right:

□CH□ - Number of channels (Prefix is either 1, 2 or 3 and/or with the postfix 'M' indicating mixed voltages/currents on individual channels)

□□V – Potential difference (volts) per individual channel (DC) [except for mixed voltage variants]

□□mA – Current in milliamperes per individual channel [except for mixed voltage variants]

Given that each barrier has up to 3 channels, and also given the electrical characteristics the entity parameters in each case is calculated considering the channels combined. When using and installing the device the parameters must be considered in consonance with IEC 60079-11 Cl, 10.1.5.2. where:

1. The external circuit contains no combined lumped inductance 'Li' and capacitance 'Ci' greater than 1% of the values in the table below or;
2. The inductance and capacitance are distributed as in a cable or;
3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable

In all other situations e.g. the external circuit combined lumped inductance and lumped capacitance, up to 50% of each of the Lo and Co values is allowed.

Excluding the models listed below, all the models are marked as:

I (M1)	[Ex ia Ma] I
II (1)G	[Ex ia Ga] IIC
II (1)D	[Ex ia Da] IIIC

The models DZB-1CH-24V-160mA, DZB-1CH-28V-100mA, DZB-1CH-28V-125mA, DZB-1CH-36V-80mA,

DZB-1CH-36V-100mA, DZB-2CH-28V-50mA, DZB-2CH-36V-50mA, DZB-3CH-24V-50mA and DZB-3CH-28V-50mA are marked as:

[Ex ia Ma] I

[Ex ia Ga] IIB

[Ex ia Da] IIIC

The model DZB-3CH-36V-50mA is marked as:

[Ex ia Ma] I

[Ex ia Ga] IIA

1, 2, and 3 channel variants (same currents and voltages per channel), entity parameters calculated with the channels associated in parallel: See appendix for Entity Parameters.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The intrinsically safe circuits are not segregated from the ground circuit, all the limiting circuits are based on Zener barriers and therefore there is no insulation between the intrinsically safe circuits and the grounding circuit. Therefore, the barriers does not comply with the dielectric strength requirements from clause 6.3.13 of IEC 60079-11.
2. The barriers must be installed an enclosure meeting the requirements of IP20 in accordance with IEC 60529 or greater according to the intended use and environmental conditions.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
This revision has been necessary to allow the inclusion of a new enclosure material type.

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Additional information:
See Annex for Routine tests

Annex:

IECEx Certificate annex.pdf

Description continued

The DZB (Deeter Zener Barrier) is designed for fixed installation into a DIN Rail with a rating of Um = 250 V. The barrier has one, two, or three channels which have identical electrical parameters for Current, Voltage, and Power on each channel. There are also a select few variants which have 'mixed' channels where each of the two or three channels may have a differing electrical parameters to the alternate channels. The product types are differentiated using the following product code:

Product name: DZB ─ □ CH □ ─ □□V ─ □□ mA

The product name uses the character '□' to reveal the barrier characteristics following from left to right:

□ CH □	Number of channels (Prefix is either 1, 2 or 3 and/or with the postfix 'M' indicating mixed voltages/currents on individual channels)
□□ Vdc	Potential difference (Volts) per individual channel
□□ mA	Current in milliampere per individual channel

Given that each barrier has up to 3 channels, and also given the electrical characteristics the entity parameters in each case is calculated considering the channels combined. When using and installing the device the parameters must be considered in consonance with IEC 60079-11 Cl, 10.1.5.2. where:

1. The external circuit contains no combined lumped inductance 'Li' and capacitance 'Ci' greater than 1% of the values in the table below or;
2. The inductance and capacitance are distributed as in a cable or;
3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit combined lumped inductance and lumped capacitance, up to 50% of each of the Lo and Co values is allowed.

Excluding the models listed below, all the models are marked as:

Ex I (M1) [Ex ia Ma] I

Ex II (1)G [Ex ia Ga] IIC

Ex II (1)D [Ex ia Da] IIIC

The models DZB-1CH-24V-160mA, DZB-1CH-28V-100mA, DZB-1CH-28V-125mA, DZB-1CH-36V-80mA, DZB-1CH-36V-100mA, DZB-2CH-28V-50mA, DZB-2CH-36V-50mA, DZB-3CH-24V-50mA and DZB-3CH-28V-50mA are marked as:

Ex I (M1) [Ex ia Ma] I

Ex II (1)G [Ex ia Ga] IIB

Ex II (1)D [Ex ia Da] IIIC

The model DZB-3CH-36V-50mA is marked as:

Ex I (M1) [Ex ia Ma] I

Ex II (1)G [Ex ia Ga] IIA

1, 2, and 3 channel variants (same currents and voltages per channel), entity parameters calculated with the channels associated in parallel:

Table key: * = Not suitable for IIC, ** = Not suitable for IIB

ExVeritas, Units 16-18, Abenbury Way, Wrexham Industrial Estate, Wrexham, United Kingdom LL13 9UZ.

Barrier Type	Uo (V)	Io (mA)	Po (mW)	Lo/Ro (mH/Ω) IIC	Lo/Ro (mH/Ω) IIB	Lo/Ro (mH/Ω) IIA	Lo/Ro (mH/Ω) I
DZB-1CH-6V-50mA	6.3	63.64	100.24	0.35	1.41	2.83	4.65
DZB-1CH-6V-80mA	6.3	84.85	133.64	0.26	1.06	2.12	3.49
DZB-1CH-6V-100mA	6.3	102.64	161.66	0.21	0.87	1.75	2.88
DZB-1CH-6V-125mA	6.3	124.78	196.53	0.18	0.72	1.44	2.37
DZB-1CH-6V-160mA	6.3	163.18	257.01	0.13	0.55	1.1	1.81
DZB-1CH-10V-50mA	10.5	53.04	139.23	0.25	1.02	2.04	3.35
DZB-1CH-10V-80mA	10.5	85.54	224.55	0.15	0.63	1.26	2.07
DZB-1CH-10V-100mA	10.5	106.07	278.44	0.12	0.51	1.02	1.67
DZB-1CH-10V-125mA	10.5	129.35	339.55	0.1	0.41	0.83	1.37
DZB-1CH-10V-160mA	10.72	164.07	439.71	0.08	0.32	0.64	1.06
DZB-1CH-12V-50mA	12.6	57.86	182.26	0.19	0.78	1.56	2.56
DZB-1CH-12V-80mA	12.6	79.55	250.59	0.14	0.56	1.13	1.86
DZB-1CH-12V-100mA	12.6	106.07	334.13	0.1	0.42	0.85	1.39
DZB-1CH-12V-125mA	12.6	127.28	400.94	0.08	0.35	0.7	1.16
DZB-1CH-12V-160mA	12.6	163.18	514.02	0.06	0.27	0.55	0.9
DZB-1CH-18V-50mA	18.9	53.04	250.62	0.14	0.56	1.13	1.86
DZB-1CH-18V-80mA	18.9	79.55	375.88	0.09	0.37	0.75	1.24
DZB-1CH-18V-100mA	18.9	104.9	495.66	0.07	0.28	0.57	0.94
DZB-1CH-18V-125mA	18.9	127.28	601.4	0.05	0.23	0.47	0.77
DZB-1CH-18V-160mA	18.9	153.96	727.47	0.04	0.19	0.39	0.64
DZB-1CH-24V-50mA	25.2	54.16	341.21	0.1	0.41	0.83	1.36
DZB-1CH-24V-80mA	25.2	70.71	445.48	0.07	0.31	0.63	1.04
DZB-1CH-24V-100mA	25.2	106.07	668.25	0.05	0.21	0.42	0.69
DZB-1CH-24V-125mA	25.8	118.46	764.07	0.04	0.18	0.37	0.61
DZB-1CH-24V-160mA	25.8	158.91	1024.97	(*)	0.13	0.27	0.45
DZB-1CH-28V-50mA	29.4	53.04	389.85	0.09	0.36	0.72	1.19
DZB-1CH-28V-80mA	29.4	82.5	606.38	0.05	0.23	0.46	0.76
DZB-1CH-28V-100mA	31.5	106.07	835.31	(*)	0.17	0.34	0.55
DZB-1CH-28V-125mA	31.5	144.63	1138.97	(*)	0.12	0.24	0.4
DZB-1CH-36V-50mA	37.8	57.86	546.78	0.06	0.26	0.52	0.85
DZB-1CH-36V-80mA	37.8	79.55	751.75	(*)	0.18	0.37	0.62
DZB-1CH-36V-100mA	37.8	106.07	1002.37	(*)	0.14	0.28	0.46
DZB-2CH-6V-50mA	6.3	127.28	200.47	0.35	1.41	2.83	4.65
DZB-2CH-6V-80mA	6.3	169.7	267.28	0.26	1.06	2.12	3.49
DZB-2CH-6V-100mA	6.3	212.13	334.11	0.21	0.85	1.7	2.79
DZB-2CH-6V-125mA	6.3	265.16	417.63	0.17	0.68	1.36	2.23
DZB-2CH-6V-160mA	6.3	318.19	501.15	0.14	0.56	1.13	1.86
DZB-2CH-10V-50mA	10.5	106.07	278.44	0.25	1.02	2.04	3.35
DZB-2CH-10V-80mA	10.5	171.07	449.06	0.15	0.63	1.26	2.07
DZB-2CH-10V-100mA	10.5	207.97	545.93	0.13	0.52	1.04	1.7
DZB-2CH-10V-125mA	10.5	271.96	713.9	0.09	0.39	0.79	1.3
DZB-2CH-10V-160mA	10.72	328.13	879.39	0.08	0.32	0.64	1.06
DZB-2CH-12V-50mA	12.6	115.71	364.49	0.19	0.78	1.56	2.56
DZB-2CH-12V-80mA	12.6	155.22	488.95	0.14	0.58	1.16	1.9
DZB-2CH-12V-100mA	12.6	205.28	646.64	0.1	0.43	0.87	1.44
DZB-2CH-12V-125mA	12.6	249.56	786.12	0.09	0.36	0.72	1.18
DZB-2CH-18V-50mA	18.9	106.07	501.19	0.14	0.56	1.13	1.86
DZB-2CH-18V-80mA	18.9	159.1	751.75	0.09	0.37	0.75	1.24
DZB-2CH-18V-100mA	18.9	209.8	991.31	0.07	0.28	0.57	0.94
DZB-2CH-24V-50mA	25.2	106.07	668.25	0.1	0.42	0.85	1.39
DZB-2CH-28V-50mA	29.4	109.99	808.43	(*)	0.35	0.7	1.15
DZB-2CH-36V-50mA	37.8	115.71	1093.46	(*)	0.26	0.52	0.85
DZB-3CH-6V-50mA	6.3	190.91	300.69	0.35	1.41	2.83	4.65
DZB-3CH-6V-80mA	6.3	254.55	400.92	0.26	1.06	2.12	3.49
DZB-3CH-6V-100mA	6.3	318.19	501.15	0.21	0.85	1.7	2.79
DZB-3CH-6V-125mA	6.3	397.73	626.43	0.17	0.68	1.36	2.23
DZB-3CH-6V-160mA	6.3	477.28	751.72	0.14	0.56	1.13	1.86
DZB-3CH-10V-50mA	10.5	159.1	417.64	0.25	1.02	2.04	3.35
DZB-3CH-10V-80mA	10.5	256.6	673.58	0.15	0.63	1.26	2.07
DZB-3CH-10V-100mA	10.5	311.95	818.87	0.13	0.52	1.04	1.7

ExVeritas, Units 16-18, Abenbury Way, Wrexham Industrial Estate, Wrexham, United Kingdom LL13 9UZ.

Barrier Type	Uo (V)	Io (mA)	Po (mW)	Lo/Ro (mH/Ω) IIC	Lo/Ro (mH/Ω) IIB	Lo/Ro (mH/Ω) IIA	Lo/Ro (mH/Ω) I
DZB-3CH-10V-125mA	10.5	407.93	1070.82	0.09	0.39	0.79	1.3
DZB-3CH-10V-160mA	10.72	492.2	1319.1	0.08	0.32	0.64	1.06
DZB-3CH-12V-50mA	12.6	173.56	546.72	0.19	0.78	1.56	2.56
DZB-3CH-12V-80mA	12.6	232.82	733.39	0.14	0.58	1.16	1.9
DZB-3CH-12V-100mA	12.6	307.92	969.95	0.1	0.43	0.87	1.44
DZB-3CH-12V-125mA	12.6	374.34	1179.18	0.09	0.36	0.72	1.18
DZB-3CH-18V-50mA	18.9	159.1	751.75	0.14	0.56	1.13	1.86
DZB-3CH-18V-80mA	18.9	238.64	1127.58	0.09	0.37	0.75	1.24
DZB-3CH-18V-100mA	18.9	314.69	1486.92	0.07	0.28	0.57	0.94
DZB-3CH-24V-50mA	25.2	159.1	1002.33	(*)	0.42	0.85	1.39
DZB-3CH-28V-50mA	29.4	164.99	1212.68	(*)	0.35	0.7	1.15
DZB-3CH-36V-50mA	37.8	173.56	1640.15	(**)	(**)	0.52	0.85

Barrier Type	Co (µF) IIC	Co (µF) IIB	Co (µF) IIA	Co (µF) I	Lo (mH) IIC	Lo (mH) IIB	Lo (mH) IIA	Lo (mH) I
DZB-1CH-6V-50mA	31.000	720.000	1000.000	1000.000	8.77	35.11	70.23	115.22
DZB-1CH-6V-80mA	31.000	720.000	1000.000	1000.000	4.93	19.75	39.50	64.81
DZB-1CH-6V-100mA	31.000	720.000	1000.000	1000.000	3.37	13.50	27.00	44.29
DZB-1CH-6V-125mA	31.000	720.000	1000.000	1000.000	2.28	9.13	18.26	29.97
DZB-1CH-6V-160mA	31.000	720.000	1000.000	1000.000	1.33	5.34	10.68	17.52
DZB-1CH-10V-50mA	2.410	16.800	75.000	95.000	12.63	50.55	101.10	165.88
DZB-1CH-10V-80mA	2.410	16.800	75.000	95.000	4.85	19.43	38.87	63.77
DZB-1CH-10V-100mA	2.410	16.800	75.000	95.000	3.16	12.64	25.28	41.47
DZB-1CH-10V-125mA	2.410	16.800	75.000	95.000	2.12	8.50	17.00	27.89
DZB-1CH-10V-160mA	2.140	15.000	66.000	80.000	1.32	5.28	10.56	17.33
DZB-1CH-12V-50mA	1.150	7.400	27.000	32.000	10.62	42.48	84.96	139.39
DZB-1CH-12V-80mA	1.150	7.400	27.000	32.000	5.61	22.47	44.94	73.74
DZB-1CH-12V-100mA	1.150	7.400	27.000	32.000	3.16	12.64	25.28	41.47
DZB-1CH-12V-125mA	1.150	7.400	27.000	32.000	2.19	8.77	17.55	28.80
DZB-1CH-12V-160mA	1.150	7.400	27.000	32.000	1.33	5.34	10.68	17.52
DZB-1CH-18V-50mA	0.262	1.600	6.390	9.070	12.63	50.55	101.10	165.88
DZB-1CH-18V-80mA	0.262	1.600	6.390	9.070	5.61	22.47	44.94	73.74
DZB-1CH-18V-100mA	0.262	1.600	6.390	9.070	3.23	12.92	25.84	42.40
DZB-1CH-18V-125mA	0.262	1.600	6.390	9.070	2.19	8.77	17.55	28.80
DZB-1CH-18V-160mA	0.262	1.600	6.390	9.070	1.50	6.00	12.00	19.68
DZB-1CH-24V-50mA	0.107	0.820	2.900	4.800	12.12	48.48	96.97	159.09
DZB-1CH-24V-80mA	0.107	0.820	2.900	4.800	7.11	28.44	56.88	93.33
DZB-1CH-24V-100mA	0.107	0.820	2.900	4.800	3.16	12.64	25.28	41.47
DZB-1CH-24V-125mA	0.101	0.780	2.670	4.570	2.53	10.13	20.27	33.25
DZB-1CH-24V-160mA	(*)	0.780	2.670	4.570	(*)	5.63	11.26	18.48
DZB-1CH-28V-50mA	0.071	0.587	1.910	3.270	12.63	50.55	101.10	165.88
DZB-1CH-28V-80mA	0.071	0.587	1.910	3.270	5.22	20.89	41.79	68.56
DZB-1CH-28V-100mA	(*)	0.497	1.620	2.810	(*)	12.64	25.28	41.47
DZB-1CH-28V-125mA	(*)	0.497	1.620	2.810	(*)	6.79	13.59	22.30
DZB-1CH-36V-50mA	0.037	0.339	1.070	1.930	10.62	42.48	84.96	139.39
DZB-1CH-36V-80mA	(*)	0.339	1.070	1.930	(*)	22.47	44.94	73.74
DZB-1CH-36V-100mA	(*)	0.339	1.070	1.930	(*)	12.64	25.28	41.47
DZB-2CH-6V-50mA	31.000	720.000	1000.000	1000.000	2.19	8.77	17.55	28.80
DZB-2CH-6V-80mA	31.000	720.000	1000.000	1000.000	1.23	4.93	9.87	16.20
DZB-2CH-6V-100mA	31.000	720.000	1000.000	1000.000	0.79	3.16	6.32	10.37
DZB-2CH-6V-125mA	31.000	720.000	1000.000	1000.000	0.50	2.02	4.04	6.63
DZB-2CH-6V-160mA	31.000	720.000	1000.000	1000.000	0.35	1.40	2.80	4.60
DZB-2CH-10V-50mA	2.410	16.800	75.000	95.000	3.16	12.64	25.28	41.47
DZB-2CH-10V-80mA	2.410	16.800	75.000	95.000	1.21	4.85	9.71	15.94
DZB-2CH-10V-100mA	2.410	16.800	75.000	95.000	0.82	3.28	6.57	10.78
DZB-2CH-10V-125mA	2.410	16.800	75.000	95.000	0.48	1.92	3.84	6.30
DZB-2CH-10V-160mA	2.140	15.000	66.000	80.000	0.33	1.32	2.64	4.33
DZB-2CH-12V-50mA	1.150	7.400	27.000	32.000	2.65	10.62	21.24	34.85
DZB-2CH-12V-80mA	1.150	7.400	27.000	32.000	1.47	5.90	11.80	19.36

Barrier Type	Co (µF) IIC	Co (µF) IIB	Co (µF) IIA	Co (µF) I	Lo (mH) IIC	Lo (mH) IIB	Lo (mH) IIA	Lo (mH) I
DZB-2CH-12V-100mA	1.150	7.400	27.000	32.000	0.84	3.37	6.75	11.07
DZB-2CH-12V-125mA	1.150	7.400	27.000	32.000	0.57	2.28	4.56	7.49
DZB-2CH-18V-50mA	0.262	1.600	6.390	9.070	3.16	12.64	25.28	41.47
DZB-2CH-18V-80mA	0.262	1.600	6.390	9.070	1.40	5.61	11.23	18.43
DZB-2CH-18V-100mA	0.262	1.600	6.390	9.070	0.80	3.23	6.46	10.60
DZB-2CH-24V-50mA	0.107	0.820	2.900	4.800	3.16	12.64	25.28	41.47
DZB-2CH-28V-50mA	(*)	0.587	1.910	3.270	(*)	11.75	23.51	38.57
DZB-2CH-36V-50mA	(*)	0.339	1.070	1.930	(*)	10.62	21.24	34.85
DZB-3CH-6V-50mA	31.000	720.000	1000.000	1000.000	0.97	3.90	7.80	12.80
DZB-3CH-6V-80mA	31.000	720.000	1000.000	1000.000	0.54	2.19	4.38	7.20
DZB-3CH-6V-100mA	31.000	720.000	1000.000	1000.000	0.35	1.40	2.80	4.60
DZB-3CH-6V-125mA	31.000	720.000	1000.000	1000.000	0.22	0.89	1.79	2.95
DZB-3CH-6V-160mA	31.000	720.000	1000.000	1000.000	0.15	0.62	1.24	2.04
DZB-3CH-10V-50mA	2.410	16.800	75.000	95.000	1.40	5.61	11.23	18.43
DZB-3CH-10V-80mA	2.410	16.800	75.000	95.000	0.54	2.16	4.32	7.08
DZB-3CH-10V-100mA	2.410	16.800	75.000	95.000	0.36	1.46	2.92	4.79
DZB-3CH-10V-125mA	2.410	16.800	75.000	95.000	0.21	0.85	1.70	2.80
DZB-3CH-10V-160mA	2.140	15.000	66.000	80.000	0.14	0.58	1.17	1.92
DZB-3CH-12V-50mA	1.150	7.400	27.000	32.000	1.18	4.72	9.44	15.49
DZB-3CH-12V-80mA	1.150	7.400	27.000	32.000	0.65	2.62	5.24	8.60
DZB-3CH-12V-100mA	1.150	7.400	27.000	32.000	0.37	1.50	3.00	4.92
DZB-3CH-12V-125mA	1.150	7.400	27.000	32.000	0.25	1.01	2.02	3.33
DZB-3CH-18V-50mA	0.262	1.600	6.390	9.070	1.40	5.61	11.23	18.43
DZB-3CH-18V-80mA	0.262	1.600	6.390	9.070	0.62	2.49	4.99	8.19
DZB-3CH-18V-100mA	0.262	1.600	6.390	9.070	0.35	1.43	2.87	4.71
DZB-3CH-24V-50mA	(*)	0.820	2.900	4.800	(*)	5.61	11.23	18.43
DZB-3CH-28V-50mA	(*)	0.587	1.910	3.270	(*)	5.22	10.44	17.14
DZB-3CH-36V-50mA	(**)	(**)	1.070	1.930	(**)	(**)	9.44	15.49

Barrier Type	Uo (V)	Io (mA)	Po (mW)	Lo/Ro (mH/Ω) IIC	Lo/Ro (mH/Ω) IIB	Lo/Ro (mH/Ω) IIA	Lo/Ro (mH/Ω) I
DZB-2CHM-24/5-4/20	25.2	151.19	952.5	0.018	0.071	0.142	0.233
DZB-2CHM-24/5	25.2	108.32	682.4	0.048	0.193	0.387	0.635
DZB-2CHM-24/10	25.2	110.49	696.03	0.048	0.193	0.387	0.635

Barrier Type	Co (µF) IIC	Co (µF) IIB	Co (µF) IIA	Co (µF) I	Lo (mH) IIC	Lo (mH) IIB	Lo (mH) IIA	Lo (mH) I
DZB-2CHM-24/5-4/20	0.107	0.820	2.900	4.800	1.55	6.22	12.44	20.41
DZB-2CHM-24/5	0.107	0.820	2.900	4.800	3.03	12.12	24.24	39.77
DZB-2CHM-24/10	0.107	0.820	2.900	4.800	2.91	11.65	23.3	38.23

Barrier Type	Uo (V)	Io (mA)	Po (mW)	Lo/Ro (mH/Ω) IIC	Lo/Ro (mH/Ω) IIB	Lo/Ro (mH/Ω) IIA	Lo/Ro (mH/Ω) I
DZB-3CHM-24/5/5	25.2	153.45	966.74	0.017	0.069	0.137	0.225
DZB-3CHM-24/10/10	25.2	88.39	556.82	0.056	0.224	0.448	0.735

Barrier Type	Co (µF) IIC	Co (µF) IIB	Co (µF) IIA	Co (µF) I	Lo (mH) IIC	Lo (mH) IIB	Lo (mH) IIA	Lo (mH) I
DZB-3CHM-24/5/5	0.107	0.820	2.900	4.800	1.5	6.03	12.07	19.81
DZB-3CHM-24/10/10	0.107	0.820	2.900	4.800	4.55	18.2	36.41	59.73

ExVeritas, Units 16-18, Abenbury Way, Wrexham Industrial Estate, Wrexham, United Kingdom LL13 9UZ.

Compliance drawings:

Technical Documents			
Title	Drawing	Revision	Date
Electronic schematic	LP700494	H1	22/02/2021
Printed circuit board artwork (Gerbers)	LP700494L	H1	14/08/2020
Bill of materials	BOM700494	1	24/02/2021
General assembly drawings *	D600806_1	5	01/11/2023
General assembly drawings *	D600806_2	5	01/11/2023
General assembly drawings *	D600806_3	5	01/11/2023
Instruction manual	DZB Manual	1	09/04/2021
DZB Control drawing, 1 channel 6 V, 50 mA to 160 mA versions	D600807	1	12/02/2020
DZB Control drawing, 1 channel 10 V, 50 mA to 160 mA versions	D600808	1	12/02/2020
DZB Control drawing, 1 channel 12 V, 50 mA to 160 mA versions	D600809	1	12/02/2020
DZB Control drawing, 1 channel 18 V, 50 mA to 160 mA versions	D600810	1	12/02/2020
DZB Control drawing, 1 channel 24 V, 50 mA to 125 mA versions	D600811	1	12/02/2020
DZB Control drawing, 1 channel 24 V, 160 mA only	D600812	1	12/02/2020
DZB Control drawing, 1 channel 28 V, 50 mA & 80 mA versions	D600813	1	12/02/2020
DZB Control drawing, 1 channel 28 V, 100mA & 125 mA versions	D600814	1	12/02/2020
DZB Control drawing, 1 channel 36 V, 50 mA version only	D600815	1	12/02/2020
DZB Control drawing, 1 channel 36 V, 80 mA & 100 mA versions	D600816	1	12/02/2020
DZB Control drawing, 2 channel 6 V, 50 mA to 160 mA versions	D600817	1	12/02/2020
DZB Control drawing, 2 channel 10 V, 50 mA to 160 mA versions	D600818	1	12/02/2020
DZB Control drawing, 2 channel 12 V, 50 mA to 125 mA versions	D600819	1	12/02/2020
DZB Control drawing, 2 channel, 18 V 50 mA, 80 mA & 100 mA versions	D600820	1	12/02/2020
DZB Control drawing, 2 channel, 24 V 50 mA version only	D600821	1	12/02/2020
DZB Control drawing, 2 channel, 28 V 50 mA version only	D600822	1	12/02/2020
DZB Control drawing, 2 channel 36 V 50 mA version only	D600823	1	12/02/2020
DZB Control drawing, mixed version 24V 50 mA and 5 V 40 mA	D600825	1	12/02/2020
DZB Control drawing, mixed version 24 V 50 mA and 40 mA	D600826	1	12/02/2020
DZB Control drawing, 2 channel mixed version 24 V 50 mA and 10 V 40 mA	D600827	1	12/02/2020
DZB Control drawing, 3 channel mixed version 24V / 5V / 5V, 50 mA, 40 mA,40 mA	D600828	1	12/02/2020
DZB Control drawing, 3 channel mixed version 24 V / 10V / 10V, 50 mA, 40 mA, 40mA	D600829	1	12/02/2020
DZB Control drawing, 3 channel 6 V version 50 mA, 80 mA, 100 mA, 125 mA,160 mA	D600833	1	12/02/2020
DZB Control drawing, 3 channel 10 V version 50 mA, 80 mA, 100 mA, 125 mA, 160 mA	D600834	1	12/02/2020
DZB drawing, 3 channel 12 V version 50 mA, 80 mA, 100 mA, 125 mA	D600835	1	12/02/2020
DZB Control drawing, 3 channel 18 V version 50 mA, 80 mA, 100 mA	D600836	1	12/02/2020
DZB Control drawing, 3 channel 24 V 50 mA version only	D600837	1	12/02/2020
DZB Control drawing, 3 channel 28 V 50 mA version only	D600838	1	12/02/2020
DZB Control drawing, 3 channel 36 V 50 mA version only	D600839	1	12/02/2020
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Routine Tests

A routine test shall be carried out on each completed barrier to check correct operation of each barrier component and the fuses resistance.

ExVeritas, Units 16-18, Abenbury Way, Wrexham Industrial Estate, Wrexham, United Kingdom LL13 9UZ.