

Certificate of Compliance

Certificate: 1433346 (LR 66529-17)

Master Contract: 176244



Project: 1433346

Date Issued: June 3, 2003

Issued to: Pepperl + Fuchs Elcon SRL
P.O. Box 14
Division Process Automation
Via delle Industrie, 4
Mezzago, Milan 20050
ITALY
Attention: Mr. Francesco Esposito

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



Issued by: 
R. Wildish
Authorized by:  for
Nick Alfano
Operations 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; Ex nA [ia] IIC/IIB:

Zener Barrier Devices, uZ600 Series; provides intrinsically safe circuits with parameters as tabulated below, when connected per installation drawing 366-015CS-12. These devices must be mounted in a suitable enclosure in non-hazardous locations or Class I, Div. 2, Group A,B,C,D or Class I, Zone 2, Group IIC hazardous locations; temperature code rating T4 at Tamb = 55C. Maximum safe area voltage must not exceed 250Vrms.

Model	Trml	System		Entity Parameters			
		Vmax (V)	Rmin (ohms)	Voc/Uo (V)	Isc/Io (mA)	Ca (uF)	La (mH)

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						A,B IIC	C,E IIB	D,F,G IIA	A,B IIC	C,E IIB	D,F,G IIA
	4-gnd	13	1485	13	9	1	6.2	22.5	400	1000	1000
	3-4	-	-	13	18	1	6.2	22.5	108	432	864
uZ620+	3-gnd	28	305	28	92	0.083	0.65	2.15	3.0	16	32
	4-gnd	10	50	10	200	3	20	100	0.88	3.52	7
	3-4	-	-	29.2	292	0.073	0.59	1.94	0.4	1.6	3.2
uZ620R+	3-gnd	28	305	28	92	0.083	0.65	2.15	3.0	16	32
	4-gnd	10	50	10	200	3	20	100	0.88	3.52	7
	3-4	-	-	29.2	292	0.073	0.59	1.94	0.4	1.6	3.2
uZ623-	3-gnd	26	305	26	86	0.099	0.77	2.6	4.8	19.2	38.4
	4-gnd	19.5	386	19.5	51	0.24	1.49	5.87	13.7	54.8	109
	3-4	-	-	28.4	137	0.079	0.632	2.07	1.9	7.6	15.2
uZ630+ uZ630-	3-gnd	28	305	28	92	0.083	0.65	2.15	3.0	16	32
	4-gnd	28	diode	28	0	0.083	0.65	2.15	-	-	-
	3-4	-	-	28	92	0.083	0.65	2.15	3.0	16	32
uZ631+	3-gnd	28	255	28	110	0.083	0.65	2.15	2.9	11.6	23.2
	4-gnd	28	diode	28	0	0.083	0.65	2.15	-	-	-
	3-4	-	-	28	110	0.083	0.65	2.15	2.9	11.6	23.2
uZ640ac	3-gnd	15.5	99	15.5	157	0.508	3.11	12.5	1.4	5.6	11.2
	4-gnd	15.5	99	15.5	157	0.508	3.11	12.5	1.4	5.6	11.2
	3-4	-	-	15.5	314	0.508	3.11	12.5	0.36	1.44	2.88
uZ641+ uZ641-	3-gnd	15.5	99	15.5	157	0.508	3.11	12.5	1.4	5.6	11.2
	4-gnd	-	-	-	-	-	-	-	-	-	-
	3-4	15.5	99	15.5	157	0.508	3.11	12.5	1.4	5.6	11.2
uZ650+	3-gnd	21	148	21	142	0.188	1.27	4.78	1.78	6.8	13.6
	4-gnd	21	148	21	142	0.188	1.27	4.78	1.78	6.8	13.6
	3-4	-	-	23.4	284	*	0.75	2	*	1.7	3.4
uZ660ac	3-gnd	9	74	9	122	4.9	40	500	2.4	9.6	19.6
	4-gnd	9	74	9	122	4.9	40	500	2.4	9.6	19.6
	3-4	-	-	9	244	4.9	40	500	0.6	2.6	4.7
uZ664ac	3-gnd	13	990	13	14	1	6.2	22.5	180	720	1000
	4-gnd	13	990	13	14	1	6.2	22.5	180	720	1000
	3-4	-	-	13	28	1	6.2	22.5	45	180	360
uZ666ac	3-gnd	8	26.7	8	300	8.4	100	1000	0.4	1.6	3.2
	4-gnd	8	26.7	8	300	8.4	100	1000	0.4	1.6	3.2
	3-4	-	-	16	600	0.46	2.75	11	0.098	0.392	0.784
uZ667ac	3-gnd	18	123	18	147	0.309	1.78	7.6	1.6	6.4	12.8
	4-gnd	18	123	18	147	0.309	1.78	7.6	1.6	6.4	12.8
	3-4	-	-	18	294	0.309	1.78	7.6	0.41	1.64	3.28
uZ670ac	3-gnd	4.7	10.8	4.7	436	100	1000	1000	0.145	0.58	1.16
	4-gnd	4.7	10.8	4.7	436	100	1000	1000	0.145	0.58	1.16
	3-4	-	-	9.4	872	3.9	29	300	0.046	0.184	0.368
uZ680+ uZ680-	3-gnd	28	305	28	92	0.083	0.65	2.15	3.0	16	32
	4-gnd	28	305	28	92	0.083	0.65	2.15	3.0	16	32
	3-4	-	-	29.2	184	*	0.36	0.96	*	4	8
uZ681+	3-gnd	28	305	28	92	0.083	0.65	2.15	3.0	16	32

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						A,B IIC	C,E IIB	D,F,G IIA	A,B IIC	C,E IIB	D,F,G IIA
uZ681-	4-gnd	-	-	-	-	-	-	-	-	-	-
	3-4	28	305	28	92	0.083	0.65	2.15	3.0	16	32
uZ690ac	3-gnd	13	74	13	176	1	6.2	22.5	1	4	8
	4-gnd	13	74	13	176	1	6.2	22.5	1	4	8
	3-4	-	-	13	352	1	6.2	22.5	0.28	1.12	2.24

Notes:

- * designates that output suitable for Groups C,D,E,F,G and Groups IIB, IIA only.
- Voc and Isc can not occur simultaneously; Voc represents the voltage of the series combination of terminals; Isc represents the current of the parallel combination of terminals, shorted to ground.
- These barriers are intended for mounting on standard DIN 35mm "Top Hat " rail were installation and maintenance are to be carried out as per instruction given on manufacturer's Control Drawing number 366-015CS-12.
- The circuitry of all of the above listed barriers is such that the voltage/current output characteristic is linear. Therefore the output power (Po) may be calculated using the formula: $P_o = U_o * I_o/4$.
- Certified entity parameters for additional combinations of barrier channel outputs are detailed on manufacturer's Control Drawing number 366-015CS-12.

APPLICABLE REQUIREMENTS

- 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
- CAN/CSA-E60079-0-02 - Electrical Apparatus for Explosive Gas Atmospheres--Part 0: General Requirements
- CAN/CSA-E60079-11-02 - Electrical Apparatus for Explosive Gas Atmospheres--Part 11: Intrinsic Safety "i"
- CAN/CSA-E60079-15-02 - Electrical Apparatus for Explosive Gas Atmospheres--Part 15: Type of protection "n"



Supplement to Certificate of Compliance

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*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
1433346	June 3, 2003	Addition of Type uZ641+, uZ641-, uZ664ac and uZ666ac, revised entity parameters and documentation format.
LR66529-17	Nov. 27/98	Original Certification.