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 history:
Issue 0 (2021-10-12)

Certificate No.: **IECEx DEK 21.0022X**

Status: **Current**

Issue No: 1

Date of Issue: 2023-05-02

Applicant: **Dong-A-Bestech CO., LTD**
6, Seounsandan-ro 5-gil, Gyeyang-gu
Incheon
Korea, Republic of

Equipment: **Junction Box, type DJBS-N-**-******

Optional accessory:

Type of Protection: **Ex eb, Ex ia, Ex eb [ia Ga], Ex tb**

Marking: Ex eb IIC T6…T4 Gb
Ex ia IIC T6...T4 Ga
Ex eb [ia Ga] IIC T6…T4 Gb
Ex tb IIIC T85 °C…135 °C Db

Approved for issue on behalf of the IECEx Certification Body: **R. Schuller**

Position: **Certification Manager**

Signature:
(for printed version)

Date:
(for printed version)

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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
Netherlands

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Certificate No.: **IECEx DEK 21.0022X**

Date of issue: 2023-05-02 Issue No: 1

Manufacturer: **Dong-A-Bestech CO., LTD**
6, Seounsandan-ro 5-gil, Gyeyang-gu
Incheon
Korea, Republic of

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

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

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 Report:

NL/DEK/ExTR21.0020/01

Quality Assessment Report:

GB/BAS/QAR07.0030/10

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

Junction Box, type DJBS-N-**-****** made of stainless steel (STS316L or STS304) and provided with separately certified Ex e terminal blocks for non-intrinsically safe and/or intrinsically safe circuits, and may be equipped with an Ex draining device as an option. For intrinsically safe circuits, the area for the terminals is marked, e.g. by a light blue color.
For Ex components certified to an older editions of the standards, as detailed in Annex 1, technical Differences are evaluated and found satisfactory.

Ambient temperature range -50 °C to +40 °C for T6 and T85 °C
-50 °C to +55 °C for T5 and T100 °C
-50 °C to +70 °C for T4 and T135 °C
-50 °C to +80 °C for T4 and T135 °C

For more information see Annex 1.

The enclosure provides a degree of protection of IP66/67 per IEC 60079-0 and IEC 60529.

Electrical data

max. 1100 V, max. 375 A

The electrical data depend on the built-in terminals and equipment and is taken from the applicable certificates and manufacturers' data, but will not exceed the above. Actual electrical rating for the intended application is shown on the marking label and in the instructions provided with the junction box. Galvanic isolation between intrinsically safe circuits is suitable for up to a maximum of 1575V.

SPECIFIC CONDITIONS OF USE: YES as shown below:
The junction box shall be installed in a wall mounting position only.

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Address change of the manufacturer

Annex:

510077800-1-Annex1.pdf

Note) A point, "." is used as decimal separator.

Type designation

DJBS	-	N	-	*	-	*	*	*	*	*	*
				(a)		(b)	(c)	(d)	(e)	(f)	(g)

(a) = Size of enclosure (W x H x D in mm)
- 01 = 155 x 155 x 100
- 02 = 185 x 275 x 140
- 03 = 235 x 325 x 140
- 04 = 305 x 305 x 200
- 05 = 325 x 375 x 200
- 06 = 375 x 450 x 200
- 07 = 375 x 510 x 200
- 08 = 375 x 510 x 300
- 09 = 510 x 510 x 200
- 10 = 510 x 510 x 300
- 11 = 510 x 780 x 200
- 12 = 510 x 780 x 300
- 13 = 650 x 950 x 300
- 14 = 800 x 1250 x 300

(b) = Gland plate
- N = N/A * Gland plates are not applied to DJBS-N-01 and DJBS-N-02
- 1 = one side
- 3 = three sides
- 4 = four sides

(c) = Mounting plate
- N = N/A
- M = Applicable

(d) = Security (Locking device)
- N = N/A
- S = Applicable

(e) = Ground Stud
- 6 = dia. 6 mm
- 8 = dia. 8 mm
- 10 = dia. 10 mm

(f) = Breather drain
- N = N/A
- Y = Applicable * When this option is applied, the enclosure provides only IP66.

(g) = Fix of cover
- B = Bolted only * This option is only for DJBS-N-01 to DJBS-N-06
- H = Bolted with hinge

Thermal data

Ambient temperature range:
-50 °C to +40 °C for T6 and T85 °C
-50 °C to +55 °C for T5 and T100 °C
-50 °C to +70 °C for T4 and T135 °C
-50 °C to +80 °C for T4 and T135 °C

Electrical data

Option of Ex terminal block and electrical data accordingly is as follows.

Manufacturer : Weidmüller							
Type	Voltage [V]	Max. Current [A]		Resistance at 20 °C [mΩ]	Operating temperature [°C]	Certificate	Applied standards
		rating	de-rating				
WDU 2.5	690	24	15	0.369	-60 °C to +110 °C (for all applications)	IECEx ULD 14.0005U DEMKO 14ATEX1338 U	IECEx IEC 60079-0 : 2017 (ed. 7.0) IEC 60079-7 : 2017 (ed. 5.1) ATEX EN IEC 60079-0 : 2018 EN 60079-7 : 2015 + A1 : 2018
WDU 4	690	32	19	0.298			
WDU 4 SL	440	32	19	0.300			
WDU 6	690	41	23	0.180			
WDU 10	690	57	30	0.152			
WDU 10 SL	690	55	30	0.280			
WDU 16	690	76	38	0.161			
WDU 35	690	115	56	0.145			
WDU 50N	690	126	56	0.151			
WDU 70N/35	690	184	81	0.142			
WDU 70/95	1100	218	93	0.053			
WDU 95N/120N	880	221	105	0.129			
WDU 120/150	1100	265	117	0.044			
ZDU 2.5	550	22	15	1.330		IECEx ULD 15.0008U DEMKO 15ATEX1467 U	IECEx IEC 60079-0 : 2017 (ed. 7.0) IEC 60079-7 : 2017 (ed. 5.1) ATEX EN IEC 60079-0 : 2018 EN 60079-7 : 2015 + A1 : 2018
ZDU 2.5/3AN	550	22	15	1.330			
ZDU 2.5/4AN	550	22	15	1.330			
ZDU 4	550	28	18	1.000			
ZDU 4/3AN	550	28	18	1.000			
ZDU 4/4AN	550	28	18	1.000			
ZDU 6	550	39	21	0.780			
ZDU 6/3AN	550	39	21	0.780			
ZDU 10/3AN	690	51	26	0.560			
ZDU 16	690	68	32	0.420			
ZDU 16/3AN	550	66	32	0.420			
ZDU 35	690	110	42	0.260			

WFF 35	1100	125	56	0.043	-60 °C to +100 °C (for only T6 and T85 °C)	IECEx ULD 15.0004U DEMKO 15ATEX1357 U	IECEx IEC 60079-0 : 2017 (ed. 7.0) IEC 60079-7 : 2017 (ed. 5.1) ATEX EN IEC 60079-0 : 2018 EN 60079-7 : 2015 + A1 : 2018
WFF 35/AH	1100	125	56	0.043			
WFF 70	1100	192	192	0.032			
WFF 70/AH	1100	192	192	0.032			
WFF 120	1100	269	269	0.028			
WFF 120/AH	1100	269	269	0.028			
WFF 185	1100	353	345	0.028			
WFF 185/AH	1100	353	345	0.028			
WFF 300	1100	520	375	0.020			
WFF 300/AH	1100	520	375	0.020			

Manufacturer : Phoenix

Type	Voltage [V]	Max. Current [A]		Resistance at 20 °C [mΩ]	Operating temperature [°C]	Certificate	Applied standards
		rating	de-rating				
ST 2.5	550	20.5	15	1.040	-60 °C to +110 °C (for all applications)	IECEx KEM 06.0051U KEMA 00ATEX2052 U	IECEx IEC 60079-0 : 2017 (ed. 7.0) IEC 60079-7 : 2017 (ed. 5.1) ATEX EN IEC 60079-0 : 2018 EN 60079-7 : 2015 + A1 : 2018
ST 2.5 quattro	550	22	15	1.170			
ST 2.5 twin	550	21	15	1.080			
ST 4	550	30	19	0.630			
ST 6	550	36.5	22	0.560		IECEx KEM 06.0050U KEMA 00ATEX2129 U	
ST 10	550	51	27	0.400		IECEx KEM 06.0033U KEMA 01ATEX2260 U	
ST 16	550	64.5	32	0.340			
ST 35	690	107.5	43	0.21			
UT 2.5	690	21	15	0.410		IECEx KEM 06.0027U KEMA 04ATEX2048 U	
UT 4	690	30	19	0.260			
UT 6	690	40	22	0.200			
UT 10 (SL)	690	54	28	0.160			
UT 16	690	73.5	34	0.160			
UT 35	690	123	49	0.080			
UT 2.5 twin	352	21	15	0.600		IECEx KEM 06.0013U KEMA 06ATEX2017 U	
PT 2.5	550	19	15	0.093		IECEx PTB 10.0021U PTB 09ATEX1111 U	IECEx IEC 60079-0 : 2011 (ed. 6.0) IEC 60079-7 : 2006 (ed. 4.0)

							ATEX EN 60079-0 : 2012 EN 60079-7 : 2007
PT 4	550	26	16	0.54		IECEx PTB 10.0046U PTB 09ATEX1112 U	IECEx IEC 60079-0 : 2011 (ed. 6.0) IEC 60079-7 : 2006 (ed. 4.0) ATEX EN 60079-0 : 2012 EN 60079-7 : 2007
PT 6	550	36.5	23	0.480		IECEx SEV 13.0005U SEV 13ATEX0159 U	IECEx IEC 60079-0 : 2017 (ed. 7.0) IEC 60079-7 : 2017 (ed. 5.1) ATEX EN IEC 60079-0 : 2018 EN 60079-7 : 2015 + A1 : 2018
PT 10	550	52.5	27	0.430			
PT 16 N	550	65.5	33	0.310			

Manufacturer : WAGO							
Type	Voltage [V]	Max. Current [A]		Resistance at 20 °C [mΩ]	Operating temperature [°C]	Certificate	Applied standards
		rating	de-rating				
2002-1201/1204	550	22	15	1.60	-55 °C to +110 °C (for all applications)	IECEx PTB 03.0004U PTB 03ATEX1162 U	IECEx IEC 60079-0 : 2017 (ed. 7.0) IEC 60079-7 : 2017 (ed. 5.1) ATEX EN IEC 60079-0 : 2018 EN 60079-7 : 2015 + A1 : 2018
2002-1301/1304	550	22	15	1.60			
2002-1401/1404	550	22	15	1.60			
2010-1201/1204	550	51	27	0.56		IECEx PTB 06.0003U PTB 05ATEX1070 U	IECEx IEC 60079-0 : 2011 (ed. 6.0) IEC 60079-7 : 2015 (ed. 5.0) ATEX EN 60079-0 : 2012 + A11 : 2013 EN 60079-7 : 2015
2010-1301/1304	550	50	27	0.56			
2016-1201/1204	550	65	31	0.42		IECEx PTB 05.0015U PTB 05ATEX1031 U	

2004-1201/1204	550	30	19	1.00	-55 °C to +85 °C (for only T6 and T85 °C)	IECEx PTB 05.0033U PTB 05ATEX1095 U	IECEx IEC 60079-0 : 2017 (ed. 7.0) IEC 60079-7 : 2017 (ed. 5.1) ATEX EN IEC 60079-0 : 2018 EN 60079-7 : 2015 + A1 : 2018
2006-1201/1204	550	33	22	0.80			
285-407	880	57	27	0.50		IECEx PTB 16.0001U PTB 98ATEX3134 U	IECEx IEC 60079-0 : 2017 (ed. 7.0) IEC 60079-7 : 2017 (ed. 5.1) ATEX EN IEC 60079-0 : 2018 EN IEC 60079-7 : 2015 + A1 : 2018
285-992	880	109	47	0.21			
285-935	880	101	47	0.21			
285-950	880	134	59	0.13			
285-995	880	211	74	0.21			
285-1163	1100	250	98	0.06			
870-909	440	22	15	1.33		IECEx PTB 04.0018U PTB 03ATEX1188 U	
870-919	440	22	15	1.33			
870-951	440	18	15	1.33			
870-961	440	18	15	1.33			

Option of draining device is as follows.

Manufacturer : Dong-A Bestech			
Type	Operating temperature [°C]	Certificate	Applied standards
DADP-HD	-60 °C to +100 °C	IECEx CML 16.0019U CML 15ATEX3134U	IECEx IEC 60079-0 : 2011 (ed. 6.0) IEC 60079-7 : 2015 (ed. 5.0) IEC 60079-31 : 2013 (ed. 2) ATEX EN 60079-0 : 2012 + A11 : 2013 EN 60079-7 : 2015 EN 60079-31 : 2015

The maximum dissipated wattage is as follows.

Type of terminal box	Enclosure size W x H x D [mm]	Maximum Power [W]				Maximum cable length per terminal [mm]
		T6	T5	T4		
		Ta: +40°C	Ta: +55°C	Ta: +70°C	Ta: +80°C	
DJBS-N-01	155 x 155 x 100	7.56	7.56	7.56	7.56	234.1
DJBS-N-02	185 x 275 x 140	13.61	13.61	13.61	13.61	353.1
DJBS-N-03	235 x 325 x 140	19.17	19.17	19.17	14.18	418.2
DJBS-N-04	305 x 305 x 200	24.03	24.03	24.03	18.50	468.6
DJBS-N-05	325 x 375 x 200	27.86	27.86	27.86	21.67	528.3
DJBS-N-06	375 x 450 x 200	35.48	35.48	35.48	27.20	612.4
DJBS-N-07	375 x 510 x 200	39.15	39.15	39.15	29.05	657.3
DJBS-N-08	375 x 510 x 300	43.85	43.85	43.85	33.21	693.8
DJBS-N-09	510 x 510 x 200	46.69	46.69	46.69	35.37	741.9
DJBS-N-10	510 x 510 x 300	48.62	48.62	48.62	36.83	774.4
DJBS-N-11	510 x 780 x 200	58.84	58.84	58.84	44.57	946.9
DJBS-N-12	510 x 780 x 300	60.37	60.37	60.37	45.72	972.5
DJBS-N-13	650 x 950 x 300	75.06	75.06	75.06	57.40	1183.2
DJBS-N-14	800 x 1250 x 300	86.51	86.51	86.51	86.51	1507.9

Note)

1. When the smaller conductor cross section than the rated cross section specified for the type of terminal listed on the table above is used, the corresponding current is calculated using the following formula:
   $Id2 \times Rm \geq Ic2 \times Rs$
   Id = Maximum de-rated current (Amp)
   Ic = Corresponding current for smaller conductor than rated conductor size (Amp)
   Rm = Resistance of maximum rated conductor cross section @ 20 °C (Ohms)
   Rs = Resistance of smaller conductor cross section than the rated conductor cross section @ 20 °C (Ohms)

2. The maximum number of terminals which may be fitted into each junction box is calculated using the following formula:
   Power $= I^2 \times N (Rt + Rc)$ Watts
   I = current (Amps)
   N = Number of terminals

Rt = Resistance of terminal @ 20 °C (Ohms)
Rc = Resistance of one conductor per current bar @ 20 °C (Ohms) when using the maximum diagonal cable length listed the above table.