

NEPSI Hazardous Area Approvals for Fisher™ FIELDVUE™ DLC3100 Digital Level Controller

This supplement provides NESPI Hazardous Area Approval information for the DLC3100 digital level controller.

NEPSI—National Supervision and Inspection Centre for Explosion Protection and Safety of Instrumentation. NEPSI approval is accepted in China.

These special instructions for “safe use” are in addition to, and may override, the standard installation procedures. Certain nameplates may carry more than one approval, and each approval may have unique installation/wiring requirements and/or conditions of “safe use”. Special instructions are listed by approval.

Note

This information supplements the nameplate markings affixed to the product and the DLC3100 Digital Level Controller quick start guide ([D104214X012](#)) and instruction manual ([D104213X012](#)), available from your Emerson sales office or at Fisher.com.

Always refer to the nameplate itself to identify the appropriate certification.

⚠ WARNING

Failure to follow these conditions of “safe use” could result in personal injury or property damage from fire or explosion, and area re-classification.

Intrinsically Safe

Certificate Number GYJ19.1344X

Ex ia IIC T5/T6 Ga

Ex iaD 20 T85/T100

Special Conditions for Safe Use

The suffix “X” placed after the certificate number indicates that this product is subject to special conditions for safe use, that is:

1. For EPL Ga applications, at the metallic parts of the products made of light metal there is a danger of ignition by impact or friction.
2. Potential electrostatic charging hazard. Clean only with wet cloth (or see instructions).

Conditions for Safe Use

1. The external earth connection facility shall be connected reliably.
2. The relationship between the temperature class, maximum surface temperature and ambient temperature range is shown as following

Temperature Class	T6	T5
Max Surface Temperature	T85	T100
Ambient Temperature	-40°C~+55°C	-40°C~+80°C

3. This product should be used in explosive gas atmospheres/combustible dust atmospheres together with approved associated apparatus, follow the instruction manual of this product and associated apparatus when connecting the wiring. Connect the wiring terminals correctly.

4. The intrinsically safe parameters are shown as follows:

Ui (V)	Ii (mA)	Pi (W)	Ci (nF)	Li (μ H)
30	130	0.9	10	10

Uo (V)	Io (mA)	Po (W)	Co (nF)	Lo (mH)
13.5	11.8	88.6	58	80

5. Connecting cable between this product and associated apparatus should be insulated screen cable; connect the cable screen functionally to earth ground.

6. Install and maintain the product only when no combustible dust exists (Ex iaD product).

7. Clean the surface of this product termly when using in combustible dust atmosphere.

8. After installation, degree of protection of enclosure is at least IP66 according to GB/T 4208-2017.

9. The user shall not change the configuration in order to maintain/ensure the explosion protection performance of the equipment. Any change may impair safety.

10. For installation, use and maintenance of this product, the end user shall observe the instruction manual and the following standards:

GB 50257-2014 “Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering”.

GB 3836.13-2013 “Explosive atmospheres- Part 13: Equipment repair, overhaul and reclamation”.

GB/T 3836.15-2017 “Explosive atmospheres- Part 15: Electrical installations design, selection and erection

GB/T 3836.16-2017 “Explosive atmospheres- Part 16: Electrical installations inspection and maintenance”.

GB/T 3836.18-2017 “Explosive atmospheres-Part 18: Intrinsically safe electrical systems”.

GB 15577-2007 “Safety regulations for dust explosion prevention and protection”. (Only if installed in dust hazardous areas).

Flameproof

Certificate Number GYJ19.1343X

Ex d II C T5/T6 Gb;

Ex tD A21 IP66 T78°C

Special Conditions for Safe Use

The suffix “X” placed after the certificate number indicates that this product is subject to special conditions for safe use, that is:

1. For information on the dimensions of the flameproof joints contact the manufacturer.

2. The special fasteners can be replaced only by the identical fasteners (yield stress at least 1100Mpa), contact the manufacturer for the detail.

3. At Tamb = +75°C, the cable used shall have an operating temperature greater than +80°C.

4. Potential electrostatic charging hazard. Clean only with wet cloth (or see instructions).

Conditions for Safe Use

1. The external earth connection facility should be connected reliably.

2. The relationship between ambient temperature range, temperature class and max. surface temperature is shown as below:

Ambient Temperature Range	Temperature Class	Max. Surface Temperature
-40°C~+55°C	T6	/
-40°C~+75°C	T5	T78°C

3. Electrical data:
Input Voltage: 12~30V DC, Maximum Input Current: 22.5mA
Output Current: 4~20mA DC
4. As flameproof product, suitable certified cable glands or blanking plugs for unused holes approved by ExTL according to GB 3836.1-2010 and GB 3836.2-2010 with Ex marking “Ex d II C Gb” shall be used and correctly installed; as dust product, suitable certified cable glands or blanking plugs for unused holes approved by ExTL according to GB 12476.1-2013 and GB 12476.5-2013 with Ex marking “Ex tD A21 IP66” shall be used and correctly installed, after installation, degree of protection of enclosure is at least IP66 according to GB/T 4208-2017. The cable glands and blanking plugs to be used shall suitable for the product working conditions.
5. Any maintenance shall be performed only when the warning of “Do not open when energized” is observed.
6. Clean the surface of this product termly when using in combustibile dust atmosphere.
7. The user shall not change the configuration in order to maintain/ensure the explosion protection performance of this product. Any change may impair safety.
8. For installation, use and maintenance of this product, the end user should observe the instruction manual and the following standards:
GB 50257-2014 “Code for construction and acceptance of electric device for explosion atmospheres and fire hazard electrical equipment installation engineering”.
GB 3836.13-2013 “Explosive atmospheres-Part 13:Equipment repair, overhaul and reclamation”.
GB/T 3836.15-2017 “Explosive atmospheres-Part 15:Electrical installations design, selection and erection”.
GB/T 3836.16-2017 “Explosive atmospheres-Part 16:Electrical installations inspection and maintenance”.
GB 15577-2007 “Safety regulations for dust explosion prevention and protection”. (Only if installed in dust hazardous areas)

Neither Emerson, Emerson Automation Solutions, nor any of their affiliated entities assumes responsibility for the selection, use or maintenance of any product. Responsibility for proper selection, use, and maintenance of any product remains solely with the purchaser and end user.

Fisher and FIELDVUE are marks owned by one of the companies in the Emerson Automation Solutions business unit of Emerson Electric Co. Emerson Automation Solutions, Emerson, and the Emerson logo are trademarks and service marks of Emerson Electric Co. HART and WirelessHART are registered trademarks of FieldComm Group. Modbus is a registered trademark of Schneider Automation, Inc. All other marks are the property of their respective owners.

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available upon request. We reserve the right to modify or improve the designs or specifications of such products at any time without notice.

Emerson Automation Solutions
Marshalltown, Iowa 50158 USA
Sorocaba, 18087 Brazil
Cernay, 68700 France
Dubai, United Arab Emirates
Singapore 128461 Singapore

www.Fisher.com

