



# 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](http://www.iecex.com)

Certificate No.: **IECEX TUR 19.0001X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2020-09-30

Applicant: **Beijing GODA Instruments Co., LTD.**  
Hongfu Enterprise Incubation Yard10, No.2 Workshop 2-4. ChangpingDistrict,  
Beijing  
China

Equipment: **80G Radar Level Instrument,type GDRD8X Series**

Optional accessory:

Type of Protection: **Equipment protection by intrinsic safety "ia"**

Marking: Ex ia IIC T6...T2 Ga  
Ex ia IIIC T85°C...T300°C Da

Approved for issue on behalf of the IECEX  
Certification Body:

**Dipl.-Ing. Yang Wang**

Position:

**Assigned Certifier**

Signature:  
(for printed version)

*Wang Yang*

Date:

2020.09.30

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# IECEX Certificate of Conformity

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Manufacturer: **Beijing GODA Instruments Co., LTD.**  
Hongfu Enterprise Incubation Yard10, No.2 Workshop 2-4. ChangpingDistrict,  
Beijing  
China

Additional  
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 Report:

[DE/TUR/ExTR19.0001/00](#)

Quality Assessment Report:

[DE/TUR/QAR15.0009/02](#)



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Date of issue: 2020-09-30

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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

80G Radar Level instrument, type GDRD8X Series

GDRD8X Series radar level instrument.

X could be 2, 3, 7 and 9 to represent different application. 2 and 3 is for liquid application; 7 is for solid application; 9 is for marine application.

Take user manual for detailed equipment model naming.

The final equipment is the combination of Mainframe and Antenna.

Only the mainframe construction and Antenna setup are little bit different among the models.

Take Sheets of Mainframe and Antenna for detail, construction and material difference are listed in user manual.

The lens on the Antenna of 83 and 89 are made of PTFE. The lens on the Antenna of 82 are made of PTFE and FEP. The lens on the Antenna of 87 are made of PTFE and PEEK.

The main circuit in all models are same, only little difference because of different interface (RS485 and 4-20mA).

GDRD8X Series radar level instrument are designed and constructed with type of protection "ia" for gas group IIC and dust group IIIC.

## SPECIFIC CONDITIONS OF USE: YES as shown below:

- Electrical connections and IS input parameters should be observed in accordance with Ex instruction.
- WARNING – Potential Electrostatic Charging Hazard- See instructions.
- When the enclosure is made of aluminum alloy, impact or friction should be avoided to control the mechanical spark.
- Non metallic parts of the equipment shall be protected from the sunlight to avoid the UV impact.
- The temperature class depends on Ta and process temperature as the table below listed.

Ta of mainframe	Process temperature at the antenna	T class of whole equipment
-40-50°C	-40-50°C	T6/85°C
-40-60°C	-40-95°C	T5/100°C
-40-70°C	-40-130°C	T4/135°C
	-40-195°C	T3/200°C
	-40-200°C	T2/300°C

- The radar level instrument shall use the suitable certified cable gland and blank element with  $T_s \geq 100^\circ\text{C}$ .
- The equipment should be protected to avoid high risk from mechanical impact.
- Installation of the equipment shall follow IEC 60079-14 last edition or any national equivalent standards.

## Annex:

[DE-IECEX\\_TUR\\_19.0001X\\_00\\_Attachment.pdf](#)



Attachment to Certificate  
IECEX TUR19.0001 X  
Revision 0

Attachment to Certificate IECEX TUR19.0001 X

**Device:** 80G Radar Level Instrument  
GDRD8X series

**Manufacturer:** Beijing GODA Instruments Co., Ltd.

**Address:** Hongfu Enterprise Incubation Yard10, No.2 Workshop 2-4.ChangpingDistrict,  
Beijing, P.R. China.

**General product information:**

GDRD8X Series radar level instrument.

X could be 2, 3, 7 and 9 to represent different application.

2 and 3 is for liquid application; 7 is for solid application; 9 is for marine application.

Take user manual for detailed equipment model naming.

The final equipment is the combination of Mainframe and Antenna.

Only the mainframe construction and Antenna setup are little bit different among the models.

Take Sheets of Mainframe and Antenna for detail, construction and material difference are listed in user manual.

The lens on the Antenna of 83 and 89 are made of PTFE. The lens on the Antenna of 82 are made of PTFE and FEP. The lens on the Antenna of 87 are made of PTFE and PEEK.

The main circuit in all models are same, only little difference because of different interface(RS485 and 4-20mA).

GDRD8X Series radar level instrument are designed and constructed with type of protection "ia" for gas group IIC and dust group IIIC.

**Model naming rules:**

**GDRD8X-(1)(2)(3(4)(5)(6)(7)(8)(9) (X standards for 2, 3, 7, and 9)**

- (1)Approval
- (2)Antenna form
- (3) Lens material
- (4) Install form
- (5) Process Seal
- (6) Electronic building brick
- (7) House /protection grade
- (8) Cable access interface
- (9) Display/programming



**GDRD82- 1 2 3 4 5 6 7 8 9**

(1)Approval

P Standard  
I Ex ia IIC T6...T2 Ga  
F Ex ia IIIC T85°C...T300°C Da

(2)Antenna form

DS (-40~150°C) (-0.1~2.5) MPa	Lens diameter is 50mm
DQ (-40~200°C) (-0.1~2.5) MPa	Lens diameter is 50mm
ES (-40~150°C) (-0.1~2.5)MPa	Lens diameter is 80mm
EQ (-40~200°C) (-0.1~2.5) MPa	Lens diameter is 80mm

(3) Lens material

A PTFE (-40~200°C)  
B FEP (-40~200°C)

(4) Install form

FA Flange DN50 PN16 Stainless steel 316L  
FB Flange DN80 PN16 Stainless steel 316L  
FC Flange DN100 PN16 Stainless steel 316L  
FD Flange DN125 PN16 Stainless steel 316L  
FE Flange DN150 PN16 Stainless steel 316L  
FX Nonstandard flange

(5) Process Seal

X None

(6) Electronic building brick

B (4-20)mA/HART 2-Wire  
R RS485/MODBUS Protocol

(7) House /protection grade

A Die-casting aluminum ADC12/IP67  
E Die-casting aluminum ADC12/IP67  
G Stainless steel 316L/IP67

(8) Cable access interface

M M20X1.5  
N ½ NPT

(9) Display/programming

A Programmer with Bluetooth  
B Programmer without Bluetooth  
C Remote display with Bluetooth  
D Remote display without Bluetooth  
X None

**GDRD83- 1 2 3 4 5 6 7 8 9**

(1)Approval

P Standard  
I Ex ia IIC T6...T2 Ga  
F Ex ia IIIC T85°C ...T300°C Da



Attachment to Certificate  
IECEX TUR19.0001 X  
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(2) Antenna form

AM	(-40~130°C) (-0.1~2.5)MPa	Lens diameter is ¾"
FM	(-40~130°C) (-0.1~2.5)MPa	Lens diameter is 1½"
FT	(-40~200°C) (-0.1~2.5)MPa	Lens diameter is 1½"
GM	(-40~130°C) (-0.1~2.5)MPa	Lens diameter is 3"
GT	(-40~200°C) (-0.1~2.5)MPa	Lens diameter is 3"

(3) Lens material

A PTFE (-40~200°C)

(4) Install form

GP G-thread/ Stainless steel 316L  
NP NPT-thread/ Stainless steel 316L

(5) Process Seal

A FKM (-40~200°C)

(6) Electronic building brick

B (4-20) mA/HART 2-Wire  
R RS485/MODBUS Protocol

(7) House /protection grade

A Die-casting aluminum ADC12/IP67  
E Die-casting aluminum ADC12/IP67  
G Stainless steel 316L/IP67

(8) Cable access interface

M M20X1.5  
N ½ NPT

(9) Display/programming

A Programmer with Bluetooth  
B Programmer without Bluetooth  
C Remote display with Bluetooth  
D Remote display without Bluetooth  
X None

**GDRD87- 1 2 3 4 5 6 7 8 9**

(1) Approval

P Standard  
I Ex ia IIC T6...T2 Ga  
F Ex ia IIIC T85°C ...T300°C Da

(2) Antenna form

NW	(-40~130°C) Atmospheric	Stainless steel 316L Gimbal
RW	(-40~200°C) Atmospheric	Stainless steel 316L Gimbal with Radiator
JG	(-40~130°C) (-0.1~0.3) MPa	Stainless steel 316L Thread M94X2
LG	(-40~200°C) (-0.1~0.3) MPa	Stainless steel 316L Thread M94X2 with Radiator

(3) Lens material

A PTFE (-40~200°C)  
C PEEK (-40~200°C)



Attachment to Certificate  
IECEX TUR19.0001 X  
Revision 0

(4) Install form

FC Flange DN100 PN16 Stainless steel 316L  
FD Flange DN125 PN16 Stainless steel 316L  
FE Flange DN150 PN16 Stainless steel 316L  
FX Nonstandard flange

(5) Process Seal

A FKM (-40~200°C)

(6) Electronic building brick

B (4-20) mA/HART 2-Wire  
R RS485/MODBUS Protocol

(7) House /protection grade

A Die-casting aluminum ADC12/IP67  
E Die-casting aluminum ADC12/IP67  
G Stainless steel 316L/IP67

(8) Cable access interface

M M20X1.5  
N ½ NPT

(9) Display/programming

A Programmer with Bluetooth  
B Programmer without Bluetooth  
C Remote display with Bluetooth  
D Remote display without Bluetooth  
X None

**GDRD89- 1 2 3 4 5 6 7 8 9**

(1)Approval

I intrinsically safe

(2)Antenna form

UA (-40~130°C) (-0.1~0.1) MPa 30m  
UB (-40~130°C) (-0.1~0.1) MPa 70m

(3) Lens material

A PTFE (-40~200°C)

(4) Install form

FB Flange DN80 PN40 Stainless steel 316L

(5) Process Seal

X None

(6) Electronic building brick

B (4-20) mA/HART 2-Wire  
R RS485/MODBUS Protocol

(7) House /protection grade

E Die-casting aluminum ADC12/IP67  
M Stainless steel 316L/IP67  
G Stainless steel 316L/IP67



Attachment to Certificate  
IECEX TUR19.0001 X  
Revision 0

(8) Cable access interface

M M20X1.5

N ½ NPT

(9) Display/programming

B Programmer without Bluetooth

X None