IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx CML 17.0053X

Issue No: 0

Certificate history:
Issue No. 0 (2018-01-30)

Status: **Current**

Date of Issue: **2018-01-30**

Applicant: **CMA (Wuhu) Robotics Co. Ltd.**
No. 96, East Wanchun Road,
Jiujiang Economic Development District
Wuhu
Anhui Province
China

Equipment: **GR6100ST 6 axis robotic arm**

Optional accessory:

Type of Protection: **Purged**

Marking:

Ex pxb IIB T4 Gb

Ex pxb IIIC T135°C Db

0°C ≤Ta≤ +40°C

Approved for issue on behalf of the IECEx Certification Body: D R Stubbings MIET

Position: Technical Director

Signature:
(for printed version)

Date:

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 the Official IECEx Website.

Certificate issued by:

Certification Management Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom

IECEx Certificate of Conformity

Certificate No: IECEx CML 17.0053X Issue No: 0

Date of Issue: **2018-01-30** Page 2 of 3

Manufacturer: **CMA (Wuhu) Robotics Co. Ltd.**
Jiujiang Economic Development District
Wuhu
Anhui Province
China

Additional Manufacturing location(s):

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 apparatus 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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-2 : 2014-07 Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure "p"
Edition:6

*This Certificate **does not** indicate compliance with electrical 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:

GB/CML/ExTR17.0089/00

Quality Assessment Report:

GB/CML/QAR17.0013/00

IECEx Certificate of Conformity

Certificate No: IECEx CML 17.0053X Issue No: 0

Date of Issue: **2018-01-30**

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The GR6100ST 6-axis industrial robot is a purged robot arm which may be located in hazardous areas. It comprises a base, big arm, small arm, and wrist. The base and small arm contain uncertified electrical equipment such as motors.

Refer to Annex for full description and Conditions of Manufacture

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to Annex for full details

Annex:

IECEx CML 17.0053X Annex Issue 0.pdf

Annexe to:	IECEx CML 17.0053X Issue 0
Applicant:	CMA (Wuhu) Robotics Co. Ltd.
Apparatus:	GR6100ST 6-axis industrial robot

Product Description

The GR6100ST 6-axis industrial robots is a purged robot arms which may be located in hazardous areas. It comprises a base, big arm, small arm, and wrist. The base and small arm contains uncertified electrical equipment such as motors.

The equipment is intended for environments requiring Equipment Protection Level “Gb or Db” and there are no internal sources of release. The protection level required is therefore “pxb”.

Purging is controlled by a control system which is located in the safe area and which has electrical and pneumatic connections to the robot base and which comprises a purging unit and a control cabinet. The system is purged with compressed air.

The equipment listed below may be fitted and are included for completeness and information only but they do not form part of the equipment certification. Therefore, this report and associated certificate do not cover the suitability of these devices with the equipment.

Item, Description, and Certificate Details
Gas applications only
SMC Solenoid valve type 52-SY7140R-TT10-02 DEKRA 11ATEX0273X II 1 G Ex ia IIC T6…T4 Tamb -40°C to +80°C II 2 G Ex ia IIC T6…T4 Tamb -40°C to +80°C
Gas or Dust
VACF-B-K1-... -... -EX4-M Solenoid IBExU16ATEX1146 X IECEx IBE 16.0024X Ex mb IIC T5 Gb Ex mb IIIC T95 °C Db Tamb -30°C to +40°C
Nuova General Safety Valve G04.XSIC10055 TUV IT 15ATEX 070 Ar Rev. 01 II 2 G D c T6 X

Unit 1, Newport Business Park
New Port Road
Ellesmere Port
CH65 4LZ

T +44 (0) 151 559 1160
E info@cmlex.com

www.cmlex.com

Company Reg No. 8554022 VAT No. GB163023642

Item, Description, and Certificate Details
Gas applications only
GM Safety Barriers D1031D and D1040Q DMT 01 ATEX E 042X IECEx BVS 07.0027X  II (1) G D [Ex ia Ga/Da] IIC I (M1) [Ex ia I] Tamb -20°C to +40°C

Conditions of manufacture

The following are conditions of manufacture

i. The equipment covered by this certificate includes previously certified devices, it is the manufacturer's responsibility to continually monitor the status of these certified devices. The manufacturer shall also inform Certification Management Ltd of any changes to these devices that may impact upon the explosion safety aspects of their equipment. A copy of the appropriate certification documentation for these devices shall be provided to the end user.

ii. Each product shall be subjected to the following routine testing:

- Functional test for the performance of safety devices as required by IEC 60079-2:2014 Clause 17.1.
- A leakage test in accordance with IEC 60079-2:2014, clause 16.3.1, the leakage shall not exceed 35 Nl/min.

iii. The manufacturer shall ensure that the safety and integrity of the purging control system is consistent with a single fault evaluation in accordance with IEC61511 or similar standard.

iv. The manufacturer shall ensure that all previously certified equipment and components integrated into this equipment are suitably IECEx certified.

v. The separately certified devices shall be installed in accordance with their Specific Conditions of Safe Use.

Conditions Of Specific Use

i. The temperature of the protective gas at the inlet of the enclosure shall not exceed 40°C.

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx CML 17.0054X

Issue No: 0

Certificate history:
Issue No. 0 (2018-01-30)

Status: **Current**

Date of Issue: **2018-01-30**

Applicant: **CMA (Wuhu) Robotics Co. Ltd.**
No. 96, East Wanchun Road, Jiujiang Economic Development District, Wuhu, Anhui Province,
China

Equipment: **GR680ST 6-axis industrial robot**

Optional accessory:

Type of Protection: **Purged**

Marking:

Ex pxb IIB T4 Gb

Ex pxb IIIC T135°C Db

0°C ≤Ta≤ +40°C

Approved for issue on behalf of the IECEx Certification Body: D R Stubbings MIET

Position: Technical Director

Signature:
(for printed version)

Date:

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 the Official IECEx Website.

Certificate issued by:

Certification Management Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom

IECEx Certificate of Conformity

Certificate No: IECEx CML 17.0054X Issue No: 0

Date of Issue: **2018-01-30** Page 2 of 3

Manufacturer: **CMA (Wuhu) Robotics Co. Ltd.**
No. 96, East Wanchun Road, Jiujiang Economic Development District, Wuhu, Anhui Province, China
China

Additional Manufacturing location(s):

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 apparatus 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 : 2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-2 : 2014-07 Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure "p"
Edition:6

*This Certificate **does not** indicate compliance with electrical 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:

GB/CML/ExTR17.0089/00

Quality Assessment Report:

GB/CML/QAR17.0013/00

IECEx Certificate of Conformity

Certificate No: IECEx CML 17.0054X Issue No: 0

Date of Issue: **2018-01-30**

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

GR680ST 6-axis robots are purged robot arms which may be located in hazardous areas. Each model comprises a base, big arm, small arm, and wrist, and the models differ only in size. The base and small arm contain uncertified electrical equipment such as motors.

See Annex for full description and Conditions of Manufacture

SPECIFIC CONDITIONS OF USE: YES as shown below:

See Annex for details

Annex:

IECEx CML 17.0054X Annex Issue 0.pdf

Annexe to:	IECEx CML 17.0054X Issue 0
Applicant:	CMA (Wuhu) Robotics Co. Ltd.
Apparatus:	GR680ST 6-axis industrial robot

Product Description

The GR6100ST 6-axis industrial robots are purged robot arms which may be located in hazardous areas. Each model comprises a base, big arm, small arm, and wrist, and the models differ only in size. The base and small arm contain uncertified electrical equipment such as motors.

The equipment is intended for environments requiring Equipment Protection Level “Gb or Db” and there are no internal sources of release. The protection level required is therefore “pxb”.

Purging is controlled by a control system which is located in the safe area and which has electrical and pneumatic connections to the robot base and which comprises a purging unit and a control cabinet. The system is purged with compressed air.

The equipment listed below may be fitted and are included for completeness and information only but they do not form part of the equipment certification. Therefore, this report and associated certificate do not cover the suitability of these devices with the equipment.

Item, Description, and Certificate Details
Gas applications only
SMC Solenoid valve type 52-SY7140R-TT10-02 DEKRA 11ATEX0273X II 1 G Ex ia IIC T6…T4 Tamb -40°C to +80°C II 2 G Ex ia IIC T6…T4 Tamb -40°C to +80°C
Gas or Dust
VACF-B-K1-... -... -EX4-M Solenoid IBExU16ATEX1146 X IECEx IBE 16.0024X Ex mb IIC T5 Gb Ex mb IIIC T95 °C Db Tamb -30°C to +40°C
Nuova General Safety Valve G04.XSIC10055 TUV IT 15ATEX 070 Ar Rev. 01 II 2 G D c T6 X

Unit 1, Newport Business Park
New Port Road
Ellesmere Port
CH65 4LZ

T +44 (0) 151 559 1160
E info@cmlex.com

www.cmlex.com

Company Reg No. 8554022 VAT No. GB163023642

Item, Description, and Certificate Details
Gas applications only
GM Safety Barriers D1031D and D1040Q DMT 01 ATEX E 042X IECEx BVS 07.0027X  II (1) G D [Ex ia Ga/Da] IIC I (M1) [Ex ia I] Tamb -20°C to +40°C

Conditions of manufacture

The following are conditions of manufacture

i. The equipment covered by this certificate includes previously certified devices, it is the manufacturer's responsibility to continually monitor the status of these certified devices. The manufacturer shall also inform Certification Management Ltd of any changes to these devices that may impact upon the explosion safety aspects of their equipment. A copy of the appropriate certification documentation for these devices shall be provided to the end user.

ii. Each product shall be subjected to the following routine testing:

- Functional test for the performance of safety devices as required by IEC 60079-2:2014 Clause 17.1.
- A leakage test in accordance with IEC 60079-2:2014, clause 16.3.1, the leakage shall not exceed 35 Nl/min.

iii. The manufacturer shall ensure that the safety and integrity of the purging control system is consistent with a single fault evaluation in accordance with IEC61511 or similar standard.

iv. The manufacturer shall ensure that all previously certified equipment and components integrated into this equipment are suitably IECEx certified.

v. The separately certified devices shall be installed in accordance with their Specific Conditions of Safe Use.

Conditions Of Specific Use

i. The temperature of the protective gas at the inlet of the enclosure shall not exceed 40°C.