

# CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**

2. **Certificate No:** **FM18US0270X**

3. **Equipment:**  
**(Type Reference and Name)**

*Listing - 1*  
**H11, H41, H51 Automation System Modules**

*Listing - 2*  
**H41, H51, H41q, H51q, Automation Systems Modules**

*Listing - 3*  
**H41, H51, H41q, H51q, H41q, H51q, Automation Systems Modules**

*Listing - 4*  
**HIMatrix F60, Safety Related System**

*Listing - 5*  
**HIMatrix F60 Modular PLC, Safety Related System**

*Listing - 6*  
**HIMatrix Compact PES, Safety Related System**

*Listing - 7*  
**HIMatrix Compact PES, Safety Related System**

*Listing - 8*  
**GuardPLC 2000**

*Listing - 9*  
**GuardPLC 1200**

*Listing - 10*  
**K7916, Feeding Decoupling Diode**

*Listing - 11*  
**H6200, Analog Isolator / Power Supply**

**Certificate issued by:**

J.E. Marquedant  
VP, Manager - Electrical Systems

24 February 2019

Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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



US Certificate Of Conformity No: FM18US0270X

*Listing - 12*  
**H6210, HART Multiplexer**

4. **Name of Listing Company:** HIMA Paul Hildebrandt GmbH
5. **Address of Listing Company:** Albert-Bassermann-Strabe 28  
68782 Bruehl near Mannheim  
Germany
6. The examination and test results are recorded in confidential report number:  
3015309 dated May 2, 2003
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 3611:2016, FM Class 3810:2005  
ANSI/ISA-12.12.01-2015, 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.
10. Equipment Ratings:

*Listing – 1, Listing – 3, Listing 5, Listing 7*

Non-incendive for Class I, Division 2, Groups A, B, C and D providing Non-incendive Circuits for Class I, Division 2, Groups A, B, C and D; T\* hazardous (classified) locations with an ambient temperature rating of -25°C up to 70°C.

*Listing – 2, Listing – 4, Listing – 6, Listing – 8, Listing – 9, Listing – 10, Listing – 11, Listing – 12*

Non-incendive for Class I, Division 2, Groups A, B, C and D; T\* hazardous (classified) locations with an ambient temperature rating of -25°C to 60°C.

11. The marking of the equipment shall include:

*Listing – 1*

Class I Division 2, Groups A, B, C, D;

Provides Non-Incendive Circuits for Class I Division 2, Group A, B, C, D - HA196426-001 / A

T\* Ta = 60°C

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*Listing – 2, Listing – 4, Listing – 6, Listing – 8, Listing – 9, Listing – 10, Listing – 11, Listing – 12*

Class I Division 2, Groups A, B, C, D;

T\* Ta = 60°C

*Listing – 3, Listing - 5, Listing - 7*

Class I Division 2, Groups A, B, C, D; T\* Ta = 50°C, 60°C, or 70°C

Provides Non-Incendive Circuits for Class I Division 2, Group A, B, C, D - 99001, 99002

T\* Ta = 50°C, 60°C, or 70°C

## 12. Description of Equipment:

**General** - The safety-related HIMatrix compact controller is a compact system that is powered with 24VDC. It offers digital input, outputs and analog inputs, outputs and counter and relays additional with remote I/O's. Communication over Safeethernet, Modbus, Profibus DP, OPC and other.

The modular safety-related HIMatrix F60 system is composed of a rack and various modules inserted in the rack 6 slots. The HIMatrix F60 modules is powered 24VDC. It offers digital input, outputs and analog inputs, outputs and counter and relays additional with remote I/O's. Communication over Safeethernet, Modbus, Profibus DP, OPC and other.

The modular safety-related H41, H51 ( HIQuad) is 19 inches system with CPU and I/O (sub)racks. The modular safety-related H41, H51 is powered 24VDC. It offers digital input, outputs and analog inputs, outputs and counter and relays. Communication over Safeethernet, Modbus, Profibus DP, OPC and other.

**Construction** - The safety-related HIMatrix compact controller is designed for an ambient temperature: 0...+60 °C, or -25...+70 °C, IP20, Pollution degree II, Protection class III in accordance with IEC/EN 61131-2 and UL508 and FM Class I Division 2 and Safety Applications according the Safety Standards see above. Offered Communication interfaces are RS232, RS422, RS485, Profibus DP, CAN, SSI and Ethernet, PADT interface (Programming and Debugging tool) is available for SILworX or ELOP II Factory. The dimensions of the DIN rail mounted device are: width 257mm, height 114mm, depth 97mm or smaller. For details see the manuals.

The modular safety-related HIMatrix F60 system Ambient temperature: 0...+60 °C, or -25...+70 °C, IP20, Pollution degree II, Protection class III in accordance with IEC/EN 61131-2. Connections RS232, RS422, RS485, Modbus, Profibus, Interbus, CAN, ComUSERTask, Ethernet, Safeethernet and other. PADT Interface (programming and debugging tool) is for SILworX or ELOP II Factory. For wall mounting. Dimensions: 260mm x 312mm x 245mm (WxHxD). For details see the manuals.

The modular safety-related HIQuad – System. Ambient temperature: 0...+60 °C  
H41q 1 subrack 482.6 mm (19-inches technology), 5 HU for central modules and 13 I/O modules.  
H51q subracks 482.6 mm (19-inches technology), 1 central subrack 5 HU, max. 16 I/O subracks 4 HU I/O subrack with 16 slots. IP20, Pollution degree II, Protection class II in accordance with IEC/EN 61131-2. Modbus, Modbus TCP, PROFIBUS DP and 3964R, OPC, Ethernet, HIPRO and other. PADT Interface (programming and debugging tool) is for SILworX or ELOP II.

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**Ratings** - The HIMA safety-related PLC's up to SIL 3 or up to Cat.4 and PL e or up to SIL 4 for safety application are available for many safety and Ex (hazardous) applications. PLC, modules are available for example: Digital 24VDC I/O, 110VDC/127VAC, Analog I/O 10VDC/0-4..20mA, Relays up to 250V and other for details please see the manuals.

The 2-pole outputs one switching to L+ and the other switching to L-.

## Listing - 1

### **H11, H41, H51 Automation System Modules**

Model No.	T-Code	Description
F8620/11 (H51)	T4	Central Module
F8640 (H41)	T4	Central Module
F9430 (H11)	T4	24 Binary or Digital Inputs 24 V dc; 24 Binary or Digital Outputs 24 V dc, 12 W

Nonincendive Field Wiring Parameters:

Input:

$V_{max} = 15V$ ,  $I_{max} = 500mA$ ,  $C_i = 0$ ,  $L_i = 0$

Output:

$V_{oc} = 6V$ ,  $I_{sc} = 500mA$

Groups A/B –  $C_a = 1\mu F$ ,  $L_a = .15mH$

Groups C/D –  $C_a = 2\mu F$ ,  $L_a = .5mH$

## Listing - 2

### **H41, H51, H41q, H51q, Automation Systems Modules**

Module Name	T-Code	Description
F3221	T4	16 Fold Input Module
F3236	T4	16 Fold Input Module, Safety related
F3237	T4	8 Fold Input Module for Prox. Sw., Safety related
F3240	T4	16 Fold Input Module, Testable, 120 V ac/dc
F3248	T4	16 Fold Input Module, Safety related, 48 V ac/dc
F3322	T4	16 Fold Output Module
F3330	T4	8 Fold Output Module, Safety related
F3331	T4	8 Fold Output Module, Safety related
F3333	T4	4 Fold Output Module, Safety related
F3334	T4	4 Fold Output Module, Safety related
F3422	T4	8 Fold Relay Module
F3430	T4	4 Fold Relay Module, Safety related
F5220	T4	2 Fold Counter Module, Safety related
F6214	T4	4 Fold Analog Input Module, Safety related
F6215	T4	8 Fold Analog Input Module
F6216A	T4	8 Fold Analog Input Module w/Transmitter Supply
F6220	T4	8 Fold Thermocouple Input Module, Safety related
F6221	T4	8 Fold Analog Input Module, Safety Related
F6705	T4	2 Fold Analog Output Module, Safety related

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F6706	T4	2 Fold Analog Output Module
F7126 (H51)	T4	Power Supply Module
F7130A (H41)	T4	Power Supply Module
F7131 (H51)	T4	Power Supply Monitoring w/Buffer Batteries
F7133	T4	4 Fold Power Distribution
F7553 (H51)	T4	Coupling Module
F9430 (H11)	T4	24 Binary or Digital Inputs 24 V dc; 24 Binary or Digital Outputs 24 V dc, 12 W
F8621A	T4	Coprocessor Module
F8627X	T4	Communication Module for Ethernet 10/100Mbit
F8628X	T4	Communication Module for Profibus-DP
H4135	T4	Relay Module in Terminal Case, Safety related
H4135A	T4	Relay Module in Terminal Case, Safety related
H7505	T4	Multifunctional Interface Module
H7506	T4	Bus Terminal
K7915	T4	Decoupling, Feeding, and Fusing Subrack
K9202	T4	Cabinet Fan Module
K9203	T4	Fan Module/19-inch Subrack
Z6015	T4	EMC Filter

Listing - 3

### **H41, H51, H41q, H51q, H41q, H51q, Automation Systems Modules**

Model No.	T-Code	Description
F8650X	T4	Central Module [H51q]
F8652X	T4	Central Module [H41q]
F6217	T4	8 Fold Analog Input Module

Nonincendive Field Wiring Parameters:

Input:

$V_{max} = 15V$ ,  $I_{max} = 500mA$ ,  $C_i = 0$ ,  $L_i = 0$

Output:

$V_{oc} = 6V$ ,  $I_{sc} = 500mA$

Groups A/B –  $C_a = 1\mu F$ ,  $L_a = .15mH$

Groups C/D –  $C_a = 2\mu F$ ,  $L_a = .5mH$

Drawing 99001 for non-incendivefield circuits and Nonincendive Field Wiring Parameters

Listing - 4

### **HIMatrix F60, Safety Related System**

Module Names	T-Code	Description
BUS 01	T6	System Bus Board
PSU 01	T6	Power Supply Module
PSU 014	T4A	Power Supply Module
CPU 01	T6	Central Module with Profibus-DP, Safety related
AI 8 01	T6	
AO 8 01	T6	Analog Out Module, Safety related

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CIO 2/4 01	T6	Counter Module, Safety related
DI 24 01	T6	Digital Input Module, Safety related
DIO 24/16 01	T6	Digital I/O Module, Safety related
DI 32 01	T6	Digital Input Module, Safety related
MI 24 01	T5	Module PES system rack
DO 8 01	T6	Relay Output Module, Safety related
GEH 01	T6	6 Slot HIMatrix F60 Chassis
GEH 014	T6	6 Slot HIMatrix F60 Chassis
CM-Profibus DP	T6	
CM-RS485	T6	
CM-RS232	T6	
CM-RS232A	T6	
F1 DI 16 01	T4A	Digital Input Module, Safety related 16 channels
F2 DO 16 01	T4A	Digital Output Module, Safety related 16 channels
F2 DO 08 01	T5	Digital Output Module, Safety related 8 channels
F2 DO 04 01	T5	Digital Output Module, Safety related 4 channels
F3 AIO 8/4/01	T4A	Analog I/O Module, 8 channel Safety related, 4 channel not Safety related
F3 DIO 20/8/02	T5	Digital I/O Module Safety related, 20 channel Input, 8 channel output
F60 MI 24 01	T5	Module PES system rack

Listing - 5

### **HIMatrix F60 Modular PLC, Safety Related System**

CPU 03	T5	Central Module with Profibus-DP, Safety related
CPU 034	T5	Central Module with Profibus-DP, Safety related

Drawing 99001 for non-incendivefield circuits and Nonincendive Field Wiring Parameters

Listing - 6

### **HIMatrix Compact PES, Safety Related System**

CompactPES	T-Code	Description
F20	T4	8 Digital Inputs/Outputs, 4 Pulsed Outputs, 2 Ethernet, 2 Field Bus Interfaces
F30	T4	20 Digital Inputs, 8 Outputs (cross-circuit monitoring) Field bus Interfaces
F31	T4	20 Digital Inputs, 8 Outputs (cross-circuit monitoring)
F35	T4	24 Digital Inputs, 8 Outputs, 8 Analog Inputs, 2 Counter Inputs, Field bus Interfaces

Drawing 99001 for non-incendivefield circuits and Nonincendive Field Wiring Parameters

Remote I/O	T-Code	Description
F1 DI 16 01	T4A	16 Digital Inputs, 4 pulsed outputs (cross-circuit monitoring)
F2 DO 16 01	T4A	6 Digital Outputs
F2 DO 08 01	T5	8 Channel Relay Outputs

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F2 DO 04 01	T5	4 Digital Outputs
F3 AIO 8/4 01	T4A	8 Analog Inputs and 4 Outputs
F3 DIO 20/8 01	T4	20 Digital Inputs, 8 Outputs (cross-circuit monitoring)
F3 DIO 20/8 02	T5	20 Digital Inputs, 8 Outputs (cross-circuit monitoring)
F2 DO 16 02	T5	16 Channel Relay Outputs
F3 DIO16/8 01	T5	16 Digital Inputs
F3 DIO 8/8 01	T3C	8 Digital Inputs

Listing - 7

### **HIMatrix Compact PES, Safety Related System**

F30 03	T4	20 Digital Inputs, 8 Outputs (cross-circuit monitoring) Field bus Interfaces
F30 034	T4	20 Digital Inputs, 8 Outputs (cross-circuit monitoring) Field bus Interfaces
F30 CSG	T4	20 Digital Inputs, 8 Outputs (cross-circuit monitoring)
F35 03	T4	24 Digital Inputs, 8 Outputs, 8 Analog Inputs, 2 Counter Inputs, Field bus Interfaces
F35 032	T4	24 Digital Inputs, 8 Outputs, 8 Analog Inputs, 2 Counter Inputs, Field bus Interfaces
F35 034	T4	24 Digital Inputs, 8 Outputs, 8 Analog Inputs, 2 Counter Inputs, Field bus Interfaces

Drawing 99001 for non-incendive field circuits and Nonincendive Field Wiring Parameters

Listing - 8

### **GuardPLC 2000**

Module Names	T-Code	Description
RA-GEH 01	T4A	6 Slot GuardPLC Chassis
RA-PS 0503	T4A	Power Supply Module
RA-CPU	T4A	Safe GuardPLC 2000 CPU Module
RA-CO2	T4A	Safe Counter Module
RA-DIO	T4A	2416 Safe Digital I/O Module
RA-AO 08	T4A	Safe Analog Out Module
RA-AI 08	T4A	Safe Analog In Module
RA-BUS 2106	T4A	System Bus Board

Listing - 9

### **GuardPLC 1200**

Module Names	T-Code	Description
RA-MAXI	T4A	Safe GuardPLC 1200 28 I/O

Listing - 10

### **K7916, Feeding Decoupling Diode.**

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T6  
Listing – 11

**H6200, Analog Isolator / Power Supply**  
T5

Listing - 12

**H6210, HART Multiplexer**  
T6

**13. Specific Conditions of Use:**

1. Shall be installed in compliance with the enclosure, mounting, spacing and segregation requirements of the ultimate application including provisions for Division 2 wiring method and access only by the use of a tool.

**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
24 <sup>th</sup> February 2019	<u>Supplement 7:</u> Report Reference: – 3063890 dated 24 <sup>th</sup> February 2019 Description of the Change: Approved F30 03, F30 034, F30 CSG, F35 03, F35 032 F35 034, F60 PS 014, F60 GEH 014, F60 CPU 03, F60 CPU 034 models. Converted to the new certificate format.

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