

IECEX/ATEX/UKEX Hazardous Area Approvals

Fisher™ FIELDVUE™ DVC7K-H-C-D Digital Valve Controllers

Hazardous Area Approvals and Special Instructions for “Safe Use” and Installations in Hazardous Locations

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

NOTE

This information supplements the nameplate markings affixed to the product and the DVC7K-H Quick Start Guide (D104766X012), available from your [Emerson sales office](#) or at [Fisher.com](#). Always refer to the nameplate itself to identify the appropriate certification.

Approval information is for both aluminum and stainless steel constructions.

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.

1.11 Specific Conditions of Use

1.11.1 IECEX CSAE 24.0005X

1. The user should ensure that the Equipment is not installed in a location where it may be subjected to external conditions which might cause a build-up of electrostatic charges on these non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth.
2. The temperature of the DVC7K-H can reach 94 °C in an 85 °C ambient at the cable entry and the branching point. This must be considered by the user when selecting field wiring and cable entry devices.

3. This equipment shall only be installed where the risk of damage due to impact is considered to be low.
4. Compressed air or natural gas may be used as a control medium. For natural gas, only the intrinsically safe (Ex ia) protection concept is permitted. The control medium shall be particulate free and have a dew point of at least 10 °C below the ambient temperature to ensure no risk of condensation. The maximum pressure of the control medium shall not exceed 145 lbf/in² (psi).
5. When natural gas is used as a control medium, a barrier gland, or other equally effective means of mitigating the migration of natural gas into the wiring system, shall be used with each populated cable entry. The enclosure vent shall be replaced by the pipeblock and the spent medium shall be disposed of at a safe location; eg, at a flare stack.
6. The UART connection shall not be used when an explosive atmosphere is present. The USB-UART cable provided by the manufacturer shall be used for the connection and the user shall ensure an ambient temperature less than 60 °C.
7. Use only manufacturer battery part number GK03960X012.
8. The flamepaths of this equipment shall not be repaired.

1.11.2 CSANe 24ATEX1054X and CSAE 24UKEX1027X

1. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions which might cause a build-up of electrostatic charges. Additionally, cleaning of the equipment should be done only with a damp cloth.
2. The temperature of the DVC7K can reach 94 °C in an 85 °C ambient at the cable entry and the branching point. This must be considered by the user when selecting field wiring and cable entry devices.
3. This equipment shall only be installed where the risk of damage due to impact is considered to be low.
4. Compressed air or natural gas may be used as a control medium. For natural gas, only the intrinsically safe (Ex ia) protection concept is permitted. The control medium shall be particulate free and have a dew point of at least 10 °C below the ambient temperature to ensure no risk of condensation. The maximum pressure of the control medium shall not exceed 145 lbf/in² (psi).
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6. The UART connection shall not be used when an explosive atmosphere is present. The USB-UART cable provided by the manufacturer shall be used for the connection and the user shall ensure an ambient temperature less than 60 °C.
7. Use only manufacturer battery part number GK03960X012.
8. The flamepaths of this equipment shall not be repaired.

1.11.3 CSANe 24ATEX1056X and CSAE 24UKEX1029X

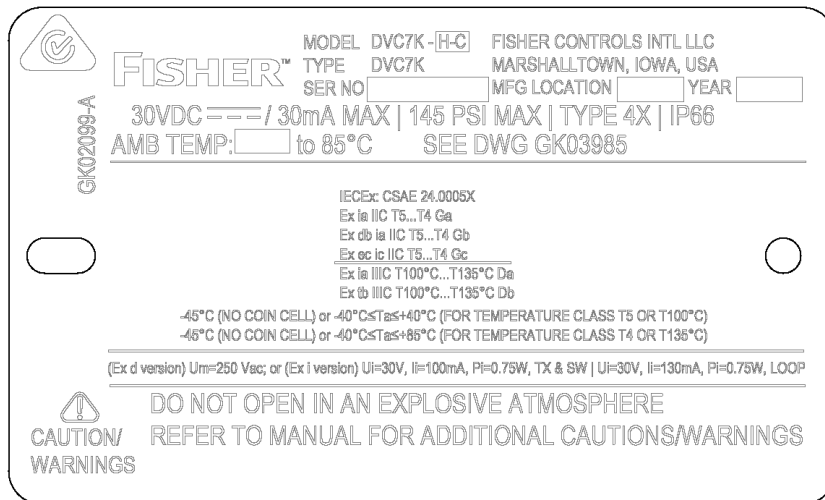
1. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions which might cause a build-up of electrostatic charges. Additionally, cleaning of the equipment should be done only with a damp cloth.
2. The temperature of the DVC7K can reach 94 °C in an 85 °C ambient at the cable entry and the branching point. This must be considered by the user when selecting field wiring and cable entry devices.
3. This equipment shall only be installed where the risk of damage due to impact is considered to be low.
4. Compressed air may be used as a control medium. The control medium shall be particulate free and have a dew point of at least 10 °C below the ambient temperature to ensure no risk of condensation. The maximum pressure of the control medium shall not exceed 145 lbf/in² (psi).
5. The UART connection shall not be used when an explosive atmosphere is present. The USB-UART cable provided by the manufacturer shall be used for the connection and the user shall ensure an ambient temperature less than 60 °C.
6. Use only manufacturer battery part number GK03960X012.

IECEx Nameplate

Covered by Standards(s):

- IEC 60079-0:2017 Ed. 7
- IEC 60079-1:2014 Ed. 7
- IEC 60079-7:2017 Ed. 5.1
- IEC 60079-11:2011 Ed. 6
- IEC 60079-31:2022 Ed. 3

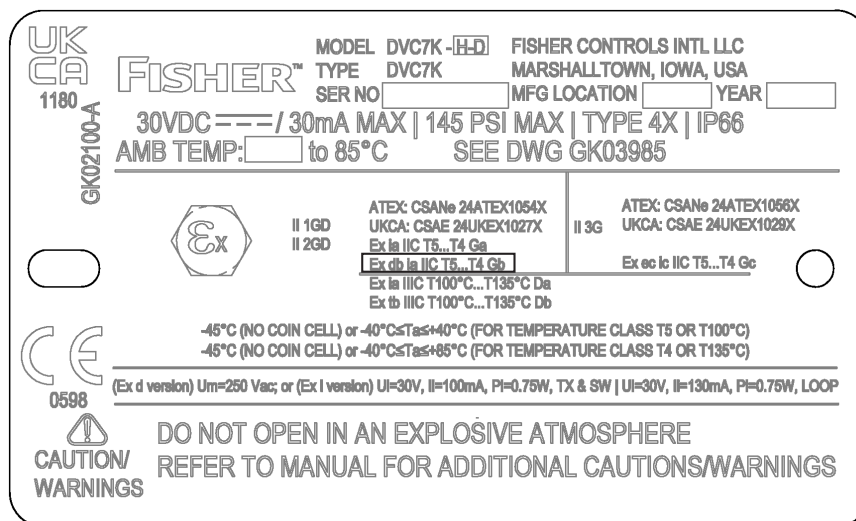
DVC7K-H-C



Flameproof, Ex d

Covered by Standard(s): EN 60079-1:2014+AC:2018-09



DVC7K-H-D



Dust by Enclosure, Ex t 

Covered by Standard(s): IEC 60079-31:2022 Edition: 3.0



DVC7K-H-D

UK CA 1180 GK02100-A	MODEL DVC7K -H-D FISHER CONTROLS INTL LLC	
	TYPE DVC7K	MARSHALLTOWN, IOWA, USA
SER NO <input type="text"/>		MFG LOCATION <input type="text"/> YEAR <input type="text"/>
30VDC === / 30mA MAX 145 PSI MAX TYPE 4X IP66		
AMB TEMP: <input type="text"/> to 85°C SEE DWG GK03985		
	II 1GD II 2GD	ATEX: CSANo 24ATEX1054X UKCA: CSAE 24UKEX1027X Ex la IIC T5...T4 Ga Ex db la IIC T5...T4 Gb Ex la IIIC T100°C...T135°C Da Ex tb IIIC T100°C...T135°C Db
	II 3G	ATEX: CSANo 24ATEX1056X UKCA: CSAE 24UKEX1029X Ex ec lc IIC T5...T4 Gc
-45°C (NO COIN CELL) or -40°C ≤ T _{amb} ≤ +40°C (FOR TEMPERATURE CLASS T5 OR T100°C) -45°C (NO COIN CELL) or -40°C ≤ T _{amb} ≤ +85°C (FOR TEMPERATURE CLASS T4 OR T135°C)		
(Ex d version) Um=250 Vac; or (Ex l version) Ui=30V, Ii=100mA, Pi=0.75W, TX & SW Ui=30V, Ii=130mA, Pi=0.75W, LOOP		
 DO NOT OPEN IN AN EXPLOSIVE ATMOSPHERE CAUTION/ WARNINGS REFER TO MANUAL FOR ADDITIONAL CAUTIONS/WARNINGS		

Increased Safety, Ex e 

Covered by Standard(s): I IEC 60079-7: 2017 Edition 5.1

DVC7K-H-D

UK CA 1180 GK02100-A	MODEL DVC7K -H-D FISHER CONTROLS INTL LLC	
	TYPE DVC7K	MARSHALLTOWN, IOWA, USA
SER NO <input type="text"/>		MFG LOCATION <input type="text"/> YEAR <input type="text"/>
30VDC === / 30mA MAX 145 PSI MAX TYPE 4X IP66		
AMB TEMP: <input type="text"/> to 85°C SEE DWG GK03985		
	II 1GD II 2GD	ATEX: CSANo 24ATEX1054X UKCA: CSAE 24UKEX1027X Ex la IIC T5...T4 Ga Ex db la IIC T5...T4 Gb Ex la IIIC T100°C...T135°C Da Ex tb IIIC T100°C...T135°C Db
	II 3G	ATEX: CSANo 24ATEX1056X UKCA: CSAE 24UKEX1029X Ex ec lc IIC T5...T4 Gc
-45°C (NO COIN CELL) or -40°C ≤ T _{amb} ≤ +40°C (FOR TEMPERATURE CLASS T5 OR T100°C) -45°C (NO COIN CELL) or -40°C ≤ T _{amb} ≤ +85°C (FOR TEMPERATURE CLASS T4 OR T135°C)		
(Ex d version) Um=250 Vac; or (Ex l version) Ui=30V, Ii=100mA, Pi=0.75W, TX & SW Ui=30V, Ii=130mA, Pi=0.75W, LOOP		
 DO NOT OPEN IN AN EXPLOSIVE ATMOSPHERE CAUTION/ WARNINGS REFER TO MANUAL FOR ADDITIONAL CAUTIONS/WARNINGS		



Flameproof, Ex i 

⚠ WARNING

Substitution of components may impair intrinsic safety.

Covered by Standard(s): EN 60079-11:2012

DVC7K-H-D

UK CA 1180 GK02100-A	MODEL DVC7K- (H-D) FISHER CONTROLS INTL LLC	
	TYPE DVC7K MARSHALLTOWN, IOWA, USA	
SER NO [] MFG LOCATION [] YEAR []		
30VDC === / 30mA MAX 145 PSI MAX TYPE 4X IP66		
AMB TEMP: [] to 85°C SEE DWG GK03985		
	II 1GD	ATEX: CSANe 24ATEX1054X
	II 2GD	UKCA: CSAE 24UKEX1027X
		II 3G
		ATEX: CSANe 24ATEX1056X
		UKCA: CSAE 24UKEX1029X
		Ex ia IIC T5...T4 Ga
		Ex db Ia IIC T5...T4 Gb
		Ex la IIIIC T100°C...T135°C Da
		Ex tb IIIIC T100°C...T135°C Db
		Ex ec Ic IIC T5...T4 Gc
-45°C (NO COIN CELL) or -40°C ≤ T _{amb} ≤ +40°C (FOR TEMPERATURE CLASS T5 OR T100°C)		
-45°C (NO COIN CELL) or -40°C ≤ T _{amb} ≤ +85°C (FOR TEMPERATURE CLASS T4 OR T135°C)		
(Ex d version) U _m =250 Vac; or (Ex l version) U _i =30V, I _i =100mA, P _i =0.75W, TX & SW U _i =30V, I _i =130mA, P _i =0.75W, LOOP		
CE 0598	DO NOT OPEN IN AN EXPLOSIVE ATMOSPHERE	
	REFER TO MANUAL FOR ADDITIONAL CAUTIONS/WARNINGS	
CAUTION/ WARNINGS		

⚠ WARNING

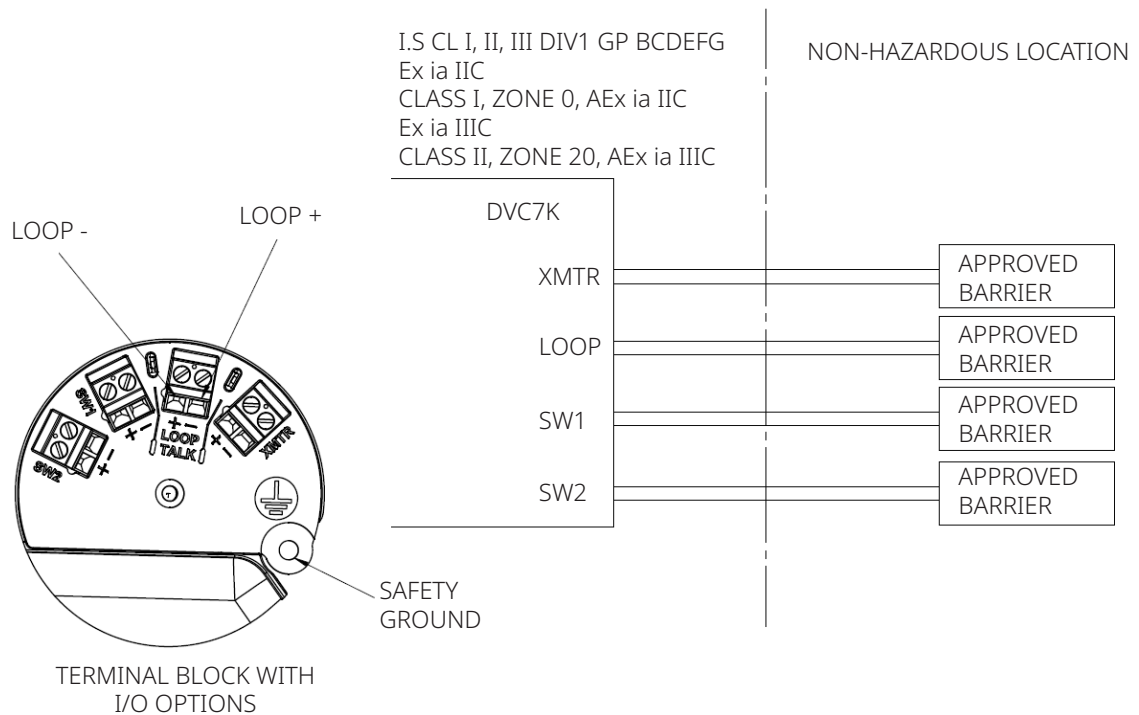
Use only copper conductors.

Figure 1. Loop Schematics FIELDVUE DVC7K-H

1. WHERE APPLICABLE EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE CANADIAN ELECTRICAL CODE (CEC) PART 1 OR IN ACCORDANCE WITH THE NATIONAL WIRING PRACTICES OF THE COUNTRY IN USE.
2. BARRIERS MUST BE APPROVED WITH ENTITY PARAMETERS AND ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS I.S. INSTALLATION INSTRUCTIONS.
3. ENTITY PARAMETERS FOR EACH I.S. CIRCUIT ARE AS FOLLOWS:

CIRCUIT	Vmax (UI)	imax (II)	Ci	Li	Pmax
XMTR	30Vdc	100mA	19.25nF	0.175mH	0.750W
LOOP	30Vdc	130mA	18.81nF	0.175mH	0.750W
SW1	30Vdc	100mA	2.2nF	0 mH	0.750W
SW2	30Vdc	100mA	2.2nF	0 mH	0.750W

4. XMTR, SW1 AND SW2 CIRCUITS ARE OPTIONAL.
5. IF HAND-HELD COMMUNICATOR OR MULTIPLEXER IS USED, IT MUST BE CERTIFIED WITH ENTITY PARAMETERS AND INSTALLED PER THE MANUFACTURER'S CONTROL DRAWING.



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Emerson
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Cernay, 68700 France
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