

CERTIFICATE OF CONFORMITY




1. **HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS**
2. **Certificate No:** FM16CA0015X
3. **Equipment:** MODEL IMX12-SERIES EX ISOLATED BARRIERS AND EX ANALOG SIGNAL ISOLATORS
(Type Reference and Name)
4. **Name of Listing Company:** Hans Turck GmbH & Co KG
5. **Address of Listing Company:** Witzlebenstr 7
Muelheim an der Ruhr 45472
Germany
6. The examination and test results are recorded in confidential report number:

3055815 dated 5th April 2017
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

CAN/CSA-C22.2 No. 142-M1987:2009, CAN/CSA-C22.2 No. 157-92:2012, CAN/CSA-C22.2 No. 213-M1987:2013, CAN/CSA-C22.2 No. 60079-0:2015, CAN/CSA-C22.2 No. 60079-7: 2016, CAN/CSA-C22.2 No. 60079-11:2014, CAN/CSA-C22.2 No. 60079-15:2012, CAN/CSA-C22.2 No. 60529-05:2010, CAN/CSA-C22.2 No. 61010-1:2009
8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

Certificate issued by:



J.E. Marquedant
Manager, Electrical Systems

28 September 2018

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com

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10. Equipment Ratings:

IMX12-DI, IMX12-AI, IMX12-AO, IMX12-TI, IMX12-FI

Associated Apparatus Suitable for Class I, Division 2, Groups A, B, C and D; Class I, Zone 2, Groups IIC, IIB, IIA Hazardous (Classified) Locations, indoors (Type, IP20) with an ambient temperature rating of -25 °C to 70 °C with Intrinsically Safe connections for Class I, II, III Division 1, Groups A, B, C, D, E, F, and G and Class I, Zone 0, Group IIC and IIB Hazardous (Classified) Locations

IMX12-PS02

Suitable for Class I, Division 2, Groups A, B, C and D; Class I, Zone 2, Groups IIC, IIB, IIA Hazardous (Classified) Locations, indoors (Type, IP20) with an ambient temperature rating of -25 °C to 70 °C

11. The marking of the equipment shall include:

IMX12-DI, IMX12-AI, IMX12-AO, IMX12-TI, IMX12-FI, IMX12-CD

Associated Apparatus, nonhazardous or CI I Div 2, Grs A, B, C, D, haz loc, AEx/Ex nA* IIC [AEx/Ex ia] IIC, AEx/Ex ec* IIC [AEx/Ex ia] IIC; providing IS circuits for use in haz loc CI I, Div 1, Grs A, B, C, D; CI II, Div 1 Grs E, F, G, CI III, Div 1; Zone 0, Group IIC. Install per Turck control drawing IS-1.XXX, from www.turck.com/fmcd. -25 °C < Ta < 70 °C Um = 250V Temp Code T5

* AEx/Ex nA nC, AEx/Ex ec nC for Relay models versions ("1R", or "2R" model code) and IMX12-CD

IMX12-PS02

Nonhazardous or CI I Div 2, Grs A, B, C, D, haz loc, AEx/Ex ec nC IIC. Install per Turck control drawing IS-1.138, from www.turck.com/fmcd. -25 °C < Ta < 70 °C Um = 250V Temp Code T4

12. Description of Equipment:

General - The IMX12-Series Ex-safety-barriers and Ex-analog-signal isolators are associated electrical apparatus for use in Division 2 (Zone 2) explosion hazardous area and for installation outside of the explosion hazardous area.

- IMX12-DI*; switching amplifier is used for the transmission of binary signals out of the explosion hazardous area into non explosion hazardous area as well as for the safe galvanic separation between the intrinsically safe and nonintrinsically safe circuits.
- IMX12-AI*; isolating transducer is used for the galvanically separated supply of apparatus in the explosion hazardous area as well as for the safe galvanic separation between the intrinsically safe measuring circuits and nonintrinsically safe output circuits. Additional to the analogue signals a digital HART-data can be transferred bidirectional.
- IMX12-AO*; current repeater is used for the galvanically separated supply of apparatus in the explosion hazardous area as well as for the safe galvanic separation between the nonintrinsically safe measuring circuits and the intrinsically safe output circuits. Additional to the analogue signals a digital HART-data can be transferred bidirectional.
- IMX12-DO*; solenoid driver provides intrinsically safe limited power at the output.
- IMX12-TI*; temperature measuring amplifier is used for the measurements of temperatures by means of thermocouples or resistance thermometers (e.g. PT100) as well as for the safe galvanic separation

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between the intrinsically safe and non intrinsically safe circuits.

- IMX12-FI*; Frequency Measuring Amplifier is used for the frequency transducer as well as for the safe galvanic separation between the intrinsically safe and non-intrinsically safe circuits.
- IMX12-PS*; power bridge supply module feeds the IMX12 device series with power via the power bridge and transmits the collective fault signal of the connected devices.
- IMX12-CD*; relay coupler is used for the galvanically separated supply of apparatus in the explosion hazardous area as well as for the safe galvanic separation between the nonintrinsically safe measuring circuits and the intrinsically safe output circuits.

Construction - The equipment's 126 x 12.5 x 110 mm Polycarbonate enclosure mounts on DIN-rail or pane and carries an IP20 rating..

Ratings The equipment ios are rated for use in an ambient temperature range of -25 °C to 70 °C with a nominal supply voltage of 10 to 30 volts dc.

IMX12-DI01-2S-2R-0/24VDC
IMX12-DI01-2S-2R-PR/24VDC
IMX12-DI01-2S-2R-0/24VDC/CC
IMX12-DI01-2S-2R-PR/24VDC/CC **2-Channel Isolating Switching Amplifier with Relay Output**

Part Numbers: 7580016, 7580017, 7580018, 7580019

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω, Po = 22 mW

Group IIC, Groups A & B	Co (Ca) = 1.2 μF	Lo (La) = 1 mH
	Co (Ca) = 0.89 μF	Lo (La) = 5 mH
	Co (Ca) = 0.8 μF	Lo (La) = 10 mH
Groups IIB & IIA, Groups C, D, E, F & G	Co (Ca) = 6.6 μF	Lo (La) = 1 mH
	Co (Ca) = 4.1 μF	Lo (La) = 10 mH
	Co (Ca) = 3.6 μF	Lo (La) = 20 mH

IMX12-DI01-2S-2T-0/24VDC
IMX12-DI01-2S-2T-PR/24VDC
IMX12-DI01-2S-2T-0/24VDC/CC
IMX12-DI01-2S-2T-PR/24VDC/CC **2-Channel Isolating Switching Amplifier with Transistor Output**

Part Numbers: 7580020, 7580021, 7580022, 7580023

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω, Po = 22 mW

Group IIC, Groups A & B	Co (Ca) = 1.2 μF	Lo (La) = 1 mH
	Co (Ca) = 0.89 μF	Lo (La) = 5 mH
	Co (Ca) = 0.8 μF	Lo (La) = 10 mH
Groups IIB & IIA, Groups C, D, E, F & G	Co (Ca) = 6.6 μF	Lo (La) = 1 mH

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Co (Ca) = 4.1 μ F Lo (La) = 10 mH
Co (Ca) = 3.6 μ F Lo (La) = 20 mH

IMX12-DI01-2S-2PP-0/ 24VDC
IMX12-DI01-2S-2PP-PR /24VDC
IMX12-DI01-2S-2PP-0/ 24VDC/CC
IMX12-DI01-2S-2PP-PR /24VDC/CC

Push-Pull transistor outputs

Part Numbers: 7580024, 7580025, 7580026, 7580027

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω , Po = 22 mW

Group IIC, Groups A & B

Co (Ca) = 1.2 μ F Lo (La) = 1 mH
Co (Ca) = 0.89 μ F Lo (La) = 5 mH
Co (Ca) = 0.8 μ F Lo (La) = 10 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 6.6 μ F Lo (La) = 1 mH
Co (Ca) = 4.1 μ F Lo (La) = 10 mH
Co (Ca) = 3.6 μ F Lo (La) = 20 mH

IMX12-DI03-1S- 1NAM1R-0/24VDC
IMX12-DI03-1S- 1NAM1R-PR/24VDC
IMX12-DI03-1S- 1NAM1R-0/24VDC/CC
IMX12-DI03-1S- 1NAM1R-PR/24VDC/CC

NAMUR output and relay output

Part Numbers: 7580000, 7580001, 7580002, 7580003

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω , Po = 22 mW

Group IIC, Groups A & B

Co (Ca) = 1.2 μ F Lo (La) = 1 mH
Co (Ca) = 0.89 μ F Lo (La) = 5 mH
Co (Ca) = 0.8 μ F Lo (La) = 10 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 6.6 μ F Lo (La) = 1 mH
Co (Ca) = 4.1 μ F Lo (La) = 10 mH
Co (Ca) = 3.6 μ F Lo (La) = 20 mH

IMX12-DI03-1S- 1NAM1T-0/24VDC
IMX12-DI03-1S- 1NAM1T-PR/24VDC
IMX12-DI03-1S- 1NAM1T-0/24VDC/CC
IMX12-DI03-1S- 1NAM1T-PR/24VDC/CC

NAMUR output and transistor output

Part Numbers: 7580004, 7580005, 7580006, 7580007

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω , Po = 22 mW

Group IIC, Groups A & B

Co (Ca) = 1.2 μ F Lo (La) = 1 mH
Co (Ca) = 0.89 μ F Lo (La) = 5 mH

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Groups IIB & IIA, Groups C, D, E, F & G	Co (Ca) = 0.8 μ F	Lo (La) = 10 mH
	Co (Ca) = 6.6 μ F	Lo (La) = 1 mH
	Co (Ca) = 4.1 μ F	Lo (La) = 10 mH
	Co (Ca) = 3.6 μ F	Lo (La) = 20 mH

IMX12-DI03-1S-2R-S/ 24VDC
IMX12-DI03-1S-2R-SPR /24VDC
IMX12-DI03-1S-2R-S/ 24VDC/CC
IMX12-DI03-1S-2R-SPR /24VDC/CC

Splitter: 1 input to 2 relay outputs t

Part Numbers: 7580008, 7580009, 7580010, 7580011

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω , Po = 22 mW

Group IIC, Groups A & B	Co (Ca) = 1.2 μ F	Lo (La) = 1 mH
	Co (Ca) = 0.89 μ F	Lo (La) = 5 mH
	Co (Ca) = 0.8 μ F	Lo (La) = 10 mH
Groups IIB & IIA, Groups C, D, E, F & G	Co (Ca) = 6.6 μ F	Lo (La) = 1 mH
	Co (Ca) = 4.1 μ F	Lo (La) = 10 mH
	Co (Ca) = 3.6 μ F	Lo (La) = 20 mH

IMX12-DI03-1S-2T-S/ 24VDC
IMX12-DI03-1S-2T-SPR /24VDC
IMX12-DI03-1S-2T-S/ 24VDC/CC
IMX12-DI03-1S-2T-SPR /24VDC/CC

Splitter: 1 input to 2 transistor outputs

Part Numbers: 7580012, 7580013, 7580014, 7580015

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω , Po = 22 mW

Group IIC, Groups A & B	Co (Ca) = 1.2 μ F	Lo (La) = 1 mH
	Co (Ca) = 0.89 μ F	Lo (La) = 5 mH
	Co (Ca) = 0.8 μ F	Lo (La) = 10 mH
Groups IIB & IIA, Groups C, D, E, F & G	Co (Ca) = 6.6 μ F	Lo (La) = 1 mH
	Co (Ca) = 4.1 μ F	Lo (La) = 10 mH
	Co (Ca) = 3.6 μ F	Lo (La) = 20 mH

Part Numbers: 7580610, 7580611

IMX12-CD01-2R-2U- 0/L
IMX12-CD01-2R-2U- 0/L/CC

Relay coupler t

Part Numbers: 7580620, 7580621

IS Output Entity Parameters: Terminals 1 – 2 - 3 – 4 - 5, or Terminals 6 - 7 - 8

Uo (Voc) = 0 V, Io (Isc) = 0 mA, Po = 0 W

Ui (Vmax) = 60 V, Ii (Imax) = 2 A

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IMX12-AI01-1I-2IU-HPR/24VDC
IMX12-AI01-1I-2IU-H0/24VDC
IMX12-AI01-1I-2IU-HPR/24VDC/CC
IMX12-AI01-1I-2IU-H0/24VDC/CC

Splitter: 1 input to 2 outputs

Part Numbers: 7580300, 7580301, 7580302, 7580303

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 26.1 V, Io (Isc) = 97 mA, Ro = 269 Ω, Po = 632 mW

Group IIC, Groups A & B

Co (Ca) = 47 nF

Lo (La) = 1.5 mH

Co (Ca) = 58 nF

Lo (La) = 0.9 mH

Co (Ca) = 74 nF

Lo (La) = 0.4 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 320 nF

Lo (La) = 9.9 mH

Co (Ca) = 340 nF

Lo (La) = 1.9 mH

Co (Ca) = 400 nF

Lo (La) = 0.9 mH

IMX12-AI01-2I-2IU-HPR/24VDC
IMX12-AI01-2I-2IU-H0/ 24VDC
IMX12-AI01-2I-2IU-HPR/24VDC/CC
IMX12-AI01-2I-2IU-H0/ 24VDC/CC

2 channels device

Part Numbers: 7580304, 7580305, 7580306, 7580307

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 26.1 V, Io (Isc) = 97 mA, Ro = 269 Ω, Po = 632 mW

Group IIC, Groups A & B

Co (Ca) = 47 nF

Lo (La) = 1.5 mH

Co (Ca) = 58 nF

Lo (La) = 0.9 mH

Co (Ca) = 74 nF

Lo (La) = 0.4 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 320 nF

Lo (La) = 9.9 mH

Co (Ca) = 340 nF

Lo (La) = 1.9 mH

Co (Ca) = 400 nF

Lo (La) = 0.9 mH

IMX12-AI01-1I-1IU-HPR/24VDC
IMX12-AI01-1I-1IU-H0/24VDC
IMX12-AI01-1I-1IU-HPR/24VDC/CC
IMX12-AI01-1I-1IU-H0/24VDC/CC

one channel device

Part Numbers: 7580312, 7580313, 7580314, 7580315

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 26.1 V, Io (Isc) = 97 mA, Ro = 269 Ω, Po = 632 mW

Group IIC, Groups A & B

Co (Ca) = 47 nF

Lo (La) = 1.5 mH

Co (Ca) = 58 nF

Lo (La) = 0.9 mH

Co (Ca) = 74 nF

Lo (La) = 0.4 mH

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Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 320 nF	Lo (La) = 9.9 mH
Co (Ca) = 340 nF	Lo (La) = 1.9 mH
Co (Ca) = 47 nF	Lo (La) = 1.5 mH

IMX12-AO01-1I-1I-HPR /24VDC

IMX12-AO01-1I-1I-H0/ 24VDC

IMX12-AO01-1I-1I-HPR /24VDC/CC

IMX12-AO01-1I-1I-H0/ 24VDC/CC

1-Channel HART®-Output Analog Signal Isolator

Part Numbers: 7580400, 7580401, 7580402, 7580403

IS Output Entity Parameters: Terminals 7 - 8

Uo (Voc) = 21.8 V, Io (Isc) = 53.2 mA, Ro = 134.6 Ω, Po = 671 mW

Group IIC, Groups A & B

Co (Ca) = 69 nF	Lo (La) = 1.5 mH
Co (Ca) = 95 nF	Lo (La) = 0.5 mH
Co (Ca) = 169 nF	Lo (La) = 0.1 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 54 nF	Lo (La) = 20 mH
Co (Ca) = 600 nF	Lo (La) = 10 mH
Co (Ca) = 660 nF	Lo (La) = 0.5 mH

IMX12-AO01-2I-2I-HPR /24VDC

IMX12-AO01-2I-2I-H0/ 24VDC

IMX12-AO01-2I-2I-HPR /24VDC/CC

IMX12-AO01-2I-2I-H0/ 24VDC/CC

2-Channel HART®-Output Analog Signal Isolator

Part Numbers: 7580404, 7580405, 7580406, 7580407

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 21.8 V, Io (Isc) = 53.2 mA, Ro = 134.6 Ω, Po = 671 mW

Group IIC, Groups A & B

Co (Ca) = 69 nF	Lo (La) = 1.5 mH
Co (Ca) = 95 nF	Lo (La) = 0.5 mH
Co (Ca) = 169 nF	Lo (La) = 0.1 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 54 nF	Lo (La) = 20 mH
Co (Ca) = 600 nF	Lo (La) = 10 mH
Co (Ca) = 660 nF	Lo (La) = 0.5 mH

IMX12-DO01-1U-1U-PR/ 24VDC

IMX12-DO01-1U-1U-0/ 24VDC

IMX12-DO01-1U-1U-PR/ 24VDC/CC

IMX12-DO01-1U-1U-0/ 24VDC/CC

1-Channel Solenoid Valve

Part Numbers: 7580100, 7580101, 7580102, 7580103

IS Output Entity Parameters: Terminals 7 - 8

Uo (Voc) = 27.26 V, Io (Isc) = 68.4 mA, Ro = 67.72 Ω, Po = 576 mW

Group IIC, Groups A & B

Co (Ca) = 0.057 μF	Lo (La) = 0.94 mH
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Groups IIB & IIA, Groups C, D, E, F & G	Co (Ca) = 0.078 μ F	Lo (La) = 0.4 mH
	Co (Ca) = 0.088 μ F	Lo (La) = 0.2 mH
	Co (Ca) = 0.26 μ F	Lo (La) = 10 mH
	Co (Ca) = 0.31 μ F	Lo (La) = 2 mH
	Co (Ca) = 0.45 μ F	Lo (La) = 0.5 mH

IMX12-DO01-2U-2U-PR/ 24VDC
IMX12-DO01-2U-2U-0/ 24VDC
IMX12-DO01-2U-2U-PR/ 24VDC/CC
IMX12-DO01-2U-2U-0/ 24VDC/CC
2-Channel Solenoid Valve

Part Numbers: 7580104, 7580105, 7580106, 7580107

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 27.26 V, Io (Isc) = 68.4 mA, Ro = 67.72 Ω , Po = 576 mW

Group IIC, Groups A & B	Co (Ca) = 0.057 μ F	Lo (La) = 0.94 mH
	Co (Ca) = 0.078 μ F	Lo (La) = 0.4 mH
	Co (Ca) = 0.088 μ F	Lo (La) = 0.2 mH
Groups IIB & IIA, Groups C, D, E, F & G	Co (Ca) = 0.26 μ F	Lo (La) = 10 mH
	Co (Ca) = 0.31 μ F	Lo (La) = 2 mH
	Co (Ca) = 0.45 μ F	Lo (La) = 0.5 mH

IMX12-FI01-1SF-1I1R- CPR/24VDC
IMX12-FI01-1SF-1I1R- C0/24VDC
IMX12-FI01-1SF-1I1R- CPR/24VDC/CC
IMX12-FI01-1SF-1I1R- C0/24VDC/CC
1 current output, 1 relay output

Part Numbers: 7580204, 7580205, 7580206, 7580207

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 21.1 mA, Ro = 441 Ω , Po = 49 mW

Group IIC, Groups A & B	Co (Ca) = 1.2 μ F	Lo (La) = 0.7 mH
	Co (Ca) = 0.84 μ F	Lo (La) = 4.7 mH
	Co (Ca) = 0.73 μ F	Lo (La) = 9.7 mH
Groups IIB & IIA, Groups C, D, E, F & G	Co (Ca) = 6.6 μ F	Lo (La) = 0.7 mH
	Co (Ca) = 3.9 μ F	Lo (La) = 4.7 mH
	Co (Ca) = 3.4 μ F	Lo (La) = 9.7 mH

IMX12-FI01-2SF-2I- CPR/24VDC
IMX12-FI01-2SF-2I- C0/24VDC
IMX12-FI01-2SF-2I- CPR/24VDC/CC
IMX12-FI01-2SF-2I- C0/24VDC/CC
2 current outputs

Part Numbers: 7580208, 7580209, 7580210, 7580211

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 21.1 mA, Ro = 441 Ω , Po = 49 mW

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Group IIC, Groups A & B

Co (Ca) = 1.2 μ F Lo (La) = 0.7 mH
Co (Ca) = 0.84 μ F Lo (La) = 4.7 mH
Co (Ca) = 0.73 μ F Lo (La) = 9.7 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 6.6 μ F Lo (La) = 0.7 mH
Co (Ca) = 3.9 μ F Lo (La) = 4.7 mH
Co (Ca) = 3.4 μ F Lo (La) = 9.7 mH

IMX12-TI02-1TCURTDR-111R-CPR/24VDC
IMX12-TI02-1TCURTDR-111R-C0/24VDC
IMX12-TI02-1TCURTDR-111R-CPR/24VDC/CC
IMX12-TI02-1TCURTDR-111R-C0/24VDC/CC

**1-channel Universal Temperature Transducer
with Current Output and Limit Value**

Part Numbers: 7580504, 7580505, 7580506, 7580507

IS Output Entity Parameters: Terminals 3 – 4, or Terminals 5 – 6 - 7 - 8

Uo (Voc) = 5.0 V, Io (Isc) = 2.4 mA, Ro = 2074 Ω , Po = 3 mW

Group IIC, Groups A & B

Co (Ca) = 3.4 μ F Lo (La) = 1.6 mH
Co (Ca) = 2.9 μ F Lo (La) = 4.6 mH
Co (Ca) = 2.7 μ F Lo (La) = 9.6 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 18 μ F Lo (La) = 1.6 mH
Co (Ca) = 13 μ F Lo (La) = 9.6 mH
Co (Ca) = 12 μ F Lo (La) = 19.6 mH

IIMX12-TI02-2TCURTDR- 2I-CPR/24VDC
IMX12-TI02-2TCURTDR- 2I-C0/24VDC
IMX12-TI02-2TCURTDR- 2I-CPR/24VDC/CC
IMX12-TI02-2TCURTDR- 2I-C0/24VDC/CC

**2-Channel Universal Temperature Transducer
with Current Output.**

Part Numbers: 7580508, 7580509, 7580510, 7580511

IS Output Entity Parameters: Terminals 1 – 2 - 3 – 4, or Terminals 5 – 6 - 7 - 8

Uo (Voc) = 5.0 V, Io (Isc) = 2.8 mA, Ro = 1817 Ω , Po = 3.5 mW

Group IIC, Groups A & B

Co (Ca) = 3.4 μ F Lo (La) = 1.7 mH
Co (Ca) = 2.9 μ F Lo (La) = 4.7 mH
Co (Ca) = 2.7 μ F Lo (La) = 9.7 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 18 μ F Lo (La) = 1.7 mH
Co (Ca) = 13 μ F Lo (La) = 9.7 mH
Co (Ca) = 12 μ F Lo (La) = 19.7 mH

IMX12-TI01-2RTDR- 2I-CPR/24VDC
IMX12-TI01-2RTDR- 2I-C0/24VDC
IMX12-TI01-2RTDR- 2I-CPR/24VDC/CC
IMX12-TI01-2RTDR- 2I-C0/24VDC/CC

**2-Channel Temperature Transducer
with Current Output.**

Part Numbers: 7580512, 7580513, 7580514, 7580515

IS Output Entity Parameters: Terminals 1 – 2 - 3 – 4, or Terminals 5 – 6 - 7 - 8

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U_o (Voc) = 5.0 V, I_o (Isc) = 2.4 mA, R_o = 2093 Ω , P_o = 3 mW

Group IIC, Groups A & B

Co (Ca) = 3.4 μ F

Lo (La) = 1.7 mH

Co (Ca) = 2.9 μ F

Lo (La) = 4.7 mH

Co (Ca) = 2.7 μ F

Lo (La) = 9.7 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 18 μ F

Lo (La) = 1.7 mH

Co (Ca) = 13 μ F

Lo (La) = 9.7 mH

Co (Ca) = 12 μ F

Lo (La) = 19.7 mH

IMX12-PS02-UI-UIR-PR /24VDC

IMX12-PS02-UI-UIR-PR /24VDC/CC

Power supply module

13. Specific Conditions of Use:

- 1 The modules shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application, including a tool removable cover.
- 2 When installed in Division 2 Hazardous (classified) locations, a warning label must be prominently affixed near the unit(s) which warns that the cables must not be removed or inserted unless the area is known to be non-hazardous
- 3 The installation must be in accordance with the Canadian Electrical Code, CEC Part I, CSA C22.1.
- 4 The maximum unclassified location voltage, U_m , is 250 V.

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals Canadian Certification Scheme.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
5 th April 2017	Original Issue.
28 th September 2018	Supplement 1: Report Reference: – Approval report 3063968 dated 28 th September 2018 Description of the Change: Addition of new models

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CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
2. **Certificate No:** FM16US0015X
3. **Equipment:** MODEL IMX12-SERIES EX ISOLATED BARRIERS AND EX ANALOG SIGNAL ISOLATORS
(Type Reference and Name)
4. **Name of Listing Company:** Hans Turck GmbH & Co KG
5. **Address of Listing Company:** Witzlebenstr 7
Muelheim an der Ruhr 45472
Germany
6. The examination and test results are recorded in confidential report number:

3055815 dated 5th April 2017
7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2011, FM Class 3610:2015, FM Class 3611:2004, FM Class 3810:2005, ANSI/IEC 60529:2004, ANSI/ISA-60079-0:2013, ANSI/ISA-60079-7:2017, ANSI/ISA-60079-11:2014, ANSI/ISA-60079-15:2013, ANSI/ISA-61010-1:2012
8. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

Certificate issued by:

J/E. Marquedant
Manager, Electrical Systems

28 September 2018

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

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10. Equipment Ratings:

IMX12-DI, IMX12-AI, IMX12-AO, IMX12-TI, IMX12-FI

Associated Apparatus Suitable for Class I, Division 2, Groups A, B, C and D; Class I, Zone 2, Groups IIC, IIB, IIA Hazardous (Classified) Locations, indoors (Type, IP20) with an ambient temperature rating of -25 °C to 70 °C with Intrinsically Safe connections for Class I, II, III Division 1, Groups A, B, C, D, E, F, and G and Class I, Zone 0, Group IIC and IIB Hazardous (Classified) Locations

IMX12-PS02

Suitable for Class I, Division 2, Groups A, B, C and D; Class I, Zone 2, Groups IIC, IIB, IIA Hazardous (Classified) Locations, indoors (Type, IP20) with an ambient temperature rating of -25 °C to 70 °C

11. The marking of the equipment shall include:

IMX12-DI, IMX12-AI, IMX12-AO, IMX12-TI, IMX12-FI, IMX12-CD

Associated Apparatus, nonhazardous or CI I Div 2, Grs A, B, C, D, haz loc, AEx/Ex nA* IIC [AEx/Ex ia] IIC, AEx/Ex ec* IIC [AEx/Ex ia] IIC; providing IS circuits for use in haz loc CI I, Div 1, Grs A, B, C, D; CI II, Div 1 Grs E, F, G, CI III, Div 1; Zone 0, Group IIC. Install per Turck control drawing IS-1.XXX, from www.turck.com/fmcd. -25 °C < Ta < 70 °C Um = 250V Temp Code T5

* AEx/Ex nA nC, AEx/Ex ec nC for Relay models versions ("1R", or "2R" model code) and IMX12-CD

IMX12-PS02

Nonhazardous or CI I Div 2, Grs A, B, C, D, haz loc, AEx/Ex ec nC IIC. Install per Turck control drawing IS-1.138, from www.turck.com/fmcd. -25 °C < Ta < 70 °C Um = 250V Temp Code T4

12. **Description of Equipment:**

General - The IMX12-Series Ex-safety-barriers and Ex-analog-signal isolators are associated electrical apparatus for use in Division 2 (Zone 2) explosion hazardous area and for installation outside of the explosion hazardous area.

- IMX12-DI*; switching amplifier is used for the transmission of binary signals out of the explosion hazardous area into non explosion hazardous area as well as for the safe galvanic separation between the intrinsically safe and nonintrinsically safe circuits.
- IMX12-AI*; isolating transducer is used for the galvanically separated supply of apparatus in the explosion hazardous area as well as for the safe galvanic separation between the intrinsically safe measuring circuits and nonintrinsically safe output circuits. Additional to the analogue signals a digital HART-data can be transferred bidirectional.
- IMX12-AO*; current repeater is used for the galvanically separated supply of apparatus in the explosion hazardous area as well as for the safe galvanic separation between the nonintrinsically safe measuring circuits and the intrinsically safe output circuits. Additional to the analogue signals a digital HART-data can be transferred bidirectional.
- IMX12-DO*; solenoid driver provides intrinsically safe limited power at the output.
- IMX12-TI*; temperature measuring amplifier is used for the measurements of temperatures by means of thermocouples or resistance thermometers (e.g. PT100) as well as for the safe galvanic separation

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between the intrinsically safe and non intrinsically safe circuits.

- IMX12-FI*; Frequency Measuring Amplifier is used for the frequency transducer as well as for the safe galvanic separation between the intrinsically safe and non-intrinsically safe circuits.
- IMX12-PS*; power bridge supply module feeds the IMX12 device series with power via the power bridge and transmits the collective fault signal of the connected devices.
- IMX12-CD*; relay coupler is used for the galvanically separated supply of apparatus in the explosion hazardous area as well as for the safe galvanic separation between the nonintrinsically safe measuring circuits and the intrinsically safe output circuits.

Construction - The equipment's 126 x 12.5 x 110 mm Polycarbonate enclosure mounts on DIN-rail or pane and carries an IP20 rating..

Ratings - The equipment are rated for use in an ambient temperature range of -25 °C to 70 °C with a nominal supply voltage of 10 to 30 volts dc.

IMX12-DI01-2S-2R-0/24VDC

IMX12-DI01-2S-2R-PR/24VDC

IMX12-DI01-2S-2R-0/24VDC/CC

IMX12-DI01-2S-2R-PR/24VDC/CC

2-Channel Isolating Switching Amplifier with Relay Output

Part Numbers: 7580016, 7580017, 7580018, 7580019

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω, Po = 22 mW

Group IIC, Groups A & B

Co (Ca) = 1.2 μF

Lo (La) = 1 mH

Co (Ca) = 0.89 μF

Lo (La) = 5 mH

Co (Ca) = 0.8 μF

Lo (La) = 10 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 6.6 μF

Lo (La) = 1 mH

Co (Ca) = 4.1 μF

Lo (La) = 10 mH

Co (Ca) = 3.6 μF

Lo (La) = 20 mH

IMX12-DI01-2S-2T-0/24VDC

IMX12-DI01-2S-2T-PR/24VDC

IMX12-DI01-2S-2T-0/24VDC/CC

IMX12-DI01-2S-2T-PR/24VDC/CC

2-Channel Isolating Switching Amplifier with Transistor Output

Part Numbers: 7580020, 7580021, 7580022, 7580023

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω, Po = 22 mW

Group IIC, Groups A & B

Co (Ca) = 1.2 μF

Lo (La) = 1 mH

Co (Ca) = 0.89 μF

Lo (La) = 5 mH

Co (Ca) = 0.8 μF

Lo (La) = 10 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 6.6 μF

Lo (La) = 1 mH

Co (Ca) = 4.1 μF

Lo (La) = 10 mH

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Co (Ca) = 3.6 μ F

Lo (La) = 20 mH

IMX12-DI01-2S-2PP-0/ 24VDC
IMX12-DI01-2S-2PP-PR /24VDC
IMX12-DI01-2S-2PP-0/ 24VDC/CC
IMX12-DI01-2S-2PP-PR /24VDC/CC

Push-Pull transistor outputs

Part Numbers: 7580024, 7580025, 7580026, 7580027

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω , Po = 22 mW

Group IIC, Groups A & B

Co (Ca) = 1.2 μ F

Lo (La) = 1 mH

Co (Ca) = 0.89 μ F

Lo (La) = 5 mH

Co (Ca) = 0.8 μ F

Lo (La) = 10 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 6.6 μ F

Lo (La) = 1 mH

Co (Ca) = 4.1 μ F

Lo (La) = 10 mH

Co (Ca) = 3.6 μ F

Lo (La) = 20 mH

IMX12-DI03-1S- 1NAM1R-0/24VDC
IMX12-DI03-1S- 1NAM1R-PR/24VDC
IMX12-DI03-1S- 1NAM1R-0/24VDC/CC
IMX12-DI03-1S- 1NAM1R-PR/24VDC/CC

NAMUR output and relay output

Part Numbers: 7580000, 7580001, 7580002, 7580003

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω , Po = 22 mW

Group IIC, Groups A & B

Co (Ca) = 1.2 μ F

Lo (La) = 1 mH

Co (Ca) = 0.89 μ F

Lo (La) = 5 mH

Co (Ca) = 0.8 μ F

Lo (La) = 10 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 6.6 μ F

Lo (La) = 1 mH

Co (Ca) = 4.1 μ F

Lo (La) = 10 mH

Co (Ca) = 3.6 μ F

Lo (La) = 20 mH

IMX12-DI03-1S- 1NAM1T-0/24VDC
IMX12-DI03-1S- 1NAM1T-PR/24VDC
IMX12-DI03-1S- 1NAM1T-0/24VDC/CC
IMX12-DI03-1S- 1NAM1T-PR/24VDC/CC

NAMUR output and transistor output

Part Numbers: 7580004, 7580005, 7580006, 7580007

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω , Po = 22 mW

Group IIC, Groups A & B

Co (Ca) = 1.2 μ F

Lo (La) = 1 mH

Co (Ca) = 0.89 μ F

Lo (La) = 5 mH

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Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 0.8 μ F	Lo (La) = 10 mH
Co (Ca) = 6.6 μ F	Lo (La) = 1 mH
Co (Ca) = 4.1 μ F	Lo (La) = 10 mH
Co (Ca) = 3.6 μ F	Lo (La) = 20 mH

IMX12-DI03-1S-2R-S/ 24VDC
IMX12-DI03-1S-2R-SPR /24VDC
IMX12-DI03-1S-2R-S/ 24VDC/CC
IMX12-DI03-1S-2R-SPR /24VDC/CC

Splitter: 1 input to 2 relay outputs t

Part Numbers: 7580008, 7580009, 7580010, 7580011

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω , Po = 22 mW

Group IIC, Groups A & B

Co (Ca) = 1.2 μ F	Lo (La) = 1 mH
Co (Ca) = 0.89 μ F	Lo (La) = 5 mH
Co (Ca) = 0.8 μ F	Lo (La) = 10 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 6.6 μ F	Lo (La) = 1 mH
Co (Ca) = 4.1 μ F	Lo (La) = 10 mH
Co (Ca) = 3.6 μ F	Lo (La) = 20 mH

IMX12-DI03-1S-2T-S/ 24VDC
IMX12-DI03-1S-2T-SPR /24VDC
IMX12-DI03-1S-2T-S/ 24VDC/CC
IMX12-DI03-1S-2T-SPR /24VDC/CC

Splitter: 1 input to 2 transistor outputs

Part Numbers: 7580012, 7580013, 7580014, 7580015

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 9.6 mA, Ro = 969 Ω , Po = 22 mW

Group IIC, Groups A & B

Co (Ca) = 1.2 μ F	Lo (La) = 1 mH
Co (Ca) = 0.89 μ F	Lo (La) = 5 mH
Co (Ca) = 0.8 μ F	Lo (La) = 10 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 6.6 μ F	Lo (La) = 1 mH
Co (Ca) = 4.1 μ F	Lo (La) = 10 mH
Co (Ca) = 3.6 μ F	Lo (La) = 20 mH

Part Numbers: 7580610, 7580611

IMX12-CD01-2R-2U- 0/L
IMX12-CD01-2R-2U- 0/L/CC

Relay coupler t

Part Numbers: 7580620, 7580621

IS Output Entity Parameters: Terminals 1 – 2 - 3 – 4 - 5, or Terminals 6 - 7 - 8

Uo (Voc) = 0 V, Io (Isc) = 0 mA, Po = 0 W

Ui (Vmax) = 60 V, Ii (Imax) = 2 A

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IMX12-AI01-1I-2IU-HPR/24VDC
IMX12-AI01-1I-2IU-H0/24VDC
IMX12-AI01-1I-2IU-HPR/24VDC/CC
IMX12-AI01-1I-2IU-H0/24VDC/CC

Splitter: 1 input to 2 outputs

Part Numbers: 7580300, 7580301, 7580302, 7580303

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 26.1 V, Io (Isc) = 97 mA, Ro = 269 Ω, Po = 632 mW

Group IIC, Groups A & B

Co (Ca) = 47 nF

Lo (La) = 1.5 mH

Co (Ca) = 58 nF

Lo (La) = 0.9 mH

Co (Ca) = 74 nF

Lo (La) = 0.4 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 320 nF

Lo (La) = 9.9 mH

Co (Ca) = 340 nF

Lo (La) = 1.9 mH

Co (Ca) = 400 nF

Lo (La) = 0.9 mH

IMX12-AI01-2I-2IU-HPR/24VDC
IMX12-AI01-2I-2IU-H0/ 24VDC
IMX12-AI01-2I-2IU-HPR/24VDC/CC
IMX12-AI01-2I-2IU-H0/ 24VDC/CC

2 channels device

Part Numbers: 7580304, 7580305, 7580306, 7580307

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 26.1 V, Io (Isc) = 97 mA, Ro = 269 Ω, Po = 632 mW

Group IIC, Groups A & B

Co (Ca) = 47 nF

Lo (La) = 1.5 mH

Co (Ca) = 58 nF

Lo (La) = 0.9 mH

Co (Ca) = 74 nF

Lo (La) = 0.4 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 320 nF

Lo (La) = 9.9 mH

Co (Ca) = 340 nF

Lo (La) = 1.9 mH

Co (Ca) = 400 nF

Lo (La) = 0.9 mH

IMX12-AI01-1I-1IU-HPR/24VDC
IMX12-AI01-1I-1IU-H0/24VDC
IMX12-AI01-1I-1IU-HPR/24VDC/CC
IMX12-AI01-1I-1IU-H0/24VDC/CC

one channel device

Part Numbers: 7580312, 7580313, 7580314, 7580315

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 26.1 V, Io (Isc) = 97 mA, Ro = 269 Ω, Po = 632 mW

Group IIC, Groups A & B

Co (Ca) = 47 nF

Lo (La) = 1.5 mH

Co (Ca) = 58 nF

Lo (La) = 0.9 mH

Co (Ca) = 74 nF

Lo (La) = 0.4 mH

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Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 320 nF
Co (Ca) = 340 nF
Co (Ca) = 47 nF

Lo (La) = 9.9 mH
Lo (La) = 1.9 mH
Lo (La) = 1.5 mH

IMX12-AO01-1I-1I-HPR /24VDC
IMX12-AO01-1I-1I-H0/ 24VDC
IMX12-AO01-1I-1I-HPR /24VDC/CC
IMX12-AO01-1I-1I-H0/ 24VDC/CC

1-Channel HART®-Output Analog Signal Isolator

Part Numbers: 7580400, 7580401, 7580402, 7580403

IS Output Entity Parameters: Terminals 7 - 8

Uo (Voc) = 21.8 V, Io (Isc) = 53.2 mA, Ro = 134.6 Ω, Po = 671 mW

Group IIC, Groups A & B

Co (Ca) = 69 nF
Co (Ca) = 95 nF
Co (Ca) = 169 nF

Lo (La) = 1.5 mH
Lo (La) = 0.5 mH
Lo (La) = 0.1 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 54 nF
Co (Ca) = 600 nF
Co (Ca) = 660 nF

Lo (La) = 20 mH
Lo (La) = 10 mH
Lo (La) = 0.5 mH

IMX12-AO01-2I-2I-HPR /24VDC
IMX12-AO01-2I-2I-H0/ 24VDC
IMX12-AO01-2I-2I-HPR /24VDC/CC
IMX12-AO01-2I-2I-H0/ 24VDC/CC

2-Channel HART®-Output Analog Signal Isolator

Part Numbers: 7580404, 7580405, 7580406, 7580407

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 21.8 V, Io (Isc) = 53.2 mA, Ro = 134.6 Ω, Po = 671 mW

Group IIC, Groups A & B

Co (Ca) = 69 nF
Co (Ca) = 95 nF
Co (Ca) = 169 nF

Lo (La) = 1.5 mH
Lo (La) = 0.5 mH
Lo (La) = 0.1 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 54 nF
Co (Ca) = 600 nF
Co (Ca) = 660 nF

Lo (La) = 20 mH
Lo (La) = 10 mH
Lo (La) = 0.5 mH

IMX12-DO01-1U-1U-PR/ 24VDC
IMX12-DO01-1U-1U-0/ 24VDC
IMX12-DO01-1U-1U-PR/ 24VDC/CC
IMX12-DO01-1U-1U-0/ 24VDC/CC

1-Channel Solenoid Valve

Part Numbers: 7580100, 7580101, 7580102, 7580103

IS Output Entity Parameters: Terminals 7 - 8

Uo (Voc) = 27.26 V, Io (Isc) = 68.4 mA, Ro = 67.72 Ω, Po = 576 mW

Group IIC, Groups A & B

Co (Ca) = 0.057 μF

Lo (La) = 0.94 mH

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Groups IIB & IIA, Groups C, D, E, F & G	Co (Ca) = 0.078 μ F	Lo (La) = 0.4 mH
	Co (Ca) = 0.088 μ F	Lo (La) = 0.2 mH
	Co (Ca) = 0.26 μ F	Lo (La) = 10 mH
	Co (Ca) = 0.31 μ F	Lo (La) = 2 mH
	Co (Ca) = 0.45 μ F	Lo (La) = 0.5 mH

IMX12-DO01-2U-2U-PR/ 24VDC
IMX12-DO01-2U-2U-0/ 24VDC
IMX12-DO01-2U-2U-PR/ 24VDC/CC
IMX12-DO01-2U-2U-0/ 24VDC/CC
2-Channel Solenoid Valve

Part Numbers: 7580104, 7580105, 7580106, 7580107

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 27.26 V, Io (Isc) = 68.4 mA, Ro = 67.72 Ω , Po = 576 mW

Group IIC, Groups A & B	Co (Ca) = 0.057 μ F	Lo (La) = 0.94 mH
	Co (Ca) = 0.078 μ F	Lo (La) = 0.4 mH
	Co (Ca) = 0.088 μ F	Lo (La) = 0.2 mH
Groups IIB & IIA, Groups C, D, E, F & G	Co (Ca) = 0.26 μ F	Lo (La) = 10 mH
	Co (Ca) = 0.31 μ F	Lo (La) = 2 mH
	Co (Ca) = 0.45 μ F	Lo (La) = 0.5 mH

IMX12-FI01-1SF-1I1R- CPR/24VDC
IMX12-FI01-1SF-1I1R- C0/24VDC
IMX12-FI01-1SF-1I1R- CPR/24VDC/CC
IMX12-FI01-1SF-1I1R- C0/24VDC/CC
1 current output, 1 relay output

Part Numbers: 7580204, 7580205, 7580206, 7580207

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 21.1 mA, Ro = 441 Ω , Po = 49 mW

Group IIC, Groups A & B	Co (Ca) = 1.2 μ F	Lo (La) = 0.7 mH
	Co (Ca) = 0.84 μ F	Lo (La) = 4.7 mH
	Co (Ca) = 0.73 μ F	Lo (La) = 9.7 mH
Groups IIB & IIA, Groups C, D, E, F & G	Co (Ca) = 6.6 μ F	Lo (La) = 0.7 mH
	Co (Ca) = 3.9 μ F	Lo (La) = 4.7 mH
	Co (Ca) = 3.4 μ F	Lo (La) = 9.7 mH

IMX12-FI01-2SF-2I- CPR/24VDC
IMX12-FI01-2SF-2I- C0/24VDC
IMX12-FI01-2SF-2I- CPR/24VDC/CC
IMX12-FI01-2SF-2I- C0/24VDC/CC
2 current outputs

Part Numbers: 7580208, 7580209, 7580210, 7580211

IS Output Entity Parameters: Terminals 5 – 6, Terminals 7 - 8

Uo (Voc) = 9.3 V, Io (Isc) = 21.1 mA, Ro = 441 Ω , Po = 49 mW

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

SCHEDULE



Member of the FM Global Group

US Certificate Of Conformity No: FM16US0015X

Group IIC, Groups A & B

Co (Ca) = 1.2 μ F Lo (La) = 0.7 mH
Co (Ca) = 0.84 μ F Lo (La) = 4.7 mH
Co (Ca) = 0.73 μ F Lo (La) = 9.7 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 6.6 μ F Lo (La) = 0.7 mH
Co (Ca) = 3.9 μ F Lo (La) = 4.7 mH
Co (Ca) = 3.4 μ F Lo (La) = 9.7 mH

IMX12-TI02-1TCURTDR-111R-CPR/24VDC
IMX12-TI02-1TCURTDR-111R-C0/24VDC
IMX12-TI02-1TCURTDR-111R-CPR/24VDC/CC
IMX12-TI02-1TCURTDR-111R-C0/24VDC/CC

**1-channel Universal Temperature Transducer
with Current Output and Limit Value**

Part Numbers: 7580504, 7580505, 7580506, 7580507

IS Output Entity Parameters: Terminals 3 – 4, or Terminals 5 – 6 - 7 - 8

Uo (Voc) = 5.0 V, Io (Isc) = 2.4 mA, Ro = 2074 Ω , Po = 3 mW

Group IIC, Groups A & B

Co (Ca) = 3.4 μ F Lo (La) = 1.6 mH
Co (Ca) = 2.9 μ F Lo (La) = 4.6 mH
Co (Ca) = 2.7 μ F Lo (La) = 9.6 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 18 μ F Lo (La) = 1.6 mH
Co (Ca) = 13 μ F Lo (La) = 9.6 mH
Co (Ca) = 12 μ F Lo (La) = 19.6 mH

IIMX12-TI02-2TCURTDR- 2I-CPR/24VDC
IMX12-TI02-2TCURTDR- 2I-C0/24VDC
IMX12-TI02-2TCURTDR- 2I-CPR/24VDC/CC
IMX12-TI02-2TCURTDR- 2I-C0/24VDC/CC

**2-Channel Universal Temperature Transducer
with Current Output.**

Part Numbers: 7580508, 7580509, 7580510, 7580511

IS Output Entity Parameters: Terminals 1 – 2 - 3 – 4, or Terminals 5 – 6 - 7 - 8

Uo (Voc) = 5.0 V, Io (Isc) = 2.8 mA, Ro = 1817 Ω , Po = 3.5 mW

Group IIC, Groups A & B

Co (Ca) = 3.4 μ F Lo (La) = 1.7 mH
Co (Ca) = 2.9 μ F Lo (La) = 4.7 mH
Co (Ca) = 2.7 μ F Lo (La) = 9.7 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 18 μ F Lo (La) = 1.7 mH
Co (Ca) = 13 μ F Lo (La) = 9.7 mH
Co (Ca) = 12 μ F Lo (La) = 19.7 mH

IMX12-TI01-2RTDR- 2I-CPR/24VDC
IMX12-TI01-2RTDR- 2I-C0/24VDC
IMX12-TI01-2RTDR- 2I-CPR/24VDC/CC
IMX12-TI01-2RTDR- 2I-C0/24VDC/CC

**2-Channel Temperature Transducer
with Current Output.**

Part Numbers: 7580512, 7580513, 7580514, 7580515

IS Output Entity Parameters: Terminals 1 – 2 - 3 – 4, or Terminals 5 – 6 - 7 - 8

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US Certificate Of Conformity No: FM16US0015X

Uo (Voc) = 5.0 V, Io (Isc) = 2.4 mA, Ro = 2093 Ω, Po = 3 mW

Group IIC, Groups A & B

Co (Ca) = 3.4 μF

Lo (La) = 1.7 mH

Co (Ca) = 2.9 μF

Lo (La) = 4.7 mH

Co (Ca) = 2.7 μF

Lo (La) = 9.7 mH

Groups IIB & IIA, Groups C, D, E, F & G

Co (Ca) = 18 μF

Lo (La) = 1.7 mH

Co (Ca) = 13 μF

Lo (La) = 9.7 mH

Co (Ca) = 12 μF

Lo (La) = 19.7 mH

IMX12-PS02-UI-UIR-PR /24VDC

IMX12-PS02-UI-UIR-PR /24VDC/CC

Power supply module

13. Specific Conditions of Use:

- 1 The modules shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application, including a tool removable cover.
- 2 When installed in Division 2 Hazardous (classified) locations, a warning label must be prominently affixed near the unit(s) which warns that the cables must not be removed or inserted unless the area is known to be non-hazardous
- 3 The installation must be in accordance with the National Electrical Code, NFPA 70, Articles 504 and 505, ANSI/ISA-RP12.06.01
- 4 The maximum unclassified location voltage, Um, is 250 V.

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
5 th April 2017	Original Issue.
28 th September 2018	Supplement 1: Report Reference: – Approval report 3063968 dated 28 th September 2018 Description of the Change: Addition of new models

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FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA

T: +1 (1) 781 762 4300 F: +1 (1) 781 762 9375 E-mail: information@fmapprovals.com www.fmapprovals.com