



CSA INTERNATIONAL

Certificate of Compliance

Certificate: 1404404

Master Contract: 169790(LR 36087)



Project: 1404404

Date Issued: April 11, 2003

Issued to: **PEPPERL + FUCHS GmbH**
DEV-PA, Construction PA
Koenigsberger Allee 85-87
Mannheim, 31 68307
GERMANY
Attention: Mr. Harald Hofmeister

The products listed below are eligible to bear the CSA Mark shown



Issued by: 
R. Wildish
Authorized by: 
Nick Alfano
Operation Manager

PRODUCTS

CLASS 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations

Class I, Groups A, B, C and D; Class II, Groups E, F and G; Class III:

- KFD SERIES Transformer Isolated Barriers, Models as tabulated below;

Model	Trml	System		Entity Parameters					
		Vmax (V)	Rmin (Ω)	Voc (V)	Isc (mA)	Ca (μF)		La (mH)	
						A,B	C-G	A,B	C-G
KFD0-CS-Ex1.50 KFD0-CS-Ex1.50P	1-2	25.2	270	25.2	93	0.107	0.82	4.3	18
KFD0-CS-Ex1.51 KFD0-CS-Ex1.51P	1-2	25.2	270	25.2	93	0.107	0.82	4.3	18
KFD0-CS-Ex1.52	1-2	28.0	diode	28.0	0	0.14	0.42	1000	1000



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KFD0-CS-Ex1.53	1-2	10.5	110	10.5	95.0	2.41	16.8	4.0	17
KFD0-CS-Ex1.54	1-2	28.0	301	28.0	93	0.077	0.64	3.1	16.7
KFD0-CS-Ex1.54-Y72221	1-2	25.2	586	25.2	43	0.101	0.81	19.6	72
KFD0-CS-Ex2.50 KFD0-CS-Ex2.50P KFD0-CS-Ex2.51 KFD0-CS-Ex2.51.GP KFD0-CS-Ex2.51P	1-2, 4-5	25.2	271	25.2	93	0.107	0.82	4.3	18
KFD0-CS-Ex2.52	1-2,	28.0	diode	28.0	0	0.14	0.42	1000	1000
KFD0-CS-Ex2.53 KFD0-CS-Ex2.53P	1-2, 4-5	10.5	110	10.5	95.0	2.41	16.8	4.0	17
KFD0-CS-Ex2.54	1-2,	28.0	301	28.0	93	0.077	0.64	3.1	16.7
KFD0-CS-Ex2.54-Y72222	1-2, 4-5	25.2	586	25.2	43	0.101	0.81	19.6	72
KFD2-CD-Ex1.32* * options -0 thru -25	1-2	28.0	300	28.0	93.0	0.14	0.42	3.1	16.7
KFD2-CR-Ex1.20-200 KFD2-CR-Ex1.20-240	1-3	20.0	Isc=	20.0	93	0.22	1.41	4.3	17.7
KFD2-CR-Ex1.20-300 KFD2-CR-Ex1.20-304 KFD2-CR-Ex1.20-340	1-2 2-3 1-3 1-2-3	20.0 4.3 20 -	Isc= 195 Isc= 56mA -	20.0 4.3 20 20.0	93 22 56 115.0	0.22 0.22 0.22 0.22	1.41 1.41 1.41 1.41	2.8 2.8 2.8 2.8	12 12 12 12
KFD2-CR-Ex1.30-200 KFD2-CR-Ex1.30-240	1-3	26.0	279	26.0	93	0.099	0.77	4.3	17.7
KFD2-CR-Ex1.30-300 KFD2-CR-Ex1.30-300-90C KFD2-CR-Ex1.30-304 KFD2-CR-Ex1.30-340	1-2 2-3 1-3 1-2-3	26.0 4.1 26.0 -	279 195 464 -	26.0 4.3 26.0 26.0	93 22 56 115.0	0.099 0.099 0.099 0.099	0.77 0.77 0.77 0.77	2.8 2.8 2.8 2.8	12 12 12 12
KFD2-GU-Ex1	1-2-3-4-5-6	-	-	10.5	27	2.7	8.1	46	165
KFD2-PT-Ex1	1-2-3-4-5	-	-	10.6	31.7	2.6	7.8	34	121
KFD2-PT2-Ex1* * options -1 thru -5	1-2-3-4-5	-	-	10.4	31.4	2.53	17.4	36.0	132

Certificate: 1404404

Master Contract: 169790 (LR 36087)

Project: 1404404

Date: April 11, 2003

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KFD2-PT2-Ex1-Y98312, -1-Y107265, -2-Y107266, -3-Y107267, -4-Y107268, -5-Y107269	1-2-3-4-5	-	-	10.4	46	2.53	17.4	17.2	64
KFD2-RR-Ex1	1-2-3-4-5	-	-	12.4	17	1.24	7.9	120	458
KFD2-SCD-Ex1.LK	1-2	25.2	270	25.2	93	0.107	0.82	4.3	17.7
KFD2-SD-Ex1.17	1-2	17.22	78	17.22	220	0.353	2.06	0.56	1.67
KFD2-SD-Ex1.36 KFD2-SD-Ex1.36-87B (Groups C and D)	1-2	25.9	140.7	25.9	184	-	0.77	-	4.78
KFD2-SD-Ex1.47 KFD2-SD-Ex1.48 KFD2-SD-Ex1.48-90A	1-2	25.2	270	25.2	93	0.107	0.82	4.3	17.7
KFD2-SL-Ex1.17	1-2	17.22	78	17.22	220	0.353	2.06	0.56	1.67
KFD2-SL-Ex1.36 (Groups C and D)	1-2	25.9	140.7	25.9	184	-	0.77	-	4.78
KFD2-SL-Ex1.47 KFD2-SL-Ex1.48 KFD2-SL-Ex1.48-90A	1-2	25.2	270	25.2	93	0.107	0.82	4.3	17.7
KFD2-STC1-Ex1* KFD2-STV1-Ex1** optional -1	1-3	25.2	270	25.2	93	0.082	0.79	4.3	17.7
KFD2-STC3-Ex1* KFD2-STV3-Ex1** options -1 thru -3	1-3	28.0		28.0	93.0	0.14	0.42	3.1	16.7
KFD2-TR-Ex1	1-2-3-7-8-9	-	-	8.9	19.0	5.1	15.5	93	329
KFD2-TT-Ex1	1-3	6.4	990	6.4	6.4	36	109	1000	1000
KFD2-UT-Ex1 KFD2-UT-Ex1-1	1-2-3-4-5	-	-	11	33	1.97	13.8	32	121
KFD2-VR3-Ex1.26	4-5	25.0	307	-	-	-	-	-	-
	4-6	25.0	Isc=4.6 mA	-	-	-	-	-	-
	4-5-6	-	-	26.0	88.0	0.17	0.51	4.6	18.6
KFD2-VR-Ex1.18 KFD2-VR-Ex1.19	4-5	18.0	4400	18.0	4.2	0.309	1.78	492	1000
KFD2-VR-Ex1.19-Y109129	4-5	15.5	2152	15.5	7.2	0.309	1.78	492	1000

Certificate: 1404404
Project: 1404404

Master Contract: 169790 (LR 36087)
Date: April 11, 2003

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		Vmax (V)	Rmin (Ω)	Voc (V)	Isc (mA)	Ca (μ F)		La (mH)	
						A,B	C-G	A,B	C-G
KFD2-VR-1.50m KFD2-VR-1.50m.L KFD2-VR-1.50m.R	4-5	3.9	2280	3.9	1.7	1000	3000	1000	1000
KFD2-VR-1.500m KFD2-VR-1.500m.L KFD2-VR-1.500m.R	4-5	5.1	2280	5.1	2.2	1000	3000	1000	1000
KFD2-WAC-Ex1 KFD2-WAV-Ex1	1-2-3- 7-8-9	-	-	17.6	314	0.44	1.32	0.19	0.57

These barriers must be installed in suitable enclosures in a non-hazardous location and provide intrinsically safe circuits for switches, thermocouples, non-inductive resistive devices or CSA Certified entity equipment when installed per manufacturers control drawings.

APPLICABLE STANDARDS

- CSA Std C22.2 No. 142-M1987 - Process Control Equipment
- CAN/CSA-C22.2 No.157-92 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations

Class I, Groups A, B, C and D; Class II, Groups E, F and G; Class III:

- KFD SERIES Transformer Isolated Barriers, Models as tabulated below;

Model	Trml	System		Entity Parameters								
		Vmax (V)	Rmin (Ω)	Voc (V)	Isc (mA)	Po (W)	Ca (μ F)			La (mH)		
							A, B	C, E	D, F, G	A, B	C, E	D, F, G
KFD2-SL2-Ex1 *	1-2-3	28	254.5	28	110	0.77	0.083	0.249	0.664	2.2	9	18
KFD2-SL2-Ex2 *	1-2-3; 4-5-6	28	254.5	28	110	0.77	0.083	0.249	0.664	2.2	9	18

These barriers must be installed in suitable enclosures in a non-hazardous location or Class I, Division 2, Group A, B, C and D hazardous location with a maximum ambient temperature of 60 Deg. C, and provide intrinsically safe circuits for switches, thermocouples, non-inductive resistive devices, CSA Certified ASCO Intrinsically Safe Valves or other CSA Certified equipment when installed per manufacturers control drawing 116-0264.



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APPLICABLE STANDARDS

- CSA Std C22.2 No. 142-M1987 - Process Control Equipment
- CAN/CSA-C22.2 No.157-92 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
- CSA Std C22.2 No. 213-M1987 - Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations

MARKINGS

- CSA Monogram
- Company Name
- Model number
- Serial number
- Electrical Rating
- The symbol [Exia]
- The words "ASSOCIATED EQUIPMENT/APPAREILLAGE CONNEXE"
- Maximum Ambient Temperature Rating
- Temperature Code Rating (Model KFD2-SL2-Ex_ only)
- Reference to Installation Instructions



Supplement to Certificate of Compliance

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Master Contract: 169790 (LR 36087)

*The products listed, including the latest revision described below,
are eligible to be marked in accordance with the referenced Certificate.*

Product Certification History

Project	Date	Description
1404404	April 11, 2003	Addition of Model KFD2-SL2-Ex1 and KFD2-SL2-Ex2 and transfer or report 176024-1171974 (65756-13).