



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 CML 19.0176X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 1	Issue 0 (2020-07-09)
Date of Issue:	2021-10-23		
Applicant:	Warom Technology Incorporated Company No. 555, Baoqian Road, Jiading District, Shanghai China		
Equipment:	HRMD92 Series Explosion-proof Distribution Panel		
Optional accessory:			
Type of Protection:	Flameproof "db", Intrinsic Safety "[ib]", Dust Ignition "tb"		
Marking:	Ex db IIB T4...T6 Gb Ex db [ib] IIB T4...T6 Gb Ex tb IIIC T130°C...T80°C Db Ex db IIB+H ₂ T4...T6 Gb Ex db [ib] IIB+H ₂ T4...T6 Gb Ex tb IIIC T130°C...T80°C Db IP66 Ta = -60°C to +**°C		
	<i>**Refer to description</i>		

Approved for issue on behalf of the IECEx
Certification Body:

R C Marshall

Position:

Operations Manager

Signature:
(for printed version)

Date:

2021-10-23

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Unit 1, Newport Business Park
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United Kingdom





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Certificate No.: **IECEx CML 19.0176X**

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Date of issue: 2021-10-23

Issue No: 1

Manufacturer: **Warom Technology Incorporated Company**
No. 555, Baoqian Road, Jiading District, Shanghai
China

Additional manufacturing locations: **Warom Technology Mena Fzco**
Plot No.S31223, Jebel Ali Free Zone
Dubai 263667
United Arab Emirates

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 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
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

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/CML/ExTR20.0138/00](#) [GB/CML/ExTR21.0257/00](#)

Quality Assessment Report:

[CN/CQM/QAR07.0003/10](#)



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Certificate No.: **IECEx CML 19.0176X**

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Date of issue: 2021-10-23

Issue No: 1

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Type HRMD92 Explosion-proof Distribution Panels comprise of a main enclosure and a cover. The enclosures have flanged joints and are used to contain electrical equipment.

Refer to Annex for full description and conditions of manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to Annex for specific conditions of use.



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Date of issue: 2021-10-23

Issue No: 1

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1

This issue introduced the following change:

1. Addition of the following manufacturing location:
WAROM Technology Mena Fzco
Plot No.S31223, Jebel Ali Free Zone Dubai 263667
United Arab Emirates

Annex:

[IECEx CML 19.0176X Iss. 1 Certificate Annex.pdf](#)

Annex to: IECEEx CML 19.0176X Issue 1
Applicant: Warom Technology Incorporated Company
Apparatus: HRMD92 Series Explosion-proof Distribution Panel



Description

The Type HRMD92 Explosion-proof Distribution Panels comprise of a main enclosure and a cover. The enclosures have flanged joints and are used to contain electrical equipment.

The panels can include separately certified intrinsically safe apparatus such as barriers or isolators.

The enclosure covers can include optional small or big glass windows made of tempered glass. The cover can also include mounted electrical components such as, HA button, HD indicator, HK control switch, operating mechanism for switch and breaker, and a potentiometer.

The number of components incorporated depends on the control panel size and the space required to fit each component. The arrangements are fixed and preapproved as part of this certification.

Rated voltage: Max. 1000 V AC 50/60 Hz
Max. 1500 V DC

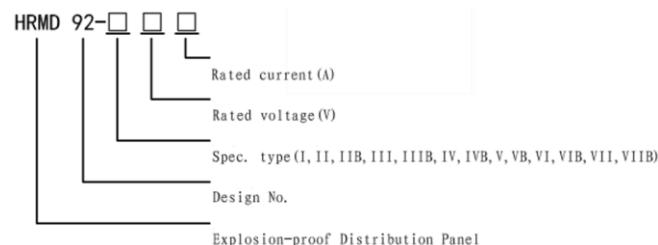
Rated current: Max. 2000 A

The temperature class depends on the maximum dissipated power and the enclosure's size.

The enclosure cover can include the following separately certified components:

Component	Certificate Number	Standard Differences
HK Control Switch	CML 17ATEX1036U IECEEx CML 17.0166U	No differences applicable to the component
HD Indicator	EPT 17ATEX 2649U IECEEx CQM 17.0008U	No differences applicable to the component
HA Flameproof Pushbutton	CML 17ATEX1289U IECEEx CML 17.0161U	No differences applicable to the component

Nomenclature



Where the Spec. type is: I, II, IIB, III, IIIB, IV, IVB, V, VB, VI, VIB, VII, VIIB

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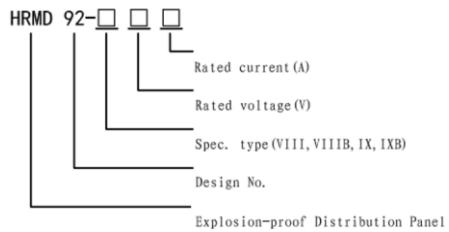
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The marking is:

Ex db IIB+H₂ T6...T4 Gb
 Ex db [ib] IIB+H₂ T6...T4 Gb
 Ex tb IIIC T80°C...T130°C Db
 IP66



Where the Spec. type is: VIII, VIIIB, IX, IXB

The marking is:

Ex db IIB T6...T4 Gb
 Ex db [ib] IIB T6...T4 Gb
 Ex tb IIIC T80°C...T130°C Db
 IP66

*For the HRMD92 Explosion-proof distribution panels with the cover fitted with the electrical components mentioned in the table above, the permitted dissipated power can only be corresponding to temperature class T6.

Ta = 60°C	HRMD92 with full metal cover without glass					
	T4*		T5*		T6	
Type	Power consumption (W)	Temperature rise (K)	Power consumption (W)	Temperature rise (K)	Power consumption (W)	Temperature rise (K)
HRMD92-I	101	70	51	35	22	17
HRMD92-II	101	70	51	35	25	17
HRMD92-IIB	101	70	51	35	25	17
HRMD92-III	145	70	73	35	31	17
HRMD92-IIIB	168	70	84	35	41	17
HRMD92-IV	148	70	74	35	36	17
HRMD92-IVB	188	70	94	35	46	17
HRMD92-V	190	70	95	35	40	17
HRMD92-VB	239	70	119	35	56	17
HRMD92-VI	279	70	139	35	55	17
HRMD92-VIB	288	70	144	35	70	17

Ta = 60°C	HRMD92 with full metal cover without glass					
	T4*		T5*		T6	
Type	Power consumption (W)	Temperature rise (K)	Power consumption (W)	Temperature rise (K)	Power consumption (W)	Temperature rise (K)
HRMD92-VII	279	70	139	35	55	17
HRMD92-VIIB	299	70	149	35	72	17
HRMD92-VIII	686	70	343	35	167	17
HRMD92-VIIB	743	70	371	35	180	17
HRMD92-IX	975	70	488	35	237	17
HRMD92-IXB	1149	70	575	35	279	17

Ta = 60°C	HRMD92 with metal cover with glass					
	T4*		T5*		T6	
Type	Power consumption (W)	Temperature rise (K)	Power consumption (W)	Temperature rise (K)	Power consumption (W)	Temperature rise (K)
HRMD92-I	101	70	51	35	19	17
HRMD92-II	101	70	51	35	20	17
HRMD92-IIB	129	70	65	35	26	17
HRMD92-III	150	70	75	35	31	17
HRMD92-IIIB	155	70	77	35	38	17
HRMD92-IV	215	70	108	35	38	17
HRMD92-IVB	224	70	112	35	49	17
HRMD92-V	187	70	93	35	37	17
HRMD92-VB	251	70	125	35	61	17
HRMD92-VI	266	70	133	35	71	17
HRMD92-VIB	319	70	160	35	79	17
HRMD92-VII	290	70	145	35	71	17
HRMD92-VIIB	313	70	157	35	76	17
HRMD92-VIII	709	70	354	35	172	17
HRMD92-VIIB	780	70	390	35	189	17
HRMD92-IX	953	70	476	35	231	17
HRMD92-IXB	1206	70	603	35	293	17

Ta = 40°C	HRMD92 with metal cover without glass					
	T4*		T5*		T6	
Type	Power consumption (W)	Temperature rise (K)	Power consumption (W)	Temperature rise (K)	Power consumption (W)	Temperature rise (K)
HRMD92-I	130	90	79	55	43	37

Ta = 40°C	HRMD92 with metal cover without glass					
	T4*		T5*		T6	
	Type	Power consumption (W)	Temperature rise (K)	Power consumption (W)	Temperature rise (K)	Power consumption (W)
HRMD92-II	130	90	79	55	53	37
HRMD92-IIB	130	90	79	55	53	37
HRMD92-III	187	90	114	55	61	37
HRMD92-IIIB	216	90	132	55	89	37
HRMD92-IV	190	90	116	55	89	37
HRMD92-IVB	242	90	148	55	99	37
HRMD92-V	244	90	149	55	78	37
HRMD92-VB	307	90	188	55	111	37
HRMD92-VI	358	90	219	55	147	37
HRMD92-VIB	371	90	226	55	152	37
HRMD92-VII	358	90	219	55	108	37
HRMD92-VIIB	384	90	235	55	158	37
HRMD92-VIII	882	90	539	55	362	37
HRMD92-VIIB	955	90	584	55	393	37
HRMD92-IX	1254	90	766	55	515	37
HRMD92-IXB	1478	90	903	55	607	37

Ta = 40°C	HRMD92 with full metal cover with glass					
	T4*		T5*		T6	
	Type	Power consumption (W)	Temperature rise (K)	Power consumption (W)	Temperature rise (K)	Power consumption (W)
HRMD92-I	130	90	79	55	19	37
HRMD92-II	130	90	79	55	20	37
HRMD92-IIB	166	90	101	55	26	37
HRMD92-III	193	90	118	55	31	37
HRMD92-IIIB	199	90	122	55	38	37
HRMD92-IV	277	90	169	55	38	37
HRMD92-IVB	288	90	176	55	49	37
HRMD92-V	240	90	147	55	37	37
HRMD92-VB	322	90	197	55	61	37
HRMD92-VI	342	90	209	55	71	37
HRMD92-VIB	411	90	251	55	79	37
HRMD92-VII	373	90	228	55	71	37
HRMD92-VIIB	403	90	246	55	76	37

Ta = 40°C	HRMD92 with full metal cover with glass					
	T4*		T5*		T6	
Type	Power consumption (W)	Temperature rise (K)	Power consumption (W)	Temperature rise (K)	Power consumption (W)	Temperature rise (K)
HRMD92-VIII	911	90	557	55	172	37
HRMD92-VIIB	1003	90	613	55	189	37
HRMD92-IX	1225	90	749	55	231	37
HRMD92-IXB	1551	90	948	55	293	37

Conditions of Manufacture

The following are conditions of manufacture:

- i. Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- ii. The equipment shall be designed and constructed in accordance with all applicable general electrical safety standards.
- iii. The internal parts of the equipment can be installed in any arrangement, provided that an area of at least 40 % of each cross-sectional area remains free to permit an unimpeded gas flow and, therefore, unrestricted development of an explosion. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5 mm.
- iv. When a battery is fitted, it shall be appropriately equipment certified as a battery pack and suitable for use in a flameproof enclosure as per EN/IEC 60079-1 Annex E. Additionally, the overall equipment shall comply with the conditions shown on the certificate.
- v. When certified intrinsically safe associated equipment are installed, the installation shall comply with the requirements of the EN/IEC 60079-25 and the separation distances of EN/IEC 60079-11 clause 6.3 shall be applied.
- vi. When intrinsically safe devices such as barriers and isolators are installed, thermal protection circuitry is required to be incorporated into the equipment so as to prevent the intrinsically safe device being exceeded being exposed to an ambient temperature within the enclosure that exceeds the maximum ambient temperature of the device. Consideration shall be taken for the tolerances of the protection circuitry. This may be achieved with suitably rated thermal fuses that disconnect power to the intrinsically safe equipment in the event of the ambient temperature around the device reaches the limiting temperature, or with a temperature limiting device that isolates the power to the equipment should the limiting temperature be reached.
- vii. Each unit shall be subjected to an overpressure test in accordance with EN/IEC 60079-1 clause 16.1. The test shall be conducted at the following pressure for at least 10 seconds:

Type	Pressure (bar)
HRMD92-I	13
HRMD92-II	
HRMD92-IIB	
HRMD92-III	
HRMD92-IIIB	
HRMD92-IV	
HRMD92-IVB	
HRMD92-V	15
HRMD92-VB	
HRMD92-VI	
HRMD92-VIB	
HRMD92-VII	
HRMD92-VIIB	
HRMD92-VIII	14.5
HRMD92-VIIIB	
HRMD92-IX	18.1
HRMD92-IXB	

There shall be no permanent damage or deformation as a result of the test.

Specific Conditions of Use

The following conditions relate to the installation and/or safe use of the equipment:

- i. The dimensions of the flameproof joints differ from the values shown in EN/IEC 60079-1 Tables 2, 3, 4 and 5. Therefore, the flameproof joints shall not be repaired by anyone other than the manufacturer. This also applies to components mounted on the equipment cover.
- ii. The equipment is a potential electrostatic charging hazard. Therefore, to reduce the risk of electrostatic charging, the equipment shall only be cleaned with a damp cloth.
- iii. The equipment shall be installed as per the instructions specified in the manual.
- iv. The user shall leave the equipment de-energised for at least 30 minutes before opening the equipment to ensure that all internal hot components have reduced in temperature below the assigned maximum surface temperature of the equipment.
- v. The HK control switch, potentiometer, miniature circuit breaker (MCB) and moulded case circuit breaker (MCCB) all have non-threaded cylindrical flamepath between the shaft and sheath. This joint is not repairable. When the flameproof gap exceeds 0.13 mm due to wear during use, then it shall be replaced according to the manufacturer's requirements.
- vi. The HD indicator mounted on the cover shall be installed where the risk of mechanical danger is low to reduce the risk of impact of foreign objects during installation.
- vii. Cables selection shall be as per the instructions specified in the manual.