EU-Type Examination Certificate

[1] **EU - TYPE EXAMINATION CERTIFICATE**

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

[3]	EU – Type Examination Certificate Number	ACE24ATEX020X Rev00
[4]	Product	BXM(D) 53 Series Explosion-proof Power (Illumination) Distribution Boxes
[5]	Manufacturer	Shenyang Huaxing Explosion-Proof Equipment Co., Ltd.
[6]	Address	No.6, Hongsha Street, Yuhong District Shenyang City, Liaoning Province, P.R.China

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

[8] Advanced Consulting and Engineering Iberia SL (A.C.&E. Iberia S.L.), Notified body Accreditation nº: NB3024 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and 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 to the Directive
The examination and test results are recorded in the confidential Report nº.
EX_EXD007_24_24-1030, EX_EXE006_24_24-1030, EX_EXT005_24_24-1030

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0 2018: Explosive atmospheres — Part 0: Equipment — General requirements
EN 60079-1 2014: Explosive atmospheres — Part 1: Equipment protection by flameproof enclosures ‘d’
EN 60079-7: 2015/A1: 2018: Explosive atmospheres — Part 7: Equipment protection by increased safety ‘e’
EN 60079-31 2014: Explosive atmospheres — Part 31: Equipment dust ignition protection by enclosure ‘t’

[10] If the sign “X” is placed after the certificate number, it indicates that the product is subject to the Special Conditions for Use specified in the point 17 of This certificate.

[11] This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:

II 2G Ex db eb IIC T5…T6 Gb
II 2D Ex tb IIIC T80°C Db

Date: 23/12/2024

Advanced Consulting and Engineering Iberia SL
Notified Body No NB3024
Digitally signed by: MARCONI MATTEO
Date: 23/12/2024 12:30:58

Matteo Marconi, CEO

This certificate may only be reproduced in its entirety and without any change, including schedules.

[13]

SCHEDULE

[14] EU-Type Examination Certificate No: ACE24ATEX020X Rev00

[15] General product information:

1. Construction Overview

BXM(D) 53 Series Explosion-proof Power (Illumination) Distribution Boxes include BXM(D) 53-I, BXM(D) 53-II and BXM(D) 53-III.

The BXM(D) 53-I has one ”d” chamber and one small “e” chamber, the BXM(D) 53-II has two ”d” chambers and one middle “e” chamber, and the BXM(D) 53-III has three ”d” chambers and one “e” chamber. Each "d" chamber is the same size and is connected with "e" chamber by epoxy resin.
The "d" chamber is composed of an enclosure and a cover, and the "e" chamber is composed of an enclosure and a cover, both of which are made of Q235 carbon steel or SUS 304 stainless steel or SUS 316 stainless steel (the dimensions remain the same when the material changes). The seals of the ”d” chamber housing are made of polytetrafluoroethylene (PTFE). The seals of the ”e” chamber housing are made of nitrile rubber. Electrical components (e.g. circuit breakers, etc.) are installed in the "d" chamber, and the terminals and rails are installed in the"e"chamber. Different numbers of holes are provided on the outer surface of the "e" chamber for installation with explosion-proof cable glands.

Both external and internal earthings are provided. The degree of protection of the enclosure is IP66, according to EN IEC 60079-0 and IEC 60529.

The following are the details of the terminal blocks.

item	Components used	Type	Manufacture	Certificate No.	Ex marking
1	Terminal blocks	WDU/WPE Series	Weidmüller Interface GmbH & Co. KG	DEMKO 14 ATEX 1338U KEMA 01 ATEX2186U	Ex eb IIC Gb
2	Terminal blocks	UK/UKH Series	PHOENIX CONTACT GmbH & Co. KG	KEMA 98 ATEX1651U KEMA 98 ATEX1786U PTB 19 ATEX 1014U	Ex eb IIC Gb
Note 1 . The Weidmüller Terminal blocks and the PHOENIX Terminal blocks is certified according to EN IEC 60079-0 and EN 60079-7, it is the same version standard on this product.					

And the suitable application location for it as below: For gas is zone 1 and zone 2, this Explosion-proof Power (Illumination) Distribution Boxes for gas group, it is IIC; for gas protection, it is Gb.

For dust is zone 21 and zone 22, this Explosion-proof Power (Illumination) Distribution Boxes for dust group, it is IIIC; for dust protection, it is Db.

Model designation:

BXM(D) 53-☐ - ☐ / ☐ / ☐ / ☐ / ☐
1 2 3 4 5 6 7 8

"1": Explosion-Proof Distribution box;
"2":Design Number;
"3":Qty of "d" Chamber, "I" as 1, "II" as 2,"III" as 3;
"4":Qty of branches: <32
"5":Branch current ≤315A;
"6":Switch:"K"/"N"; "K" for existence of a main switch, "N" for absence;
"7":Main switch current≤400A;
"8": Material: "1" as Carbon Steel, "2" as 304 Stainless Steel, "4 "as 316 Stainless Steel

Outer Dimensions:

Model	Outer dimensions (Length×Width×Depth) (mm)
BXM(D) 53-I	500×1280×3381
BXM(D) 53-II	1000×1280×3381
BXM(D) 53-III	1500×1280×3381
Note1: Not includes the cable glands, handles and steel bars for installation.	

The model and the number of terminal blocks installed inside, the cross-sectional area and the corresponding current of conductor when using Weidmüller WDU/WPE series:

Cross-sectional area of conductor(mm2)		1.5	2.5	4	6	10	16
Terminal current (A)		15	20	25	40	55	75
Terminal model (Weidmüller)		WDU/WPE 1.5/ZZ	WDU/ WPE 2.5	WDU/ WPE 4	WDU/ WPE 6	WDU/ WPE10	WDU/ WPE 16
Terminal tightening torque		0.5N • m	1N • m	1.5N • m	2N • m	3N • m	3.5N • m
Number of Terminals	BXM(D) 53-I	110	110	80	64	50	40
	BXM(D) 53-II	80	80	70	45	32	25
	BXM(D) 53-III	45	40	32	24	20	16

Cross-sectional area of conductor(mm2)	35	50	95	120	150	240
Terminal current (A)	100	125	200	200	300	400
Terminal model (Weidmüller)	WDU /WPE 35N	WDU/ WPE 50N	WDU/ WPE 70/95	WDU/ WPE 95N/120N	WDU/ WPE 120/150	WDU 240
Terminal tightening torque	4N·m	6N·m	15N·m	20N·m	25N·m	25N·m

Number of Terminals	BXM(D) 53-I	40	32	24	20	16	12
	BXM(D) 53-II	25	20	16	12	10	8
	BXM(D) 53-III	16	12	10	8	6	5

The model and the number of terminal blocks installed inside, the cross-sectional area and the corresponding current of conductor when using Phoenix UK/UKH series:

Cross-sectional area of conductor (mm2)		1.5	2.5	3	5	6	10
Terminal current (A)		15	20	18	28	40	50
Terminal model （Phoenix ）		UK 1.5 N	UK 2.5 N	UK 3 N	UK 5 N	UK 6 N	UK 10 N
Terminal tightening torque		0.5N • m	1N • m	0.8N • m	1.5N • m	2N • m	3N • m
Number of Terminals	BXM(D) 53-I	110	110	80	64	50	40
	BXM(D) 53-II	80	80	70	45	32	25
	BXM(D) 53-III	45	40	32	24	20	16

Cross-sectional area of conductor (mm2)	16	35	50	95	150	240
Terminal current (A)	64	100	125	200	300	400
Terminal model （Phoenix ）	UK 16 N	UK 35	UKH 50	UKH 95	UKH 150	UKH 240
Terminal tightening torque	3.5N • m	4N • m	6N • m	15N • m	25N • m	25N • m

Number of Terminals	BXM(D) 53-I	40	32	24	20	16	12
	BXM(D) 53-II	25	20	16	12	10	8
	BXM(D) 53-III	16	12	10	8	6	5

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Maximum Dissipated Power:

Model	Maximum Dissipated Power(W) 'd' Chamber	Maximum Dissipated Power(W) 'e' Chamber
BXM(D) 53-I	171.0	122.0
BXM(D) 53-II	335.6	228.8
BXM(D) 53-III	431.6	325.3

The number of holes which can be processed on the increased safety enclosure:

Model	Diameter of the hole								
	Φ20.5	Φ25.5	Φ32.5	Φ40.5	Φ50.5	Φ63.5	Φ75	Φ90	Φ110
BXM(D) 53-I	36	36	28	22	17	14	11	7	7
BXM(D) 53-II	36	36	36	36	34	28	22	14	14
BXM(D) 53-III	36	36	36	36	36	36	33	21	21
Note 1: The holes can be only processed on the bottom of the 'e' Chamber. Note 2: These numbers also indicate the number of cable glands. Note 3: Due to the maximum branch limits, the maximum number of holes shall not exceed 36.									

Class: When Ta: -40°C to +40°C, T-Class is T6;
When Ta: -40°C to +55°C, T-Class is T5;

2. Electrical parameters：
   Rated voltage:Max. 690VAC/DC;
   Rated current: Max. 400A;
3. Ambient temperature:-40°C ~+40°C;-40°C ~+55°C
4. Ingress Protection class:IP66

[13] **SCHEDULE**

[14] EU-Type Examination Certificate No: ACE24ATEX020X Rev00

[16] Test documents are listed in the test report nº
EX_EXD007_24_24-1030, EX_EXE006_24_24-1030, EX_EXT005_24_24-1030

[17] Special conditions for safe use

1. Ambient temperature range: -40°C to +40°C; -40°C to +55°C;
2. End user shall use certified cable gland suitable type of protection for final installation purpose;
3. Use screws with yield strength ⩾450MPa for Ex db chamber;
4. WARNING–DO NOT OPEN WHEN ENERGIZED;
5. WARNING - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT.

[18] Essential Health and Safety Requirements
Are met by harmonized standards

[19] Documents and technical datasheets:

Title	Object	Revision	Date
BXM(D) 53 Series Explosion-proof Power (Illumination) Distribution Boxes User Manual	/	V1.1	2023.06
General assembly	BXM(D) 53-00-00	V1.0	2023.6.3
Flameproof joints and sealings	BXM(D) 53-00-01	V1.0	2023.6.3
Flameproof joints and sealings	BXM(D) 53-00-02	V1.0	2023.6.3
Flameproof enclosure	BXD51-01-00	V1.0	2023.6.3
Flameproof enclosure Stiffeners	BXM(D) 53-01-01	1.0	2023.10.11
Threaded Pipe	BXM(D) 53-01-02	1.0	2023.10.11
Premade welding nut A	BXM(D) 53-01-03	1.0	2023.10.11
Premade welding nut B	BXM(D) 53-01-04	1.0	2023.10.11
‘d’chamber sealing ring	BXM(D) 53-01-05	1.0	2023.10.11
Interchamber sealing ring	BXM(D) 53-01-06	1.0	2023.10.11

Enclosure Top Cover	BXM(D) 53-02-01	1.0	2023.10.11
Enclosure Top Cover	BXM(D) 53-02-02	1.0	2023.10.11
Increased Safety enclosure	BXM(D) 53-03-00	V1.0	2023.6.3
Enclosure	BXM(D) 53-03-01	1.0	2023.10.11
Interchamber Sealing ring	BXM(D) 53-03-02	1.0	2023.10.11
Holes on the enclosure	BXM(D) 53-03-03	1.0	2023.10.11
Increased safety enclosure	BXM(D) 53-04-00	V1.0	2023.6.3
'e'top cover sealing ring	BXM(D) 53-04-01	1.0	2023.10.11
Control panel complex A	BXM(D) 53-05-01	1.0	2023.10.11
Control panel complex B	BXM(D) 53-05-02	1.0	2023.10.11
Installation bearings	BXM(D) 53-05-03	1.0	2023.10.11
Installation bearings	BXM(D) 53-05-04	1.0	2023.10.11
Mounting plate-Flameproof	BXM(D) 53-05-05	1.0	2023.10.11
Mounting plate- increased safety	BXM(D) 53-05-06	1.0	2023.10.11
Mounting rail	BXM(D) 53-05-07	1.0	2023.10.11
Transition threaded tubes	BXM(D) 53-05-08	1.0	2023.10.11
Bushings	BXD51-05-09	1.0	2023.10.11
Axial bearing 1	BXM(D) 53-05-10	1.0	2023.10.11
Axial bearing 2	BXM(D) 53-05-11	1.0	2023.10.11
Axial bearing 3	BXM(D) 53-05-12	1.0	2023.10.11
Lamp holder	BXM(D) 53-05-13	1.0	2023.10.11
Grounding signs	BXM(D) 53-05-14	1.0	2023.10.11
Name Plate	BXM(D) 53-05-15	1.0	2023.10.11
Sealing ring Q	BXM(D) 53-05-16	1.0	2023.10.11
Sealing ring E-E	BXM(D) 53-05-18	1.0	2023.10.11
Technical Document of SUS304	MTD-01	Rev. A	2023.06.05

Technical Document of SUS316	MTD-02	Rev. A	2023.06.05
Technical Document of Q235	MTD-03	Rev. A	2023.06.05
Technical Document of Nitrile Rubber	MTD-04	Rev. A	2023.06.05
Technical Document of Epoxy Resin	MTD-05	Rev. A	2023.06.05
Technical Document of Polytetrafluoroethylene (PTFE)	MTD-07	Rev. A	2023.06.05
Terminal blocks of certificate	IECEx PTB 19.0039U	Issue 0	2020.01.09
Terminal blocks of certificate	IECEx KEM 06.0034U	Issue 7	2021.06.23
Terminal blocks of certificate	IECEx KEM 06.0029U	Issue 7	2021.06.30
Terminal blocks of certificate	PTB 19 ATEX 1014U	Issue 0	2020.01.09
Terminal blocks of certificate	KEMA 98 ATEX 1651U	Issue 6	2021.06.23
Terminal blocks of certificate	KEMA 98 ATEX 1786U	Issue 6	2021.06.30
Terminal blocks of certificate	IECEx ULD 14.0005U	Issue 7	2021.03.26
Terminal blocks of certificate	IECEx DEK 21.0033U	Issue 0	2021.11.15
Terminal blocks of certificate	DEMKO 14 ATEX 1338U	Issue 7	2021.03.26
Terminal blocks of certificate	KEMA 01 ATEX 2186U	Issue 3	2021.11.15
Dissipation power table-"d" Chamber of BXM(D) 53-I	SYHXW2023092801	V1.0	2023.09.28

Dissipation power table-"d" Chamber of BXM(D) 53-II	SYHXW2023092802	V1.0	2023.09.28
Dissipation power table-"d" Chamber of BXM(D) 53-III	SYHXW2023092803	V1.0	2023.09.28
Dissipation power table-"e" Chamber of BXM(D) 53	SYHXW2023092804	V1.0	2023.09.28

The documents above-mentioned are strictly confidential and they are of only use of authorities.
A copy of the documents are saved by A.C.&E. Iberia S.L.

[20] Certificate History

Number of certificate	Rev.	Comments	Date
ACE24ATEX020X	00	First issue	2024.12.23

Date: 23/12/2024

Advanced Consulting and Engineering Iberia SL
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Matteo Marconi, CEO