

**Наименование на материала:**  
**Комплект измервателен клемен блок с клеми за**  
**медни проводници от проходен тип и 1P, 3P или**  
**3P+N стопяеми цилиндрични предпазител-**  
**прекъсвач-разединители**

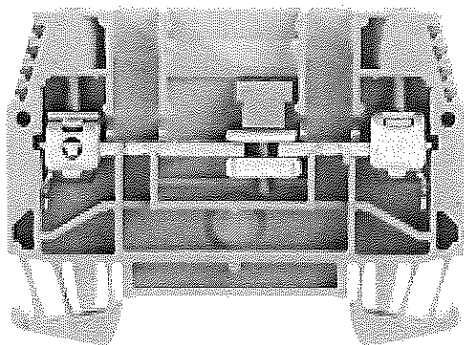
№ по ред	Документ	Приложение № или текст
1.	Точно означение на типа, производителя и страната на производство (произход) и последно издание на каталога на производителя	Клеморед Тип 0055, Вайдбул, България, Чехия, Германия, Словения Приложение 1
2.	Техническо описание и чертежи с нанесени на тях размери	Приложение 2
3.	ЕО декларация за съответствие	Приложение 3
4.	Протоколи от типови изпитвания на английски или български език съответно за 1P, 3P или 3P+N стопяеми цилиндрични предпазител-прекъсвач-разединители и клемните блокове, проведени от независима изпитвателна лаборатория – заверени копия, с приложен списък на отделните изпитвания на български език	Приложение 4
5.	Сертификат/акредитация на независимата изпитвателна лаборатория, провела типовите изпитвания по т. 4 – заверено копие	Приложение 5

Управител:.....  
/Антон Илиев

на основание чл. 2 от  
ЗЗЛД

**W-Series**  
**WTL 6/1**

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
Fax: +49 5231 14-292083  
www.weidmueller.com

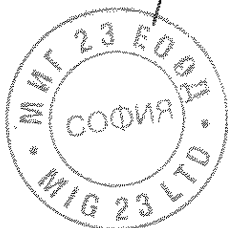


Special instruments are required for measuring electrical energy. One wrong connection during maintenance work is enough to ruin a current transformer! Disconnect test terminals represent a reliable way of solving this problem. As a leading supplier of line connectors, Weidmüller has developed special disconnect test terminals in close cooperation with users. These modular terminals ensure optimum realisation of all important circuits for the measurement of current, voltage and energy. Different current transformer circuits, e.g. for replacing measuring instruments or electricity meters, can be implemented. Besides disconnect test terminals with screw or tension clamp connections, Weidmüller also has a comprehensive range of accessories, including test adapters, cross-connections and markers for the testing of 3-phase and AC circuits as well as voltages.

**General ordering data**

Type	WTL 6/1
Order No.	1016700000
Version	W-Series, Test-disconnect terminal, Rated cross-section: 6 mm <sup>2</sup> , Screw connection
GTIN (EAN)	4008190151171
Qty.	50 pc(s).

ВЯРНО С  
ОРИГИНАЛА



Creation date November 17, 2013 7:12:39 AM CET

Catalogue status / We reserve the right to make technical changes.

**Data sheet**

**W-Series  
WTL 6/1**

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
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**Technical data**

**Dimensions and weights**

Length	65 mm	Width	7.9 mm
Height of lowest version	48.5 mm	Net weight	19.78 g

**Temperatures**

Operating temperature		Storage temperature	
Continuous operating temp., min.	-50 °C	Continuous operating temp., max.	120 °C

**2 clampable wires (H05V/H07V) same cross-section (rated connection)**

Wire connection cross section, finely stranded, two clampable wires, min.	0.5 mm <sup>2</sup>	Wire cross-section, finely stranded, two clampable wires, max.	2.5 mm <sup>2</sup>
Wire connection cross section, finely stranded with wire-end ferrules DIN 46228/1, 2 clampable wires, min.	0.5 mm <sup>2</sup>	Wire connection cross section, finely stranded with wire-end ferrules DIN 46228/1, 2 clampable wires, max.	2.5 mm <sup>2</sup>

**Additional technical data**

Explosion-tested version	No	Number of similar terminals	1
Open sides	right	Type of mounting	Snap-on
Version	Screw connection, Disconnection element, for screwable cross-connection, One end without connector		

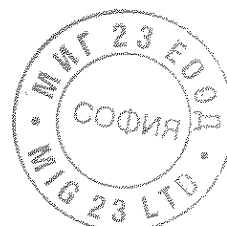
**CSA ratings data**

Certificate No. (CSA)	200039-1057876	Voltage size C (CSA)	300 V
Voltage size D (CSA)	600 V	Current size C (CSA)	45 A
Current size D (CSA)	5 A	Wire cross section max. (CSA)	8 AWG
Wire cross section min. (CSA)	20 AWG		

**Clampable wires (additional connection)**

Conductor cross-section, flexible plus plastic collar DIN 46228/1, further connection, min.	0.5 mm <sup>2</sup>	Conductor cross-section, flexible plus plastic collar DIN 46228/1, further connection, max.	6 mm <sup>2</sup>
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**Technical data**

**Clampable wires (rated connection)**

Type of connection	Screw connection	Stripping length	12 mm
Blade size	0,8 x 4,0 mm	Connection direction	on side
Number of connections	2	Clamping range, rated connection, min.	0,5 mm <sup>2</sup>
Clamping range, rated connection, max.	10 mm <sup>2</sup>	Clamping screw	M 3,5
Tightening torque, min.	1 Nm	Tightening torque, max.	1,6 Nm
Torque level with DMS electric screwdriver	3	Gauge to IEC 60947-1	A5
Wire connection cross section, solid core, max. rated connection	0,5 mm <sup>2</sup>	Wire connection cross section, solid core max. rated connection	10 mm <sup>2</sup>
Wire connection cross section, stranded, rated connection, min.	1,5 mm <sup>2</sup>	Wire connection cross section, stranded, rated connection, max.	10 mm <sup>2</sup>
Wire connection cross section, finely stranded, max.	10 mm <sup>2</sup>	Wire connection cross-section, finely stranded, min.	0,5 mm <sup>2</sup>
Wire connection cross section, finely stranded with wire-end ferrules DIN 46228/1, rated connection, min.	0,5 mm <sup>2</sup>	Wire connection cross section, finely stranded with wire-end ferrules DIN 46228/1, rated connection, max.	6 mm <sup>2</sup>
Cross-section for connected conductor, finely stranded with wire-end ferrules and plastic collars DIN 46228/4, rated connection, min.	0,5 mm <sup>2</sup>	Wire connection cross-section, finely stranded with wire-end ferrules and plastic collars DIN 46228/4, rated connection, max.	6 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 20	Wire connection cross section AWG, max.	AWG 8

**Disconnect terminals**

Cross-disconnect	sliding	Integral test socket	No
Slitting	sliding	Tightening torque, max.	1,6 Nm
Tightening torque, min.	1 Nm	Torque level with DMS electric screwdriver	3

**Rated data**

Rated cross-section	6 mm <sup>2</sup>	Rated voltage	630 V
Rated impulse withstand voltage	6 kV	Rated current	41 A
Current at maximum wires	57 A	Pollution severity	3

**UL ratings data**

Certificate No. (UR)	E60693	Voltage size C (UR)	300 V
Current size C (UR)	45 A	Conductor size Factory wiring max. (UR)	8 AWG
Conductor size Factory wiring min. (UR)	20 AWG	Conductor size Field wiring max. (UR)	8 AWG

**Material data**

Material	Wemid	Colour	Dark Beige
UL 94 flammability rating	V-0		

**System specifications**

Product family	W-Series	Type of connection	Screw connection
Connection direction	on side	Number of levels	1
Number of connections	2	No. of clamping points per level	2
Levels cross-connected internally	No	Mounting rail	TS 35
End cover plate required	Yes		



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**Technical data**

**Classifications**

ETIM 3.0	EC000902	UNSPSC	30-21-18-11
eClass 5.1	27-14-11-26	eClass 6.2	27-14-11-26
eClass 7.1	27-14-11-26		

**Product information**

Descriptive text ordering data	TS32 version on request
Descriptive text technical data	Use as 500 V disconnect terminal. Wire connection H07V-K10, H07V-R10 and AWG 8/7 with tightening torque of 1.4 Nm.

**Approvals**

Approvals



ROHS Conform

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**Drawings**



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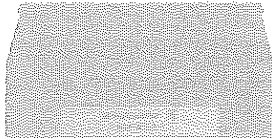
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**Accessories**

**WAP WTL 6/1**



The versatile and extensive range of products - from 0.05 mm<sup>2</sup> to 300 mm<sup>2</sup> - means that you have diverse options for your applications at your disposal. Hardened steel for mechanical strength and high-quality tinned copper for optimum conductivity. All materials comply with RoHS requirements and have been tested to current environment guidelines.

**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.
WAP WTL6/1	1068300000	W-Series, Accessories, End plate	4008190088330	20 pc(s).

**Blank**



The dekafix (DEK) marker is the universal marker for all conductor and plug-in connectors as well as for electronic sub-assemblies. The system is ideal for short number sequences and covers a large range of ready-printed markers.

Strips for fast installation in one work step. The printing is easy to read, rich in contrast, and is available in five widths.

- Large range of ready-to-use markers
- Strips for fast installation
- Connector markers, suitable for all Weidmüller cable connectors
- Available as blank cards, MultiCard or as cards with standard printing

**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.
DEK 5/8 MC	1856740000	Terminal markers, MultiCard, 5 x 8 mm, Polyamide 66, Colour: White	4032248400850	800 pc(s).

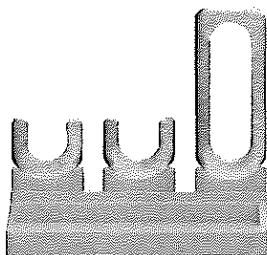


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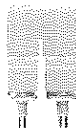
**Accessories****Cross-connection slider**

The versatile and extensive range of products - from 0.05 mm<sup>2</sup> to 300 mm<sup>2</sup> - means that you have diverse options for your applications at your disposal.

Hardened steel for mechanical strength and high-quality tinned copper for optimum conductivity. All materials comply with RoHS requirements and have been tested to current environment guidelines.

**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.
QVS 2 SAKT1+2	<u>0307300000</u>	SAK Series, Accessories, Cross-connector, Cross- connector, No. of poles: 2	4008190036140 20	pc(s).
QVS 3 SAKT1+2	<u>0329300000</u>	SAK Series, Accessories, Cross-connector, Cross- connector, No. of poles: 3	4008190084714 20	pc(s).

**WQV 6**

The versatile and extensive range of products - from 0.05 mm<sup>2</sup> to 300 mm<sup>2</sup> - means that you have diverse options for your applications at your disposal.

Hardened steel for mechanical strength and high-quality tinned copper for optimum conductivity. All materials comply with RoHS requirements and have been tested to current environment guidelines.

**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.
WQV 6/10	<u>1052260000</u>	W-Series, Accessories, Cross-connector, For the terminals, No. of poles: 10	4008190153977 20	pc(s).
WQV 6/2	<u>1052360000</u>	W-Series, Accessories, Cross-connector, For the terminals, No. of poles: 2	4008190075866 50	pc(s).
WQV 6/3	<u>1054760000</u>	W-Series, Accessories, Cross-connector, For the terminals, No. of poles: 3	4008190174163 50	pc(s).
WQV 6/4	<u>1054860000</u>	W-Series, Accessories, Cross-connector, For the terminals, No. of poles: 4	4008190180799 50	pc(s).



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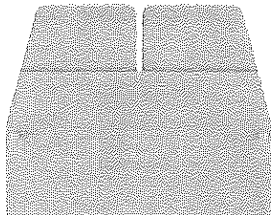


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**Accessories**

**WTW WTL 6.1**

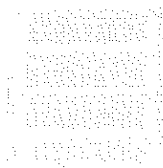


The versatile and extensive range of products - from 0.05 mm<sup>2</sup> to 300 mm<sup>2</sup> - means that you have diverse options for your applications at your disposal. Hardened steel for mechanical strength and high-quality tinned copper for optimum conductivity. All materials comply with RoHS requirements and have been tested to current environment guidelines.

**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.
WTW	1068400000	W-Series, Accessories, Test	4008190091996	20 pc(s).
WTL6/1 DB		adapter		

**Blank**



WS markers are the perfect match for the W-series connectors. Thanks to their system compatibility, the WS tags can also be used with the I-series and the Z-series. The large marking surfaces do not only permit long character strings but also multi-line text. WS markers are ideal for labels with long, customised character strings. Thanks to the proven MultiCard format, printing with laser printer, PrintJet ADVANCED, plotter or MC-Mobilo is possible.

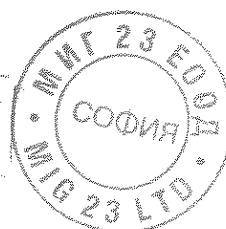
- Can be fitted in strips or individually
- Markers in proven MultiCard format

**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.
WS 12/6.5	1609920000	Terminal markers, MultiCard, 12 x 6.5 mm, Polyamide 66, Colour: White	4008190203511	540 pc(s).
MC NE WS				

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**ВЯРНО С  
ОРИГИНАЛА**



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**Accessories**

**connecting sleeve**



Some 60% of all modular terminals have a cross-connection.  
Weidmüller has a huge range of solutions on offer.

VH 12/4.9/3.3 024900

**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.
VH 19/6/4.2	0318000000	SAK Series, Accessories,	4008190059460	50 pc(s).
SAKT1		Connecting sleeve, for cross-connection link, No. of poles: 1		

**StB 35**

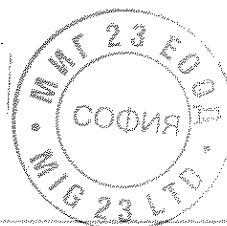


The SAKR disconnect terminals are available already fitted with sockets (see disconnect terminals). The sockets are equipped with a slit so that they can be actuated with a screwdriver. Weidmüller can supply special screwdrivers with a shoulder for this purpose.

**General ordering data**

Type	Order No.	Version	GTIN (EAN)	Qty.
STB 35 IH/BL	0388700000	SAK Series, Accessories, Socket	4008190082383	50 pc(s).
STB 35 IH/VI	0389100000	SAK Series, Accessories, Socket	4008190137755	50 pc(s).
STB 35 IH/GE	0389000000	SAK Series, Accessories, Socket	4008190396985	50 pc(s).
STB 35 IH/GN	0388900000	SAK Series, Accessories, Socket	4008190010409	50 pc(s).

ВЯРНО С  
ОРИГИНАЛА



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**Означение на типа, производителя и страната на производство (произход)**

**Тип 0055 - Комплект измервателен клемен блок с клеми за медни проводници от проходен тип и 1P, 3P или 3P+N стояеми цилиндрични предпазител-прекъсвач-разединители**

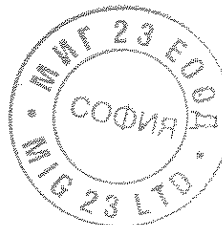
№	ТИП	КАТ. №	ПРОИЗВОДИТЕЛ	СТРАНА - ПРОИЗХОД
1	WTL 6/1 Клема измервателна, делима	1016700000	Вайдмюлер	Чехия
2	WAP WTL 6/1 Крайна плочка	1068300000	Вайдмюлер	Румъния
3	WTW WTL 6/1 Разделителна стена	1068400000	Вайдмюлер	Румъния
4	QVS 2 Двуполюсен мост подвижен	0307300000	Вайдмюлер	Германия
5	VH 19 Втулка	0318000000	Вайдмюлер	Германия
6	STB35 Гнездо за сонда жълто	0389000000	Вайдмюлер	Германия
7	STB35 Гнездо за сонда зелено	0388900000	Вайдмюлер	Германия
8	STB35 Гнездо за сонда червено	0388800000	Вайдмюлер	Германия
9	BS 25 Винт за мост	0334700000	Вайдмюлер	Германия
10	Stb 25 SW Гнездо за сонда черно	0271500000	Вайдмюлер	Германия
11	Stb 14 Гнездо за сонда	0169900000	Вайдмюлер	Германия
12	DEK 5 GW N Маркировка за клема	0522761034	Вайдмюлер	Германия
13	DEK 5/5 MC-10 NEUT. WS Маркировка за клема, бяла, надписана	1609801044	Вайдмюлер	Германия
14	Шина симетрична, перфорирана 35x7,5x2000	BK3593-35Z	Балди	Италия
15	Основа за предпазител 10x38 3P 32A 690V	8033	ОЕЗ	Чехия
16	Предпазител вложка PV 10x38 4A gG 500V	6693	ОЕЗ	Чехия
17	Краен притискач с винтове	P60228	Вайд-Бул	България
18	Защитен монолитен капак IP4x	K1008000	Вайд-Бул	България

гр. София,  
дата: 17. 01 . 2017 г

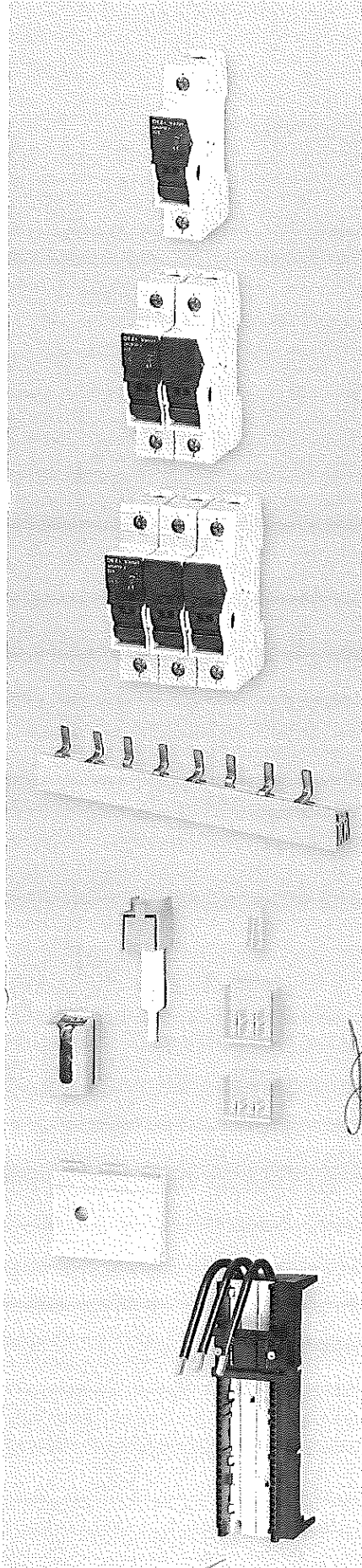
на основание чл. 2 от  
ЗЗЛД

.....  
инж. П. Ценов – продуктов мениджър  
/фамилия, длъжност и подпис на  
произв. или негов представител/

**ВЯРНО С  
ОРИГИНАЛА**



**FUSE SWITCH-DISCONNECTORS OPVP10 UP TO 32 A**



- Fuse switch-disconnectors OPVP10 are intended for cylindrical fuse-links size 10x38.
- They can safely switch off rated current and overcurrent. Devices meet the requirements for safe disconnection.
- Inverse connection is permissible and it affects neither the technical parameters nor the safety of the operator.
- Fuse switch-disconnectors OPVP10 can be sealed in the closed state.
- The devices are designed as modular for 45 mm cutout in the switchboard.
- Mounted on „U” rail of type TH35 according to EN 60715.
- Switch-Disconnector design ...-5 features LED signalization of the state of fuse-link for each pole.
- Fuse-link state can also be indicated by means of MD-M3 electronic signalling.

**Fuse switch-disconnectors**

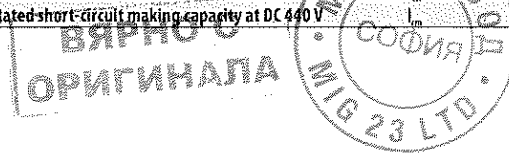
Type	Order code	I <sub>n</sub> [A]	Number of poles	Weight [kg]	Package [pcs]
OPVP10-1	OEZ:41013		1	0.063	12
OPVP10-1-S	OEZ:43683		1	0.068	12
OPVP10-1N	OEZ:43686		1+N	0.133	6
OPVP10-2	OEZ:41014	32	2	0.128	6
OPVP10-2-S	OEZ:43684		2	0.137	6
OPVP10-3	OEZ:41015		3	0.193	4
OPVP10-3-S	OEZ:43685		3	0.193	4
OPVP10-3N	OEZ:43687		3+N	0.271	3

**Accessories**

Description	Type	Order code	Weight [kg]	Package [pcs]
1-pole interconnecting busbar, cross-section 10 mm <sup>2</sup> , max. current 63 A rated operating voltage AC 690 V / DC 1 000 V, length 210 mm	S1L-210-10	OEZ:38475	0.047	50
1-pole interconnecting busbar, profile 16 mm <sup>2</sup> , max. current 80 A rated operating voltage AC 690 V / DC 1 000 V, length 1 m	S1L-1000-16	OEZ:37375	0.302	50
2-pole interconnecting busbar, cross-section 10 mm <sup>2</sup> , max. current 63 A rated operating voltage AC 415 V, length 210 mm	S2L-210-10	OEZ:38476	0.110	20
2-pole interconnecting busbar, cross-section 16 mm <sup>2</sup> , max. current 80 A rated operating voltage AC 415 V, length 1 m	S2L-1000-16	OEZ:37378	0.447	20
3-pole interconnecting busbar, cross-section 10 mm <sup>2</sup> , max. current 63 A rated operating voltage AC 415 V, length 210 mm	S3L-210-10	OEZ:38482	0.110	25
3-pole interconnecting busbar, cross-section 16 mm <sup>2</sup> , max. current 80 A rated operating voltage AC 415 V, length 1 m	S3L-1000-16	OEZ:37379	0.737	20
End cap, for single-pole busbars of cross-section 10, 16 mm <sup>2</sup>	EKC-1	OEZ:37383	0.0005	10
End cap, for 2-pole and 3-pole rails 16 mm <sup>2</sup>	EKC-2+3	OEZ:37384	0.001	10
End cap, for 3-pole rails of cross-section 10 mm <sup>2</sup>	EKC-3	OEZ:37385	0.001	10
Terminal extension, with long terminal, cross-section Cu 6 ÷ 50 mm <sup>2</sup>	AL-50-S-1	OEZ:63149	0.033	1
Connection block, enables power supply of interconnecting busbars by conductors of cross-section up to 35 mm <sup>2</sup> , the use of the block extends the mounting with by additional N-poles	ES-35-GS	OEZ:37388	0.03	10
Adapter on „U” rail TH35, for OPVP10	OD-OPV-AD45	OEZ:43148	0.008	1
Adapter for busbar system with spacing 60 mm, busbar thickness 5 or 10 mm, busbar width 12 ÷ 30 mm, cable outlet bottom, max. current 63 A	GA-60/63/54-1x1,5	OEZ:11883	0.56	1

**Specifications**

Rated operating current	I <sub>n</sub>	32 A
Rated operating voltage	U <sub>n</sub>	AC 690 V / DC 440 V
LED signalling voltage range		AC/DC 110 ÷ 690 V
Utilization category		AC 400 V AC-21B
		AC 690 V AC-20B
		DC 250 V DC-21B
Rated thermal current with fuse-link	I <sub>th</sub>	32 A
Rated frequency	f <sub>n</sub>	50 ÷ 60 Hz
Rated insulation voltage	U <sub>i</sub>	AC 800 V
Rated conditional short-circuit current with fuse-links PV (RMS)	I <sub>cc</sub>	AC 400 V 100 kA
		AC 690 V 50 kA
Rated impulse withstand voltage	U <sub>imp</sub>	6 kV
Fuse-link size	Φ, diameter x length	10x38
Max. power losses of the fuse-link	P <sub>max</sub>	4.3 W
Rated short-time withstand current	I <sub>sw</sub> 1s	1.6 kA
Rated short-circuit making capacity at DC 440 V	I <sub>m</sub>	3.5 kA



## FUSE SWITCH-DISCONNECTORS OPVP10 UP TO 32 A

### Specifications

Electrical endurance	operating cycles	300
Mechanical endurance	operating cycles	2 000
Degree of protection from front slide, built-in device, cover closed		IP20
Connection cross-section		Cu / 0.75 ÷ 25 mm <sup>2</sup> 2x (6 ÷ 16) stranded in the same size
Torque		2 ÷ 2.5 Nm
Operating ambient temperature		t
Max. sea level		-25 ÷ +55 °C
Sismic resistance according to VE ŠKODA		2 000 m
Overvoltage category / Rated voltage		3 g / 8 ÷ 50 Hz
Standards		[(II)*] / AC 690 V, [(III)*] / AC 500 V, III / AC 400 V
Approval marks		IEC 60947-1, -3; EN 60947-1, -3



\* For underground cable distribution systems with overvoltage protection or for exposure to a low thunderstorm electricity (table H2 EN 60947-1, IEC 60947-1).

EN 60947-3 ed. 2/A2, p. C.5 Instructions for the use of 1-pole controlled devices states:

These devices are intended for distribution systems, with possible necessity of switching and/or safe disconnection of individual phases, and must not be used for switching a primary circuit of a three-phase equipment.

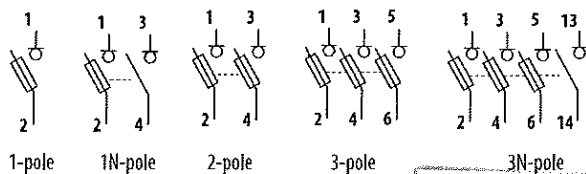
### Reduction of rated current of fuse-links PV gG, aM according to the number of poles

Type	I <sub>n</sub> [A]	Reduced rated current [A] (number of poles)					
		1	2	3	5	7	10
OPVP10	32	32	32	32	32	32	32

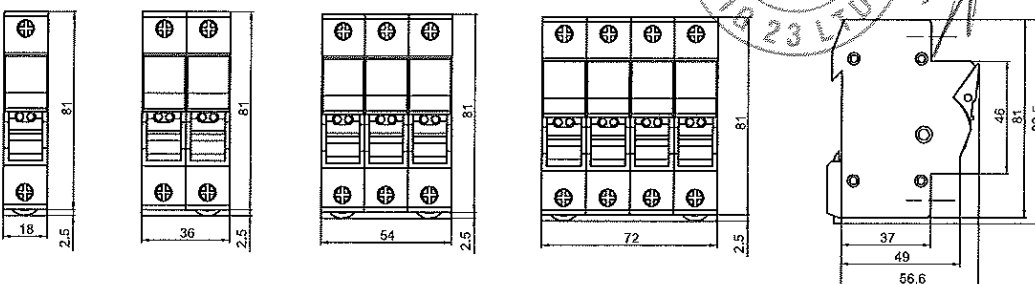
### Fuse switch-disconnector with disconnecting link

Rated operating current	I <sub>n</sub>	32 A	
Thermal current with disconnecting link ZPV10	I <sub>th</sub>	100 / 25 mm <sup>2</sup>	
Utilization category		AC-20B	
Rated short-time withstand current	I <sub>w</sub> 1 s	1.6 kA	
Rated short-circuit making capacity	I <sub>m</sub>	AC 690 V	3.5 kA
		DC 440 V	4 kA
Power losses with disconnecting link at I <sub>n</sub>	P <sub>v</sub>	4.5 W	
Connection cross-section		0.75 ÷ 25 mm <sup>2</sup>	

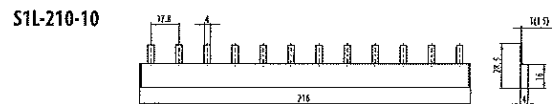
### Diagram



### Dimensions



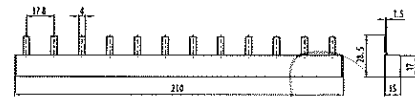
### Interconnecting busbars



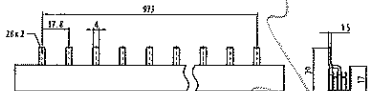
### S1L-1000-16



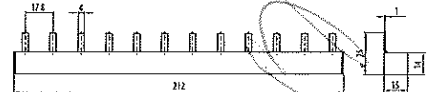
### S2L-210-10



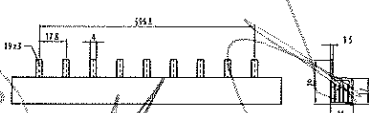
### S2L-1000-16



### S3L-210-10



### S3L-1000-16



ВЯРНО С  
ОРИГИНАЛА

МИГ 23 ЕООД  
СОФИЯ

МИГ 23 LTD.

ТЕХНИЧЕСКО ОПИСАНИЕ

Тип 0055 - Комплект измервателен клемен блок с клеми за медни проводници от проходен тип и 1P, 3P или 3P+N стопяеми цилиндрични предпазител-прекъсвач-разединители

№	Наименование, описание и технически характеристики	Кат. №
	<p>Общи данни за клеми</p> <p>Неотслабваща сила на притискане на проводника при вибрации и стареене</p> <p>Отговаря на EN 60947-7-1 (виж Приложение 20)</p> <p>С винтова връзка за свързване на проводника</p> <p>С висока устойчивост на чупене</p> <p>Изоляционен материал на клемите WEMID</p> <p>Устойчивост на токове на утечка ≥ CTI 600</p> <p>Работна температура - -50°C ...+120°C</p> <p>Клас на горимост по UL 94 V0, самозагасящ материал,</p> <p>Без вредни съставки по Ro Hs</p> <p>Устойчивост срещу електролитна корозия</p>	
1	<p>WTL 6/1 Измервателна делима клема с възможност за разкъсване на веригата в клемата и монтиране на по едно стандартно гнездо от двете страни на клемата, за присъединяване на външна измервателна апаратура с размер на отвора Ф 4 mm; възможност за мостова връзка между клемите; с монтирани гнезда за сонди .</p> <p>Номинални данни по IEC 60947-7-1 / VDE 0100-537:</p> <p>напрежение - 630 V; ток - 41 A;</p> <p>импулсно напрежение - 6000 V;</p> <p>максимален ток - 57 A; максимално сечение на проводника - 10 mm<sup>2</sup></p>	1016700000
2	<p>WAP WTL 6/1 Крайна капачка за клема WTL 6/1</p> <p>дебелина 1,5 mm, материал - WEMID</p>	1068300000
3	<p>WTW WTL 6/1 Разделителна стена за клема WTL 6/1</p> <p>дебелина 1,5 mm, материал - WEMID</p>	1068400000
4	<p>QVS 2 мост, двуполусен, подвижен, изолиран, монтира се с винтове,</p>	0307300000
5	<p>VH 19 Втулка съединителна, за свързване на мост</p>	0318000000
6	<p>STB35 Гнездо за сонда жълто</p>	0389000000
7	<p>STB35 Гнездо за сонда зелено</p>	0388900000
8	<p>STB35 Гнездо за сонда червено</p>	0388800000
9	<p>BS 25 Винт за мост</p>	0334700000
10	<p>Stb 25 SW Гнездо за сонда черно</p>	0271500000
11	<p>Stb 14 Гнездо безцветно</p>	0169900000
12	<p>DEK 5 GW N Маркировка за клема</p>	0522761034
13	<p>DEK 5/5 MC-10 NEUT. WS Маркировка за клема, бяла, надписана</p>	1609801044
14	<p>Шина симетрична, перфорирана 35x7,5x2000</p>	BK3593-35Z
15	<p>Основа за предпазител 10x38 3P 32A 690V</p>	8033
16	<p>Предпазител вложка PV 10x38 4A gG 500V</p>	6693
17	<p>Краен притискач с винтове</p>	P60228
18	<p>Защитен монолитен капак IP4x</p>	K1008000

на основание чл. 2 от  
ЗЗЛД

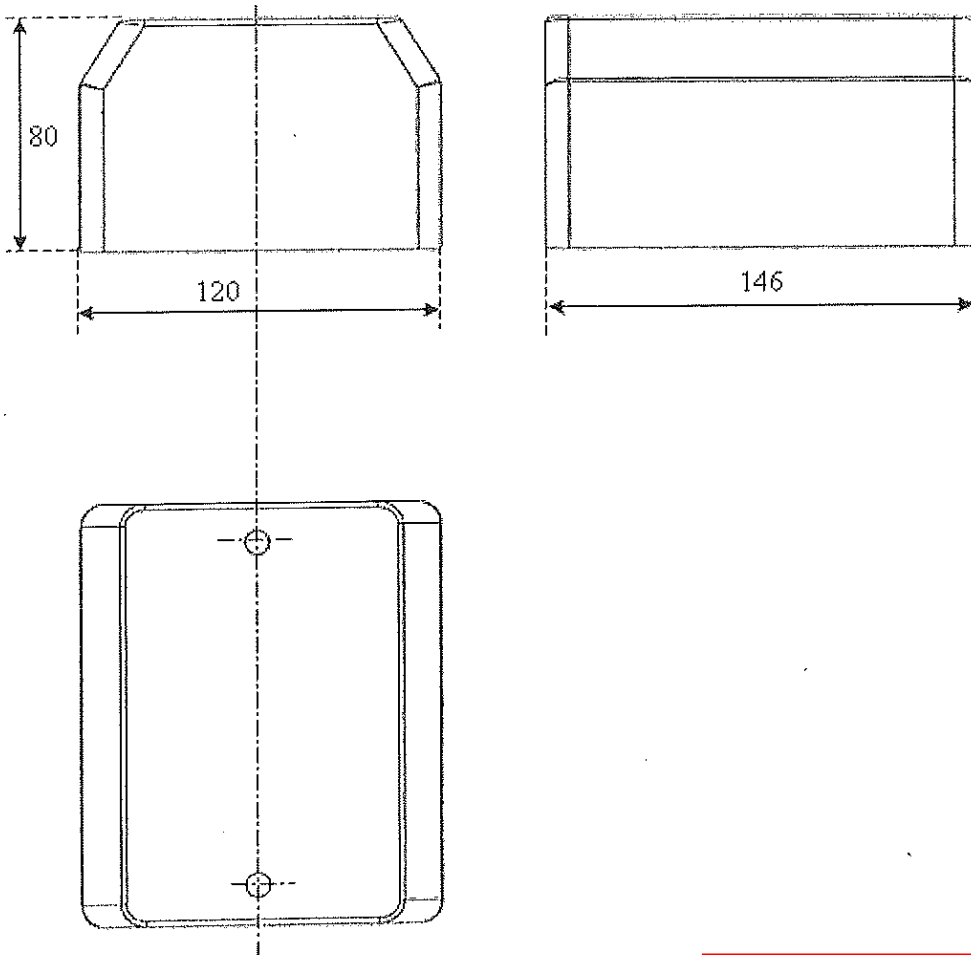
ВЯРНО С  
ОРИГИНАЛА

Съставил:  
ИНЖ. Ц.  
MIG 23 LTD

иниждър

**ЧЕРТЕЖ С НАНЕСЕНИ РАЗМЕРИ**

Комплект измервателен клемен блок с клеми за медни проводници от проходен тип и 1P, 3P или 3P+N стопяеми цилиндрични предпазител-прекъсвач-разединители



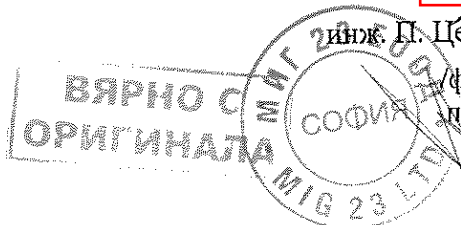
гр. София ,  
дата: 17.01.2017 г

на основание чл. 2 от  
ЗЗЛД

*[Handwritten signature]*



инж. П. Ценов – продуктов мениджър  
/фамилия, длъжност и подпис на  
произв. или негов представител/



*[Handwritten signature]*

# ДЕКЛАРАЦИЯ ЗА СЪОТВЕТСТВИЕ

Аз (Ние)

„ВАЙД БУЛ“ ЕООД  
(наименование на доставчика)

гр. София 1756 бул. „Свети Климент Охридски“ № 13  
(адрес)

декларирам(е) на собствена отговорност, че продуктът

Измервателен клемен блок с токови и напреженови клеми тип WTL и  
аксесоари към тях  
(наименование, тип или модел, номер на партидата, извадката)

Производство на: Weidmüller - Германия  
(пробата) или серията, евентуално произход и брой на екземплярите)

за който се отнася тази декларация, е в съответствие със следния(те)  
стандарт(и):  
IEC 60695-2-2, IEC60947-7-1, IEC60947-7-2, IEC60947-1, EN 50019

или друг(и) нормативен(ни) документ(и):

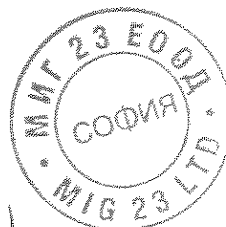
ISO 9001:2008  
(наименование и/или номер и дата на издаване на стандарта(тите)  
или друг(и) нормативен(ни) документ(и))

17.01.2017 г, гр. София  
(място и дата на издаване)

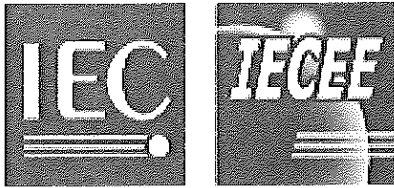
инж. Петър Ценов  
(фамилия и подпис на  
упълномощено лице)

на основание чл. 2 от  
ЗЗЛД

ВЯРНО С  
ОРИГИНАЛА





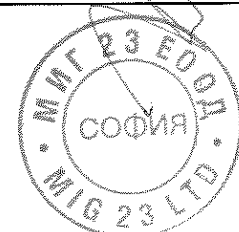


Test Report issued under the responsibility of:



TEST REPORT IEC 60947-3 Low-voltage switchgear and controlgear Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units	
Report Reference No. ....	249800-4402-0705/152633
Date of issue.....	2011-12-12
Total number of pages .....	116
CB Testing Laboratory.....	VDE Prüf- und Zertifizierungsinstitut GmbH VDE Testing and Certification Institute
Address .....	Merianstraße 28 · 63069 Offenbach , Germany
Applicant's name.....	Wöhner GmbH & Co. KG Elektrotechnische Systeme
Address .....	Mönchrödener Straße 10, 96472 Rödental, Germany
<b>Test specification:</b>	
Standard.....	IEC 60947-3: 3 <sup>rd</sup> Edition (2008) in conjunction with IEC 60947-1: 5 <sup>th</sup> Edition (2007)
Test procedure .....	CB
Non-standard test method.....	N/A
Test Report Form No. ....	IEC60947_3B
Test Report Form(s) Originator .....	OVE
Master TRF .....	Dated 2009-08
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If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.	
<b>This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.</b>	
Test item description .....	Fuse-switch-disconnector
Trade Mark .....	<b>wöhner</b>
Manufacturer .....	Wöhner GmbH & Co. KG Elektrotechnische Systeme
Model/Type reference.....	AES 10x38
Ratings .....	See page 6 and 7

Testreport-FG32-2-152633.DOC



<b>Testing procedure and testing location:</b>	
<input checked="" type="checkbox"/> <b>CB Testing Laboratory:</b>	<b>VDE Prüf- und Zertifizierungsinstitut GmbH</b> VDE Testing and Certification Institute
Testing location/ address .....	Merianstraße 28 , 63069 Offenbach , Germany
<input checked="" type="checkbox"/> <b>Associated CB Test Laboratory:</b>	<b>IPH Institut "Prüffeld für elektrische Hochleistungstechnik" GmbH</b>
Testing location/ address .....	Landsberger Allee 378 A , 12681 Berlin , Germany
Tested by (name + signature) .....	H. Schmidt
Approved by (+ signature) .....	T. Kohushöfner
<input type="checkbox"/> Testing procedure: TMP	на основание чл. 2 от 33ЛД
Testing location/ address .....	
Tested by (name + signature) .....	
<input type="checkbox"/> Testing procedure: WMT	
Testing location/ address .....	
Tested by (name + signature) .....	
Witnessed by (+ signature) .....	
Approved by (+ signature) .....	
<input type="checkbox"/> Testing procedure: SMT	
Testing location/ address .....	
Tested by (name + signature) .....	
Approved by (+ signature) .....	
Supervised by (+ signature) .....	
<input type="checkbox"/> Testing procedure: RMT	
Testing location/ address .....	
Tested by (name + signature) .....	
Approved by (+ signature) .....	
Supervised by (+ signature) .....	

TRF No. IEC60947\_3B

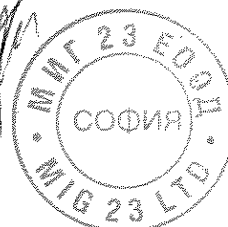
**ВЯРНО С  
ОРИГИНАЛА**



<b>Summary of testing:</b>	
<b>The tests are carried-out according to IEC 60947-1 (ed.5);am1:2010-12 and IEC 60947-3 (ed.3).</b>	
<b>Tests performed (name of test and test clause):</b>	<b>Testing location:</b>
<b>Clause 7.1 (Construction) .....</b>	<b>VDE Testing and Certification Institute</b>
<b>Test sequence I: .....</b>	<b>IPH Institut</b>
Sample No.1: AC-21B, 500 V, 25 A, 1-pole	see page 16 - 20
Sample No.2: AC-21B, 690 V, 10 A, 1-pole	see page 21 - 25
Sample No.3: AC-22B, 400 V, 32 A, 1-pole	see page 26 - 30
Sample No.4: AC-22B, 400 V, 32 A, 2-pole	see page 31 - 35
Sample No.5: AC-22B, 500 V, 25 A, 2-pole	see page 36 - 40
Sample No.6: AC-22B, 690 V, 10 A, 2-pole	see page 41 - 45
Sample No.7: AC-22B, 690 V, 32 A, 3-pole+N	see page 46 - 50
<b>Test sequence II: .....</b>	<b>IPH Institut</b>
Sample No.8: AC-21B, 500 V, 25 A, 1-pole	see page 51 - 52
Sample No.9: AC-21B, 690 V, 10 A, 1-pole	see page 53 - 54
Sample No.10: AC-22B, 400 V, 32 A, 1-pole	see page 55 - 56
Sample No.11: AC-22B, 400 V, 32 A, 2-pole	see page 57 - 58
Sample No.12: AC-22B, 500 V, 25 A, 2-pole	see page 59 - 60
Sample No.13: AC-22B, 690 V, 10 A, 2-pole	see page 61 - 62
Sample No.14: AC-22B, 690 V, 32 A, 3-pole+N	see page 63 - 64
<b>Test sequence IV: .....</b>	<b>IPH Institut</b>
Sample No.15: 400 V a.c., 100 kA, 1-pole (with fuse-link 32 A / 400 V)	see page 68 - 69
Sample No.16: 400 V a.c., 100 kA, 1-pole+N (with fuse-link 32 A / 400 V)	see page 70 - 71
Sample No.17: 400 V a.c., 100 kA, 2-pole (with fuse-link 32 A / 400 V)	see page 72 - 73
Sample No.18: 400 V a.c., 100 kA, 3-pole+N (with fuse-link 32 A / 400 V)	see page 74 - 75

TRF No. IEC60947\_3B

ВЕРНО С  
ОРИГИНАЛА



**Summary of testing: (Continuation)**

The tests are carried-out according to IEC 60947-1 (ed.5);am1:2010-12 and IEC 60947-3 (ed.3).

**Tests performed (name of test and test clause):****Testing location:****Test sequence IV: .....**

Sample No.19: 500 V a.c., 100 kA, 1-pole  
(with fuse-link 25 A / 500 V)

Sample No.20: 500 V a.c., 100 kA, 1-pole+N  
(with fuse-link 25 A / 500 V)

Sample No.21: 500 V a.c., 100 kA, 2-pole  
(with fuse-link 25 A / 500 V)

Sample No.22: 500 V a.c., 100 kA, 3-pole+N  
(with fuse-link 25 A / 500 V)

Sample No.23: 690 V a.c., 50 kA, 1-pole  
(with fuse-link 10 A / 690 V)

Sample No.24: 690 V a.c., 50 kA, 1-pole+N  
(with fuse-link 10 A / 690 V)

Sample No.25: 690 V a.c., 50 kA, 2-pole  
(with fuse-link 10 A / 690 V)

Sample No.26: 690 V a.c., 50 kA, 3-pole+N  
(with fuse-link 32 A / 400 V)

**Test sequence V: .....**

Sample No.27: 690 V, 32 A, 1-pole  
(with fuse-link 32 A / 400 V)

Sample No.28: 690 V, 32 A, 2-pole  
(with fuse-link 32 A / 400 V)

Sample No.29: 690 V, 32 A, 3-pole+N  
(with fuse-link 32 A / 400 V)

**IPH Institut**

see page 76 - 77

see page 78 - 79

see page 80 - 81

see page 82 - 83

see page 84 - 85

see page 86 - 87

see page 88 - 89

see page 90 - 91

**IPH Institut**

see page 92 - 93

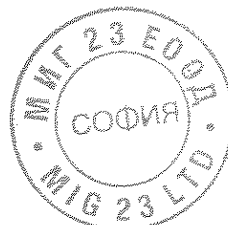
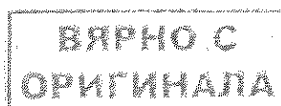
see page 94 - 95

see page 96 - 97

**Summary of compliance with National Differences:**

Not applicable

TRF No. IEC60947\_3B



Copy of marking plate

Front printing: (for example a single pole device)

**wöhner**

AES10x38  
32A 10x38  
31 110 1P

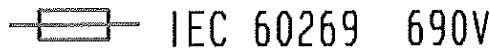


Side printing:

IEC 60947-3 AC-22B 32A 400V 50/60Hz Ui:AC800V

**RU<sup>®</sup>**  
**C US**  
30A 600V  
Do not operate  
under load

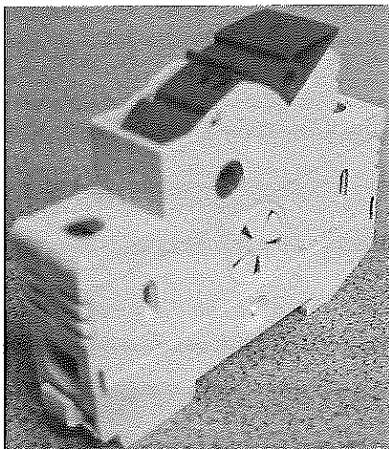
gG	32A	6 □	3,0W
aM	32A	6 □	1,2W
aR/gR	consult		



18...4AWG  
0.75...25mm<sup>2</sup>  
Cu only.  
75°C wire  
PZ2 2,5Nm  
22lb-in

When two conductors per terminal are used,  
only stranded wires of the same size  
within the range of 18-6AWG, may be used

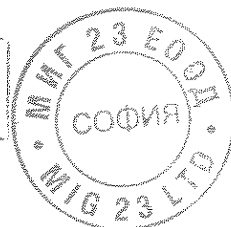
Picture of the fuse-switch-disconnector: (for example a single pole device)



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TRF No. IEC60947\_3B

**ВЯРНО С  
ОРИГИНАЛА**



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**Test item particulars** .....

- method of operation .....: Dependent manual operation
- suitability for isolation .....: Suitable / ~~not suitable~~
- degree of protection .....: IP20
- number of poles.....: 1; 2; 3; 1+N; 3+N
- kind of current.....: a.c.
- number of positions of the main contacts.....: 2 (open and closed)

Rated and limiting values, main circuit:

- rated operational voltage  $U_e$  (V) .....: 400 V a.c.  
500 V a.c.  
690 V a.c.
- rated insulation voltage  $U_i$  (V) .....: 800 V
- rated impulse withstand voltage  $U_{imp}$  (kV) .....: 6 kV
- conventional free air thermal current  $I_{th}$  (A) .....: 32 A
- conventional enclosed thermal current  $I_{the}$  (A).....: —
- rated operational current  $I_e$  (A) .....: See utilization category
- rated uninterrupted current  $I_u$  (A).....: See utilization category
- rated frequency (Hz).....: 50/60 Hz
- utilization category.....:

	$U_e$ [V]	$I_e$ [A]	Number of poles
AC-21B	500	25 <sup>*)</sup>	1; 1+N
	690	10 <sup>*)</sup>	1; 1+N
AC-22B	400	32 <sup>*)</sup>	1; 2; 3; 1+N; 3+N
		25 <sup>*)</sup>	2; 3; 3+N
	500	32 <sup>*)</sup>	3; 3+N
		10 <sup>*)</sup>	2
690	32 <sup>*)</sup>	3; 3+N	

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<sup>\*)</sup> Corresponding short circuit current: 50 kA  
<sup>\*\*)</sup> Corresponding short circuit current: 100 kA

Short-circuit characteristic:

- rated short-time withstand current  $I_{cw}$  (kA) .....: —
- rated short-time making capacity  $I_{cm}$  (kA) .....: —
- rated conditional short-circuit current.....: 50 kA; 100 kA (See utilization category)

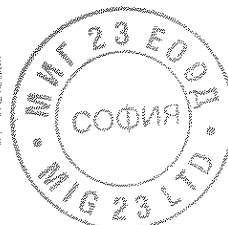
Control circuits .....: —

Auxiliary circuits .....: —

Relays and releases .....: —

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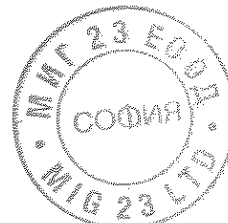
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Co-ordination of short-circuit protective devices:	
- kind of protective device.....	Fuse-links with cylindrical contact caps for fuse system F (size 10,3 x 38) Rated currents: 10 A (gR), 25 A (gG) and 32 A (gG)
<b>Possible test case verdicts:</b>	
- test case does not apply to the test object.....	N/A
- test object does meet the requirement .....	P (Pass)
- test object does not meet the requirement .....	F (Fail)
<b>Testing .....</b>	
Date of receipt of test item .....	2011-06
Date (s) of performance of tests .....	2011-06 up to 2011-11

<b>General remarks:</b>
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.  "(see Enclosure #)" refers to additional information appended to the report. "(see appended table)" refers to a table appended to the report.  Throughout this report a comma (point) is used as the decimal separator.
<b>General product information:</b>
The fuse-switch-disconnectors of type AES10x38 are available for DIN-rail mounting with cable connection on the line and load side.  The cable connection is possible by screw terminals (box terminal connection). The box terminal connection is suitable for cable cross-sections between 0,75mm <sup>2</sup> and 25mm <sup>2</sup> .  <b>Upon the tests of the making and breaking capacities and the performance under short-circuit conditions the distances between the metallic screen and the test items were 0 mm to the sides and 0 mm to the top.</b>

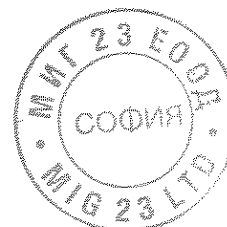
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
5.2	MARKING		P
	Marking on equipment itself or on nameplate or nameplates attached to the equipment and legible from the front after mounting		—
	- indication of the open and closed position		P
	- suitability for isolation		P
	- disconnectors AC-20 and DC-20 only: marked "Do not operate under load"		N/A
	Marking on equipment not needed to be visible after mounting:		—
	- manufacturer's name or trademark	<b>wöhner</b>	P
	- type designation or serial number	AES 10x38	P
	- rated operational currents	10 A, 25 A, 32 A	P
	- rated operational voltage	400 V, 500 V, 690 V a.c.	P
	- utilization category	See page 6	P
	- rated frequency	50/60 Hz	P
	- manufacturer's claim for compliance with IEC 60947-3		P
	- degree of protection	IP20	P
	Marking on fuse-combination units:		—
	- fuse type	Fuse System F (size 10,3x38)	P
	- maximum rated current	32 A	P
	- power loss of the fuse-link	< 3 W	P
	Identification of terminals:		—
	- line terminals, unless connection is immaterial	Not labelled, free line and load connection choice	P
	- load terminals, unless connection is immaterial		P
	- neutral pole terminal		N/A
	- protective earth terminal		N/A
	Data in the manufacturer's published information:		—
	- rated insulation voltage	800 V	P
	- rated impulse withstand voltage for equipment suitable for isolation or when determined	6 kV	P
	- pollution degree, if different from 3	3	P
	- rated duty	uninterrupted	P
	- rated short-time withstand current and duration		N/A
	- rated short-circuit making capacity		N/A

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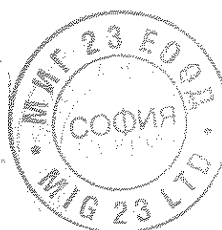




IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- rated conditional short-circuit current	50 kA, 100 kA	P
5.3	Instructions for installation, operation and maintenance		P
6	Normal service, mounting and transport conditions		P
7.1	CONSTRUCTIONAL AND PERFORMANCE REQUIREMENTS		P
7.1.2	Materials		P
7.1.2.2	Resistance to abnormal heat and fire		P
	Test performed on .....	- the equipment - sections taken from the equipment - samples of identical material	P
	Glow-wire test according to IEC 60695-2-10 and IEC 60695-2-11		—
	Parts made of insulating material necessary to retain current-carrying parts in position: test temperature 960 °C		P
	No visible flame and no sustained glowing		P
	Flames and glowing extinguish within 30 s		P
	No ignition of the tissue paper		P
	Parts of insulating material not necessary to retain current-carrying parts in position, even though in contact with them: test temperature 650 °C		P
	No visible flame and no sustained glowing		P
	Flames and glowing extinguish within 30 s		P
	No ignition of the tissue paper		P
7.1.3 of Part 1	Current-carrying parts and their connection		P
7.1.4	Clearances .....	see appended table 7.1.4 on page 103	P
	Creepage distances .....	see appended table 7.1.4 on page 103	P
	Pollution degree .....	3	—
	Comparative tracking index (V) .....	CTI 600 (housing) CTI 575 (actuator)	—
	Material group .....	II	—

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
7.1.5 of Part 1	Actuator		P
7.1.5.1	Insulation		—
	Actuator insulated from live parts for		—
	- rated insulation voltage	800 V	P
	- rated impulse withstand voltage	6 kV	P
	Actuator made of metal		—
	- connected to a protective conductor or provided with an additional insulation		P
	Actuator made of or covered by insulating material :		—
	- internal metal parts, which might become accessible in the event of an insulation failure, are also insulated from live parts for the rated insulation voltage		P
7.1.5.2	Direction of movement		P
	The direction of operation for actuators shall where applicable conform to IEC 60447		P
	There is no doubt of the "I" and "O" position and the direction of operation		P
7.1.6 of Part 1	Indication of contact position		P
7.1.6.1	Indicating means		N/A
7.1.6.2	Indication by the actuator		P
7.1.7	Additional safety requirements for equipment suitable for isolation		P
7.1.7.1	Additional constructional requirements		P
	- marking according to 5.2.1b		P
	- indication of the position of the contacts		N/A
	- construction of the actuating mechanism		P
	- minimum clearances across open contacts (see Table 13, Part 1) (mm) .....	2 mm	—
	- measured clearances (mm) .....	> 5,5 mm	P
	- test U <sub>imp</sub> across gap (kV) .....	9,8 kV	P

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
7.1.7.2	Supplementary requirements for equipment with provision for electrical interlocking with contactors or circuit-breakers:		N/A
	Auxiliary switch is rated according to IEC 60947-5-1 (unless the equipment is rated AC-23)		N/A
	Time interval between opening of the contacts of the auxiliary contact and the contacts of the main poles: $\geq 20$ ms .....		—
	Measured time interval (ms) .....		N/A
	During the closing operation the contacts of the auxiliary switch closes after or simultaneously with the contacts of the main poles		N/A
7.1.7.3	Supplementary requirements for equipment provided with means for padlocking the open position:		N/A
	The locking means is so designed that it cannot be removed with the appropriate padlock(s) installed		N/A
	Test force F applied to the actuator in an attempt to operate to the closed position (N) .....		—
	Rated impulse withstand voltage (kV) .....		—
	Test Uimp on open main contacts at the test force		N/A
7.1.8 of Part 1	Terminals		P
7.1.8.1	All parts of terminals which maintain contact and carry current are of metal having adequate mechanical strength	(see 8.2.4 below)	P
	Terminal connections are such that necessary contact pressure is maintained	(see 8.2.4 below)	P
	Terminals are so constructed that the conductor is clamped between suitable surfaces without damage to the conductor and terminal	(see 8.2.4 below)	P
	Terminals do not allow the conductor to be displaced or to be displaced themselves in a manner detrimental to the operator of equipment and the insulation voltage is not reduced below the rated value	(see 8.2.4 below)	P

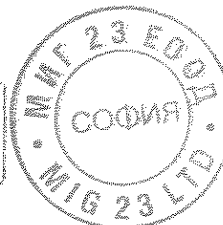
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.2.4	Mechanical properties of terminals (box terminal connection)		P
	Mechanical strength of terminals		P
	Maximum cross-sectional area of conductor (mm <sup>2</sup> ) .....:		—
	Diameter of thread (mm) .....	Screw M5	—
	Torque (Nm) .....	2,75 Nm (manufacturer indicates: 2 – 2,5 Nm)	—
	5 times on 2 separate clamping units		P
	Testing for damage to and accidental loosening of conductor (flexion test)		P
	Conductor of the smallest cross-sectional area (mm <sup>2</sup> ) .....	0,75 mm <sup>2</sup>	—
	Number of conductor of the smallest cross section :	1	—
	Diameter of bushing hole (mm) .....	6,5 mm	—
	Height between the equipment and the platen .....	260 mm	—
	Mass at the conductor(s) (kg) .....	0,4 kg	—
	135 continuous revolutions: the conductor neither slips out of the terminal nor breaks near the clamping unit		P
	Pull-out test		P
	Force (N), applied for 1 min. ....	30 N	—
	During the test, the conductor neither slips out of the terminal nor breaks near the clamping unit		P
	Conductor of the largest cross-sectional area (mm <sup>2</sup> ) .....	25 mm <sup>2</sup>	—
	Number of conductor of the largest cross section .:	1	—
	Diameter of bushing hole (mm) .....	13 mm	—
	Height between the equipment and the platen .....	300 mm	—
	Mass at the conductor(s) (kg) .....	4,5 kg	—
	135 continuous revolutions: the conductor neither slips out of the terminal nor breaks near the clamping unit		P
	Pull-out test		P
	Force (N), applied for 1 min. ....	135 N	—
	During the test, the conductor neither slips out of the terminal nor breaks near the clamping unit		P

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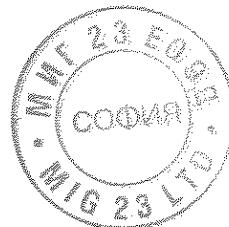
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Clause	Requirement + Test	Result - Remark	Verdict
	Conductor of the largest and smallest cross-sectional area (mm <sup>2</sup> ) .....		—
	Number of conductor of the smallest cross section, number of conductor of the largest cross section ..		—
	Diameter of bushing hole (mm) .....		—
	Height between the equipment and the platen .....		—
	Mass at the conductor(s) (kg) .....		—
	135 continuous revolutions: the conductor neither slips out of the terminal nor breaks near the clamping unit		N/A
	Pull-out test		N/A
	Force (N), applied for 1 min. ....		—
	During the test, the conductor neither slips out of the terminal nor breaks near the clamping unit		N/A
7.1.8.2	Connection capacity		P
	Type of conductors .....	Rigid, stranded or flexible	—
	Minimum cross-sectional area of conductor (mm <sup>2</sup> ) :	0,75 mm <sup>2</sup>	—
	Maximum cross-sectional area of conductor (mm <sup>2</sup> ) .....	25 mm <sup>2</sup>	—
	Number of conductors simultaneously connectable to the terminal .....		—
7.1.8.3	Connection		P
	Terminals for connection to external conductors are readily accessible during installation		P
	Clamping screws and nuts do not serve to fix any other component		P
7.1.8.4	Terminal identification and marking		P
	Terminal intended exclusively for the neutral conductor	Only if applicable	P
	Protective earth terminal		N/A
	Other terminals		P

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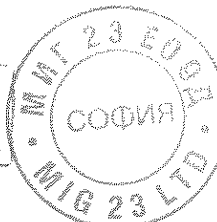
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
7.1.9	Additional requirements for equipment provided with a neutral pole		P
	Equipment provided with a pole intended for the connection of neutral, this pole shall be clearly marked by the letter "N"		P
	The switched neutral pole does not break before and does not make after the other poles except		N/A
	- a pole having the appropriate short-circuit breaking and making capacity is used as neutral pole, all poles may operate together	The connection is given by a dummy (piece of copper), which is inside the actuator.	P
	Conventional thermal current of neutral pole	32 A	P
7.1.10	Provisions for protective earthing		N/A
7.1.10.1	The exposed conductive parts are electrically interconnected and connected to a protective earth terminal		N/A
7.1.10.2	Protective earth terminal is readily accessible		N/A
	Protective earth terminal is suitably protected against corrosion		N/A
	Electrical continuity between the exposed conductive parts of the protective earth terminal and the metal sheathing of connecting conductors		N/A
	Protective earth terminal has no other functions		N/A
7.1.10.3	Protective earth terminal marking and identification		N/A
7.1.11	Enclosure for equipment		N/A
7.1.11.1	Design		N/A
	When the enclosure is opened, all parts requiring access for installation and maintenance are readily accessible		N/A
	Sufficient space is provided inside the enclosure		N/A
	The fixed parts of a metal enclosure are electrically connected to the other exposed conductive parts of the equipment and connected to a terminal which enables them to be earthed or connected to a protective conductor		N/A
	Under no circumstances a removable metal part of the enclosure is insulated from the part carrying the earth terminal when the removable part is in place		N/A
	The removable parts of the enclosure are firmly secured to the fixed parts by a device such that they cannot be accidentally loosened or detached owing to the effects of operation of the equipment or vibrations		N/A

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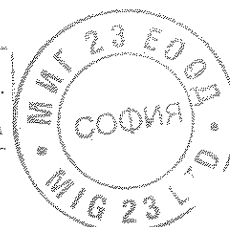
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Clause	Requirement + Test	Result - Remark	Verdict
	When an enclosure is so designed as to allow the covers to be opened without the use of tools, means is provided to prevent loss of the fastening devices		N/A
	If the enclosure is used for mounting push-buttons, it is not possible to remove the buttons from the outside of the enclosure		N/A
7.1.11.2	Insulation		N/A
	If, in order to prevent accidental contact between a metallic enclosure and live parts, the enclosure is partly or completely lined with insulating material, then this lining is securely fixed to the enclosure		N/A
7.1.12	Degree of protection of enclosed equipment		N/A
	Degree of protection .....: IP		N/A
7.1.13	Conduit pull-out, torque and bending with metallic conduits		N/A
	Withstand the stress occurring during its installation .....: IP		N/A

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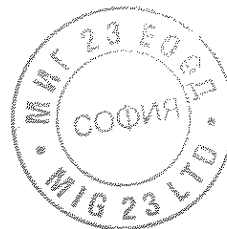


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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (Sample No. 1: AC-21B, 500 V, 25 A, 1-pole)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....	22,7 °C	—
	test enclosure W x H x D (mm x mm x mm) .....		—
	material of enclosure .....		—
	Main circuits, test conditions:		—
	- rated operational current I <sub>e</sub> (A) .....	25 A	—
	- cable/busbar cross-section (mm <sup>2</sup> ) / length (mm) ...	4 mm <sup>2</sup> cables / 1000 mm long	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G25	—
	- rated current (A) .....	25A (gG)	—
	- power loss (W) .....	2,6 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page 103	P
	Auxiliary circuits, test conditions:		N/A
	- rated operation current (A) .....		—
	- cable cross-section (mm <sup>2</sup> ) .....		—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page ___	N/A
8.3.3.2	Test of dielectric properties		P
	Rated impulse withstand voltage (kV) .....	6 kV	—
	- test U <sub>imp</sub> main circuits (kV) .....	7,3 kV	P
	- test U <sub>imp</sub> auxiliary circuits (kV) .....		N/A
	- test U <sub>imp</sub> on open main contacts (equipment suitable for isolation) (kV) .....	9,8 kV	P
	Power-frequency withstand voltage (V) .....	800 V	—
	- main circuits, test voltage for 5 sec. (V) .....	2000 V	P
	- control and auxiliary circuits, test voltage for 5 sec. (V) .....		N/A

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Devices, which have been disconnected for the power-frequency withstand voltage test .....		N/A
	Equipment suitable for isolation, leakage current not exceed 0,5 mA		—
	Test voltage 1,1 Ue (V) .....	550 V (tested with 759 V)	—
	Measured leakage current (mA) .....	0,001 mA	P
8.3.3.3	Making and breaking capacity		P
	- utilization category .....	AC-21B	—
	- rated operational voltage Ue (V) .....	500 V	—
	- rated operational current Ie (A) or power (kW) .....	25 A	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G25	—
	- rated current (A) .....	25 A (gG)	—
	- power loss (W) .....	2,6 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....	L1: L2: L3:	—
	- test current, I = ..... x Ie (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—
	Conditions for break operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....	L1: L2: L3:	—
	- test current, I = ..... x Ie (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Conditions for make/break operations, other than AC-23A/B:		P
	- test voltage, $U = 1,05 U_e$ ..... (V):	L1: 525 V L2: — L3: —	—
	- test current, $I =$ ..... $1,5 \times I_e$ (A):	L1: 38 A L2: — L3: —	—
	- power factor/ time constant .....	0,91	—
	Number of make/break or make and break operations .....	5	P
	- recovery voltage duration ( $\geq 50$ ms)	> 50 ms	P
	- current duration (ms) .....	70 ms	—
	- time interval between operations .....	30 s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		N/A
	- oscillatory frequency (kHz) .....		—
	- measured oscillatory frequency (kHz) .....	L1: L2: L3:	N/A
	- factor $\gamma$ .....	L1: L2: L3:	N/A
8.3.3.3.5	Behaviour of the equipment during making and breaking capacity tests		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.3.3.6	Condition of the equipment after making and breaking capacity tests		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8	13,2 N (required opening force) 150 N (test force acc. tab. 8)	P
	- equipment is able to carry its rated current after normal closing operation		P

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.4	Dielectric verification		P
	test voltage: $2 \cdot U_e$ with a minimum of 1000V~ .....	1000 V (tested with 1380 V)	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 $U_e$ ) (V) .....	550 V (tested with 759 V)	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B): $\leq 0,5$ mA/pole .....		N/A
	Leakage current (other utilization categories): $\leq 2$ mA/pole) .....	< 2 mA	P
8.3.3.6	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G25	—
	- rated current (A) .....	25 A (gG)	—
	- power loss (W) .....	2,6 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	- conductor cross-section (mm <sup>2</sup> ) .....	4 mm <sup>2</sup>	—
	- test current $I_e$ (A) .....	25 A	—
	Measured temperature-rise .....	see appended table 8.3.3.6 on page 103	P
8.3.3.7	Strength of actuator mechanism		P
8.2.5	Verification of the strength of actuator mechanism and position indicating device		—
	- actuator type (fig.) .....	figure 1b (one-finger operated)	—
8.2.5.2.1	Dependent and independent manual operation	dependent manual operation	P
	- actuating force for opening (N) .....	10,2 N	—
	- test force with blocked main contacts (N) .....	50 N	—
	- used method to keep the contact closed .....	Fuse-links were held tight with a piece of wire	—
	During and after the test, open position not indicated .....		P
	Equipment with locking mean, no locking in the open position while test force is applied .....		P

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.2.5.2.2	Dependent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- 110% of the rated supply voltage applied to the equipment (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A
8.2.5.2.3	Independent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- stored energy of the power operator released (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A

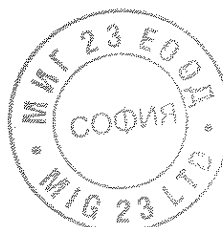
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (Sample No. 2: AC-21B, 690 V, 10 A, 1-pole)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....	22,7 °C	—
	test enclosure W x H x D (mm x mm x mm) .....		—
	material of enclosure .....		—
	Main circuits, test conditions:		—
	- rated operational current I <sub>e</sub> (A) .....	10 A	—
	- cable/busbar cross-section (mm <sup>2</sup> ) / length (mm) ..	1,5 mm <sup>2</sup> cables / 1000mm long	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	SIBA	—
	- manufacturer's model or type reference .....	50 179 06.10	—
	- rated current (A) .....	10 A (gR)	—
	- power loss (W) .....	2,3 W	—
	- rated breaking capacity (kA) .....	200 kA	—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page 104	P
	Auxiliary circuits, test conditions:		N/A
	- rated operation current (A) .....		—
	- cable cross-section (mm <sup>2</sup> ) .....		—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page __	N/A
8.3.3.2	Test of dielectric properties		P
	Rated impulse withstand voltage (kV) .....	6 kV	—
	- test U <sub>imp</sub> main circuits (kV) .....	7,3 kV	P
	- test U <sub>imp</sub> auxiliary circuits (kV) .....		N/A
	- test U <sub>imp</sub> on open main contacts (equipment suitable for isolation) (kV) .....	9,8 kV	P
	Power-frequency withstand voltage (V) .....	800 V	—
	- main circuits, test voltage for 5 sec. (V) .....	2000 V	P
	- control and auxiliary circuits, test voltage for 5 sec. (V) .....		N/A

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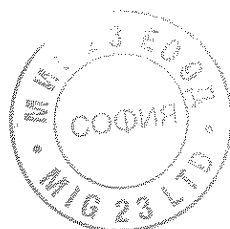
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Devices, which have been disconnected for the power-frequency withstand voltage test .....		N/A
	Equipment suitable for isolation, leakage current not exceed 0,5 mA		—
	Test voltage 1,1 Ue (V) .....	759 V	—
	Measured leakage current (mA) .....	0,001 mA	P
8.3.3.3	Making and breaking capacity		P
	- utilization category .....	AC-21B	—
	- rated operational voltage Ue (V) .....	690 V	—
	- rated operational current Ie (A) or power (kW) .....	10 A	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	SIBA	—
	- manufacturer's model or type reference .....	50 179 06.10	—
	- rated current (A) .....	10 A (gR)	—
	- power loss (W) .....	2,3 W	—
	- rated breaking capacity (kA) .....	200 kA	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....	L1: L2: L3:	—
	- test current, I = ..... x Ie (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—
	Conditions for break operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....	L1: L2: L3:	—
	- test current, I = ..... x Ie (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—

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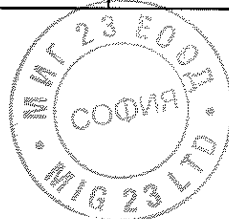
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Conditions for make/break operations, other than AC-23A/B:		P
	- test voltage, $U = 1,05 U_e$ ..... (V):	L1: 725 V L2: — L3: —	—
	- test current, $I =$ ..... 1,5 x $I_e$ (A):	L1: 15,3 A L2: — L3: —	—
	- power factor/ time constant .....	0,95	—
	Number of make/break or make and break operations .....	5	P
	- recovery voltage duration ( $\geq 50$ ms)	> 50 ms	P
	- current duration (ms) .....	70 ms	—
	- time interval between operations .....	30 s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		N/A
	- oscillatory frequency (kHz) .....		—
	- measured oscillatory frequency (kHz) .....	L1: L2: L3:	N/A
	- factor $\gamma$ .....	L1: L2: L3:	N/A
8.3.3.3.5	Behaviour of the equipment during making and breaking capacity tests		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.3.3.6	Condition of the equipment after making and breaking capacity tests		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8	17,6 N (required opening force) 150 N (test force acc. tab. 8)	P
	- equipment is able to carry its rated current after normal closing operation		P

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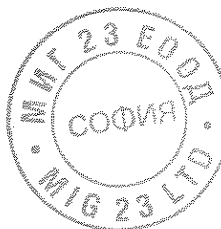
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.4	Dielectric verification		P
	test voltage: $2 \cdot U_e$ with a minimum of 1000V~ .....	1380 V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 $U_e$ ) (V) .....	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B): $\leq 0,5$ mA/pole .....		N/A
	Leakage current (other utilization categories): $\leq 2$ mA/pole) .....	< 2 mA	P
8.3.3.6	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	SIBA	—
	- manufacturer's model or type reference .....	50 179 06.10	—
	- rated current (A) .....	10 A (gR)	—
	- power loss (W) .....	2,3 W	—
	- rated breaking capacity (kA) .....	200 kA	—
	- conductor cross-section (mm <sup>2</sup> ) .....	1,5 mm <sup>2</sup>	—
	- test current $I_e$ (A) .....	10 A	—
	Measured temperature-rise .....	see appended table 8.3.3.6 on page 104	P
8.3.3.7	Strength of actuator mechanism		P
8.2.5	Verification of the strength of actuator mechanism and position indicating device		
	- actuator type (fig.) .....	figure 1b (one-finger operated)	—
8.2.5.2.1	Dependent and independent manual operation	dependent manual operation	P
	- actuating force for opening (N) .....	11 N	—
	- test force with blocked main contacts (N) .....	50 N	—
	- used method to keep the contact closed .....	Fuse-links were held tight with a piece of wire	—
	During and after the test, open position not indicated .....		P
	Equipment with locking mean, no locking in the open position while test force is applied .....		P

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.2.5.2.2	Dependent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- 110% of the rated supply voltage applied to the equipment (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A
8.2.5.2.3	Independent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- stored energy of the power operator released (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A

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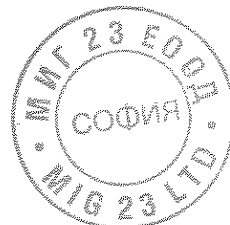
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (Sample No. 3: AC-22B, 400 V, 32 A, 1-pole)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....	22,7 °C	—
	test enclosure W x H x D (mm x mm x mm) .....		—
	material of enclosure .....		—
	Main circuits, test conditions:		—
	- rated operational current I <sub>e</sub> (A) .....	32 A	—
	- cable/busbar cross-section (mm <sup>2</sup> ) / length (mm) ..	6 mm <sup>2</sup> cables / 1000mm long	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G32	—
	- rated current (A) .....	32 A (gG)	—
	- power loss (W) .....	2,9 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page 104	P
	Auxiliary circuits, test conditions:		N/A
	- rated operation current (A) .....		—
	- cable cross-section (mm <sup>2</sup> ) .....		—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page ___	N/A
8.3.3.2	Test of dielectric properties		P
	Rated impulse withstand voltage (kV) .....	6 kV	—
	- test U <sub>imp</sub> main circuits (kV) .....	7,3 kV	P
	- test U <sub>imp</sub> auxiliary circuits (kV) .....		N/A
	- test U <sub>imp</sub> on open main contacts (equipment suitable for isolation) (kV) .....	9,8 kV	P
	Power-frequency withstand voltage (V) .....	800 V	—
	- main circuits, test voltage for 5 sec. (V) .....	2000 V	P
	- control and auxiliary circuits, test voltage for 5 sec. (V) .....		N/A

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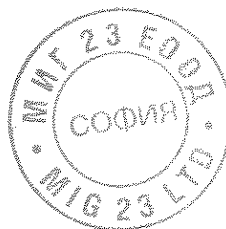
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Devices, which have been disconnected for the power-frequency withstand voltage test .....		N/A
	Equipment suitable for isolation, leakage current not exceed 0,5 mA		—
	Test voltage 1,1 Ue (V) .....	440 V (tested with 759 V)	—
	Measured leakage current (mA) .....	0,001 mA	P
8.3.3.3	Making and breaking capacity		P
	- utilization category .....	AC-22B	—
	- rated operational voltage Ue (V) .....	400 V	—
	- rated operational current Ie (A) or power (kW) .....	32 A	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G32	—
	- rated current (A) .....	32 A (gG)	—
	- power loss (W) .....	2,9 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....	L1: L2: L3:	—
	- test current, I = ..... x Ie (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—
	Conditions for break operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....	L1: L2: L3:	—
	- test current, I = ..... x Ie (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—

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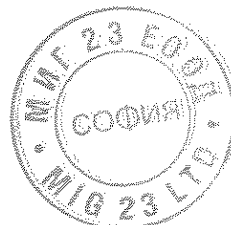
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Conditions for make/break operations, other than AC-23A/B:		P
	- test voltage, $U = 1,05 U_e$ ..... (V):	L1: 420 V L2: — L3: —	—
	- test current, $I =$ ..... $3 \times I_e$ (A):	L1: 98 A L2: — L3: —	—
	- power factor/ time constant .....	0,66	—
	Number of make/break or make and break operations .....	5	P
	- recovery voltage duration ( $\geq 50$ ms)	$> 50$ ms	P
	- current duration (ms) .....	90 ms	—
	- time interval between operations .....	30 s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) .....	41,29 kHz	—
	- measured oscillatory frequency (kHz) .....	L1: 40,5 kHz L2: — L3: —	P
	- factor $\gamma$ .....	L1: 1,1 L2: — L3: —	P
8.3.3.3.5	Behaviour of the equipment during making and breaking capacity tests		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.3.3.6	Condition of the equipment after making and breaking capacity tests		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8	8,4 N (required opening force) 150 N (test force acc. tab. 8)	P
	- equipment is able to carry its rated current after normal closing operation		P

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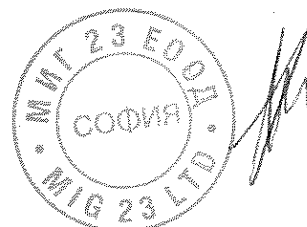
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.4	Dielectric verification		P
	test voltage: $2 \cdot U_e$ with a minimum of 1000V~ .....	1000 V (tested with 1380 V)	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 $U_e$ ) (V) .....	440 V (tested with 759 V)	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B): $\leq 0,5$ mA/pole .....		N/A
	Leakage current (other utilization categories): $\leq 2$ mA/pole) .....	< 2 mA	P
8.3.3.6	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G32	—
	- rated current (A) .....	32 A (gG)	—
	- power loss (W) .....	2,9 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	- conductor cross-section (mm <sup>2</sup> ) .....	6 mm <sup>2</sup>	—
	- test current $I_e$ (A) .....	32 A	—
	Measured temperature-rise .....	see appended table 8.3.3.6 on page 105	P
8.3.3.7	Strength of actuator mechanism		P
8.2.5	Verification of the strength of actuator mechanism and position indicating device		
	- actuator type (fig.) .....	figure 1b (one-finger operated)	—
8.2.5.2.1	Dependent and independent manual operation	dependent manual operation	P
	- actuating force for opening (N) .....	10,4 N	—
	- test force with blocked main contacts (N) .....	50 N	—
	- used method to keep the contact closed .....	Fuse-links were held tight with a piece of wire	—
	During and after the test, open position not indicated .....		P
	Equipment with locking mean, no locking in the open position while test force is applied .....		P

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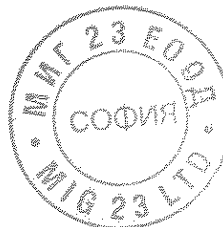
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.2.5.2.2	Dependent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- 110% of the rated supply voltage applied to the equipment (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A
8.2.5.2.3	Independent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- stored energy of the power operator released (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A

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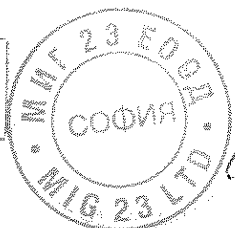
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (Sample No. 4: AC-22B, 400 V, 32 A, 2-poles)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....	22,7 °C	—
	test enclosure W x H x D (mm x mm x mm) .....		—
	material of enclosure .....		—
	Main circuits, test conditions:		—
	- rated operational current I <sub>e</sub> (A) .....	32 A	—
	- cable/busbar cross-section (mm <sup>2</sup> ) / length (mm) ..	6 mm <sup>2</sup> cables / 1000mm long	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G32	—
	- rated current (A) .....	32 A (gG)	—
	- power loss (W) .....	2,9 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page 105	P
	Auxiliary circuits, test conditions:		N/A
	- rated operation current (A) .....		—
	- cable cross-section (mm <sup>2</sup> ) .....		—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page __	N/A
8.3.3.2	Test of dielectric properties		P
	Rated impulse withstand voltage (kV) .....	6 kV	—
	- test U <sub>imp</sub> main circuits (kV) .....	7,3 kV	P
	- test U <sub>imp</sub> auxiliary circuits (kV) .....		N/A
	- test U <sub>imp</sub> on open main contacts (equipment suitable for isolation) (kV) .....	9,8 kV	P
	Power-frequency withstand voltage (V) .....	800 V	—
	- main circuits, test voltage for 5 sec. (V) .....	2000 V	P
	- control and auxiliary circuits, test voltage for 5 sec. (V) .....		N/A

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Devices, which have been disconnected for the power-frequency withstand voltage test .....		N/A
	Equipment suitable for isolation, leakage current not exceed 0,5 mA		—
	Test voltage 1,1 Ue (V) .....	440 V (tested with 759 V)	—
	Measured leakage current (mA) .....	0,001 mA	P
8.3.3.3	Making and breaking capacity		P
	- utilization category .....	AC-22B	—
	- rated operational voltage Ue (V) .....	400 V	—
	- rated operational current Ie (A) or power (kW) .....	32 A	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G32	—
	- rated current (A) .....	32 A (gG)	—
	- power loss (W) .....	2,9 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....	L1: L2: L3:	—
	- test current, I = ..... x Ie (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—
	Conditions for break operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....	L1: L2: L3:	—
	- test current, I = ..... x Ie (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—

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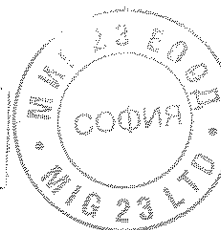




IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Conditions for make/break operations, other than AC-23A/B:		P
	- test voltage, $U = 1,05 U_e$ ..... (V):	L1: 420 V (242,5 V x $\sqrt{3}$ ) L2: 420 V (242,5 V x $\sqrt{3}$ ) L3: —	—
	- test current, $I =$ ..... 3 x $I_e$ (A):	L1: 98 A L2: 98 A L3: —	—
	- power factor/ time constant .....	0,66	—
	Number of make/break or make and break operations .....	5	P
	- recovery voltage duration ( $\geq 50$ ms)	> 50 ms	P
	- current duration (ms) .....	70 ms	—
	- time interval between operations .....	30 s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) .....	41,29 kHz	—
	- measured oscillatory frequency (kHz) .....	L1: 40,5 kHz L2: 40,5 kHz L3: —	P
	- factor $\gamma$ .....	L1: 1,1 L2: 1,1 L3: —	P
8.3.3.3.5	Behaviour of the equipment during making and breaking capacity tests		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.3.3.6	Condition of the equipment after making and breaking capacity tests		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8	17,8 N (required opening force) 150 N (test force acc. tab. 8)	P
	- equipment is able to carry its rated current after normal closing operation		P

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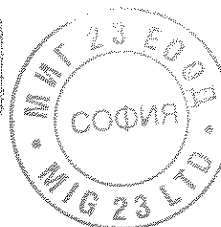
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Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.4	Dielectric verification		P
	test voltage: $2 \cdot U_e$ with a minimum of 1000V~ .....	1000 V (tested with 1380 V)	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 $U_e$ ) (V) .....	440 V (tested with 759 V)	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B): $\leq 0,5$ mA/pole .....		N/A
	Leakage current (other utilization categories): $\leq 2$ mA/pole) .....	< 2 mA	P
8.3.3.6	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G32	—
	- rated current (A) .....	32 A (gG)	—
	- power loss (W) .....	2,9 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	- conductor cross-section (mm <sup>2</sup> ) .....	6 mm <sup>2</sup>	—
	- test current $I_e$ (A) .....	32 A	—
	Measured temperature-rise .....	see appended table 8.3.3.6 on page 105	P
8.3.3.7	Strength of actuator mechanism		P
8.2.5	Verification of the strength of actuator mechanism and position indicating device		
	- actuator type (fig.) .....	figure 1b (one-finger operated)	—
8.2.5.2.1	Dependent and independent manual operation	dependent manual operation	P
	- actuating force for opening (N) .....	22 N	—
	- test force with blocked main contacts (N) .....	66 N	—
	- used method to keep the contact closed .....	Fuse-links were held tight with a piece of wire	—
	During and after the test, open position not indicated .....		P
	Equipment with locking mean, no locking in the open position while test force is applied .....		P

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Clause	Requirement + Test	Result - Remark	Verdict
8.2.5.2.2	Dependent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- 110% of the rated supply voltage applied to the equipment (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A
8.2.5.2.3	Independent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- stored energy of the power operator released (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A

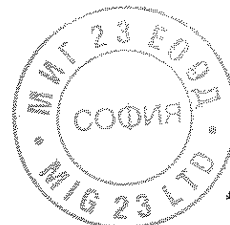
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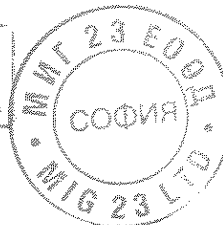


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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (Sample No. 5: AC-22B, 500 V, 25 A, 2-pole)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....	22,7 °C	—
	test enclosure W x H x D (mm x mm x mm) .....		—
	material of enclosure .....		—
	Main circuits, test conditions:		—
	- rated operational current I <sub>e</sub> (A) .....	25 A	—
	- cable/busbar cross-section (mm <sup>2</sup> ) / length (mm) ...	4 mm <sup>2</sup> cables / 1000 mm long	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G25	—
	- rated current (A) .....	25 A (gG)	—
	- power loss (W) .....	2,6 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page 106	P
	Auxiliary circuits, test conditions:		N/A
	- rated operation current (A) .....		—
	- cable cross-section (mm <sup>2</sup> ) .....		—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page ___	N/A
8.3.3.2	Test of dielectric properties		P
	Rated impulse withstand voltage (kV) .....	6 kV	—
	- test U <sub>imp</sub> main circuits (kV) .....	7,3 kV	P
	- test U <sub>imp</sub> auxiliary circuits (kV) .....		N/A
	- test U <sub>imp</sub> on open main contacts (equipment suitable for isolation) (kV) .....	9,8 kV	P
	Power-frequency withstand voltage (V) .....	800 V	—
	- main circuits, test voltage for 5 sec. (V) .....	2000 V	P
	- control and auxiliary circuits, test voltage for 5 sec. (V) .....		N/A

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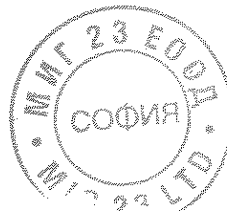
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Clause	Requirement + Test	Result - Remark	Verdict
	Devices, which have been disconnected for the power-frequency withstand voltage test .....		N/A
	Equipment suitable for isolation, leakage current not exceed 0,5 mA		—
	Test voltage 1,1 Ue (V) .....	550 V (tested with 759 V)	—
	Measured leakage current (mA) .....	0,001 mA	P
8.3.3.3	Making and breaking capacity		P
	- utilization category .....	AC-22B	—
	- rated operational voltage Ue (V) .....	500 V	—
	- rated operational current Ie (A) or power (kW) .....	25 A	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G25	—
	- rated current (A) .....	25 A	—
	- power loss (W) .....	2,6 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....	L1: L2: L3:	—
	- test current, I = ..... x Ie (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—
	Conditions for break operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....	L1: L2: L3:	—
	- test current, I = ..... x Ie (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—

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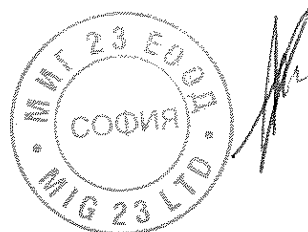
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Conditions for make/break operations, other than AC-23A/B:		
	- test voltage, $U = 1,05 U_e$ ..... (V):	L1: 525 V (303 V x $\sqrt{3}$ ) L2: 525 V (303 V x $\sqrt{3}$ ) L3: —	—
	- test current, $I =$ ..... 3 x $I_e$ (A):	L1: 78 A L2: 78 A L3: —	—
	- power factor/ time constant .....	0,68	—
	Number of make/break or make and break operations .....	5	P
	- recovery voltage duration ( $\geq 50$ ms)	> 50 ms	P
	- current duration (ms) .....	70 ms	—
	- time interval between operations .....	30 s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) .....	32,88 kHz	—
	- measured oscillatory frequency (kHz) .....	L1: 32,2 kHz L2: 32,2 kHz L3: —	P
	- factor $\gamma$ .....	L1: 1,1 L2: 1,1 L3: —	P
8.3.3.3.5	Behaviour of the equipment during making and breaking capacity tests		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.3.3.6	Condition of the equipment after making and breaking capacity tests		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8	20,4 N (required opening force) 150 N (test force acc. tab. 8)	P
	- equipment is able to carry its rated current after normal closing operation		P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.4	Dielectric verification		P
	test voltage: $2 \cdot U_e$ with a minimum of 1000V~ .....	1000 V (tested with 1380 V)	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 $U_e$ ) (V) .....	550 V (tested with 759 V)	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B): $\leq 0,5$ mA/pole .....		N/A
	Leakage current (other utilization categories): $\leq 2$ mA/pole) .....	< 2 mA	P
8.3.3.6	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G25	—
	- rated current (A) .....	25 A (gG)	—
	- power loss (W) .....	2,6 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	- conductor cross-section (mm <sup>2</sup> ) .....	4 mm <sup>2</sup>	—
	- test current $I_e$ (A) .....	25 A	—
	Measured temperature-rise .....	see appended table 8.3.3.6 on page 106	P
8.3.3.7	Strength of actuator mechanism		P
8.2.5	Verification of the strength of actuator mechanism and position indicating device		
	- actuator type (fig.) .....	figure 1b (one-finger operated)	—
8.2.5.2.1	Dependent and independent manual operation	dependent manual operation	P
	- actuating force for opening (N) .....	22,6 N	—
	- test force with blocked main contacts (N) .....	67,8 N	—
	- used method to keep the contact closed .....	Fuse-links were held tight with a piece of wire	—
	During and after the test, open position not indicated .....		P
	Equipment with locking mean, no locking in the open position while test force is applied .....		P

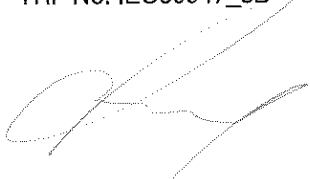
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Clause	Requirement + Test	Result - Remark	Verdict
8.2.5.2.2	Dependent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- 110% of the rated supply voltage applied to the equipment (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A
8.2.5.2.3	Independent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- stored energy of the power operator released (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A

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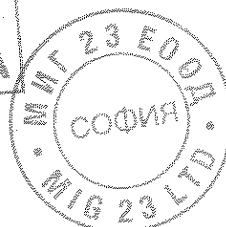





IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (Sample No. 6: AC-22B, 690 V, 10 A, 2-pole)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....	22,7 °C	—
	test enclosure W x H x D (mm x mm x mm) .....		—
	material of enclosure .....		—
	Main circuits, test conditions:		—
	- rated operational current I <sub>e</sub> (A) .....	10 A	—
	- cable/busbar cross-section (mm <sup>2</sup> ) / length (mm) ...	1,5 mm <sup>2</sup> cables / 1000mm long	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	SIBA	—
	- manufacturer's model or type reference .....	50 179 06.10	—
	- rated current (A) .....	10 A (gR)	—
	- power loss (W) .....	2,3 W	—
	- rated breaking capacity (kA) .....	200 kA	—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page 106	P
	Auxiliary circuits, test conditions:		N/A
	- rated operation current (A) .....		—
	- cable cross-section (mm <sup>2</sup> ) .....		—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page ___	N/A
8.3.3.2	Test of dielectric properties		P
	Rated impulse withstand voltage (kV) .....	6 kV	—
	- test U <sub>imp</sub> main circuits (kV) .....	7,3 kV	P
	- test U <sub>imp</sub> auxiliary circuits (kV) .....		N/A
	- test U <sub>imp</sub> on open main contacts (equipment suitable for isolation) (kV) .....	9,8 kV	P
	Power-frequency withstand voltage (V) .....	800 V	—
	- main circuits, test voltage for 5 sec. (V) .....	2000 V	P
	- control and auxiliary circuits, test voltage for 5 sec. (V) .....		N/A

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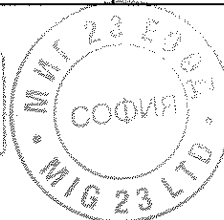
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Clause	Requirement + Test	Result - Remark	Verdict
	Devices, which have been disconnected for the power-frequency withstand voltage test .....		N/A
	Equipment suitable for isolation, leakage current not exceed 0,5 mA		—
	Test voltage 1,1 Ue (V) .....	759 V	—
	Measured leakage current (mA) .....	0,001 mA	P
8.3.3.3	Making and breaking capacity		P
	- utilization category .....	AC-22B	—
	- rated operational voltage Ue (V) .....	690 V	—
	- rated operational current Ie (A) or power (kW) .....	10 A	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	SIBA	—
	- manufacturer's model or type reference .....	50 179 06.10	—
	- rated current (A) .....	10 A (gR)	—
	- power loss (W) .....	2,3 W	—
	- rated breaking capacity (kA) .....	200 kA	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....	L1: L2: L3:	—
	- test current, I = ..... x Ie (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—
	Conditions for break operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....	L1: L2: L3:	—
	- test current, I = ..... x Ie (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—

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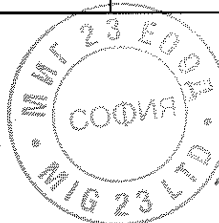
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Clause	Requirement + Test	Result - Remark	Verdict
	Conditions for make/break operations, other than AC-23A/B:		
	- test voltage, $U = 1,05 U_e$ ..... (V):	L1: 725 V (418,5 V x $\sqrt{3}$ ) L2: 725 V (418,5 V x $\sqrt{3}$ ) L3: —	—
	- test current, $I =$ ..... 3x $I_e$ (A):	L1: 31 A L2: 31 A L3: —	—
	- power factor/ time constant .....	0,65	—
	Number of make/break or make and break operations .....	5	P
	- recovery voltage duration ( $\geq 50$ ms)	> 50 ms	P
	- current duration (ms) .....	80 ms	—
	- time interval between operations .....	30 s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) .....	21,15 kHz	—
	- measured oscillatory frequency (kHz) .....	L1: 21,0 kHz L2: 21,0 kHz L3:	P
	- factor $\gamma$ .....	L1: 1,1 L2: 1,1 L3:	P
8.3.3.3.5	Behaviour of the equipment during making and breaking capacity tests		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.3.3.6	Condition of the equipment after making and breaking capacity tests		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8	22,5 N (required opening force) 150 N (test force acc. tab. 8)	P
	- equipment is able to carry its rated current after normal closing operation		P

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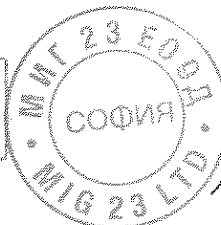
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Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.4	Dielectric verification		P
	test voltage: $2 \cdot U_e$ with a minimum of 1000V~ .....	1380 V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 $U_e$ ) (V) .....	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B): $\leq 0,5$ mA/pole .....		N/A
	Leakage current (other utilization categories): $\leq 2$ mA/pole) .....	< 2 mA	P
8.3.3.6	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	SIBA	—
	- manufacturer's model or type reference .....	50 179 06.10	—
	- rated current (A) .....	10 A (gR)	—
	- power loss (W) .....	2,3 W	—
	- rated breaking capacity (kA) .....	200 kA	—
	- conductor cross-section (mm <sup>2</sup> ) .....	1,5 mm <sup>2</sup>	—
	- test current $I_e$ (A) .....	10 A	—
	Measured temperature-rise .....	see appended table 8.3.3.6 on page 107	P
8.3.3.7	Strength of actuator mechanism		P
8.2.5	Verification of the strength of actuator mechanism and position indicating device		
	- actuator type (fig.) .....	figure 1b (one-finger operated)	—
8.2.5.2.1	Dependent and independent manual operation	dependent manual operation	P
	- actuating force for opening (N) .....	24,4 N	—
	- test force with blocked main contacts (N) .....	73,2 N	—
	- used method to keep the contact closed .....	Fuse-links were held tight with a piece of wire	—
	During and after the test, open position not indicated .....		P
	Equipment with locking mean, no locking in the open position while test force is applied .....		P

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Clause	Requirement + Test	Result - Remark	Verdict
8.2.5.2.2	Dependent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- 110% of the rated supply voltage applied to the equipment (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A
8.2.5.2.3	Independent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- stored energy of the power operator released (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A

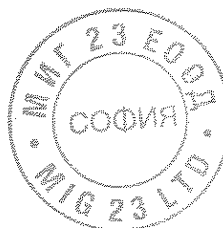
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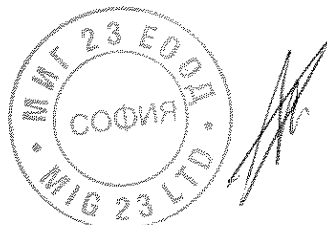


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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (Sample No. 7: AC-22B, 690 V, 32 A, 3-pole+N)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....	22,7 °C	—
	test enclosure W x H x D (mm x mm x mm) .....		—
	material of enclosure .....		—
	Main circuits, test conditions:		—
	- rated operational current I <sub>e</sub> (A) .....	32 A	—
	- cable/busbar cross-section (mm <sup>2</sup> ) / length (mm) ..	6 mm <sup>2</sup> cables / 1000mm long	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G32	—
	- rated current (A) .....	32 A (gG)	—
	- power loss (W) .....	2,9 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page 107	P
	Auxiliary circuits, test conditions:		N/A
	- rated operation current (A) .....		—
	- cable cross-section (mm <sup>2</sup> ) .....		—
	Measured temperature-rise .....	see appended table 8.3.3.1 on page __	N/A
8.3.3.2	Test of dielectric properties		P
	Rated impulse withstand voltage (kV) .....	6 kV	—
	- test U <sub>imp</sub> main circuits (kV) .....	7,3 kV	P
	- test U <sub>imp</sub> auxiliary circuits (kV) .....		N/A
	- test U <sub>imp</sub> on open main contacts (equipment suitable for isolation) (kV) .....	9,8 kV	P
	Power-frequency withstand voltage (V) .....	800 V	—
	- main circuits, test voltage for 5 sec. (V) .....	2000 V	P
	- control and auxiliary circuits, test voltage for 5 sec. (V) .....		N/A

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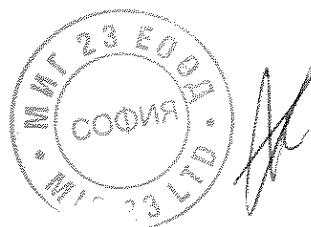
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Clause	Requirement + Test	Result - Remark	Verdict
	Devices, which have been disconnected for the power-frequency withstand voltage test .....		N/A
	Equipment suitable for isolation, leakage current not exceed 0,5 mA		—
	Test voltage 1,1 U <sub>e</sub> (V) .....	759 V	—
	Measured leakage current (mA) .....	0,001 mA	P
8.3.3.3	Making and breaking capacity		P
	- utilization category .....	AC-22B	—
	- rated operational voltage U <sub>e</sub> (V) .....	690 V	—
	- rated operational current I <sub>e</sub> (A) or power (kW) .....	32 A	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G32	—
	- rated current (A) .....	32 A (gG)	—
	- power loss (W) .....	2,9 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 U <sub>e</sub> .....	L1: L2: L3:	—
	- test current, I = ..... x I <sub>e</sub> (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—
	Conditions for break operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 U <sub>e</sub> .....	L1: L2: L3:	—
	- test current, I = ..... x I <sub>e</sub> (A):	L1: L2: L3:	—
	- power factor .....	L1: L2: L3:	—

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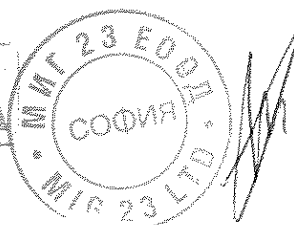
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Clause	Requirement + Test	Result - Remark	Verdict
	Conditions for make/break operations, other than AC-23A/B:		
	- test voltage, $U = 1,05 U_e$ ..... (V):	L1: 725 V (418,5 V x $\sqrt{3}$ ) L2: 725 V (418,5 V x $\sqrt{3}$ ) L3: 725 V (418,5 V x $\sqrt{3}$ )	—
	- test current, $I =$ ..... 3 x $I_e$ (A):	L1: 99 A L2: 98 A L3: 100 A	—
	- power factor/ time constant .....	0,63	—
	Number of make/break or make and break operations .....	5	P
	- recovery voltage duration ( $\geq 50$ ms)	> 50 ms	P
	- current duration (ms) .....	70 ms	—
	- time interval between operations .....	30 s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) .....	26,69 kHz	—
	- measured oscillatory frequency (kHz) .....	L1: 27,5 kHz L2: 27,5 kHz L3: 27,5 kHz	P
	- factor $\gamma$ .....	L1: 1,1 L2: 1,1 L3: 1,1	P
8.3.3.3.5	Behaviour of the equipment during making and breaking capacity tests		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.3.3.6	Condition of the equipment after making and breaking capacity tests		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8	46,2 N (required opening force) 150 N (test force acc. tab. 8)	P
	- equipment is able to carry its rated current after normal closing operation		P

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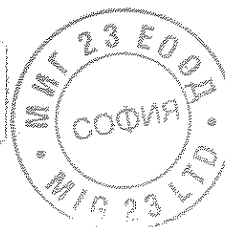




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Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.4	Dielectric verification		P
	test voltage: $2 \cdot U_e$ with a minimum of 1000V~ .....	1380 V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 $U_e$ ) (V) .....	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B): $\leq 0,5$ mA/pole .....		N/A
	Leakage current (other utilization categories): $\leq 2$ mA/pole) .....	< 2 mA	P
8.3.3.6	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G32	—
	- rated current (A) .....	32 A (gG)	—
	- power loss (W) .....	2,9 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	- conductor cross-section (mm <sup>2</sup> ) .....	6 mm <sup>2</sup>	—
	- test current $I_e$ (A) .....	32 A	—
	Measured temperature-rise .....	see appended table 8.3.3.6 on page 107	P
8.3.3.7	Strength of actuator mechanism		P
8.2.5	Verification of the strength of actuator mechanism and position indicating device		
	- actuator type (fig.) .....	figure 1b (one-finger operated)	—
8.2.5.2.1	Dependent and independent manual operation	dependent manual operation	P
	- actuating force for opening (N) .....	41,2 N	—
	- test force with blocked main contacts (N) .....	123,6 N	—
	- used method to keep the contact closed .....	Fuse-links were held tight with a piece of wire	—
	During and after the test, open position not indicated .....		P
	Equipment with locking mean, no locking in the open position while test force is applied .....		P

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Clause	Requirement + Test	Result - Remark	Verdict
8.2.5.2.2	Dependent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- 110% of the rated supply voltage applied to the equipment (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A
8.2.5.2.3	Independent power operation		N/A
	- main contacts fixed together in the closed position:		N/A
	- used method to keep the contact closed .....		N/A
	- stored energy of the power operator released (3 times) .....		N/A
	During and after the test, open position not indicated .....		N/A
	Equipment show no damage impairing its normal operation .....		N/A
	Equipment with locking mean, no locking in the open position while test force is applied .....		N/A

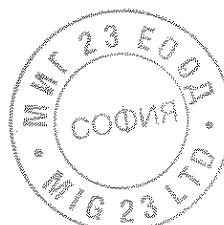
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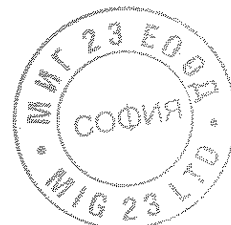


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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4	TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY (Sample No. 8: AC-21B, 500 V, 25 A, 1-pole)		P
8.3.4.1	Operational performance test		P
	- utilization category .....	AC-21B	—
	- rated operational voltage (V) .....	500 V	—
	- rated operational current (A) .....	25 A	—
	Test conditions for electrical operation cycles:		
	- test voltage (V) .....	L1: 506 V L2: — L3: —	—
	- test current (A) .....	L1: 25,6 A L2: — L3: —	—
	- power factor/time constant .....	L1: 0,95 L2: — L3: —	—
	Number of cycles with current .....	300	P
	Number of cycles without current .....	1700	P
	First test sequence (with/without current) .....	Without current	—
	Second test sequence (with/without current) .....	With current	—
	- time interval between first and second test sequence .....	515 minutes	—
8.3.4.1.5	Behaviour of the equipment during the operational performance test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P

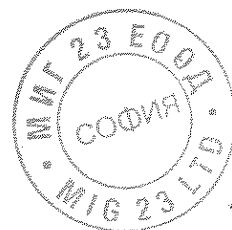
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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.1.6	Condition of the equipment after making and breaking capacity tests		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8	11,2 N (required opening force) 150 N (test force acc. tab. 8)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.4.2	Dielectric verification		P
	test voltage: $2 \cdot U_e$ with a minimum of 1000V~ .....	1000 V (tested with 1380 V)	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 $U_e$ ) (V) .....	550 V (tested with 759 V)	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) $\leq 0,5$ mA/pole .....		N/A
	Leakage current (other utilization categories) $\leq 2$ mA/pole .....	< 2 mA	P
8.3.4.4	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G25	—
	- rated current (A) .....	25 A (gG)	—
	- power loss (W) .....	2,6 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	- conductor cross-section (mm <sup>2</sup> ) .....	4 mm <sup>2</sup>	—
	- test current $I_e$ (A) .....	25 A	—
	Measured temperature-rise .....	see appended table 8.3.4.4 on page 108	P

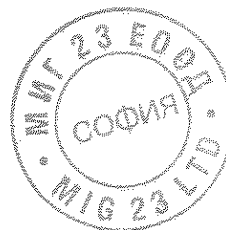
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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4	TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY (Sample No. 9: AC-21B, 690 V, 10 A, 1-pole)		P
8.3.4.1	Operational performance test		P
	- utilization category .....	AC-21B	—
	- rated operational voltage (V) .....	690 V	—
	- rated operational current (A) .....	10 A	—
	Test conditions for electrical operation cycles:		
	- test voltage (V) .....	L1: 690 V L2: — L3: —	—
	- test current (A) .....	L1: 10,2 A L2: — L3: —	—
	- power factor/time constant .....	L1: 0,95 L2: — L3: —	—
	Number of cycles with current .....	300	P
	Number of cycles without current .....	1700	P
	First test sequence (with/without current) .....	Without current	—
	Second test sequence (with/without current) .....	With current	—
	- time interval between first and second test sequence .....	1125 minutes	—
8.3.4.1.5	Behaviour of the equipment during the operational performance test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.1.6	Condition of the equipment after making and breaking capacity tests		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8	8,0 N (required opening force) 150 N (test force acc. tab. 8)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.4.2	Dielectric verification		P
	test voltage: $2 \cdot U_e$ with a minimum of 1000V~ .....	1380 V	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 $U_e$ ) (V) .....	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) $\leq 0,5$ mA/pole .....		N/A
	Leakage current (other utilization categories) $\leq 2$ mA/pole .....	0,005 mA	P
8.3.4.4	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	SIBA	—
	- manufacturer's model or type reference .....	50 179 06.10	—
	- rated current (A) .....	10 A (gR)	—
	- power loss (W) .....	2,3 W	—
	- rated breaking capacity (kA) .....	200 kA	—
	- conductor cross-section (mm <sup>2</sup> ) .....	1,5 mm <sup>2</sup>	—
	- test current $I_e$ (A) .....	10 A	—
	Measured temperature-rise .....	see appended table 8.3.4.4 on page 108	P

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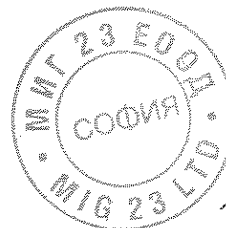


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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4	TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY (Sample No. 10: AC-22B, 400 V, 32 A, 1-pole)		P
8.3.4.1	Operational performance test		P
	- utilization category .....	AC-22B	—
	- rated operational voltage (V) .....	400 V	—
	- rated operational current (A) .....	32 A	—
	Test conditions for electrical operation cycles:		
	- test voltage (V) .....	L1: 414 V L2: L3: —	—
	- test current (A) .....	L1: 32,1 A L2: L3: —	—
	- power factor/time-constant .....	L1: 0,79 L2: L3: —	—
	Number of cycles with current .....	300	P
	Number of cycles without current .....	1700	P
	First test sequence (with/without current) .....	Without current	—
	Second test sequence (with/without current) .....	With current	—
	- time interval between first and second test sequence .....	315 minutes	—
8.3.4.1.5	Behaviour of the equipment during the operational performance test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P

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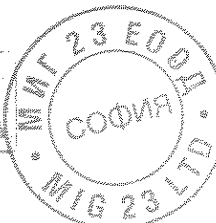
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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.1.6	Condition of the equipment after making and breaking capacity tests		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8	11,4 N (required opening force) 150 N (test force acc. tab. 8)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.4.2	Dielectric verification		P
	test voltage: $2 \cdot U_e$ with a minimum of 1000V~ .....	1000 V (tested with 1380 V)	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 $U_e$ ) (V) .....	440 V (tested with 759 V)	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) $\leq 0,5$ mA/pole .....		N/A
	Leakage current (other utilization categories) $\leq 2$ mA/pole .....	0,006 mA	P
8.3.4.4	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G32	—
	- rated current (A) .....	32 A (gG)	—
	- power loss (W) .....	2,9 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	- conductor cross-section (mm <sup>2</sup> ) .....	6 mm <sup>2</sup>	—
	- test current $I_e$ (A) .....	32 A	—
	Measured temperature-rise .....	see appended table 8.3.4.4 on page 108	P

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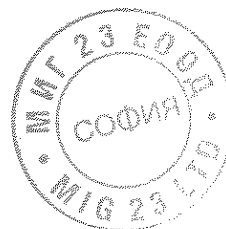
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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4	TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY (Sample No. 11: AC-22B, 400 V, 32 A, 2-poles)		P
8.3.4.1	Operational performance test		P
	- utilization category .....	AC-22B	—
	- rated operational voltage (V) .....	400 V	—
	- rated operational current (A) .....	32 A	—
	Test conditions for electrical operation cycles:		
	- test voltage (V) .....	L1: 414 V (239 V x $\sqrt{3}$ ) L2: 414 V (239 V x $\sqrt{3}$ ) L3: —	—
	- test current (A) .....	L1: 32,2 A L2: 32,2 A L3: —	—
	- power factor/time constant .....	L1: 0,8 L2: 0,8 L3: —	—
	Number of cycles with current .....	300	P
	Number of cycles without current .....	1700	P
	First test sequence (with/without current) .....	Without current	—
	Second test sequence (with/without current) .....	With current	—
	- time interval between first and second test sequence .....	315 minutes	—
8.3.4.1.5	Behaviour of the equipment during the operational performance test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P

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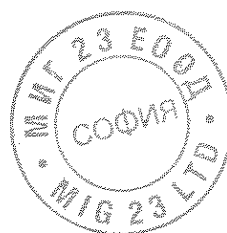


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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.1.6	Condition of the equipment after making and breaking capacity tests		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8	21,4 N (required opening force) 150 N (test force acc. tab. 8)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.4.2	Dielectric verification		P
	test voltage: $2 \cdot U_e$ with a minimum of 1000V~ .....	1000 V (tested with 1380 V)	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 $U_e$ ) (V) .....	440 V (tested with 759 V)	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) $\leq 0,5$ mA/pole .....		N/A
	Leakage current (other utilization categories) $\leq 2$ mA/pole .....	0,006 mA	P
8.3.4.4	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G32	—
	- rated current (A) .....	32 A (gG)	—
	- power loss (W) .....	2,9 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	- conductor cross-section (mm <sup>2</sup> ) .....	6 mm <sup>2</sup>	—
	- test current $I_e$ (A) .....	32 A	—
	Measured temperature-rise .....	see appended table 8.3.4.4 on page 109	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4	TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY (Sample No. 12: AC-22B, 500 V, 25 A, 2-poles)		P
8.3.4.1	Operational performance test		P
	- utilization category .....	AC-22B	—
	- rated operational voltage (V) .....	500 V	—
	- rated operational current (A) .....	25 A	—
	Test conditions for electrical operation cycles:		
	- test voltage (V) .....	L1: 510 V (294,4 V x $\sqrt{3}$ ) L2: 510 V (294,4 V x $\sqrt{3}$ ) L3:—	—
	- test current (A) .....	L1: 24,9 A L2: 24,9 A L3: —	—
	- power factor/time constant .....	L1: 0,78 L2: 0,78 L3: —	—
	Number of cycles with current .....	300	P
	Number of cycles without current .....	1700	P
	First test sequence (with/without current) .....	Without current	—
	Second test sequence (with/without current) .....	With current	—
	- time interval between first and second test sequence .....	315 minutes	—
8.3.4.1.5	Behaviour of the equipment during the operational performance test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P

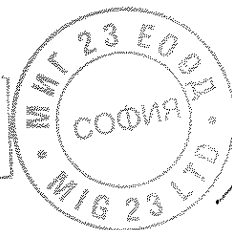
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ВЯРНО С  
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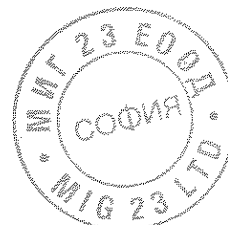


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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.1.6	Condition of the equipment after making and breaking capacity tests		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8	21,6 N (required opening force) 150 N (test force acc. tab. 8)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.4.2	Dielectric verification		P
	test voltage: $2 \cdot U_e$ with a minimum of 1000V~ .....	1000 V (tested with 1380 V)	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 $U_e$ ) (V) .....	550 V (tested with 759 V)	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) $\leq 0,5$ mA/pole .....		N/A
	Leakage current (other utilization categories) $\leq 2$ mA/pole .....	< 2 mA	P
8.3.4.4	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	Bussmann	—
	- manufacturer's model or type reference .....	C10G25	—
	- rated current (A) .....	25 A (gG)	—
	- power loss (W) .....	2,6 W	—
	- rated breaking capacity (kA) .....	120 kA	—
	- conductor cross-section (mm <sup>2</sup> ) .....	4 mm <sup>2</sup>	—
	- test current $I_e$ (A) .....	25 A	—
	Measured temperature-rise .....	see appended table 8.3.4.4 on page 109	P

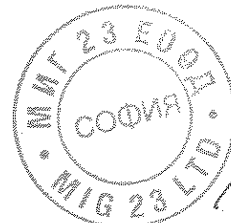
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.4	TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY (Sample No. 13: AC-22B, 690 V, 10 A, 2-poles)		P
8.3.4.1	Operational performance test		P
	- utilization category .....	AC-22B	—
	- rated operational voltage (V) .....	690 V	—
	- rated operational current (A) .....	10 A	—
	Test conditions for electrical operation cycles:		
	- test voltage (V) .....	L1: 690 V (398,4 V x $\sqrt{3}$ ) L2: 690 V (398,4 V x $\sqrt{3}$ ) L3:—	—
	- test current (A) .....	L1: 10 A L2: 10 A L3: —	—
	- power factor/time constant .....	L1: 0,78 L2: 0,78 L3: —	—
	Number of cycles with current .....	300	P
	Number of cycles without current .....	1700	P
	First test sequence (with/without current) .....	Without current	—
	Second test sequence (with/without current) .....	With current	—
	- time interval between first and second test sequence .....	315 minutes	—
8.3.4.1.5	Behaviour of the equipment during the operational performance test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P

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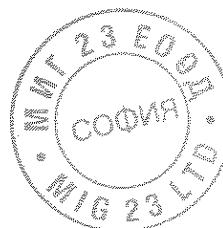


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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.1.6	Condition of the equipment after making and breaking capacity tests		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8	21,8 N (required opening force) 150 N (test force acc. tab. 8)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.4.2	Dielectric verification		P
	test voltage: $2 \cdot U_e$ with a minimum of 1000V~ .....	1380 V	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 $U_e$ ) (V) .....	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) $\leq 0,5$ mA/pole .....		N/A
	Leakage current (other utilization categories) $\leq 2$ mA/pole .....	0,008 mA	P
8.3.4.4	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....	SIBA	—
	- manufacturer's model or type reference .....	50 179 06.10	—
	- rated current (A) .....	10 A (gR)	—
	- power loss (W) .....	2,3 W	—
	- rated breaking capacity (kA) .....	200 kA	—
	- conductor cross-section (mm <sup>2</sup> ) .....	1,5 mm <sup>2</sup>	—
	- test current $I_e$ (A) .....	10 A	—
	Measured temperature-rise .....	see appended table 8.3.4.4 on page 109	P

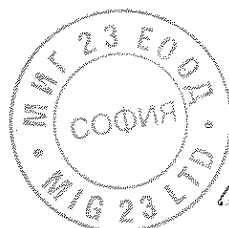
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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.4	TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY (Sample No. 14: AC-22B, 690 V, 32 A, 3-poles+N)		P
8.3.4.1	Operational performance test		P
	- utilization category .....	AC-22B	—
	- rated operational voltage (V) .....	690 V	—
	- rated operational current (A) .....	32 A	—
	Test conditions for electrical operation cycles:		
	- test voltage (V) .....	L1: 690 V (398,4 V x $\sqrt{3}$ ) L2: 690 V (398,4 V x $\sqrt{3}$ ) L3: 690 V (398,4 V x $\sqrt{3}$ )	—
	- test current (A) .....	L1: 33 A L2: 33 A L3: 33 A	—
	- power factor/time constant .....	L1: 0,8 L2: 0,8 L3: 0,8	—
	Number of cycles with current .....	300	P
	Number of cycles without current .....	1700	P
	First test sequence (with/without current) .....	Without current	—
	Second test sequence (with/without current) .....	With current	—
	- time interval between first and second test sequence .....	315 minutes	—
8.3.4.1.5	Behaviour of the equipment during the operational performance test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P

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