IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict
	dimension marking g : prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking h : prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking i min: prescribed (mm); measured (mm) .....:	-	N/A
	The dimensions of the fuse-base and contacts in tolerances given in Fig. 806		
	Fuse-base and contacts for Class T fuse-links (1-1200A) : Fig 806		N/A
	dimension marking a min: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking b: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking c min: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking d: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking e min: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking f min: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking g max: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking h : prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking i : prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking j min: prescribed (mm); measured (mm) .....:	-	N/A
	dimension "diameter of stud": prescribed (mm); measured (mm) .....:	-	N/A
7.2	Insulating properties and suitability for insulation		N/A
	Creepage distances and clearances of fuse-parts meet requirements of IEC 60664-1 for overvoltage category III and pollution degree 3 ..... :	-	N/A
7.5	Breaking capacity		N/A
	Maximum arc voltage (Table 6 in IEC 60269-1) for gN and gD 600 V rated fuses is 3 000 V .....:	-	N/A

IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict
7.6	Max values cut-off current characteristics given in Table 805		N/A
7.7	Pre-arcing I^2t given in Table 803 .....:	-	N/A
	Maximum operating I^2t given in Table 806 .....:	-	N/A
7.8	Overcurrent discrimination		N/A
	Discrimination between fuse links over 15 A is maintaining 2:1 ratio between upstream fuse and downstream fuse current ratings		N/A
	Ratio of 1,6:1 is possible between "gD" and "gN" fuse-links, provided "gD" fuse-link has the higher rated current .....:		N/A
7.9	Protection against electric shock increased by means of partition walls and covers of fuse contacts .....:		N/A
8	TESTS		
	IEC 60269-1 applies with the following supplementary requirements		N/A
8.3	Verification of temperature rise and power dissipation		N/A
8.3.1	Cross-sectional area of cable or bus bar in accordance with Table 804 .....:	-	N/A
8.3.4.1	Point of measurement marked A in Figure 809.:		N/A
	Dummy fuse-links for class J and T fuse links with dimensions of Figures 807 and 808.....:	-	N/A
8.3.4.2	Points of measurement marked B in Figure 809:		N/A
8.4	Verification of operation		N/A
8.4.1	Test arrangement specified in 8.3.1		N/A
8.4.3.3.2	Verification of gates		N/A
	Test voltage (V) ..... :	-	—
	See tests specified in 8.4.3.3.1 and additional tests for "gD" and "gN" fuse-links		N/A
	a) Test current Table 802, column 3 for 10 s; fuse-link not operate .....:	-	N/A
	b) Test current Table 802, column 4; fuse-link operate within 5 s .....:	-	N/A
	c) Test current Table 802, column 5 for 0,1s; fuse-link not operate .....:	-	N/A

IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict
	d) Test current Table 802, column 6; fuse-link operate within 0,1 s .....:	-	N/A
8.5.4	Recovery voltage		N/A
	Value of a.c. power-frequency recovery voltage (Table 20 in IEC 60269-1) replaced by (100^{+5}_{0})% of rated voltage 600 V for gN and gD fuse links ...:	-	—
	Mean value of d.c. recovery voltage (Table 21 in IEC 60269-1) replaced by (100^{+5}_{0})% of rated voltage for gN and gD fuse links .....:	-	—
8.6	Max cut-off current limits given in Table 805		N/A
	Test arrangement for breaking capacity according to 8.5 and Table 20 of IEC 60269-1 .....:	-	N/A
8.7	Max operating I^2t given in Table 806 .....:	-	N/A
	Test arrangement for breaking capacity according to 8.5 and Table 20 of IEC 60269-1 .....:	-	N/A
8.9	Verification of resistance to heat		N/A
	Fuse-holder with fuse-links having maximum power dissipation are cyclically loaded as pre-treatment... :	-	N/A
	After cooling to normal temperature breaking capacity tested at I_1 (see 8.5)..... :	- -	N/A
	Fuse-links with organic material Fuse-holder with fuse-links having maximum power dissipation are cyclically loaded as pre-treatment....	- -	N/A
	After cooling to normal temperature breaking capacity tested at I_1 and I_5 (see 8.5)..... :	- -	N/A
8.10	Verification of non-deterioration of contacts		N/A
8.10.1	Arrangement of the fuse		N/A
	Dummy fuse links Figures 807 and 808 .....: maximum power dissipation P_n (W) Figures 801, 802 and 805 .....:	- -	N/A
	Dummy fuse-links are constructed of unplated copper , they not operated during passage of overload current I_{nf} .....:		N/A
8.10.2	Test method		N/A
	Test current (A) for load period .....:	-	N/A
	Duration (s) of load period .....:	-	N/A
	Duration (s) of no-load period .....:	-	N/A
	Test voltage (V) .....:	-	—

IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict
8.10.3	Acceptability of test results		N/A
	Temperature rise after 250 cycles not exceed temperature rise at beginning + 15K		N/A
	Temperature rise after 750 cycles not exceed temperature rise at beginning + 20K		N/A
8.11.1.1	Mechanical strength of fuse-holders		N/A
	Test set-up subjected to temperature rise test at rated current ..... :	-	N/A
	fuse-link or fuse-carrier are withdrawn and inserted into fuse-base 100 times ..... :	-	—
	All parts are intact and function normally		N/A
	Test set-up subjected to further temperature rise test at rated current (values obtained are not more than 5 K or 15 % above the values from temperature-rise test prior)..... :	-	N/A
8.11.2.2	Resistance to abnormal heat and fire		N/A

IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict

FUSE SYSTEM I – gU FUSE-LINKS WITH WEDGE TIGHTENING CONTACTS

3	CONDITIONS FOR OPERATION IN SERVICE		N/A
3.9	Discrimination of fuse-links		N/A
	Subclause 3.9 of IEC 60269-1 not apply.....:	-	N/A
	Correct discrimination is ensured by adherence to Table 2 of IEC 60269-1 and standard zones for time/current characteristics (see 5.6.1 and Figures 901, 902, 903 and 904 together with compliance with values given in Table 902 of 7.7)) .....:	-	N/A

5	CHARACTERISTICS OF FUSES		N/A
5.2	Rated voltage is 400 V a.c. .....:	-	N/A
5.3.1	Rated current (A) of the fuse-link with centres at 82 mm .....:	-	N/A
	Rated current (A) of the fuse-link with centres at 92 mm .....:	-	N/A
	Other rated current (A) of the fuse-link see 5.3.1 of IEC 60269-1.....:	-	N/A
5.5	Max. rated power (W) dissipation of the fuse-link given in Table 901 when measured on standard rig Fig 906 .....:	-	N/A
5.6.1	Time-current zones given in Fig 901, Fig 902, Fig 903, and Fig 904		N/A
	Tolerances on time current characteristics not deviate for more ±10% (for current)		N/A
5.6.2	See Table 2 of IEC 60269-1		N/A
5.6.3	Subclause 5.6.3 of IEC 60269-1 not apply		N/A
	Correct discrimination ensured by adherence for zones time-current characteristics of 5.6.1 and given in Fig 901, 902, 903 and 904		N/A
5.6.3	For "gD" and "gN" fuse-links the gates given in Table 802 .....:	-	N/A
5.7.2	Rated breaking capacity (kA) .....:	-	N/A
5.8	See 5.8 of IEC 60269-1		N/A

IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict

6	MARKINGS		N/A
	Markings are legible		N/A
6.1	Fuse-holder marked by:		
	- size.....:	-	N/A
6.2	Fuse-links marked by:		
	- size or reference.....:	-	N/A
	- rated breaking capacity.....:	-	N/A

7	STANDARD CONDITIONS FOR CONSTRUCTION		N/A
7.1	Mechanical design		N/A
	The dimensions of the fuse-links given in Figure 905		
	Max current rating (A):		N/A
	dimension marking A max: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking B nom: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking C max: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking D max: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking E max: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking F max: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking G nom: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking H nom: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking J nom: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking K max: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking L nom: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking M: prescribed (mm); measured (mm) .....:	-	N/A

IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict
	dimension marking N nom: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking P nom: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking Q nom: prescribed (mm); measured (mm) .....:	-	N/A
7.2	Insulating properties and suitability for insulation		N/A
	Creepage distances and clearances of fuse-accessories meet requirements of IEC 60664-1 for overvoltage category III ..... :	-	N/A
7.5	Breaking capacity		N/A
	Max arc voltages given in Table 6 of IEC 60269 -1 .....:	-	N/A
	For a.c. arc voltage reach up to √2 times given values		N/A
7.7	Pre-arcing I^2t given in Table 7 of IEC 60269-1 replaced values given in Table 902 for gU fuse-links .....:	-	N/A
7.8	Correct discrimination ensured by adherence for zones time-current characteristics of 5.6.1 and given in Figures 901, 902, 903 and 904.....:	-	N/A

8	TESTS		N/A
	IEC 60269-1 applies with the following supplementary requirements		N/A
8.1.1	Kind of tests		N/A
	See 8.1.1 of IEC 60269-1		N/A
8.3.1	Arrangement of the fuse		N/A
	Fuse-links mounted in carrier and tested in test rig Fig 906 .....:	-	N/A
	For connections Table 17 of IEC 60269-1 not apply .....:	-	N/A
	For standardized ratings connections comply with Table 903 .....:	-	N/A
8.3.3	Points of measurement of power dissipation given in Fig 906 .....:	-	N/A
8.4.1	Test arrangement given in Figure 906 .....:	-	N/A

IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict
8.4.3.3.2	Verification of the gates		N/A
	Correct discrimination ensured by adherence for zones time-current characteristics of 5.6.1 given in Fig 901, 902, 903 and 904 verified as in 8.4.3.3.1 of IEC 60269-1.....:	-	N/A
8.5.1	Fuse-links tested for breaking capacity in test rig Figure 907 .....:		N/A
8.5.2	Characteristics of the test circuit		N/A
	See 8.5.2 of IEC 60269-1 except d.c. tests are omitted .....:	-	N/A
8.5.5	Test method		N/A
	See 8.5.5.1 of IEC 60269-1 except d.c. tests are omitted .....:	-	N/A
	See 8.5.5.2 of IEC 60269-1 except d.c. tests are omitted .....:	-	N/A
8.5.8	Acceptability of test results		N/A
	Additionally to 8.5.8 of IEC 60269-1: the fuse-links operated without melting of the fine-wire fuse and without mechanical damage to the rig		N/A
8.7.3	Verification of compliance for fuse-links at 0,01 s		N/A
	See 8.7.3 of IEC 60269-1 except that compliance with Table 7 replaced by compliance with Table 902 .....:		N/A
8.9	Verification of resistance to heat		N/A
	Fuse-holder with fuse-links having maximum power dissipation are cyclically loaded as pre-treatment... :	-	N/A
	After cooling to normal temperature breaking capacity tested at I_1 (see 8.5)..... :	-	N/A
	Fuse-links with organic material Fuse-holder with fuse-links having maximum power dissipation are cyclically loaded as pre-treatment....		N/A
	After cooling to normal temperature breaking capacity tested at I_1 and I_5 (see 8.5)..... :	-	N/A
8.11.1.1	Mechanical strength of fuse-holders		N/A
	Test set-up subjected to temperature rise test at rated current ..... :	-	N/A
	fuse-link or fuse-carrier are withdrawn and inserted into fuse-base 100 times ..... :	-	—

IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict
	All parts are intact and function normally		N/A
	Test set-up subjected to further temperature rise test at rated current (values obtained are not more than 5 K or 15 % above the values from temperature-rise test prior)..... :	-	N/A
8.11.2.2	Resistance to abnormal heat and fire		N/A
	Subclause 8.11.2.2 of IEC 60269-1 not apply		N/A

IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict

FUSE SYSTEM J – FUSES WITH FUSE-LINKS HAVING "gD CLASS CC" AND "gN CLASS CC" CHARACTERISTICS (CLASS CC TIME DELAY AND NON-TIME DELAY FUSE TYPES)			
5	CHARACTERISTICS OF FUSES		N/A
5.2	Rated voltage is 600 V a.c. .....:	-	N/A
5.3.1	Rated current (A) of the fuse-link in accordance with IEC 60269-1, maximum rated current is 30 A (Fig 1001) .....:	-	N/A
5.3.2	Rated current (A) of the fuse-holder , maximum rated current is 30 A (Fig 1002) .....:	-	N/A
5.5	Max. rated power (W) dissipation of the fuse-link given in Fig 1001 .....:	-	N/A
	Rated power (W) acceptance of the fuse-holder		N/A
	Rated acceptable power (W) dissipation of the fuse-base not less than max rated power dissipation for the fuse-link .....:		N/A
5.6.1	Time-current zones given in Fig 1005, Fig 1006, Fig 1007, Fig 1008 Fig 1009 and Fig 1010		N/A
	Tolerances on time current characteristics not deviate for more ±10% (for current)		N/A
5.6.2	See Table 1001 for "gD class CC" and "gN class CC" fuse-links .....:		N/A
5.6.3	For "gD class CC" and "gN class CC" fuse-links the gates given in Table 1002 .....:	-	N/A
5.7.2	Rated breaking capacity (kA) .....:	-	N/A

6	MARKINGS		N/A
	Markings are legible		N/A
6.1	Fuse-holders marked by:		
	- size.....:	-	N/A
6.2	Fuse-links marked by:		
	- size or reference.....:	-	N/A
	- rated breaking capacity.....:	-	N/A

IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict

7	STANDARD CONDITIONS FOR CONSTRUCTION		N/A
7.1	Mechanical design		N/A
	The dimensions of fuse-links given in Figure 1001 and the dimensions of fuse-bases given in Figure 1002		
	Class CC fuse-links (1-30 A) : Fig 1001		N/A
	dimension marking a: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking b: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking c: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking d min: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking e min: prescribed (mm); measured (mm) .....:	-	N/A
	Fuse-base and contacts for Class CC fuse-links (1-30 A) : Fig 1002	-	N/A
	dimension marking a: min prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking b: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking c min: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking d: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking e min: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking f max: prescribed (mm); measured (mm) .....:	-	N/A
	dimension marking g min: prescribed (mm); measured (mm) .....:	-	N/A
7.2	Insulating properties and suitability for insulation		N/A
	Creepage distances and clearances of fuse-accessories meet requirements of IEC 60664-1 for overvoltage category III ..... :	-	N/A
7.5	Breaking capacity		N/A
	Maximum arc voltage (Table 6 in IEC 60269-1) for "gN class CC" and "gD class CC" 600 V rated fuses is 3 000 V .....:	-	N/A

IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict
7.6	Max values cut-off current characteristics given in Table 1005		N/A
7.7	Pre-arcing I^2t given in Table 1003 .....:	-	N/A
	Maximum operating I^2t given in Table 1006 .....:	-	N/A
7.8	Overcurrent discrimination		N/A
	Discrimination between fuse links over 15 A is maintaining 2:1 ratio between upstream fuse and downstream fuse current ratings		N/A
	Ratio of 1,6:1 is possible between "gD class CC" and "gN class CC" fuse-links, provided "gD class CC" fuse-link has the higher rated current .....:	-	N/A
	For rated currents smaller than 15 A, manufacturer are consulted .....:	-	N/A
7.9	Protection against electric shock increased by means of partition walls and covers of fuse contacts .....:	-	N/A
8	TESTS		N/A
	IEC 60269-1 applies with the following supplementary requirements		N/A
8.3	Verification of temperature rise and power dissipation		N/A
8.3.1	Cross-sectional area of conductor is 8,4 mm^2 ..:	-	N/A
8.3.4.1	Dummy fuse-links for class CC fuse links with dimensions of Figures 1003 .....:	-	N/A
	Point of measurement marked A in Figure 1004.....:	-	N/A
8.3.4.2	Points of measurement marked B in Figure 1004 :	-	N/A
8.4	Verification of operation		N/A
8.4.1	Test arrangement specified in 8.3.1		N/A
8.4.3.3.2	Verification of gates		N/A
	Test voltage (V) ..... :	-	—
	See tests specified in 8.4.3.3.1 and additional tests for "gD class CC" and "gN class CC" fuse-links		N/A
	a) Test current Table 1002, column 3 for 10 s; fuse-link not operate .....:	-	N/A
	b) Test current Table 1002, column 4; fuse-link operate within 5 s .....:	-	N/A

IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict
	c) Test current Table 1002, column 5 for 0,1s; fuse-link not operate .....:	-	N/A
	d) Test current Table 1002, column 6; fuse-link operate within 0,1 s .....:	-	N/A
8.5.4	Recovery voltage		N/A
	The a.c. power-frequency recovery voltage (Table 20 in IEC 60269-1) for "gN class CC" and "gD class CC" fuse links is (100^{+5}_{0})% of rated voltage 600 V....:		—
	The d.c. mean value of recovery voltage (Table 21 in IEC 60269-1) for "gN class CC" and "gD class CC" fuse links is (100^{+5}_{0})% of rated voltage .....:		—
8.6	Max cut-off current limits given in Table 1005		N/A
	Test arrangement for breaking capacity according to 8.5 and Table 20 of IEC 60269-1 .....:	-	N/A
8.7	Max operating I^2t given in Table 1006 .....:	-	N/A
	Test arrangement for breaking capacity according to 8.5 and Table 20 of IEC 60269-1 .....:	-	N/A
8.9	Verification of resistance to heat		N/A
	Fuse-holder with fuse-links having maximum power dissipation are cyclically loaded as pre-treatment... :	-	N/A
	After cooling to normal temperature breaking capacity tested at I_1 (see 8.5)..... :	- -	N/A
	Fuse-links with organic material Fuse-holder with fuse-links having maximum power dissipation are cyclically loaded as pre-treatment....	- -	N/A
	After cooling to normal temperature breaking capacity tested at I_1 and I_5 (see 8.5)..... :	- -	N/A
8.10	Verification of non-deterioration of contacts		N/A
8.10.1	Arrangement of the fuse		N/A
	Dummy fuse links Figure 1003..... : maximum power dissipation P_n (W) Figure 1001 :	- -	N/A
	Dummy fuse-links are constructed of unplated copper , they not operated during passage of overload current I_{nf} .....:	-	N/A
8.10.2	Test method		N/A
	Test current (A) for load period .....:	-	N/A
	Duration (s) of load period .....:	-	N/A
	Duration (s) of no-load period .....:	-	N/A

IEC 60269-2			
Clause	Requirement + Test	Result - Remark	Verdict
	Test voltage (V) ..... :	-	—
8.10.3	Acceptability of test results		N/A
	Temperature rise after 250 cycles not exceed temperature rise at beginning + 15K		N/A
	Temperature rise after 750 cycles not exceed temperature rise at beginning + 20K		N/A
8.11.1.1	Mechanical strength of fuse-holders		N/A
	Test set-up subjected to temperature rise test at rated current ..... :		N/A
	fuse-link or fuse-carrier are withdrawn and inserted into fuse-base 100 times ..... :		—
	All parts are intact and function normally		N/A
	Test set-up subjected to further temperature rise test at rated current (values obtained are not more than 5 K or 15 % above the values from temperature-rise test prior)..... :		N/A
8.11.2.2	Resistance to abnormal heat and fire		N/A

List of test equipment used:

Measured quantity	Device	Manufacturer	Code
Voltage (tests above 15kA)	3-channel insulating measuring amplifier Signal memory recorder Nicolet	 Rohrer W&W	 Arcus 930-2 2580-P
Current (tests above 15kA)	Lin. current transformer LGSSO Burden 0,7mΩ Signal memory recorder Nicolet	Ritz AIT W&W	WLIN6000.HVF/1...3 - 2580-P
Current (tests at reduced voltage)	Current transformer GE 4461 Current transformer AETt10 True-RMS amperemeter Kl. 0,5 Digital multimeter Fluke 185	Goerz Siemens Norma Fluke	WI600/1...3 WI4000/1...3 A0,5/1 /4 FLUKE185/2
Dielectric properties	High-voltage test equipment 90-1F with measuring equipment Impulse tester 35 Impulse voltmeter SV642 Oscilloscope 9430	 Elabo Haefely Haefely Le Croy	 HSG5KV G304 G503 G805
Insulation resistance	MIT520 Insulation Tester	Megger	G518
Internal resistance	Resistance microhm 2316-1	Burster	Resistomat 2316-1
Time	Signal memory recorders TA 800 Stopwatch	W&W Quantum	TRA800 938-3
Temperature	Data Acquisition/Data Logger Switch Unit 34970A Temperature meter TESTO 901	Agilent Testoterm	942 TESTO
Abnormal heat and fire	Glow-wire test device with measuring equipment	Friborg	Glow
Resistance to heat	Heating cabinet UT 6060	Heraeus	95111474
Environmental tests	Environmental chamber HC7507 with measuring equipment	Heraeus Vötsch	M2
Mechanical strength of terminals	Test equipment	AIT	MSD
Strength of actuator mechanism	Test equipment	Sauter GmbH	FH1K
Degree of protection	Test probe	PTL	PTL 1...3
Clearances, creepage distances, dimensions	Digital slide gauge Tape measure 10m	Spiral Stanley	SCHUB-1 Maß1

СПИСЪК НА ИЗПИТАНИЯТА
/с Доклад No. 2.03.02619.1.0 / DF-SA / 60269-2 / PMX-10/

На продукт: PMX-10 (за *предпазители 10 x 38)*

Производител: *DF Electric, Испания*

Съгласно IEC 60269-2 (четвърто издание):2010

Тест по подточка съгласно стандарта:
8.5.5.1 Устойчивост на пиков ток на основата за предпазителя
8.9 Устойчивост на топлина
8.10 Невлошаване на контактите
8.11.1 Механично разтягане на основата за предпазителя

ВЯРНО С ОРИГИНАЛА

IEC | IECEE CB SCHEME

Ref. Certif. No.

AT 2983

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC

CB TEST CERTIFICATE

CERTIFICAT D'ESSAI OC

Product Produit	**Low-voltage fuse-holders for cylindrical fuse-links**
Name and address of the applicant Nom et adresse du demandeur	**DF S.A** **Silici, 67-69,** **08940 CORNELLA DE LLOBREGAT (Barcelona), Spain**
Name and address of the manufacturer Nom et adresse du fabricant	**DF S.A** **Silici, 67-69,** **08940 CORNELLA DE LLOBREGAT (Barcelona), Spain**
Name and address of the factory Nom et adresse de l'usine Note: *When more than one factory, please report on page 2* Note: *Lorsque il y plus d'une usine, veuillez utiliser la 2ème page*	**DF S.A** **Silici, 67-69,** **08940 CORNELLA DE LLOBREGAT (Barcelona), Spain** ☐ Additional Information on page 2
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	**AC 690 V, 50 Hz or DC 24 V; 32 A** **1-pole, N-pole, 1+N-pole, 2-pole, 3-pole, 3+N-pole, 4-pole** **for 10x38 fuse-links**
Trademark (if any) Marque de fabrique (si elle existe)	
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	--
Model / Type Ref. Ref. de type	**PMX-10**
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent être indiqués sur la 2ème page)	-- ☐ Additional Information on page 2
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	**IEC 60269-1(ed.4);am1** **IEC 60269-2(ed.4)**
As shown in the Test Report Ref No which forms part of this Certificate Comme indiqué dans le Rapport d'essais numéro de référence qui constitue partie de ce Certificat	**2.03.02619.1.0/DF-S.A/60269-1/PMX-10,** **2.03.02619.1.0/DF-S.A/60269-2/PMX-10**

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification

OVE

AUSTRIAN ELECTROT
Kahlenberger Str. 2A
1190 Wien, Austria

на основание чл. 36а, ал. 3 от ЗОП

Wallner
Martin
@ove.at

Date: 2014-02-11

Signature: Dipl.-Ing. W. Martin

ZVR: 327279990 DVR: 1055807

TEST REPORT

OBJECT: *Conformity with the requirements of standards IEC60269 / EN60269*

DEVICE CHARACTERISTICS

Type:	*Characteristics*:
420006	*Fuse link 10x38 6 A gG 500V ~*
420106	*Fuse link 10x38 6 A gG 500V ~ with indicating device*

TESTS:

Subclause	*Test*
6	Marking
8.1.4	Dimensions
8.3	Power dissipation
8.4.3.1a	Conventional non-fusing current
8.4.3.1b	Conventional fusing current
8.4.3.2	Rated current
8.4.3.3	Gates
8.4.3.4	Overload
8.4.3.5	Conventional cable overload protection
8.4.3.6	Indicating device / striker
8.5	Breaking capacity

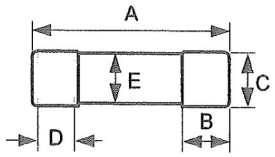
CONCLUSION:

According to the performed test, the samples of the products comply with the standards requirements.

Report by:	Reviewed
на основание чл. 36а, ал. 3 от ЗОП	на основание чл. 36а, ал. 3 от ЗОП
Juan Carlos Millán	Miquel Pérez

ВЯРНО С ОРИГИНАЛА

ABBREVIATIONS: C=Conform, NC=Non-conform, NA=Non-applicable

SUBCLAUSE	TEST		RESULTS	
6	**MARKING**		Without indicator	With indicator
	- Name of manufacturer or trade mark		DF	DF
	- Reference		420006	420106
	- Rated voltage		500 V	500 V
	- Rated current		6 A	6 A
	- Breaking range and utilization category		gG	gG
	- Kind of current		~	~
	- Rated breaking capacity (kA)		120	120
8.1.4	**DIMENSIONS** 	A = 38±0,6mm B ≤ 10,5 mm C = 10,3±0,1mm D ≥ 6,0 mm E < C	C C C C C C C C C C C C C C C	
8.3	**POWER DISSIPATION**			
	- At In (6 A)	Pd ≤ 3 W	0,83 W	0,84 W 0,85 W
8.4.3.1 a)	**CONVENTIONAL NON-FUSING CURRENT**			
	- Non-fusing at 1,5·In = 9 A	t > 1h	> 1 h	> 1 h > 1 h
8.4.3.1 b)	**CONVENTIONAL FUSING CURRENT**			
	- Fusing at 1,9·In = 11,4 A	t < 1h	490 s	569 s 461 s
8.4.3.2	**RATED CURRENT**			
	Cyclical test 100h On: 60 min at 1,05·In = 6,3 A Off: 6 min - Non-fusing at 1,5·In = 9 A	t > 1h	> 1h	
8.4.3.3	**GATES**			
	a) I_{MIN} (10s) at 11 A	t ≥ 10 s	> 10 s	
	b) I_{MAX} (5s) at 28 A	t ≤ 5 s	0,355 s	
	c) I_{MIN} (0,1s) at 26 A	t ≥ 0,1 s	> 0,1 s	
	d) I_{MAX} (0,1s) at 72 A	t ≤ 0,1 s	0,035 s	

ABBREVIATIONS: C=Conform, NC=Non-conform, NA=Non-applicable

SUBCLAUSE	TEST		RESULTS
8.4.3.4	**OVERLOAD** 50 pulses 5 s at 13,2 A - Fusing at 13,2 A	Values within the limits	C C C
8.4.3.5	**CONVENTIONAL CABLE OVERLOAD PROTECTION** - 1,45·Iz = -- A	t < 1h	NA
8.4.3.6	**INDICATING DEVICE / STRIKER** - Indicating device - Striker		C C NA NA
8.5	**BREAKING CAPACITY** Test n°1 at 120 kA / 550 V ~ Test n°2 at 440 A / 550 V ~ Test n°3 at 36 A / 550 V ~ Test n°4 at 23 A / 550 V ~ Test n°5 at 14 A / 550 V ~		C C C C C C C C C

ABBREVIATIONS: C=Conform, NC=Non-conform, NA=Non-applicable

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Превод от английски език

ДФ Електрик
Лаборатория
Док: 04.04.0016E
Дата: 2005/12/20
Стр. 1/3

Тестов рапорт

Обект: Съответствие с изискванията на стандарта: IEC 60269/ EN 60269

Характеристики на оборудването:

Тип:	Описание:
420006	Предпазител 10x38 6A gG 500V
420106	Предпазител 10x38 6A gG 500V – с индикатор

СПИСЪК НА ИЗПИТАНИЯТА:

6 Маркировка
8.1.4 Размери
8.3 Устойчивост на захранване
8.4.3.1а Обикновен не-предпазен ток
8.4.3.1б Обикновен предпазен ток
8.4.3.2 Номинален ток
8.4.3.3 Изходи
8.4.3.4 Претоварване
8.4.3.5 Защита от пренапрежение на обикновен кабел
8.4.3.6 Индикиращо устройство
8.5 Изключвателна способност

Заключение:

Според проведените тестове, мострите изпълняват изискванията на стандарта

Рапорт от: подпис – (не се чете) Хуан Карлос Милан
Ревизия от: подпис – (не се чете) Мигел Перес

ВЯРНО С ОРИГИНАЛА

Informe de Ensayo

Laboratorio Unibloc

BORNES DE CONEXION
TERMINAL BLOCKS

PROMOTORA DE MERCADOS ELECTRICOS, S.A.

Plantilla: EU-02.06.2004
Creado por: Fernando Garcia-Mauriño el 13.09.2011 12:24:37

Documento: EU-2011006.0
Actualizado por: Fernando Garcia-Mauriño el 15.09.2011 14:19:36

Ensayo: **Grado de Protección**
Tipo: **RB8**
Modelo: **585315 - Borne seccionable RB8**
Fecha: **13.09.2011**
Descripción: Verificación del grado de protección con el dedo de ensayo

Parámetros

Muestra:
Regleta de 6 bloques de conexión provista de tapa y topes finales, montada en perfil de 35mm.
Tipo de cable:
Se interconectan los bloques alternando cable de 16mm² y de 1,5 mm² rígido, flexible.
Los extremos del cable se deaislan a una distancia de 12 mm.
Apriete:
Par de apriete 1.5 Nm
Equipo:
Aparato comprobador dedo de ensayo marca Acera modelo 20324-02A Nº serie 010226/1

Condiciones:
Temperatura ambiente: 27.3°C
Humedad relativa: 48%

Especificaciones aplicadas

Detalles prueba:
Esta prueba se realiza para determinar si el equipo es adecuado para cumplir con el grado de protección IP 20 descrito en la norma IEC 60947-1 Anexo C
Los bloques de conexión estan montados en el perfil con su tapa final, topes y cables de la sección asiganada y mínima conectados.

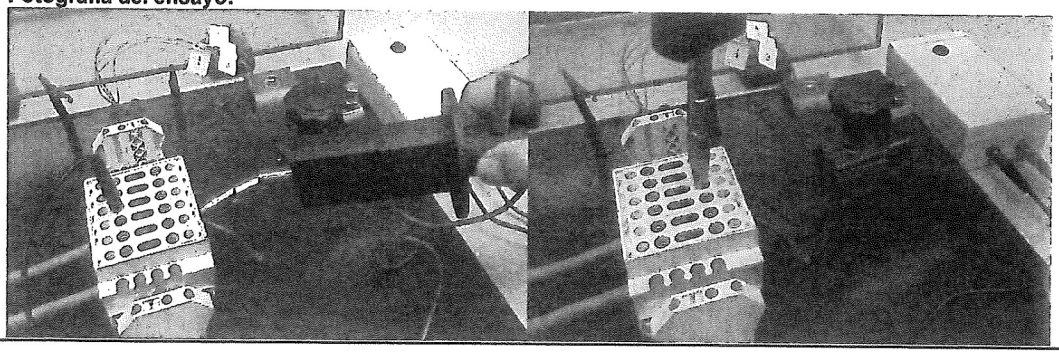
Prueba con el dedo de ensayo:
Se aplica el dedo en los orificios de los alveolos, en los orificios de los tornillos y en las embocaduras de los cables ejerciendo una presión manual aproximada de 30 N
El polo negativo se conecta a las partes activas del bloque de conexión

Resultados

Ensayo
✓ El resultado ha sido positivo, no habiéndose producido contacto entre el dedo y las partes activas del bloque de conexión.
El grado de protección resultante es **IP20**

Anexos

Fotografía del ensayo:



✓ **Realizado por:** *José Montosa 15.09.2011*

✓ **Aprobado por:** *Fernando Garcia-Mauriño 15.09.2011*

ВЯРНО С ОРИГИНАЛА

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Превод от испански език

Протокол от изпитване

Шаблон: EU-02.06.2004 Документ: EU-2011006.0

Създаден от: Фернандо Гарсия-Мауриньо на 13.09.2011 12:24:37

Актуализиран от: Фернандо Гарсия-Мауриньо на 15.09.2011 14:19:36

Изпитание: **Степен на защита**
Тип: **RB8**

Модел: **585315 – RB8 клема**
Дата: **13.09.2011**
Описание: **Проверка на степента на защита с тест**

Параметри

Проба:
Редица от 6 клеми с капачка и крайни капачки, монтирани на 35 мм профил;

Тип на кабела:
Вътрешна връзка между блоковете с кабел 16 mm ² и 1,5 mm ² твърди, гъвкави.
В краищата на кабела има разстояние 12 mm
Затягане:
Въртящ момент 1.5 Nm
Оборудване за тестване:
Техника тестер марка Acera 20324-02A N° сериен номер 010226/1

Условия:
Температура на околната среда: 27.3 ° C
Влажност: 48%

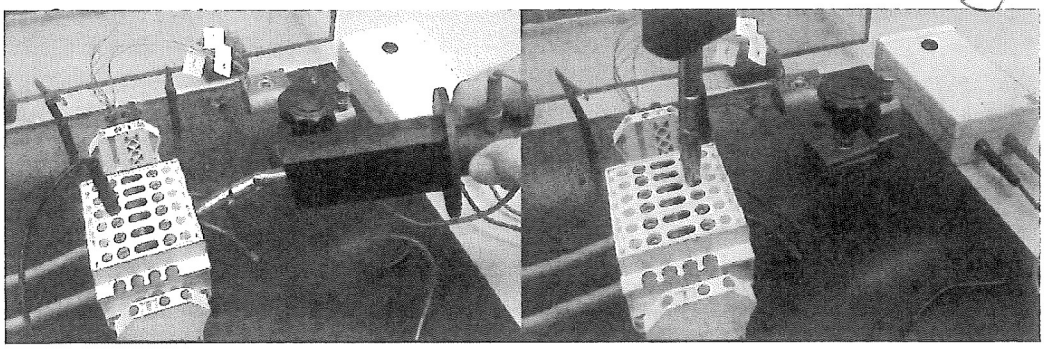
Стандарти за приложение

Детайли на теста:
Това изпитване се провежда за да се определи, че оборудването отговоря на степен на защита IP 20, както е описано в IEC 60947-1 приложение C
Клемите са монтирани на профила с крайна капачка и кабел.
Тестване
Натиснете в отворите, където са винтовете с ръчен натиск от около 30 N
Отрицателния полюс е свързан с активните части на връзката.

Резултати

Резултатът е положителен, след като няма контакт между пръст и активните части на блока връзка.
Степента на защита **IP20**.

Анекс:



✓ Изпълнено от: Хосе Монтоса на 15.09.2011
✓ Одобрено от: Фернандо Гарсия-Мауриньо на 15.09.2011

ВЯРНО С ОРИГИНАЛА

VDE Prüf- und Zertifizierungsinstitut

ZEICHENGENEHMIGUNG
MARKS APPROVAL

Smart Metering Applications, S.L.
SGC&A Smart Grid Components
& Applications
Calle Balmes 65 2º
08007 BARCELONA
SPANIEN

ist berechtigt, für ihr Produkt /
is authorized to use for their product

Prüftrenn-Reihenklemme
Test disconnect terminal block

die hier abgebildeten markenrechtlich geschützten Zeichen
für die ab Blatt 2 aufgeführten Typen zu benutzen /
the legally protected Marks as shown below for the types referred to on page 2 ff.

Geprüft und zertifiziert nach /
Tested and certified according to

DIN EN 60947-7-1 (VDE 0611 Teil 1):2010-03; EN 60947-7-1:2009

Aktenzeichen: 5017967-1442-0001 / 193256
File ref.:

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute
Zertifizierungsstelle / *Certification*

Ausweis-Nr. 40039804 Blatt 1
Certificate No. *Page*

Weitere Bedingungen siehe Rückseite und Folgeblätter /
further conditions see overleaf and following pages

Offenbach, 2014-04-22

на основание чл. 36а, ал. 3 от ЗОП

VDE
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http://www.vde.com/zertifikat
http://www.vde.com/certificate

ВЕРНО С ОРИГИНАЛА

327

VDE Prüf- und Zertifizierungsinstitut
Zeichengenehmigung

Name und Sitz des Genehmigungs-Inhabers / *Name and registered seat of the Certificate holder*
Smart Metering Applications, S.L. SGC&A Smart Grid Components, & Applications, Calle Balmes 65 2º, 08007 BARCELONA, SPAIN

Aktenzeichen / *File ref.*
5017967-1442-0001 / 193256 / CC3 / JK

Datum / *Date*
2014-04-22

Dieses Blatt gilt nur in Verbindung mit Blatt 1 des Zeichengenehmigungsausweises Nr. 40039804.
This supplement is only valid in conjunction with page 1 of the Certificate No. 40039804.

Prüftrenn-Reihenklemme
Test disconnect terminal block

Typ(en) / *Type(s)*

RB8

Bemessungsspannung *Rated voltage*	*800 V*
Bemessungsanschlußvermögen *Rated connecting capacity*	0,75...16 mm²
Ausführung *Construction*	mit Schraubklemmstellen *with screw-type clamping units*
Weitere Angaben siehe Anlage *Further information see appendix*	*100 A*

Dieser Zeichengenehmigungs-Ausweis bildet eine Grundlage für die EG-Konformitätserklärung und CE-Kennzeichnung durch den Hersteller oder dessen Bevollmächtigten und bescheinigt die Konformität mit den grundlegenden Schutzanforderungen der **EG-Niederspannungsrichtlinie 2006/95/EG** mit ihren Änderungen.
*This Marks Approval is a basis for the EC Declaration of Conformity and the CE Marking by the manufacturer or his agent and proves the conformity with the essential safety requirements of the **EC Low-Voltage Directive 2006/95/EC** including amendments.*

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute
Fachgebiet CC3
Section CC3

ВЯРНО С ОРИГИНАЛА

328

VDE Prüf- und Zertifizierungsinstitut
Zeichengenehmigung

Ausweis-Nr. / *Certificate No.* 40039804

Beiblatt / *Supplement*

Name und Sitz des Genehmigungs-Inhabers / *Name and registered seat of the Certificate holder*
Smart Metering Applications, S.L. SGC&A Smart Grid Components, & Applications, Calle Balmes 65 2º, 08007 BARCELONA, SPAIN

Aktenzeichen / *File ref.*
5017967-1442-0001 / 193256 / CC3 / JK

Datum / *Date*
2014-04-22

Dieses Beiblatt ist Bestandteil des Zeichengenehmigungsausweises Nr. 40039804.
This supplement is part of the Certificate No. 40039804.

Prüftrenn-Reihenklemme
Test disconnect terminal block

Fertigungsstätte(n)
Place(s) of manufacture

Referenz/*Reference*	
30022637	Plastijet, S.L. Can Cortès 37 08184 PALAU SOLITÀ I PLEGAMANS SPAIN

VDE Prüf- und Zertifizierungsinstitut GmbH
VDE Testing and Certification Institute
Fachgebiet CC3
Section CC3

ВЯРНО С ОРИГИНАЛА

VDE Prüf- und Zertifizierungsinstitut GmbH

Aktenzeichen: *File reference:*	5017967-1442-0001/193256	Ausweis-Nr.: *Certificate No.:*	40039804	Anlage Nr.: *Appendix No.:*	100A	Seite: *Page:*	1 / 1	Datum: *Date:*	2014-04-22

Diese Anlage ist Bestandteil des Genehmigungsausweises. *This appendix is part of the certificate.*

Prüftrenn-Reihenklemme
Test disconnect terminal block

Typ(en) *Type(s)*	*Durchgangsreihenklemme Terminal block*	*Schutzleiter-Reihenklemme Protective conductor terminal block*	Bemessungsspannung / V *Rated voltage / V*	Prüfstrom / A *Test current / A*	Bemessungsquerschnitt / mm² *Rated cross-section / mm²*	Bemessungsanschlußvermögen / mm² *Rated connecting capacity / mm²*	Schraubklemmen *Screw-type terminals*	Klemmschraubengröße *Terminal screw size*	Schraubenlose Klemmen *Screwless-type terminals*	Schneidklemmstellen *Insulation piercing terminals*	Leiterart: starr *Kind of conductor: rigid*	Leiterart: flexibel *Kind of conductor: flexible*	Anzahl Leiter in einer Klemmstelle *Number of conductors in clamping unit*	Art des Schienenprofils *Type of the rail profile*		Befestigung auf der Schiene *Mounting on the rail*		Polzahl / Etagen *Number of poles / levels*	Maximale Betriebsbedingungen über 40°C / °C *Maximum service conditions over 40°C / °C*	Verschmutzungsgrad *Degree of pollution*	Überspannungskategorie *Overvoltage category*	Werkstoffgruppe *Material group*
														Hutschiene TH 35 - EN60715 *Top- hat rail TH35 - EN60715*	G- Schiene G32 - EN60715 *G- rail G32 - EN60715*	Schnappbefestigung *Snap- on fixing*	Schraubbefestigung *Screw fixing*					
RB8	X	---	800	76	16	0,75...16 1,5 6,0	X	M 4	--	--	X	X	1 1...2 1...2	X	--	X	--	1	60	3	III	I

Anmerkung: Anziehdrehmoment der Klemm- / Trenneinrichtungsschraube :1,2 / 1,5 Nm; Werkstoff des Trägerteils/Oberflächenschutz: E. Kupfer; verzinnt; Trenneinrichtung: E. Kupfer; verzinnt; Werkstoff des Gehäuses: Copoliamid PA 6/66; grau Trenneinrichtung: Copoliamide PA6/66, grau; Stoßspannungsfestigkeit: 8 kV (auch mit geöffnetem Trennglied)
Lehrenprüfung nach EN 60947-7-1, Abschnitt 8.3.3.5 mit Lehren A6 und B6 bestanden

Remark: *Tightening torque of the terminal - / disconnect screw : 1,2 / 1,5 Nm; Material of the base / Surface protection: E.-copper, tin plated, disconnecting lever: E-copper, tin plated; Material of the housing: Copoliamide PA 6/66; grey; Material of disconnecting lever: Copoliamide PA 6/66,grey; Rated impulse voltage: 8 kV (even with opened disconnect leaver) Gauge- test according to EN 60947-7-1, chapter 8.3.3.5 with gauge A6 and B6 was passed*

Bei gleichzeitiger Verwendung von Schutzleiter- und Durchgangs- Reihenklemmen müssen die Luft- und Kriechstrecken nach DIN EN 60947-1 (VDE 0660- 100) eingehalten werden.
By using of protective conductor terminal blocks and feed through terminal blocks simultaneously the clearances and the creepage distances have to meet the requirements according to DIN EN 60947-1 (VDE 0660 -100).

Превод от английски език

VDE

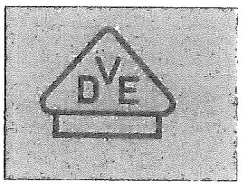
ОДОБРЕНИЕ ЗА МАРКИРОВКА

SMART METERING APPLICATIONS, S.L.
SGC&A Smart Grid Components
& Applications
Calle Balmes, 65 2°
08007- БАРСЕЛОНА
ИСПАНИЯ

е оторизирана да използва за своите продукти

тестови разединителни Клемни Блокове

легално защитените Маркировки както е показано по-долу за типовете дефинирани на стр. 2



Тествани и сертифицирани съгласно

DIN EN 60947-7-1 (VDE 0611 Teil 1): 2010-03; EN 60947-7-1:2009

Файл Реф: 5017967-1442-0001/193256

VDE Институт за тестване и сертифициране Сертификат No: 40039804 Стр. 1
Подпис: (не се чете) повече условия виж на гърба или следващи страници
Офенбах, 2014-04-22

VDE сертификати са валидни само ако са публикувани на http://www.vde.com/certificate

ВЯРНО С ОРИГИНАЛА

331

Име и адрес на управление на притежателя на сертификата:
SMART METERING APPLICATIONS, S.L. SGC&A Smart Grid Components, & Applications, Calle Balmes, 65 2°, 08007- БАРСЕЛОНА, ИСПАНИЯ

Файл Реф:
5017967-1442-0001 / 193256 / CC3 / JK

Дата:
2014-04-22

Това приложение е валидно заедно със стр. 1 на Сертификат No: 40039804

тестови разединителни Клемни Блокове

Тип: **RB8**

Работно напрежение: 800 V

Капацитет на присъединяване: 0.75….16 mm^2

Конструкция: тип захващане с винт

Допълнителна информация

Виж приложението 100A

Това одобрение за маркировка е на базата на ЕС Декларация за съответствие и CE Маркировка от производителя или негов агент и показва съответствието със съществените изисквания за безопасност както е дефинирано от **Европейската Ниско волтова директива 2006/95/EC** включително измененията.

VDE Институт за тестване и сертифициране
Секция CC3

ВЯРНО С ОРИГИНАЛА

Сертификат No
40039804

Име и адрес на управление на притежателя на сертификата:
SMART METERING APPLICATIONS, S.L. SGC&A Smart Grid Components, & Applications, Calle Balmes, 65 2°, 08007- БАРСЕЛОНА, ИСПАНИЯ

Файл Реф:
5017967-1442-0001 / 193256 / CC3 / JK

Дата:
2014-04-22

Това приложение е част от Сертификат No: 40039804

тестови разединителни Клемни Блокове

Място на производство:

Референция:
30022637

Plastijet, S.L.
Can Cortes 37
Pol. Polizur Zona A
08184 – PALAU SOLITA I PLEGAMANS
ИСПАНИЯ

VDE Институт за тестване и сертифициране
Секция CC3

ВЯРНО С ОРИГИНАЛА

	ОДОБРЕНИЕ ЗА МАРКИРОВКА	Файл Реф: 5017967-1442-0001/193256	Лиценз No: 40039804	Дата: 2014-04-22

тестови разединителни Клемни Блокове

Приложение No: 100A
Стр. 1/1

Тип	Клемен блок	Клемн блок защитен проводник	Номинално напрежение / V	Тестов ток / A	Номинално сечение / мм²	Капацитет на присъединяване	Винтов тип клеми	Размер на винта	Безвинтови клеми	Изолалионни клеми	Вид на проводника: твърд	Вид на проводника: гъвкав	Брой на проводниците	Тип на профила на шината		Монтаж на шината		Брой на полюсите/ нива	Максимум сервизни условия над 40 °C	Степен на замърсяване	Категория от пренапрежение	Група материал
														Top-hat шина TH 35- EN60715	G шина G 32- EN60715	Фиксиране „щракване"	Фиксиране с винт					
RB8	X	-	800	76	16	0.75..16 1.5 6	X	M4	-	-	X	X	1 1…2 1…2	X	-	X	-	1	60	3	III	I

Забележка:
Въртящ момент на затягане на клемата/ винт: 1,5 / 1,5Nm; Материал на базата/ Защита на повърхността: Е-мед, дебела основа, лост за изключване: Е-мед, дебела основа;
Материал на кутията: Кополиамид PA 6/66; сив; Материал на лост за изключване: Кополиамид PA 6/66; сив;
Оперативно импулсно напрежение: 8 kV (вкл. при отворен лост на изключване)
Мярка- тест съгласно EN 60947-7-1, раздел 8.3.3.5 заедно с мярка A6 и B6 са преминати;

Чрез използването на клемни блокове за защитен проводник и пружинни клемни блокове едновременно чистотата и разстоянията трябва да изпълняват изискванията съгласно DIN EN 60947-1 (VDE 0660 - 100).

VDE	VDE Институт за тестване и сертифициране Подпис: (не се чете)	

Certification
Technological Center

Campus UAB, Aprtado de Correos 18
08193 Bellaterra (Barcelona)
T 93 567 20 00
F 93 567 20 01
ctc@appluscorp.com
www.applusctc.com
www.appluscorp.com

Applus

INFORME DE ENSAYO

Expediente número: 08/32000198

Fecha: 07/03/2008
Página: 1 de 15

ENAC ENSAYOS Nº 0/LE/694
LGAI Technological Center, S.A.

Referencia del peticionario

PROMOTORA DE MERCADOS ELÉCTRICOS, S.A.
Can Mitjans, 50 Zona A Nau 30
Cerdanyola del Vallès – BARCELONA

El material recibido

clavija puente, modelo EDC600, de la marca UNIBLOC, con número de identificación interna 2008389

Han sido ensayados y son conformes según las especificaciones de la/s norma/s:

UNE-EN 61010-031:2004

Características nominales

Tensión asignada.....:	600 V
Corriente asignada.....:	32
Frecuencia.....:	50 Hz
Protección contra el choque eléctrico .....:	Clase II
Categoría de medida.....:	CAT IV
Categoría de instalación .....:	---
Clase térmica.....:	---
Grado de protección contra la humedad .....:	IPX0
Tiempo nominal de funcionamiento.....:	Contínuo

на основание чл. 36а, ал. 3 от ЗОП

LGAI Technological Center, S.A.
Albert Marginet Morales
Jefe de Departamento- ETE
División de Certificación
LGAI Technological Center, S.A

на основание чл. 36а, ал. 3 от ЗОП

LGAI
José Luis Medina Abellan
Responsable Técnico
División de Certificación
LGAI Technological Center, S.A.

UNE-EN 61010-031:2004 "RESUISITOS DE SEGURIDAD DE EQUIPOS DE MEDIDA, CONTROL Y USO EN LABORATORIO PARTE 031: REQUISITOS DE SEGURIDAD PARA SONDAS MANUALES PARA MEDIDAS Y ENSAYOS ELÉCTRICOS"	
Expediente número ..... :	08/32000198
Técnico que realiza los ensayos ..... :	Sergi Ulldemolins
Fecha de recepción ..... :	08/01/2008
Fecha de inicio de los ensayos ..... :	15/01/2008
Fecha de final de los ensayos ..... :	28/01/2008
Peticionario ..... :	Promotora de mercados eléctricos, S.A.
Dirección ..... :	Can Mitjans, 50 Zona A Nau 30 Cerdanyola del Vallès – BARCELONA
Laboratorio de ensayos ..... :	APPLUS + LGAI
Dirección ..... :	Campus de la UAB Aptdo. Correos 18 08193 Bellaterra (Barcelona – España)
Descripción del material recibido .... :	Clavija puente
Fabricante ..... :	Promotora de mercados eléctricos, S.A.
Marca ..... :	Unibloc
Modelo ..... :	EDC600
Número de serie ..... :	---
Número de identificación interna..... :	2008389

Características nominales	
Categoría de medida ..... :	CAT IV
Naturaleza de la tensión..... :	c.a.
Tipo ..... :	A
Tensión asignada respecto tierra .... :	600 V
Corriente asignada ..... :	32
Fusible de protección ..... :	---

Condiciones ambientales durante la realización de los ensayos	
Temperatura (ºC) ..... :	23,1
Humedad relativa (%)..... :	25

Incertidumbres en las medidas

La incertidumbre expandida de medida se ha obtenido multiplicando la incertidumbre típica de medición por el factor de cobertura *k=2* que, para una distribución normal, corresponde a una probabilidad de cobertura de aproximadamente el 95%. La incertidumbre típica de medida se ha determinado conforme al documento EAL-R2.

Temperatura = ± 1 ºC	Potencia = ± 1 %
Corriente = ± 1,5 %	Resistencia = ± 2 %
Voltaje = ± 0,7 %	Dimensiones = ± 0,06 mm

Veredictos de los apartados	
El apartado no se aplica a la muestra ensayada.....:	N(o)A(plica)
La muestra cumple con los requisitos del apartado ....:	P(asa)
La muestra no cumple con los requisitos del apartado:	F(alla)
Los requisitos del apartado no han podido evaluarse..:	N(o)T(esteado)
Observación sobre los resultados del apartado (Núm) :	OBS(ervación)

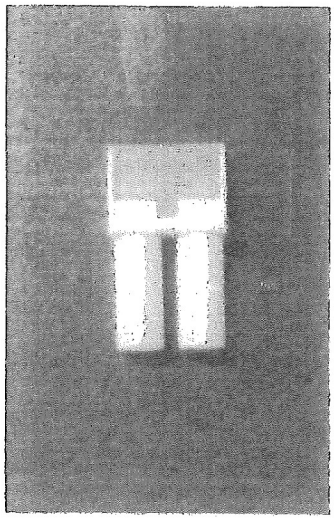
Observaciones generales

Los resultados que se indican se refieren, exclusivamente, a la muestra, producto, o material entregado al Laboratorio, tal y como se indica en el apartado de material recibido, y ensayada en las condiciones indicadas en la/s norma/s o procedimientos nombrados en el presente documento.

ВЯРНО С ОРИГИНАЛА

Nº Expediente:08/32000198

Anexo 1: Fotografía de la muestra ensayada



ВЯРНО С ОРИГИНАЛА

Превод от испански език

АППЛУС
Campus UAB, Apatado Correos 18
08193 Bellaterra (Барселона)
Т+34 93 567 20 00
Ф+ 34 93 567 20 01
www.appluscorp.com

ПРОТОКОЛ ОТ ИЗПИТВАНЕ

Изходящ номер 08/32000198

Дата: 07/03/2008

ENAC

Референция на молителя:
PROMOTORA DE MERCADOS ELECTRICOS, S.A.
Can Mitjans, 50 Nave 30
Cerdanyola del Valles БАРСЕЛОНА

Получен материал

Мст щепсел, модел EDC 600, марка UNIBLOC, под идентификационен номер 2008389

Е тестван и е в съответствие с изискванията на стандарта

UNE-EN 61010-031:2004

Номинални характеристики:

Приложено напрежение:	600V
Приложен ток:	32A
Честота:	50Hz
Защита срещу токов удар:	Клас II
Измервана категория:	CAT IV
Категория на инсталация:	----
Термичен клас:	----
Степен на защита срещу влажност:	IPX0
Категория за номинално време за работа:	Продължително

Алберт Маргинет Моралес
Шеф ма отдел ETE
Направление сертификация
LGAI Технологичен център С.А.
Подпис, печат на LGAI Техн. Център

Хосе Луис Медина Абелан
Технически отговорник
Направление сертификация
LGAI Технологичен център С.А.
Подпис, печат на LGAI Техн. център

ВЯРНО С ОРИГИНАЛА

UNE –EN 61010-031:2004 **Изисквания за защита за електрическо оборудване за измерване, контрол и използване в лаборатирия – Част 031: Изисквания за защита за ръчни проби асемблирани за електрическо мерене и тестване**	
Изходящ номер Лице извършщило теста	08/32000198 Серги Улдемолинс
Дата на получаванс : Дата на стартиране на изпитването: Дата на приключване на изпитването:	08/01/2008 15/01/2008 28/01/2008
Заявител Адрес	Promotora de mercados electridos, S.A. Can Mitjans, 50 Nave 30 Cerdanyola del Valles БАРСЕЛОНА
Лаборатория за изследване Адрес:	APPLUS + LGAI Campus de la UAB, Apatado Correos 18 08193 Bellaterra (Барселона- Испания)
Описние на изследвания материал: Производител: Марка Модел Номер на серията: Идентификационен номер:	Мост щепсел Promotora de mercados electridos, S.A. UNIBLOC EDC600 2008389

Номинални характеристики:	
Измервана категория:	CAT IV
Естество на напрежението	c.a.
Тип	A
Приложено напрежение:	600V
Приложен ток:	32
Предпазител	---

Условия на околната среда по време на изпитването:	
Температура (°C): Влажност (%)	23,1 25

Сигурност на измерванията

Разширена неопределеност на измерването се получава чрез умножаване на стандартна неопределеност на измерването с коефициент на покритие к= 2 и за едно нормално разпределение съответства на вероятност от около 95%. Отклонението при измерването се определя според документа EAL-R2

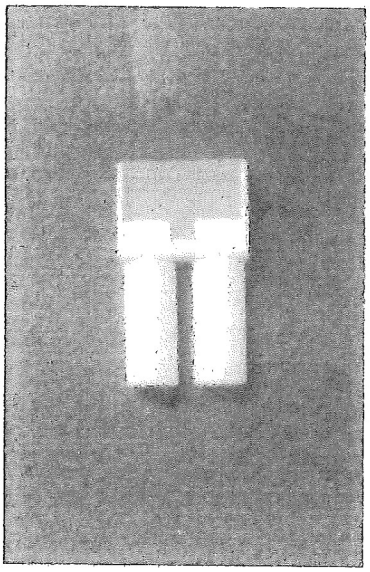
Температура=±1°C	Мощност=±1 %
Ток=±1,5%	Съпротивление=±2%
Напрежение=±0,7%	Размери=±0,06 мм

Легенда на означенията

Не се прилага за тестваната мостра:	NA – не се прилага
Отговаря на изискването:	P - преминат
Не отговаря на изискването:	F - неуспешен
Изискване, неподлежащо на тестване:	NT – не се тества
Наблюдение на резултатите (Num):	OBS – наблюдава се

Общи коментари

Посочените резултати се отнасят изключително към пробата, продукт или материал, представен в лабораторията, както е описано в раздела на материали, получени и проверени съгласно условията, определени в стандарта / титв, посочени в този документ



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Campus UAB, Apartado de Correos 18
08193 Bellaterra (Barcelona)
T + 34 93 567 20 00
F + 34 93 567 20 01
www.appluscorp.com

INFORME DE ENSAYOS

Expediente número: 07/32015936

Fecha: 22/01/2008
Página: 1 de 7

ENAC ENSAYOS
Nº LE/694
LGAI Technological Center, S.A.

Referencia del peticionario

PROMOTORA DE MERCADOS ELÉCTRICOS, S.A.
Polígono Industrial Polizur, Zona A, Nave 30
C/ Can Mitjans, 50
08290 Cerdanyola del Vallés

Material recibido:

Regleta de verificación de contadores medida indirecta, marca Unibloc, modelos Reg. 10E-6I-3fus10x38-1N EPI, Reg. 10E-6I-4T EPI

Asunto solicitado:

Comprobación del siguiente grado IK:

IK-08

según la norma UNE-EN 50102:1996 +/A1:1999 +/CORR:2002 +/A1 CORR:2002

Fecha de recepción ..... :	07/01/2008
Fecha de inicio de los ensayos ..... :	08/01/2008
Fecha de final de los ensayos ..... :	08/01/2008

Condiciones ambientales durante la realización de los ensayos	
Temperatura (ºC)..... :	23 ± 2
Humedad relativa (%)..... :	40 ± 10

на основание чл. 36а, ал. 3 от ЗОП

LGAI Technological Center, S.A.

Albert Marginet Morales
Gerente del Centro de Electricidad
Productos y sistemas - ETE
LGAI Technological Center S.A.

на основание чл. 36а, ал. 3 от ЗОП

Joan Fernández Vilamala
Técnico Responsable
Productos y sistemas - ETE
LGAI Technological Center S.A.

Incertidumbres en las medidas	
La incertidumbre expandida de medida se ha obtenido multiplicando la incertidumbre típica de medición por el factor de cobertura k=2 que, para una distribución normal, corresponde a una probabilidad de cobertura de aproximadamente el 95%. La incertidumbre típica de medida se ha determinado conforme al documento EAL-R2.	
Temperatura = ± 1 ºC	Potencia = ± 1 %
Corriente = ± 1,5 %	Resistencia = ± 2 %
Voltaje = ± 0,7 %	Dimensiones = ± 0,06 mm

Veredictos de los apartados	
El apartado no se aplica a la muestra ensayada :	N(o)A(plica)
La muestra cumple con los requisitos del apartado ..... :	P(asa)
La muestra no cumple con los requisitos del apartado.. :	F(alla)
Los requisitos del apartado no han podido evaluarse.... :	N(o)T(esteado)
Observación sobre los resultados del apartado (Núm).. :	OBS(ervación)

Observaciones generales

Los resultados que se indican se refieren, exclusivamente, a la muestra, producto, o material entregado al Laboratorio, tal y como se indica en el apartado de material recibido, y ensayada en las condiciones indicadas en la/s norma/s o procedimientos nombrados en el presente documento.

4	DESIGNACIONES		P
4.1	Disposición del codigo	IK XX	P
4.2	Código IK aplicado:	----------	P
	IK 00	No protegido	NA
	IK 01	Energía 0.14 J	NA
	IK 02	Energía 0.2 J	NA
	IK 03	Energía 0.35 J	NA
	IK 04	Energía 0.5 J	NA
	IK 05	Energía 0.7 J	NA
	IK 06	Energía 1 J	NA
	IK 07	Energía 2 J	NA
	IK 08	Energía 5 J	P
	IK 09	Energía 10 J	NA
	IK 10	Energía 20 J	NA
4.3	Grado IK aplicado a toda la envolvente	Impactos aplicados sobre la cubierta transparente protectora del embornado	P
	Envolvente con diferentes grados de IK	----------	NA

5	CONDICIONES GENERALES		P
5.1	Condiciones ambientales según norma	23ºC	P
5.2	Envolvente limpia y nueva	----------	P
5.3	Especificaciones de la norma particular :	----------	P
	- Nombre de muestras en ensayo	1	P
	- Condiciones de montaje	Pared	P
	- Preacondicionamiento aplicado	----------	NA
	- Ensayo con tensión	----------	NA
	- Partes móviles en movimiento	----------	NA
	- Número de impactos	5 por cara expuesta	P

6	ENSAYOS PARA LA VERIFICACIÓN DE LA PROTECCIÓN CONTRA LOS IMPACTOS		P
6.1	Ensayo tipo	----------	P
6.2	Verificación aplicando golpes a la envolvente a ensayar. Dispositivos a utilizar s/ ap. 7	Impactos aplicados sobre la cubierta transparente protectora del embornado	P
6.3	Montada en soporte rígido	----------	P
6.4	5 impactos por cara expuesta	----------	P
6.5	Evaluación del ensayo	Ver 'Tabla de observaciones visuales de los efectos producidos por los impactos' Se comprueba que los efectos producidos por los impactos no disminuyen el grado de protección IP4X proporcionado por la cubierta transparente Nota: el grado de protección IP4X se comprueba sobre la cubierta transparente, evaluando el acceso desde el exterior hacia el interior del embornado a través de la cubierta transparente	P

7	APARATO DE ENSAYO		P
	Martillo pendular	UNE-EN 60068-2-75:1999	P
	Martillo Resorte	UNE-EN 60068-2-75:1999	NA
	Martillo vertical	UNE-EN 60068-2-75:1999	NA

Превод от испански език

АППЛУС
Campus UAB, Apatado Correos 18
08123 Bellaterra (Барселона)
Т+34 93 567 20 00
Ф+ 34 93 567 20 01
www.appluscorp.com

ПРОТОКОЛ ОТ ИЗПИТВАНЕ

Изходящ номер 07/32015936

Дата: 22/01/2008

Получен материал

Верификация на получена марка Униблок, модели
Реф. 10E-6I-3fus10x38-1N; реф. 10E-6I-4T EPI

Поискан тест:

Поръчка на следния клас IK:
IK-08

Съгласно нормативите на UNE-EN 50102:1996+/A1:1999+/CORR:2002+/A1 CORR:2002

Дата на получаване : 07/01/2008
Дата на стартиране на изпитването: 08/01/2008
Дата на приключване на изпитването: 08/01/2008

Условия на околната среда по време на изпитването:

Температура (°C):	23+-2
Влажност:	40+-10

Алберт Маргинет Моралес
Мениджър на центъра по електричество
Продукти и системи – ETE
LGAI Технологичен център С.А.
Подпис, печат на LGAI Техн. Център

Йоан Фернандес Виламала
Технически отговорник
Продукти и системи – ETE
LGAI Технологичен център С.А.
Подпис, печат на LGAI Техн. център

ВЯРНО С ОРИГИНАЛА

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Сигурност на измерванията

Разширена неопределеност на измерването се получава чрез умножаване на стандартна неопределеност на измерването с коефициент на покритие к= 2 и за едно нормално разпределение съответства на вероятност от около 95%. Отклонението при измерването се определя според документа EAL-R2

Температура=±1°C	Мощност=±1 %
Ток=±1,5%	Съпротивление=±2%
Напрежение=±0,7%	Размери=±0,06 мм

Легенда на означенията

Не се прилага за тестваната мостра:	NA – не се прилага
Отговаря на изискването:	P - преминат
Не отговаря на изискването:	F - неуспешен
Изискване, неподлежащо на тестване:	NT – не се тества
Наблюдение на резултатите (Num):	OBS – наблюдава се

Общи коментари

Посочените резултати се отнасят изключително към пробата, продукт или материал, представен в лабораторията, както е описано в раздела на материали, получени и проверени съгласно условията, определени в стандарта / титв, посочени в този документ

ВЯРНО С ОРИГИНАЛА

4	Дизайн		Преминат
4.1	Описание на кода	IK XX	преминат
4.2	Приложение на IK кода:	----------	преминат
	IK 00	Не е защитен	не се прилага
	IK 01	Енергия 0,14 J	не се прилага
	IK 02	Енергия 0,2 J	не се прилага
	IK 03	Енергия 0,35 J	не се прилага
	IK 04	Енергия 0,5 J	не се прилага
	IK 05	Енергия 0,7 J	не се прилага
	IK 06	Енергия 1 J	не се прилага
	IK 07	Енергия 2 J	не се прилага
	IK 08	Енергия 5 J	не се прилага
	IK 09	Енергия 10 J	не се прилага
	IK 10	Енергия 20 J	не се прилага
4.3	Степен IK приложима за кутия	въздействия върху защитно прозрачно покритие на затваряне	преминат
	Кутия с различна степен на IK		не се прилага

(--СПИСЪК НА ИЗПИТАНИЯТА--)

5	Условия		преминат
5.1	Температура на околната среда	23 C	преминат
5.2	Кутия чиста и нова	----------	преминат
5.3	Конкретни спецификации на стандарта	----------	преминат
	- Брой на тестваните мостри	1	преминат
	- Условия на монтаж	стена	преминат
	- Предварителна подготовка	----------	не се прилага
	- Изпитване на напрежение	----------	не се прилага
	- Части в движение	----------	не се прилага
	- Брой на въздействията	5 излагания	преминат

(--СПИСЪК НА ИЗПИТАНИЯТА--)

6	Тестове за проверка на защита срещу удар		преминат
6.1	Тип изпитване	----------	преминат
6.2	Проверка на използването на капака. Устройства за употреба s /ар.7	Въздействията се прилагат за защитно прозрачно покритие на затваряне	преминат
6.3	Монтирани върху твърда опора	----------	преминат
6.4	Изложен на 5 удара	----------	преминат
6.5	Заключение на изпитанието	Вижте „Таблица на визуални наблюдения на ефектите от въздействието Установи се, че въздействието е на степен степен на защита, IP4X Прозрачна Забележка: Степен на защита IP4X за прозра1ен капак е установена за достъп отвън навътре и покриване от всички страни	преминат

7	Тестове за проверка на защита срещу удар		преминат
		UNE-EN 60068-2-75:1999	преминат
		UNE-EN 60068-2-75:1999	не се прилага
		UNE-EN 60068-2-75:1999	не се прилага