CERTIFICATE OF CONFORMITY

1. **HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS**
2. **Certificate No:** **FM21CA0084X**
3. **Equipment:** **Excom Remote I/O System**
   (Type Reference and Name)
4. **Name of Listing Company:** **Hans Turck GmbH & Co. KG**
5. **Address of Listing Company:** **Witzelebenstraße 7**
   45472 Muelheim an der Ruhr
   Germany
6. The examination and test results are recorded in confidential report number:

   PR457711 dated 25th April 2022

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. 60079-0:2015, CSA C22.2 60079-0:2019, CAN/CSA C22.2 No. 60079-5:2011 CAN/CSA C22.2 No. 60079-7:2016, CAN/CSA C22.2 No. 60079-11:2014, CAN/CSA C22.2 No. 60079-15:2012, CSA C22.2 No. 60079-15:2018, CSA C22.2 No. 60079-18:2016, CAN/CSA C22.2 No. 60079-28:2016, CSA C22.2 No. 213:2017, CAN/CSA C22.2 No. 61010:2015

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

J.E. Marquedant
VP, Manager - Electrical Systems

15 July 2022
Date

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

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10. Equipment Ratings:

See Annex

11. The marking of the equipment shall include:

See Annex

12. **Description of Equipment:**

General - The excom system is a remote I/O System which consists of power supplies, a backplane, gateways and I/O Modules. The system can operate with either a single or redundant power supplies. The backplane serves to distribute energy, transmit data, and connect field devices. The gateways function as both a master and slave subsystem. In the roles as the master they control the internal data bus, while in the role as the slaves they communicate with the higher level fieldbus devices. The gateways control data communication between the I/O Modules and the process control system. The I/O Modules interface to the intrinsically safe field devices. A total of 24 I/O Modules may be operated within a single backplane. The gateways and I/O Modules are hot swappable, which means they can be plugged onto and removed from the backplane during operation in the hazardous (classified) location. In order to accommodate the hot-swappability of these modules, the modules are supplied with integrated rails for module mounting.

Ratings – The excom system modules are powered via the backplane by a power supply module. The power supply is supplied from excom 115/230 AC to DC powers supply or from an external voltage source with a range of 18V to 32V. The system modules operate at an ambient temperature of -20°C to +70°C.

See Control Drawing IS-2.500

See Annex for models

13. **Specific Conditions of Use:**

1. The Excom system forms part of the explosion protected remote I/O-fieldbus system Excom and shall be operated only in combination with certified components of this system.

2. For Division installation, the Excom System shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application.

3. For Zone installation and operation in hazardous areas, the components shall be installed in a separate enclosure with the degree of protection by enclosure IP54 in accordance of IEC 60529.

4. For installation and operation in a non hazardous area, the empty slots of the backplane shall be installed blanking plates for a degree of protection IP20 in accordance of IEC 60529.

5. For models OC11Ex/2G.2, FOC11Ex-2G, FOC12Ex-2G, OC11Ex/3G.2, FOC11-3G, FOC12-3G, the optical waveguide has to be electrically insulated and used without screening and shall not be armoured.

6. For model PSM24-3G.1**,** the equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1.

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
25th April 2022	Original Issue.
15th July 2022	Supplement 1: Report Reference: – RR232692 dated 15th July 2022. Description of the Change: Add DI401Ex model. Update model number naming for models OC11Ex/2G.2, OC11Ex/3G.2, SC11-3G, and GDP-NI/FM2.3. Extend lower temperature range to -40°C for models PSM-3G.1, FOC11Ex-2G, FOC12Ex-2G, SC11-3G, SC11Ex-3G, and GEN-3G.

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Annex

MT08-3G 8 I/O module rack
MT16-3G 16 I/O module rack
MT24-3G 24 I/O module rack

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4 with Intrisically Safe Connections to Class I, II, III, Groups A, B, C, D, E, F and G; Increased Safety and Intrinsic Safety with Intrinsically safe connections for Ex ec ib ic [ia Ga], Group IIC T4 hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4
Intrinsically Safe connections to Class I, II, III, Division 1, Groups A, B, C, D, E, F, G
Ex ec ib ic [ia Ga] IIC T4 Gc; Entity - IS-2.500
Ta = -20°C to +70°C

MT-PPS 2 position rack for PPSA Ex power supplies

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4; Increased Safety for Ex eb, Group IIC T4 Gc; hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4
Ex eb IIC T4 Gb
Ta = -20°C to +70°C

PPSA115Ex 115 VAC-24 VDC power supply modules for MT-PPS sub-racks
PPSA230Ex 230 VAC-24 VDC power supply modules for MT-PPS sub-racks

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4; Increased Safety and Encapsulation for Ex eb mb, Group IIC T4 Gb; hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4
Ex eb mb IIC T4 Gb
Ta = -20°C to +70°C

PSM24-3G.1 DC Power Supply modules for MT 3G backplanes

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4; Increased Safety, Protected Sparking and Intrinsic Safety with Intrinsically Safe Connections for Ex ec nC ic [ib Gb], Group IIC T4 Gc; hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4

Ex ec nC ic [ib Gb] IIC T4 Gc; Entity - IS-2.500
Ta = -40°C to +70°C

PS-F24Ex Power supply conditioner module

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4; Increased Safety and Powder Filling for Ex eb qb, Group IIC T4 Gb; hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4
Ex eb qb IIC T4 Gb
Ta = -20°C to +70°C

OC11Ex/2G.2 Optical coupler

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4; Intrinsic Safety and Encapsulation with Intrinsically Safe Connections for Ex eb mb [ib op is Gb], Group IIC T4 Gb; hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4
Ex eb mb [ib op is Gb] IIC T4 Gb; Entity - IS-2.500
Ta = -20°C to +70°C

OC11Ex/3G.2 Optical coupler

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4; Non-Sparking with Intrinsically Safe Connections for Ex nA [op is Gb], Group IIC T4 Gc; hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4
Ex nA [op is Gb] IIC T4 Gc; Entity - IS-2.500
Ta = -20°C to +70°C

FOC11Ex-2G Optical coupler
FOC12Ex-2G Optical coupler

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4; Intrinsically Safe and Encapsulation with Intrinsically Safe Connections for Ex ib mb [op is Ga], Group IIC T4 Gc; Intrinsic Safety connections to [Ex op is Da], Group IIIC; Intrinsically Safe Connections to [Ex ib Db], Group IIIC; hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4
Ex ib mb [op is Ga] IIC T4 Gb; Entity - IS-2.500
[Ex op is Da] IIIC; Entity - IS-2.500
[Ex ib Db] IIIC; Entity - IS-2.500

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Ta = -40°C to +70°C

FOC11-3G Optical coupler
FOC12-3G Optical coupler

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4; Increased Safety, Encapsulation, and Intrinsically Safe with Intrinsically Safe Connections Ex ec mc ic [op is Ga], Group IIC T4 Gc; Intrinsic Safety Connections to [Ex op is Da], Group IIIC Group IIIC; hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4
Ex ec mc ic [op is Ga]IIC T4 Gb; Entity - IS-2.500
[Ex op is Da] IIIC; Entity - IS-2.500
Ta = -40°C to +70°C

SC11-3G Segment coupler

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4; Increased Safety and Intrinsic Safety for Ex ec ic, Group IIC T4 Gc; hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4
Ex ec ic IIC T4 Gc
Ta = -40°C to +70°C

SC11EX-3G Segment coupler

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4; Increased Safety and Intrinsic Safety with Intrinsically Safe Connections for Ex ec ic [ib Gb], Group IIC T4 Gc; Intrinsically Safe Connections to [Ex ib Db] Group IIIC; hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4
Ex ec ic [ib Gb] IIC T4 Gc; Entity - IS-2.500
[Ex ib Db] IIIC
Ta = -40°C to +70°C

GDP-NI/FW2.3 Profibus DP Gateway

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4; Increased Safety and Intrinsic Safety with Intrinsically Safe Connections for Ex eb mb [ib Gb], Group IIC T4; hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4
Ex ec ic [ib Gb] IIC T4 Gc
Ta = -20°C to +70°C

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GEN-3G Ethernet Gateway

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4; Increased Safety and Intrinsic Safety with Intrinsically Safe Connections for Ex ec ib [ib Gb] IIC T4 Gc; hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4
Ex ec ib [ib Gb] IIC T4 Gc; Entity - IS-2.500
Ta = -40°C to +70°C

AIH401Ex 4 Channel Analog Input Module with HART
AOH401Ex 4 Channel Analog Output Module with HART
TI41Ex 4 Channel Temperature/mV Input Module
DI401Ex 4 Channel Digital Input Module

Equipment ratings
Nonincendive for Class I, Division 2, Groups A, B, C, and D T4 with Intrinsically Safe Connections to Class I, II, III, Groups A, B, C, D, E, F and G; Intrinsic Safety with Intrinsically Safe Connections for Ex ib [ia Ga], Group IIC T4 Gb; Intrinsic Safety Connections to [Ex ia Da], Group IIIC; hazardous locations.

Equipment markings
Class I Division 2, Groups A, B, C, D; T4
Intrinsically Safe connections to Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; Entity - IS-2.500
Ex ib [ia Ga] IIC T4 Gb Entity - IS-2.500
[Ex ia IIIC Da]; Entity - IS-2.500
Ta = -20°C to +70°C