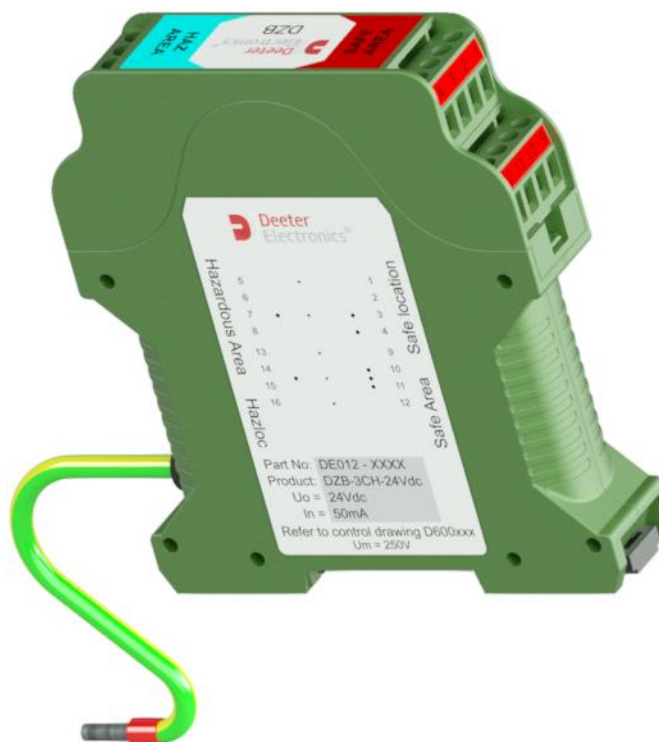


DZB Intrinsic Safety Zener Barrier

The DZB Zener Barrier is a range of Intrinsic Safety Zener Barriers for the safe application of intrinsically safe equipment in an explosive atmosphere. The DZB limits the energy transferred to the hazardous area to a safe level incapable of igniting the explosive atmosphere.



Features include:

- ATEX/ IECEx Ex ia approved
- 77 different variations
- 1, 2 and 3 channel options available

The DZB is available with 1, 2 or 3 channels, 7 reference voltages and 5 maximum current rating. Always check the product label to confirm the correct model parameters have been selected and which type of hazardous location the barrier is suitable to protect. Table 1 identifies which model is suitable for the different levels of gas, dust and mining hazards.

Safety

- 1) Installation of this product must be conducted in accordance with EN60079-14 and the control drawing identified on the product label or referenced in Table 1 below.
- 2) If the DZB is not installed according to the control drawing the safety protection may be impaired.
- 3) The green and yellow wire must be connected to a suitable ground to ensure a low resistance path to earth.

DZB Intrinsic Safety Zener Barrier

Installation:

The DZB can be installed on to a 35mm DIN-Rail or direct to a wall. The DZB may be mounted in any orientation where the screw terminals can be easily viewed for reliable connection. It is normal practice to orientate the barrier with the earth wire and hazardous area terminals below the safe area terminals. The DZB can be mounted indoors or outdoors where its environments can be controlled to ensure barrier is not operated outside the -40°C to +60°C temperature range (T_a). The DZB has an IP20 rating which requires the installation location to be protected from water and dust. Safety critical equipment should be located in a place where unauthorised access is prevented.

Direct mount: The black plastic clips on both sides of the DZB base can be pushed outwards to expose a screw hole. A click can be heard as the clip moves from DIN rail to direct mount position. The two holes can accept a 4mm or No.8 screw.

DIN Rail: With the black plastic clips on both sides of the DZB base pushed towards the enclosure's centre notch, the DZB is ready to mount onto a 35mm wide, 7.5mm high DIN Rail. Hook the one edge of a black plastic clip over the top edge of the DIN Rail before pressing the DZB case firmly towards the rail and down until the lower clip snaps over the DIN Rail. To release from the DIN Rail a small flat blade screw driver can be used to lever the black plastic clip away from the DIN Rail until the enclosure can be pulled up and off the rail.

Earth Connection: The DZB must be connected to Earth (also known as Protective Earth). The earth connection for the entire intrinsically safe circuit must not exceed 1.0 Ohm. To facilitate this low resistance connection the DZB incorporates a 4mm² green and yellow insulated earth wire. The standard DZB earth wire is 150mm long and terminated with a bootlace ferrule. This earth wire must be connected with sufficiently low resistance to 'Earth' in accordance with EN 60079-14. Additional earth wires may be connected using one or more of the earth screw terminals.

Ambient temperature: -40°C ≤ T_{amb} ≤ +60°C
Humidity: 0-95% Non-Condensing
Pollution Degree: 2
IP rating: IP20
Altitude: 5000 metres
Dimensions: Length 99mm, Width 22.5mm, Height 112mm

Special Instructions for Safe Use

The device must be installed and maintained according to EN / IEC 60079-14, EN / IEC 60079-17 and EN / IEC 60079-25.

If the device is installed with one or more additional barriers then the outputs must be galvanically separated from each other to prevent the potential association of parallel sources being connected together.

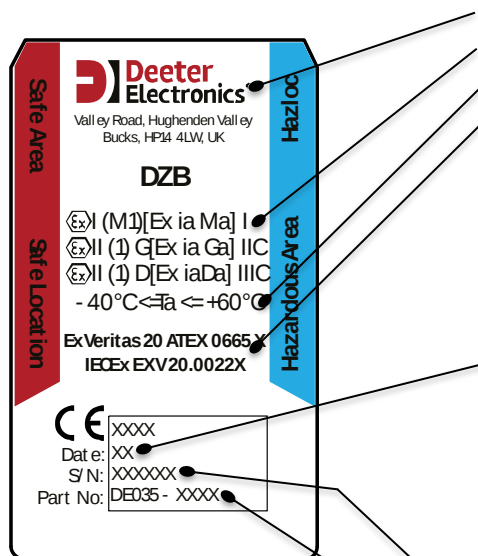
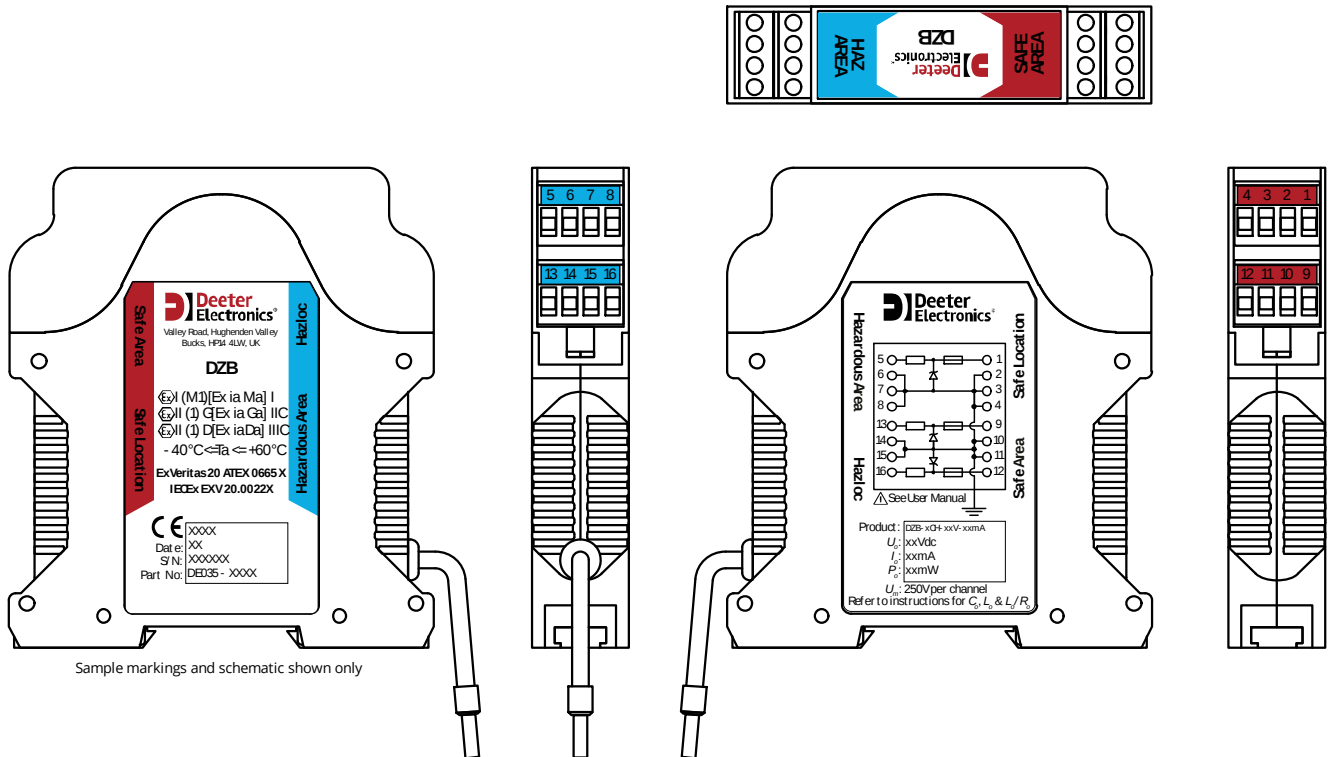
The device must only be installed in a non-hazardous area (safe area), or installed so that is covered by another type of protection (e.g. an ex 'd' enclosure).

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.

DZB Intrinsic Safety Zener Barrier

Identification:

The DZB has two side labels, one top label and four terminal labels. Both side labels have an area to display product specific information. The labels are coloured red and blue to assist in the easy identification of misplaced wires. Wires connecting the barrier to the hazardous zone must connect to the terminals on the blue side marked Hazardous Area or Hazloc.



Sample markings shown only

Manufacturers name and address

ATEX Markings (3 versions)

Ambient temperature range

Certificate No. of Ex approval

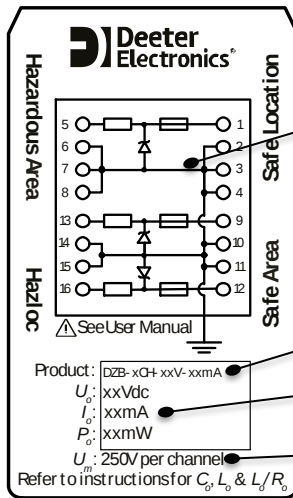
Date of manufacture*	
First letter	Second letter
A = January	U = 2020
B = February	V = 2021
C = March	W = 2022
D = April	X = 2023
E = May	Y = 2024
F = June	Z = 2025
G = July	
H = August	
I = September	
J = October	
K = November	
L = December	

*From 2026, the first letter of the date code (referencing the month of manufacture) will re-index beginning with M for January, N for February, O for March etc. The second letter (referencing the year of manufacture) will start again at A for 2026, B for 2027, C for 2028 etc.

Unique serial No.

Deeter Electronics part No.

DZB Intrinsic Safety Zener Barrier



Schematic layout (3 versions)

Product model / Ordering code. See below

Intrinsically Safe Parameters

Maximum voltage that can be applied to the 'Safe side' terminals before protection is compromised.

Sample schematic shown only

Ordering Code:

The DZB is available in single voltage and multi-voltage variants.

Single Voltage Ordering Code:

DZB- CH- V- mA

Fuse rating: 50, 80, 100, 125 or 160mA

Nominal Voltage: 6, 10, 12, 18, 24, 28 or 36Vdc

Number of channels: 1, 2 or 3

*not all combinations are available, refer to the options table for details.

Multi Voltage Ordering Codes:

DZB-2CHM-

24/5-4/20, 24/5 or 24/10

DZB-3CHM-

24/5/5 or 24/10/10

Ordering Code	Channel 1 Nominal Voltage	Channel 1 Fuse rating	Channel 2 Nominal Voltage	Channel 2 Fuse rating	Channel 3 Nominal Voltage	Channel 3 Fuse rating
DZB-2CHM-24/5-4/20	24V	50mA	5V	40mA	N/A	N/A
DZB-2CHM-24/5	24V	50mA	5V	40mA	N/A	N/A
DZB-2CHM-24/10	24V	50mA	10V	40mA	N/A	N/A
DZB-3CHM-24/5/5	24V	50mA	5V	40mA	5V	40mA
DZB-3CHM-24/10/10	24V	50mA	10V	40mA	10V	40mA

DZB Intrinsic Safety Zener Barrier

Wiring:

Refer to the Control Drawing for Entity Parameters and Hazardous Area Location.

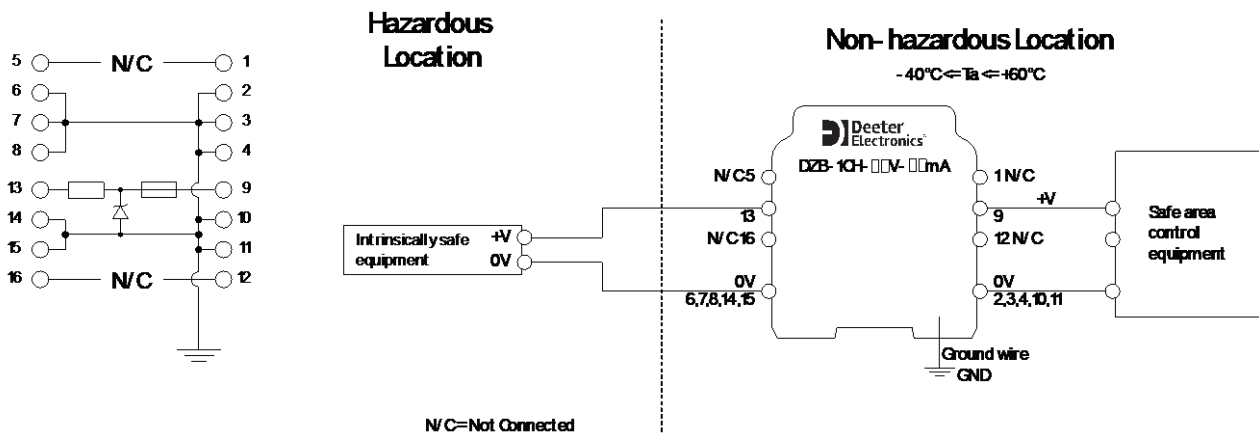
Installation must be made according to EN 60079-14

The 4mm² earth wire must be connected to a high-integrity protective earth point. It is also normal practice to include a 1.5mm² additional earth wire from one of the DZB earth screw terminals to a separate protective earth point. The earth screw terminals are 2, 3, 4, 6, 7, 8, 10, 11, 14 and 15.

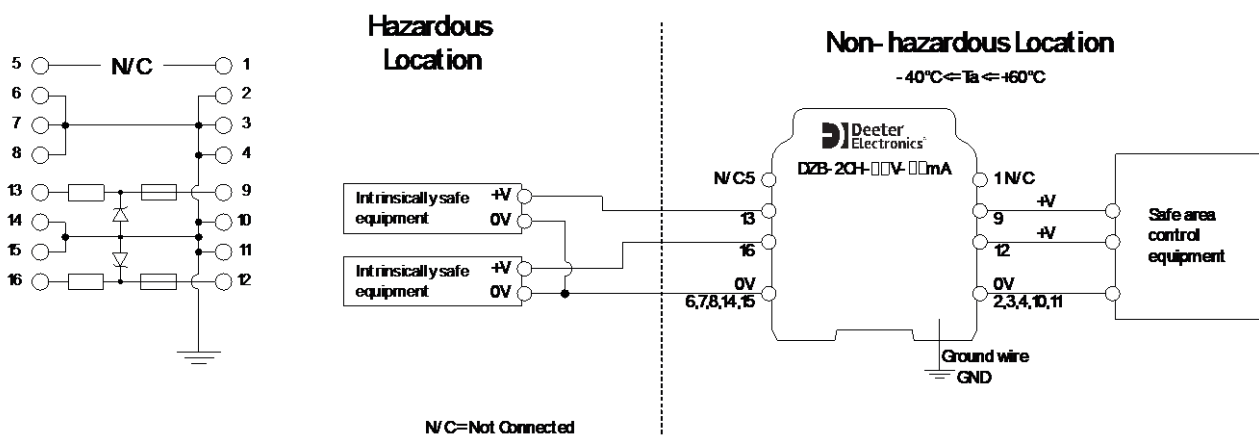
The DZB does NOT provide an earth connection through the DIN-rail mount.

The DZB has 16 rising clamp screw terminals for 1.5mm² wire (28-15 AWG)

Single channel schematic and overview diagram. Refer to associated Control Drawing for detail.

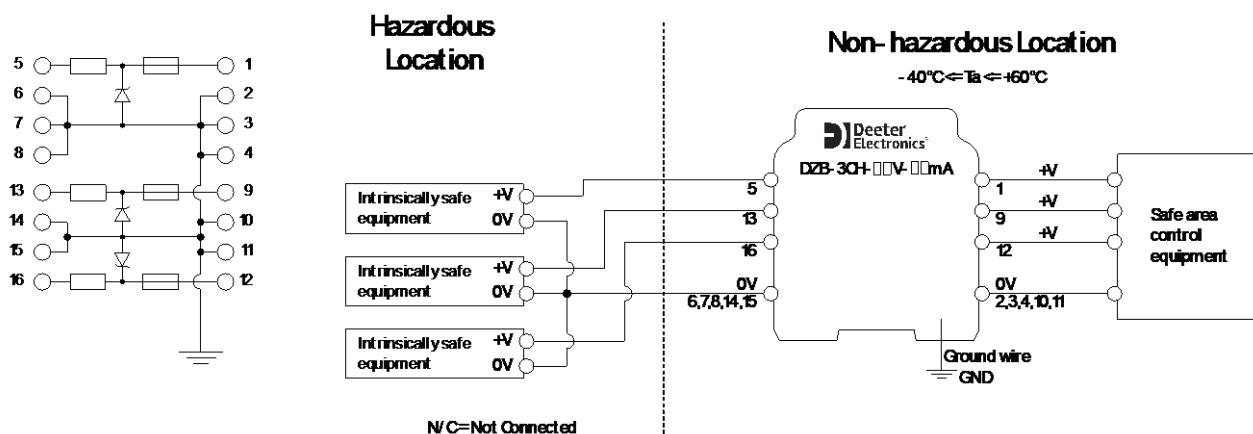


Two channel schematic and overview diagram. Refer to associated Control Drawing for detail.



DZB Intrinsic Safety Zener Barrier

Three channel schematic and overview diagram. Refer to associated Control Drawing for detail.



Servicing:

The DZB has no serviceable parts and requires no adjustments.

The DZB cannot be repaired by the user and must be replaced with an equivalent certified product.

Warning: Substitution of components is not permitted. Any attempt to open or repair this barrier will invalidate intrinsic safety.

DZB Intrinsic Safety Zener Barrier

Options table and ATEX/IECEx Markings

1 Channel						
Ordering Code	Gas/Dust Group Suitability				ATEX/IECEx marking	Control Drawing
	IIC/IIIC	IIB/IIIC	IIA	Mining (I)		
DZB-1CH-6V-50mA	✓	✓	✓	✓	Ⓔ I (M1) [Ex ia Ma] I Ⓔ II (1)G [Ex ia Ga] IIC Ⓔ II (1)D [Ex ia Da] IIIC	D600807
DZB-1CH-6V-80mA	✓	✓	✓	✓		
DZB-1CH-6V-100mA	✓	✓	✓	✓		
DZB-1CH-6V-125mA	✓	✓	✓	✓		
DZB-1CH-6V-160mA	✓	✓	✓	✓		
DZB-1CH-10V-50mA	✓	✓	✓	✓	Ⓔ I (M1) [Ex ia Ma] I Ⓔ II (1)G [Ex ia Ga] IIC Ⓔ II (1)D [Ex ia Da] IIIC	D600808
DZB-1CH-10V-80mA	✓	✓	✓	✓		
DZB-1CH-10V-100mA	✓	✓	✓	✓		
DZB-1CH-10V-125mA	✓	✓	✓	✓		
DZB-1CH-10V-160mA	✓	✓	✓	✓		
DZB-1CH-12V-50mA	✓	✓	✓	✓	Ⓔ I (M1) [Ex ia Ma] I Ⓔ II (1)G [Ex ia Ga] IIC Ⓔ II (1)D [Ex ia Da] IIIC	D600809
DZB-1CH-12V-80mA	✓	✓	✓	✓		
DZB-1CH-12V-100mA	✓	✓	✓	✓		
DZB-1CH-12V-125mA	✓	✓	✓	✓		
DZB-1CH-12V-160mA	✓	✓	✓	✓		
DZB-1CH-18V-50mA	✓	✓	✓	✓	Ⓔ I (M1) [Ex ia Ma] I Ⓔ II (1)G [Ex ia Ga] IIC Ⓔ II (1)D [Ex ia Da] IIIC	D600810
DZB-1CH-18V-80mA	✓	✓	✓	✓		
DZB-1CH-18V-100mA	✓	✓	✓	✓		
DZB-1CH-18V-125mA	✓	✓	✓	✓		
DZB-1CH-18V-160mA	✓	✓	✓	✓		
DZB-1CH-24V-50mA	✓	✓	✓	✓	Ⓔ I (M1) [Ex ia Ma] I Ⓔ II (1)G [Ex ia Ga] IIC Ⓔ II (1)D [Ex ia Da] IIIC	D600811
DZB-1CH-24V-80mA	✓	✓	✓	✓		
DZB-1CH-24V-100mA	✓	✓	✓	✓		
DZB-1CH-24V-125mA	✓	✓	✓	✓		
DZB-1CH-24V-160mA	✗	✓	✓	✓		
DZB-1CH-28V-50mA	✓	✓	✓	✓	Ⓔ I (M1) [Ex ia Ma] I Ⓔ II (1)G [Ex ia Ga] IIC Ⓔ II (1)D [Ex ia Da] IIIC	D600813
DZB-1CH-28V-80mA	✓	✓	✓	✓		
DZB-1CH-28V-100mA	✗	✓	✓	✓	Ⓔ I (M1) [Ex ia Ma] I Ⓔ II (1)G [Ex ia Ga] IIB Ⓔ II (1)D [Ex ia Da] IIIC	D600814
DZB-1CH-28V-125mA	✗	✓	✓	✓		
DZB-1CH-36V-50mA	✓	✓	✓	✓	Ⓔ I (M1) [Ex ia Ma] I Ⓔ II (1)G [Ex ia Ga] IIC Ⓔ II (1)D [Ex ia Da] IIIC	D600815
DZB-1CH-36V-80mA	✗	✓	✓	✓		
DZB-1CH-36V-100mA	✗	✓	✓	✓		

DZB Intrinsic Safety Zener Barrier

2 Channel						
Ordering Code	Gas/Dust Group Suitability				ATEX/IECEEx marking	Control Drawing
	IIC/IIIC	IIB/IIIC	IIA	Mining (I)		
DZB-2CH-6V-50mA	✓	✓	✓	✓	I (M1) [Ex ia Ma] I II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC	D600817
DZB-2CH-6V-80mA	✓	✓	✓	✓		
DZB-2CH-6V-100mA	✓	✓	✓	✓		
DZB-2CH-6V-125mA	✓	✓	✓	✓		
DZB-2CH-6V-160mA	✓	✓	✓	✓		
DZB-2CH-10V-50mA	✓	✓	✓	✓	I (M1) [Ex ia Ma] I II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC	D600818
DZB-2CH-10V-80mA	✓	✓	✓	✓		
DZB-2CH-10V-100mA	✓	✓	✓	✓		
DZB-2CH-10V-125mA	✓	✓	✓	✓		
DZB-2CH-10V-160mA	✓	✓	✓	✓		
DZB-2CH-12V-50mA	✓	✓	✓	✓	I (M1) [Ex ia Ma] I II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC	D600819
DZB-2CH-12V-80mA	✓	✓	✓	✓		
DZB-2CH-12V-100mA	✓	✓	✓	✓		
DZB-2CH-12V-125mA	✓	✓	✓	✓		
DZB-2CH-18V-50mA	✓	✓	✓	✓	I (M1) [Ex ia Ma] I II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC	D600820
DZB-2CH-18V-80mA	✓	✓	✓	✓		
DZB-2CH-18V-100mA	✓	✓	✓	✓		
DZB-2CH-24V-50mA	✓	✓	✓	✓	I (M1) [Ex ia Ma] I II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC	D600821
DZB-2CH-28V-50mA	✗	✓	✓	✓	I (M1) [Ex ia Ma] I II (1)G [Ex ia Ga] IIB II (1)D [Ex ia Da] IIIC	D600822
DZB-2CH-36V-50mA	✗	✓	✓	✓	I (M1) [Ex ia Ma] I II (1)G [Ex ia Ga] IIB II (1)D [Ex ia Da] IIIC	D600823

2 Channel Mixed Voltage						
Ordering Code	Gas/Dust Group Suitability				ATEX/IECEEx marking	Control Drawing
	IIC/IIIC	IIB/IIIC	IIA	Mining (I)		
DZB-2CHM-24/5-4/20	✓	✓	✓	✓	I (M1) [Ex ia Ma] I II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC	D600825
DZB-2CHM-24/5	✓	✓	✓	✓	I (M1) [Ex ia Ma] I II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC	D600826
DZB-2CHM-24/10	✓	✓	✓	✓	I (M1) [Ex ia Ma] I II (1)G [Ex ia Ga] IIC II (1)D [Ex ia Da] IIIC	D600827

DZB Intrinsic Safety Zener Barrier

3 Channel						
Ordering Code	Gas/Dust Group Suitability				ATEX/IECEX marking	Control Drawing
	IIC/IIIC	IIB/IIIC	IIA	Mining (I)		
DZB-3CH-6V-50mA	✓	✓	✓	✓	 I (M1) [Ex ia Ma] I  II (1)G [Ex ia Ga] IIC  II (1)D [Ex ia Da] IIIC	D600833
DZB-3CH-6V-80mA	✓	✓	✓	✓		
DZB-3CH-6V-100mA	✓	✓	✓	✓		
DZB-3CH-6V-125mA	✓	✓	✓	✓		
DZB-3CH-6V-160mA	✓	✓	✓	✓		
DZB-3CH-10V-50mA	✓	✓	✓	✓	 I (M1) [Ex ia Ma] I  II (1)G [Ex ia Ga] IIC  II (1)D [Ex ia Da] IIIC	D600834
DZB-3CH-10V-80mA	✓	✓	✓	✓		
DZB-3CH-10V-100mA	✓	✓	✓	✓		
DZB-3CH-10V-125mA	✓	✓	✓	✓		
DZB-3CH-10V-160mA	✓	✓	✓	✓		
DZB-3CH-12V-50mA	✓	✓	✓	✓	 I (M1) [Ex ia Ma] I  II (1)G [Ex ia Ga] IIC  II (1)D [Ex ia Da] IIIC	D600835
DZB-3CH-12V-80mA	✓	✓	✓	✓		
DZB-3CH-12V-100mA	✓	✓	✓	✓		
DZB-3CH-12V-125mA	✓	✓	✓	✓		
DZB-3CH-18V-50mA	✓	✓	✓	✓	 I (M1) [Ex ia Ma] I  II (1)G [Ex ia Ga] IIC  II (1)D [Ex ia Da] IIIC	D600836
DZB-3CH-18V-80mA	✓	✓	✓	✓		
DZB-3CH-18V-100mA	✓	✓	✓	✓		
DZB-3CH-24V-50mA	✗	✓	✓	✓	 I (M1) [Ex ia Ma] I  II (1)G [Ex ia Ga] IIB  II (1)D [Ex ia Da] IIIC	D600837
DZB-3CH-28V-50mA	✗	✓	✓	✓	 I (M1) [Ex ia Ma] I  II (1)G [Ex ia Ga] IIB  II (1)D [Ex ia Da] IIIC	D600838
DZB-3CH-36V-50mA	✗	✗	✓	✓	 I (M1) [Ex ia Ma] I  II (1)G [Ex ia Ga] IIA	D600839

3 Channel Mixed Voltage						
Ordering Code	Gas/Dust Group Suitability				ATEX/IECEX marking	Control Drawing
	IIC/IIIC	IIB/IIIC	IIA	Mining (I)		
DZB-3CHM-24/5/5	✓	✓	✓	✓	 I (M1) [Ex ia Ma] I  II (1)G [Ex ia Ga] IIC  II (1)D [Ex ia Da] IIIC	D600828
DZB-3CHM-24/10/10	✓	✓	✓	✓	 I (M1) [Ex ia Ma] I  II (1)G [Ex ia Ga] IIC  II (1)D [Ex ia Da] IIIC	D600829

DZB Intrinsic Safety Zener Barrier

Dimensions	99mm x 22.5mm x 112mm
Weight	290g (approx.)
Housing Material	PA66 (UL94-V0)
Connections	Rising clamp screw terminals for 1.5mm ² wire (28 to 15 AWG)
Mounting	Top hat 35mm DIN rail
Ambient Temperature	Ta = -40°C to +60°C
ATEX Certificate	ExVeritas 20 ATEX 0665 X
IECEX Certificate	IECEX EXV 20.0022X
ATEX Standards	EN 60079-0:2018 EN 60079-11:2012
IECEX Standards	IEC 60079-0:2017 IEC 60079-11:2011

1 EU - Type Examination Certificate

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

3 Certificate Number: ExVeritas 20ATEX0665X Issue: 1

4 Equipment: Deeter Zener Barrier

5 Manufacturer: Deeter Electronics

6 Address: Deeter House, Valley Road, Hughenden Valley, Bucks, HP14 4LW, UK

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

8 ExVeritas, Notified Body number 2804 in accordance with Article 17 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems for use in potentially explosive atmospheres given in Annex II to the Directive

9 Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with the following Standards and section 16 of this certificate:

EN IEC 60079-0: 2018

EN 60079-11:2012

10 If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design, construction, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment shall be marked according to the markings listed in part 13.

Schedule

13 Description of Equipment or Protective System

The DZB (Deeter Zener Barrier) is designed for fixed installation into a DIN Rail with a rating of $U_m = 250\text{ V}$. 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 [Voltage] in volts per individual channel

□□mA – Current in milliamperes 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 L_o and C_o 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:

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

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

 I (M1) [Ex ia Ma] I
 II (1)G [Ex ia Ga] IIA

Certificate: ExVeritas 20ATEX0665X

Issue 1

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

For help or assistance relating to this certificate, contact info@exveritas.com.

ExVeritas ApS, Severinsmindevej 6, 4420 Regstrup, Denmark.

ExVeritas® is a registered trademark, unauthorised use will lead to prosecution.

Schedule

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

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

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Schedule

Barrier Type	U _o (V)	I _o (mA)	P _o (mW)	Lo/Ro (mH/Ω) IIC	Lo/Ro (mH/Ω) IIB	Lo/Ro (mH/Ω) IIA	Lo/Ro (mH/Ω) I
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
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

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Schedule

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-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
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

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Schedule

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-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

Mixed variants (different currents and potentials per channel)

Barrier Type	U ₀ (V)	I ₀ (mA)	P ₀ (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	U ₀ (V)	I ₀ (mA)	P ₀ (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

14 Descriptive Documents

14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment
R2595/A/1	27/04/2021	0	Initial issue of the Prime Certificate
R4537/A/1	21/04/2023	1	Updated to include new enclosure material

14.2 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

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Technical Documents			
Title	Drawing	Revision	Date
Bill of materials	BOM700494	1	24/02/2021
General assembly drawings *	D600806_1	4	12/02/2020
General assembly drawings *	D600806_2	4	12/02/2020
General assembly drawings *	D600806_3	4	12/02/2020
General assembly drawings *	D600806_4	4	12/02/2020
Instruction manual	DZB Manual	1	09/04/2021
DBZ Control drawing, 1 channel 6 V, 50 mA to 160 mA versions	D600807	1	12/02/2020
DBZ Control drawing, 1 channel 10 V, 50 mA to 160 mA versions	D600808	1	12/02/2020
DBZ Control drawing, 1 channel 12 V, 50 mA to 160 mA versions	D600809	1	12/02/2020
DBZ Control drawing, 1 channel 18 V, 50 mA to 160 mA versions	D600810	1	12/02/2020
DBZ Control drawing, 1 channel 24 V, 50 mA to 125 mA versions	D600811	1	12/02/2020
DBZ Control drawing, 1 channel 24 V, 160 mA only	D600812	1	12/02/2020
DBZ Control drawing, 1 channel 28 V, 50 mA & 80 mA versions	D600813	1	12/02/2020
DBZ Control drawing, 1 channel 28 V, 100mA & 125 mA versions	D600814	1	12/02/2020
DBZ Control drawing, 1 channel 36 V, 50 mA version only	D600815	1	12/02/2020
DBZ Control drawing, 1 channel 36 V, 80 mA & 100 mA versions	D600816	1	12/02/2020
DBZ Control drawing, 2 channel 6 V, 50 mA to 160 mA versions	D600817	1	12/02/2020
DBZ Control drawing, 2 channel 10 V, 50 mA to 160 mA versions	D600818	1	12/02/2020
DBZ Control drawing, 2 channel 12 V, 50 mA to 125 mA versions	D600819	1	12/02/2020
DBZ Control drawing, 2 channel, 18 V 50 mA, 80 mA & 100 mA versions	D600820	1	12/02/2020
DBZ Control drawing, 2 channel, 24 V 50 mA version only	D600821	1	12/02/2020
DBZ Control drawing, 2 channel, 28 V 50 mA version only	D600822	1	12/02/2020
DBZ Control drawing, 2 channel 36 V 50 mA version only	D600823	1	12/02/2020
DBZ Control drawing, mixed version 24V 50 mA and 5 V 40 mA	D600825	1	12/02/2020
DBZ Control drawing, mixed version 24 V 50 mA and 40 mA	D600826	1	12/02/2020
DBZ Control drawing, 2 channel mixed version 24 V 50 mA and 10 V 40 mA	D600827	1	12/02/2020
DBZ Control drawing, 3 channel mixed version 24V / 5V / 5V, 50 mA, 40 mA, 40 mA	D600828	1	12/02/2020
DBZ Control drawing, 3 channel mixed version 24 V / 10V / 10V, 50 mA, 40 mA, 40mA	D600829	1	12/02/2020
DBZ Control drawing, 3 channel 6 V version 50 mA, 80 mA, 100 mA, 125 mA, 160 mA	D600833	1	12/02/2020
DBZ Control drawing, 3 channel 10 V version 50 mA, 80 mA, 100 mA, 125 mA, 160 mA	D600834	1	12/02/2020
DBZ drawing, 3 channel 12 V version 50 mA, 80 mA, 100 mA, 125 mA	D600835	1	12/02/2020
DBZ Control drawing, 3 channel 18 V version 50 mA, 80 mA, 100 mA	D600836	1	12/02/2020
DBZ Control drawing, 3 channel 24 V 50 mA version only	D600837	1	12/02/2020
DBZ Control drawing, 3 channel 28 V 50 mA version only	D600838	1	12/02/2020
DBZ Control drawing, 3 channel 36 V 50 mA version only	D600839	1	12/02/2020
242 Series - Declaration of Suitability for Encapsulation or Conformal Coating rev 3	N/A	3	20/12/2017

15 Conditions of Certification

15.1 Special Conditions for Safe Use

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.

Certificate: ExVeritas 20ATEX0665X

Issue 1

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Schedule

15.2 Conditions for Use (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.

16 Essential Health and Safety Requirements

Essential Health and Safety Requirements are addressed by the standards listed in section 9 and where required the report listed in section 14.1

The manufacturer shall inform the Notified Body of any modifications to the design of the product described by this schedule.

Certificate: ExVeritas 20ATEX0665X

Issue 1

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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	Page 1 of 5	<u>Certificate history:</u> Issue 0 (2021-04-27)
Status:	Current	Issue No: 1	
Date of Issue:	2023-05-26		
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:	Ex 'i'		
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**

Page 2 of 5

Date of issue: 2023-05-26

Issue No: 1

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](#)

Quality Assessment Reports:

[GB/SIR/QAR12.0004/08](#)

[GB/SIR/QAR12.0004/10](#)



IECEx Certificate of Conformity

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

Page 3 of 5

Date of issue: 2023-05-26

Issue No: 1

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 $U_m = 250\text{ V}$.

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 [Voltage] in 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 L_o and C_o 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.



IECEx Certificate of Conformity

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

Page 4 of 5

Date of issue: 2023-05-26

Issue No: 1

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

The certificate variation has been necessary in order to allow a new enclosure material to be used. The original manufacturer has changed the composition of the non-metallic materials from Nylon PA-66 to Polycarbonate and is therefore evaluated in this variation.



IECEx Certificate of Conformity

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

Page 5 of 5

Date of issue: 2023-05-26

Issue No: 1

Additional information:
See Annex for Routine tests

Annex:

[IECEx Certificate Annex.pdf](#)

Description continued

The DZB Zener Barrier is designed for fixed installation into a DIN Rail with a rating of $U_m = 250$ 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 [Voltage] in 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 L_o and C_o 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:

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

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

-  I (M1) [Ex ia Ma] I
-  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

Barrier Type	U_o (V)	I_o (mA)	P_o (mW)	L_o/R_o (mH/Ω) IIC	L_o/R_o (mH/Ω) IIB	L_o/R_o (mH/Ω) IIA	L_o/R_o (mH/Ω) I
DZB-1CH-6V-50mA	6.3	63.64	100.24	0.35	1.41	2.83	4.65

Barrier Type	U _o (V)	I _o (mA)	P _o (mW)	Lo/Ro (mH/Ω) IIC	Lo/Ro (mH/Ω) IIB	Lo/Ro (mH/Ω) IIA	Lo/Ro (mH/Ω) I
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
DZB-3CH-10V-125mA	10.5	407.93	1070.82	0.09	0.39	0.79	1.3

Barrier Type	U _o (V)	I _o (mA)	P _o (mW)	Lo/Ro (mH/Ω) IIC	Lo/Ro (mH/Ω) IIB	Lo/Ro (mH/Ω) IIA	Lo/Ro (mH/Ω) I
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
DZB-2CH-12V-100mA	1.150	7.400	27.000	32.000	0.84	3.37	6.75	11.07

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-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

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	4	12/02/2020
General assembly drawings *	D600806_2	4	12/02/2020
General assembly drawings *	D600806_3	4	12/02/2020
General assembly drawings *	D600806_4	4	12/02/2020
Instruction manual	DZB Manual	1	09/04/2021
DBZ Control drawing, 1 channel 6 V, 50 mA to 160 mA versions	D600807	1	12/02/2020
DBZ Control drawing, 1 channel 10 V, 50 mA to 160 mA versions	D600808	1	12/02/2020
DBZ Control drawing, 1 channel 12 V, 50 mA to 160 mA versions	D600809	1	12/02/2020
DBZ Control drawing, 1 channel 18 V, 50 mA to 160 mA versions	D600810	1	12/02/2020
DBZ Control drawing, 1 channel 24 V, 50 mA to 125 mA versions	D600811	1	12/02/2020
DBZ Control drawing, 1 channel 24 V, 160 mA only	D600812	1	12/02/2020
DBZ Control drawing, 1 channel 28 V, 50 mA & 80 mA versions	D600813	1	12/02/2020
DBZ Control drawing, 1 channel 28 V, 100mA & 125 mA versions	D600814	1	12/02/2020
DBZ Control drawing, 1 channel 36 V, 50 mA version only	D600815	1	12/02/2020
DBZ Control drawing, 1 channel 36 V, 80 mA & 100 mA versions	D600816	1	12/02/2020
DBZ Control drawing, 2 channel 6 V, 50 mA to 160 mA versions	D600817	1	12/02/2020
DBZ Control drawing, 2 channel 10 V, 50 mA to 160 mA versions	D600818	1	12/02/2020
DBZ Control drawing, 2 channel 12 V, 50 mA to 125 mA versions	D600819	1	12/02/2020
DBZ Control drawing, 2 channel, 18 V 50 mA, 80 mA & 100 mA versions	D600820	1	12/02/2020
DBZ Control drawing, 2 channel, 24 V 50 mA version only	D600821	1	12/02/2020
DBZ Control drawing, 2 channel, 28 V 50 mA version only	D600822	1	12/02/2020
DBZ Control drawing, 2 channel 36 V 50 mA version only	D600823	1	12/02/2020
DBZ Control drawing, mixed version 24V 50 mA and 5 V 40 mA	D600825	1	12/02/2020
DBZ Control drawing, mixed version 24 V 50 mA and 40 mA	D600826	1	12/02/2020
DBZ Control drawing, 2 channel mixed version 24 V 50 mA and 10 V 40 mA	D600827	1	12/02/2020
DBZ Control drawing, 3 channel mixed version 24V / 5V / 5V, 50 mA, 40 mA, 40 mA	D600828	1	12/02/2020
DBZ Control drawing, 3 channel mixed version 24 V / 10V / 10V, 50 mA, 40 mA, 40mA	D600829	1	12/02/2020
DBZ Control drawing, 3 channel 6 V version 50 mA, 80 mA, 100 mA, 125 mA, 160 mA	D600833	1	12/02/2020
DBZ Control drawing, 3 channel 10 V version 50 mA, 80 mA, 100 mA, 125 mA, 160 mA	D600834	1	12/02/2020
DBZ drawing, 3 channel 12 V version 50 mA, 80 mA, 100 mA, 125 mA	D600835	1	12/02/2020
DBZ Control drawing, 3 channel 18 V version 50 mA, 80 mA, 100 mA	D600836	1	12/02/2020
DBZ Control drawing, 3 channel 24 V 50 mA version only	D600837	1	12/02/2020
DBZ Control drawing, 3 channel 28 V 50 mA version only	D600838	1	12/02/2020
DBZ Control drawing, 3 channel 36 V 50 mA version only	D600839	1	12/02/2020
242 Series - Declaration of Suitability for Encapsulation or Conformal Coating rev 3	N/A	3	20/12/2017

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.