



Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested in accordance with the relevant requirements of the GL Type Approval System.

Certificate No. 26 972 - 05 HH
Company Pepperl + Fuchs GmbH
Lilienthalstr. 200
68307 Mannheim, GERMANY

Product Description I/O Module
Zener barriers

Type K-System
Z-System

Environmental Category C, H, EMC1, EMC2

Technical Data / Range of Application Housing material: Polycarbonate (PC)
Degree of protection: IP20

Environmental Category:
"H" - Cold test at -20 °C, "EMC2" for devices "Smart repeater"

- Accessories / Power feed module (24 V DC/4A)
UPR-03: Universal power rail
KFD2-EB2, Power feed module, fault signal relay output NO
KFD2-EB2.R4A.B, Power feed module with bus terminal, fault signal relay output NO

- Zener barriers
Positive Polarity Shunt Zener Diode Barriers: Z7**
Negative Polarity Shunt Zener Diode Barriers: Z8**
A.C. Shunt Zener Diode Barriers: Z9**

Test Standard Guidelines for the Performance of Type Approvals, Chapter 2, Edition 2003

Documents Test reports Pepperl+Fuchs: EMC PA-no. 1208 (PRDE-7694) dated 23.01.08,
ELMECH PA-no. 1621 (PRDE-7602) dated 23.01.08;
Documentation (operating instructions/system description, data sheets,
schematics, partlists, component set-ups, ATEX Certificates) acc. to submitted files

Remarks The modules must be terminated with Phoenix Contact E/AL-NS 35 termination fittings, or equivalent, on both ends of the DIN-rail to satisfy the req. for vibration.

Valid until 2013-06-30

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Hamburg, 2008-07-01

Marco Rinkel

Klaus-Peter Schröder

Germanischer Lloyd

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- Transmitter supply isolator (24 V DC Supply voltage)

- KFD2-STC4-Ex1: 1-channel; HART; 1 input 4...20mA source/sink; intrinsically safe input, 1 output 4...20mA source
- KFD2-STC4-Ex1-Y122583: 1-channel; HART; 1 input 4...20mA source/sink; intrinsically safe input, 1 output 4...20mA sink
- KFD2-STC4-Ex1.20: 1-channel; HART; 1 input 4...20mA source/sink; intrinsically safe input, 2 outputs 4...20mA source
- KFD2-STC4-Ex1.20-Y122582: 1-channel; HART; 1 input 4...20mA source/sink; intrinsically safe input, 1 output 4...20mA sink
- KFD2-STC4-1: 1-channel; HART; 1 input 4...20mA source/sink; 1 output 4...20mA source
- KFD2-STC4-1.20: 1-channel; HART; 1 input 4...20mA source/sink; 2 outputs 4...20mA source
- KFD2-STC4-Ex2: 2-channel; HART; 2 inputs 4...20mA source; intrinsically safe input; 2 outputs 4...20mA source
- KFD2-STC4-Ex2-Y132953: 2-channel; HART; 2 inputs 4...20mA source; intrinsically safe input; 2 outputs 4...20mA sink
- KFD2-STC4-2: 2-channel; HART; 2 inputs 4...20mA source; 2 outputs 4...20mA source
- KFD2-STV4-Ex1-1: 1-channel; HART; 1 input 4...20mA source/sink; intrinsically safe input, 1 output 1...5V source
- KFD2-STV4-Ex1-2: 1-channel; HART; 1 input 4...20mA source/sink; intrinsically safe input, 1 output 2...10V source
- KFD2-STV4-Ex1.20-1: 1-channel; HART; 1 input 4...20mA source/sink; intrinsically safe input, 2 outputs 1...5V source
- KFD2-STV4-Ex1.20-2: 1-channel; HART; 1 input 4...20mA source/sink; intrinsically safe input, 2 outputs 2...10V source
- KFD2-STV4-1-1: 1-channel; HART; 1 input 4...20mA source/sink; 1 output 1...5V source
- KFD2-STV4-Ex2-1: 2-channel; HART; 2 inputs 4...20mA source; intrinsically safe input; 2 outputs 1...5V source
- KFD2-STV4-Ex2-2: 2-channel; HART; 2 inputs 4...20mA source; intrinsically safe input; 2 outputs 2...10V source
- KFD2-STV4-2-1: 2-channel; HART; 2 inputs 4...20mA source; 2 outputs 2...10V source
- KFD2-CR4-Ex1: 1-channel; 1 input 4...20mA source/sink; intrinsically safe input, 1 output 4...20mA source
- KFD2-CR4-Ex1.20: 1-channel; 1 input 4...20mA source/sink; intrinsically safe input, 2 outputs 4...20mA source
- KFD2-CR4-1: 1-channel; 1 input 4...20mA source/sink; 1 output 4...20mA source
- KFD2-CR4-1.20: 1-channel; 1 input 4...20mA source/sink; 2 outputs 4...20mA source
- KFD2-CR4-Ex2: 2-channel; 2 inputs 4...20mA source; intrinsically safe input; 2 outputs 4...20mA source
- KFD2-CR4-2: 2-channel; 2 inputs 4...20mA source; 2 outputs 4...20mA source

- Smart repeater (24 V DC Supply voltage)

- KFD2-SCD2-Ex1.LK: 1-channel; HART; intrinsically safe output; 4-20mA current output
- KFD2-SCD2-Ex2.LK: 2-channel; HART; intrinsically safe output; 4-20mA current output
- KFD2-SCD2-1.LK: 1-channel; HART; 4-20mA current output
- KFD2-SCD2-2.LK: 2-channel; HART; 4-20mA current output

- Solenoid driver (loop powered)

- KFD0-SD2-Ex1.1045: 1-channel; intrinsically safe output; current limit 45mA
- KFD0-SD2-Ex2.1045: 2-channel; intrinsically safe output; current limit 45mA
- KFD0-SD2-EX1.1065: 1-channel intrinsically safe output; current limit 65mA
- KFD0-SD2-EX1.1180: 1-channel; intrinsically safe output; current limit 80mA

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KFD0-SD2-Ex2.1245: 2-channel; intrinsically safe output; current limit 45mA
KFD0-SD2-EX1.10100: 2-channel; intrinsically safe output; current limit 100mA
- Isolated switch amplifier (24 V DC Supply voltage; EN 60947-5-6 input, intrinsically safe input)
KFD2-SR2-Ex1.W: 1-channel; 1 relay output with 1 changeover contact
KFD2-SR2-Ex1.W.LB: 1-channel; signal output (changeover contact) and optionally signal output/fault signal
KFD2-SR2-Ex2.W: 2-channel; 1 signal output with 1 changeover contact per channel
KFD2-SR2-Ex2.W.SM: 1-channel; additional input for rotation direction or start-up override; 2 relay outputs
KFD2-SR2-Ex2.2S: 2-channel; 1 relay output per channel with 2 NO contacts each
KFD2-SOT2-Ex1.LB.IO: 1-channel; signal output and either signal output or error message -outputs galvanically isolated
KFD2-SOT2-Ex2.IO: 2-channel; 1 passive transistor output, depolarized per channel
- Isolated switch amplifier (115/230 V AC Supply voltage; EN 60947-5-6 input; intrinsically safe input)
KFA5-SR2-Ex1.W: 115 V AC; 1-channel; 1 relay output with 1 changeover contact
KFA6-SR2-Ex1.W: 230 V AC; 1-channel; 1 relay output with 1 changeover contact
KFA5-SR2-Ex1.W.LB: 115 V AC; 1-channel; signal output (changeover contact) and optionally signal output/fault signal
KFA6-SR2-Ex1.W.LB: 230 V AC; 1-channel; signal output (changeover contact) and optionally signal output/fault signal
KFA5-SR2-Ex2.W: 115 V AC; 2-channel; 1 relay output with 1 changeover contact per channel
KFA6-SR2-Ex2.W: 230 V AC; 2-channel; 1 relay output with 1 changeover contact per channel
KFA5-SR2-Ex2.W.IR: 115 V AC; 2-channel; 1 signal output with 2 changeover contacts
KFA6-SR2-Ex2.W.IR: 230 V AC; 2-channel; 1 signal output with 2 changeover contacts
- Pulse converter units (48 ... 253 V AC / 20 ... 90 V DC Supply voltage; intrinsically safe input)
KFU8-UFC-Ex1.D: 1-channel; EN60947-5-6 input; analog output 0/4mA...20mA, 2 relay outputs, 1 electronic output
KFU8-UFT-Ex2.D: 2-channel; EN60947-5-6 input; analog output 0/4mA...20mA, 2 relay outputs, 2 electronic outputs
KFU8-GUT-Ex1.D: 1-channel; RTD/potentiometer/thermocouple input; analog output 0/4mA...20mA, 2 relay outputs
KFU8-CRG-Ex1.D: 1-channel; analog input 0/4mA...20mA; analog output 0/4mA...20mA, 2 relay outputs
KFU8-CRG2-Ex1.D: 1-channel; analog input 0/4mA...20mA; analog output 0/4mA...20mA, 2 relay outputs
- Temperature converter (24 V DC Supply voltage; RTD/thermocouples input)
KFD2-UT2-Ex1: 1-channel; intrinsically safe input; analog current output 0/4mA...20mA
KFD2-UT2-Ex1-1: 1-channel; intrinsically safe input; voltage output 0/1V...5V
KFD2-UT2-1: 1-channel; analog current output 0/4mA...20mA
KFD2-UT2-1-1: 1-channel; voltage output 0/1V...5V
KFD2-UT2-Ex2: 2-channel; intrinsically safe input; 2 analog current outputs 0/4mA...20mA
KFD2-UT2-Ex2-1: 2-channel; intrinsically safe input; 2 voltage output 0/1V...5V
KFD2-UT2-2: 2-channel; 2 analog current outputs 0/4mA...20mA
KFD2-UT2-2-1: 2-channel; 2 voltage output 0/1V...5V

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