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СПИСЪК НА ПРОВЕЖДАНИТЕ ИЗПИТВАНИЯ НА ЛИНЕЙНИ ЗАЩИТНО-КОМУТАЦИОННИ АПАРАТИ НИСКО НАПРЕЖЕНИЕ (НН) ЗА ВЕРТИКАЛЕН МОНТАЖ

Линейни защитно-комутационни апарати ниско напрежение (НН) за вертикален монтаж (ВПР):

ARS 2-6-V/400 A
ARS 3-6-V/630 A

Производство на: APATOR® SA
Улица: Zolkiewsuiego 13/29, Пощенски код: 87-100, Населено място: Torun, Страна: Poland
Телефонен номер: +48 56/ 61 91 627
Номер на телефакс+48 56/ 61 91 295
e-mail: trade@apator.com.pl
Homepage: www. apator.com.pl

Типовите изпитвания се провеждат съгласно изискванията на стандарти:

БДС EN 60269-1:2007 - Комутационни апарати за ниско напрежение. Част 1: Общи правила (IEC 60947-1:2007)

БДС EN 60947-3:2009+A1+A2 - Комутационни апарати за ниско напрежение. Част 3: Товарови прекъсвачи, разединители, товарови прекъсвач-разединители и апарати, комбинирани със стопяеми предпазители (IEC 60947-3:2008+A1+A2)

Рутинните (контролни) изпитания се провеждат на представителна извадка от произведените количества съгласно горепосочените стандарти, както следва:

1. Визуална проверка и контрол на продуктите, част от непрекъснатата система за следене на качеството;
2. Контролни изпитвания и сравнение на измерените стойности с нормативно указаните. Маркиране на всеки ВПР с идентификационен и сериен номер, запазване в архивен масив;
3. Механични рутинни изпитвания съгласно предписанията на горепосочените стандарти;
4. Проверка на проектните и фактически размери, контактни повърхности на изделията.

15.01.2020 г.

Кандидат: ИНТЕРКОМПЛЕКС ООД

На основание чл.36а ал.3 от ЗОП

..

тел

60

Приложение ТС 1.4

POLSKIE CENTRUM AKREDYTACJI

POLISH CENTRE FOR ACCREDITATION

Sygnatariusz EA MLA
EA MLA Signatory

CERTYFIKAT AKREDYTACJI

LABORATORIUM BADAWCZEGO

ACCREDITATION CERTIFICATE OF TESTING LABORATORY

Nr AB 044

Potwierdza się, że: / This is to confirm that:

STOWARZYSZENIE ELEKTRYKÓW POLSKICH
BIURO BADAWCZE ds. JAKOŚCI
LABORATORIUM BADAWCZE
ul. M. Pożaryskiego 28, 04-703 Warszawa

spełnia wymagania normy PN-EN ISO/IEC 17025:2005
meets requirements of the PN-EN ISO/IEC 17025:2005 standard

Akredytowana działalność jest określona w Zakresie Akredytacji Nr AB 044
Accredited activity is defined in the Scope of Accreditation No AB 044

Akredytacja pozostaje w mocy pod warunkiem przestrzegania wymagań jednostki akredytującej określonych w kontrakcie Nr AB 044
This accreditation remains in force provided the Laboratory observes the requirements of Accreditation Body defined in the Contract No AB 044

Certyfikat akredytacji ważny do dnia 20.06.2014 r.
The certificate of accreditation is valid until 20.06.2014

Akredytacji udzielono dnia 30.11.1995 r.
Accreditation was granted on 30.11.1995

DYREKTOR
POLSKIEGO CENTRUM AKREDYTACJI

EUGENI

На основание чл.36а ал.3 от ЗОП

Warszawa, 4 czerwca 2010 roku

ВЯРНО С ОРИГИНАЛА

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Приложение ТС 1.5

ЕТ "АДИС - 9 -
Анелия Митева"

АГЕНЦИЯ ЗА ПРЕВОДИ

Адрес на управление: 4023 Пловдив, ж.р.Тракия, бл.20, ет.9, ап.53, тел: 032/ 826632; 266292

Превод от полски език

APATOR SA

Декларация CE за съответствие

№	0023/04
Производител:	APATOR SA
Адрес:	ул. Золкиевскиего 13/29; 87-100 Торун Полша
Обозначение на продукта (име, тип):	Вертикални разединители с ножови предпазители тип ARS 2-
Декларираме, че посочения продукт съответства на следните изисквания:	
Европейски директиви:	73/23/EEC + 93/68/EEC Директива за ниско напрежение, касаеща хармонизирането на правните предписанията на държавите членки, които се отнасят за електрическата техника, предназначена за използване в определени граници на напрежение.
Съгласувани стандарти и/или стандартна IEC:	PN-EN 60947-1 Комутационна и контролна апаратура ниско напрежение Част 1: Общи решения PN-EN 60947-3 Комутационна и контролна апаратура ниско напрежение Част 3: Превключватели, разединители, превключващи разединители и комбинирани устройства със стопяеми предпазители
Държавни норми и/или техническа документация:	Техническа документация и комплект от чертежи 63-811216-*; 63-811217-*; 63-811463-*
Документи идентифициращи стоката:	Каталожна карта "Ножови включватели серия ARS, PBS" №1/2003/1.
Град, дата:	Торун, 30.04.2004г.
Име, фамилия, длъжност, подпис:	Генерален Директор Януш Ниеджвидзки Подпис: не се чете

В случай на въвеждане на изменения на продукта, несъгласувани с производителя или ако използването не е съгласно предназначението, тази декларация става невалидна.

Подписаната Анелия Иванова Митева удостоверявам верността на извършения от мен превод от полски език на български език на приложения документ – " Декларация CE за съответствие". Преводът се състои от 1 (една) страница.

На основание чл.36а ал.3 от ЗОП

ВЯРНО С ОРИГИНАЛА

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APATOR® SA

DEKLARACJA CE ZGODNOŚCI
EC Declaration of conformity

ISO 14001 APATOR - SPÓŁKA AKCYJNA

CERTYFIKATY SYSTEMU JAKOŚCI ISO 9001 APATOR - SPÓŁKA AKCYJNA

Nr No	0023/04
Producent Manufacturer	APATOR SA
Adres Address	ul. Żółkiewskiego 13/29; 87-100 Toruń PL
Oznaczenie produktu (nazwa, typ) Product designation (name, type)	Rozłączniki izolacyjne bezpiecznikowe listwowe typu ARS 2-

Deklarujemy, że oznaczony wyrób jest zgodny z następującymi wymaganiami:
It is declared that the designed product is in conformity with the provisions of the following requirements:

Dyrektyw europejskich: European Directives:	73/23/EEC + 93/68/EEC Dyrektywa niskonapięciowa dotycząca harmonizacji przepisów prawnych państw członkowskich odnoszących się do sprzętu elektrycznego przeznaczonego do użytkowania w określonych zakresach napięć.
Norm zharmonizowanych i/lub norm IEC: Harmonised standards and/or IEC standars:	PN-EN 60947-1 Aparatura rozdzielcza i sterownicza niskonapięciowa Część 1: Postanowienia ogólne PN-EN 60947-3 Aparatura rozdzielcza i sterownicza niskonapięciowa Część 3: Rozłączniki, odłączniki, rozłączniki izolacyjne i zestawy łączników z bezpiecznikami topikowymi
Norm krajowych i/lub dokumentacji technicznych: National standards and/or technical specification:	Dokumentacja techniczna rysunki zestawcze: 63-811216-*; 63-811217-*; 63-811463-*
Dokumenty identyfikujące wyrób: Product identification documents:	Karta katalogowa „Łączniki listwowe serii ARS, PBS” Nr 1/2003/1 .
Miejscowość, data Place, date	Toruń, 2004.04.30
Imię nazwisko stanowisko podpis Name, surname, function, signature	На основание чл.36а ал.3 от ЗОП

W przypadku wprowadzenia nieuzgodnionych z producentem zmian w wyrobie lub zastosowania go niezgodnie z przeznaczeniem niniejsza deklaracja traci ważność.
If any changes of the product are not agreed with the manufacturer or the product is inappropriately used, this declaration becomes null and void.

ВЯРНО С ОРИГИНАЛА

intercomplex Ltd.®

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Приложение ТС-1.6
към Технически спецификации
по процедура PPD 19-130

ДЕКЛАРАЦИЯ

за съответствие на предлаганото изпълнение

Долуподписаният, **Ехиязар Гарабед Узунян**, с л.к. № На основание чл.36а ал.3 от ЗОП
На основание чл.36а ал.3 от ЗОП качеството ми на управител на **"ИНТЕРКОМПЛЕКС" ООД**, кандидат за участие в обществена поръчка чрез събиране на оферти с обява с предмет: „Доставка на линейни защитно-комутационни апарати ниско напрежение (НН) за вертикален закрит монтаж", реф. № PPD 17-162, с възложител „ЧЕЗ Разпределение България" АД

ДЕКЛАРИРАМ:

1. Доставяните от фирма „Интеркомплекс" ООД линейни защитно-комутационни апарати ниско напрежение (НН) за вертикален монтаж (ВПР), типове ARS 2-6-V/400A, производство на "АПАТОР" – Полша, отговарят напълно на изискванията на техническата спецификация на този стандарт за материал, вкл. на параграфи „Характеристика на материала" и „Съответствие на предложеното изпълнение със нормативно-техническите документи".

2. Правя настоящата декларация на основание CE декларация на производителя.

Известно ми е, че при деклариране на неверни данни, нося наказателна отговорност по чл. 313 от НК.

15.01.2020 г.

Участник: ИНТЕРКОМПЛЕКС ООД

На основание чл.36а ал.3 от ЗОП .....

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Приложение ТС-1.7
към Технически спецификации
по процедура PPD 19-130

ИНСТРУКЦИЯ

ЗА ТРАНСПОРТИРАНЕ,СЪХРАНЕНИЕ, МОНТАЖ И ЕКСПЛОАТАЦИЯ НА ЛИНЕЙНИ ЗАЩИТНО-КОМУТАЦИОННИ АПАРАТИ НИСКО НАПРЕЖЕНИЕ (НН) ЗА ВЕРТИКАЛЕН МОНТАЖ (ВПР)

Транспорт и съхранение

Линейните защитно-комутационни апарати ниско напрежение (НН) за вертикален монтаж (ВПР) се доставят в индивидуална единична опаковка от картон.

Съхраняват се в сухи, проветриви помещения, годни за съхраняване на електротехническо оборудване.

Монтаж и експлоатация

Линейните защитно-комутационни апарати ниско напрежение (НН) за вертикален монтаж се монтират в касетата посредством специални контактни скоби (куки), без пробиване на тоководещите шини.

За присъединяване на захранващите кабели, ВПР са съоръжени с V-съединителна арматура. **ДА СЕ СПАЗВА ОБОЗНАЧЕНИЯТ ВЪРТЯЩ МОМЕНТ НА ЗАТЯГАНЕ НА КЛЕМАТА!**

Отварянето и затварянето на ВПР да се извършва с резки движения, без да се удря затварящия лост.

Работата с предпазители трябва да се извършва единствено и само от квалифициран и упълномощен за това персонал. Снемането и поставянето на предпазителите от гнездата на разединителите да се извършва **САМО** в положение "отворено/заключено", чрез движение на лоста надолу по неговата дължина. Отключва се в обратна посока.

При необходимост от подмяна на ВПР се действа в следния ред:

- сваля се предпазния капак на клемния блок
- развива се затягащия болт на V-клемите и се отстраняват кабелите,
- отваря се ВПР,
- изважда се изцяло капакът с предпазителите,
- свалят се капачките на ревизионните отвори,
- разхлабват се болтовете (3 бр.) на контактните скоби,
- с движение нагоре и напред се отстранява корпусът на ВПР.

Монтажът на новия разединител се извършва в обратен ред. При провеждане на такива дейности, разединителите и предпазителите да се поставят върху чисти и сухи повърхности, по възможност, във фабричната им опаковка.

Подмяната на изгорял предпазител се извършва, като се отвори блокът с носачите на ВП, изважда се изгорелият и се поставя нов. Разединителят се затваря с рязко движение, но без удар. При това, за да се осигури безопасна работа, блокът с предпазителите се "заключва" в извадено положение чрез движение на лоста надолу по неговата дължина. Отключва се в обратна посока.

Задължително се взимат мерки за безопасност съгласно утвърдените наредби и правилници и осигуряване на изискваните лични предпазни средства при работа по електрически мрежи.

Да не се правят опити за ремонт или модификация на ВПР!

Поддръжка

ВПР не изискват специална поддръжка. Веднъж на 6 месеца да се прави инспекция на контактната система и при необходимост да се нанася контактна смазка.

15.01.2020 г.

Участник: ИНТЕРКОМПЛЕКС ООД

На основание чл.36а ал.3 от ЗОП

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тел

06

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1113 София, ул. "Акад. Г. Бончев" № 20, тел. (02) 971 70 41, факс: (02) 971 71 41, e-mail: office.sf@intercomplex.bg

Приложение ТС 2.2
към Технически спецификации
по процедура PPD 19-130

ТЕХНИЧЕСКО ОПИСАНИЕ НА ЛИНЕЙНИ ЗАЩИТНО-КОМУТАЦИОННИ АПАРАТИ НИСКО НАПРЕЖЕНИЕ (НН) ЗА ВЕРТИКАЛЕН МОНТАЖ

Линейните защитно-комутационни апарати ниско напрежение (НН) за вертикален монтаж (ВПР) е предназначен за включване, изключване, разединяване и защита на кабелни линии НН. ВПР е с конструкция, позволяваща едновременното прекъсване на веригата на трифазното захранване, чрез общо управление на полюсите.

Предлаганите ВПР са с обявен работен ток **630 А**, за директен монтаж върху събирателни токови шини с междуосово разстояние 185 mm. Закрепването към шините се извършва чрез специални скоби (куки), които осигуряват необподимия контакт, без да е нужно да се пробиват отвори в шините.

В разединителите се монтират високомощни предпазители със стопяема вложка НН (ВПНН), система А (NH система), с характеристика gG, **размер 3**, съответстващи на БДС EN 60269-1:2007 и БДС HD 60269-2:2007.

Конструкцията на предлаганите ВПР осигурява възможност същите да бъдат "заключвани" както в положение "отворен", така и в положение "затворен", за да се избегне произволно включване/изключване. Това се обезпечава само с едно движение на командния лост нагоре/надолу.

За удобство на обслужващите специалисти е осигурена възможност за тестване състоянието на предпазителите, без да е необходимо отваряне на ВПР, както и видимост за състоянието на челния индикатор на ВПНН.

Триполюсният вертикален предпазител-разединител за **630 А**, с общо управление на полюсите е изпитан и отговаря на съответните за този тип изделия български и международни стандарти както следва:

- БДС EN 60947-1:2007+A1:2011+A2:20014 „Комутационни апарати за ниско напрежение. Част 1: Общи правила" (IEC 60947-1:2007); и
- БДС EN 60947-3:2009+A1:2012+A2:2015 „Комутационни апарати за ниско напрежение. Част 3: „Товарови прекъсвачи, разединители, товарови прекъсвач-разединители и апарати, комбинирани с предпазители." (IEC 60947-3:2008), (IEC 60947-3:2008/A1:2012), (IEC 60947-3:2008/A2:2015)

Чертежи с размери има в приложения каталог

15.01.2020 г.

Участник: ИНТЕРКОМПЛЕКС ООД

На основание чл.36а ал.3 от ЗОП .....

тел

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Приложение ТС 2.3

Test Report issued under the responsibility of:

TEST REPORT
IEC/EN 60947-3
Low-voltage switchgear and controlgear
Part 3: Switches, disconnectors, switch-disconnectors and fuse combination units

Report Reference No. ..... :	LA-08.122/E
Date of issue ..... :	2008-07-31
Total number of pages ..... :	48
CB/CCA Testing Laboratory ..... :	BBJ-SEP TESTING LABORATORY
Address ..... :	04-703 Warszawa, ul. Pożaryskiego 28, POLAND
Applicant's name ..... :	APATOR S.A.
Address ..... :	87-100 Toruń, ul. Żółkiewskiego 21/29 POLAND
Test specification:	
Standard ..... :	☒ IEC 60947-3:1999 (Second Edition) + A1:2001 + A2:2005 in conjunction with IEC 60947-1:2004 (Fourth Edition) ☒ EN 60947-3:1999 + A1:2001 + A2:2005 in conjunction with EN 60947-1:2004
Test procedure ..... :	CCA
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IECEN60947_3B
Test Report Form(s) Originator ..... :	OVE
Master TRF ..... :	Dated 2006-08

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.
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.

If this Test Report Form is used by non-CCA members, the CIG logo and the reference to the CCA Procedure shall be removed.
This report is not valid as a CCA Test Report unless signed by an approved CCA Testing Laboratory and appended to a CCA Test Certificate issued by an NCB in accordance with CCA

Test item description ..... :	Fuse-switch disconnectors
Trade Mark ..... :	APATOR
Manufacturer ..... :	APATOR S.A. 87-100 Toruń ul. Żółkiewskiego 21/29 POLAND
Model/Type reference ..... :	ARS 3
Ratings ..... :	see page 4

Testing procedure and testing location:	
☒ **CB/CCA Testing Laboratory:**	BBJ-SEP TESTING LABORATORY
Testing location/ address.....	20-150 Lublin, ul. Rapackiego 13/15, POLAND
☐ **Associated CB Laboratory:**	
Testing location/ address.....	N/A
Tested by (name + signature).....	Dariusz Szczepanowski
Approved by (+ signature)	Leszek Krzyżanowski
☐ Testing procedure: TMP	
Tested by (name + signature).....	N/A
Approved by (+ signature)	N/A
Testing location/ address.....	N/A
☐ Testing procedure: WMT	
Tested by (name + signature).....	N/A
Witnessed by (+ signature).....	N/A
Approved by (+ signature)	N/A
Testing location/ address.....	N/A
☐ Testing procedure: SMT	
Tested by (name + signature).....	N/A
Approved by (+ signature)	N/A
Supervised by (+ signature).....	N/A
Testing location/ address.....	N/A
☐ Testing procedure: RMT	
Tested by (name + signature).....	N/A
Approved by (+ signature)	N/A
Supervised by (+ signature).....	N/A
Testing location/ address.....	N/A

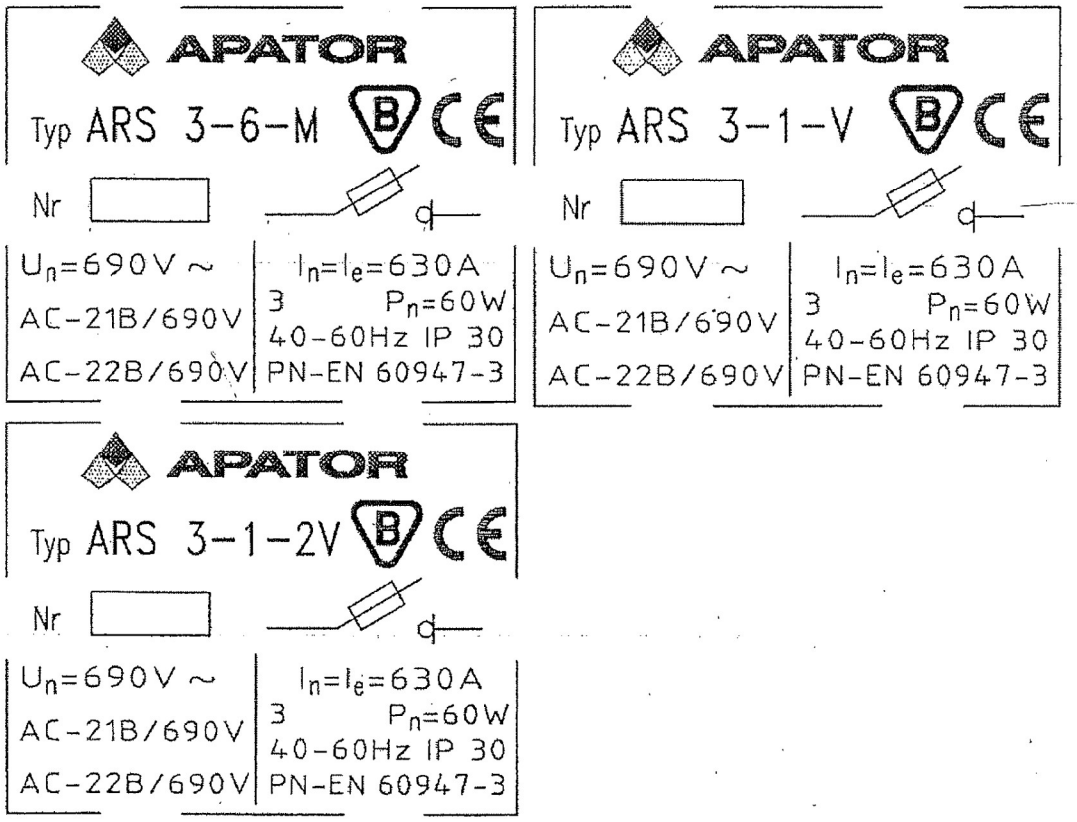
Summary of testing:

Test sequence	Clause	Requirements - Test	Sample No.	Verdict
0	5	Product information	A3/10	P
	7	Constructional and performance requirements	A3/10, A3/11, A3/15	P
I	8.3.3.1	Temperature rise		P
	8.3.3.2	Dielectric properties		P
	8.3.3.3	Making and breaking capacity	A3/1 (AC-22B, 690 V) A3/6 (AC-21B, 690 V) A3/4 (AC-22B, 400 V) A3/5 (AC-21B, 400 V)	P
	8.3.3.4	Dielectric verification		P
	8.3.3.5	Leakage current		P
	8.3.3.6	Temperature-rise verification		P
	8.3.3.7	Strength of actuator mechanism	—	N/A
II	8.3.4.1	Operational performance	A3/3 (AC-22B, 690 V) A3/7 (AC-21B, 690 V) A3/8 (AC-22B, 400 V) A3/9 (AC-21B, 400 V)	P
	8.3.4.2	Dielectric verification		P
	8.3.4.3	Leakage current		P
	8.3.4.4	Temperature-rise verification		P
III	8.3.5	Short-circuit performance capability	—	N/A
IV	8.3.6.2.	Fuse protected short-circuit withstand	2W	P*)
	8.3.6.3	Dielectric verification		P
	8.3.6.4	Leakage current		P
	8.3.6.5	Temperature-rise verification		P
V	8.3.7.1	Overload test	A3/10	P
	8.3.7.2	Dielectric verification		P
	8.3.7.3	Leakage current		P
	8.3.7.4	Temperature-rise verification		P

*) Short-circuit breaking capacity with alternating current test was carried out at Laboratorium Badawcze Aparatury Rozdzielczej of Instytut Elektrotechniki in Warsaw. The particular results of the test are given in test report No. 7670/NBR/08 from 2008-06-12, see Annex to this report.

Summary of compliance with National Differences: —

Copy of marking plate:



Marking of samples for tests:		
Type of fuse-switch disconnector	Number of samples	Date of receipt
ARS 3-6-M	A3/1, A3/2, A3/3, A3/4, A3/5, A3/6, A3/7, A3/8, A3/9, A3/10,	2008-05-16
	2W (sample tested at IEL in Warsaw)	—
ARS 3-1-V	A3/11, A3/12, A3/13, A3/14,	2008-05-16
ARS 3-1-2V	A3/15, A3/16, A3/17, A3/18	

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Test item particulars	
- method of operation	Manual
- switching positions	O I
- number of poles	3
- kind of current	AC
- number of phases	3
- rated frequency (Hz)	40…60 Hz
- number of positions of the main contacts	2
Rated and limiting values, main circuit	—
- rated operational voltage Ue (V)	400 V, 690 V - AC
- rated insulation voltage Ui (V)	1000 V
- rated impulse withstand voltage Uimp (kV)	12 kV
- conventional free air thermal current Ith (A)	630 A
- conventional enclosed thermal current Ithe (A)	—
- rated operational current Ie (A)	630 A
- rated uninterrupted current Iu (A)	630 A
- utilization category	AC-22B, AC-21B
Short-circuit characteristic	
- rated short-time withstand current Icw (kA)	—
- rated short-time making capacity Icm (kA)	—
- rated conditional short-circuit current	100 kA (fuse link 630 A)
Rated and limiting values, auxiliary circuits	
- rated operational voltage (V)	—
- rated frequency (Hz)	—
- number of circuits	—
- number and kind of contact elements	—
Co-ordination of short-circuit protective devices	
- kind of protective device	fuse link 630 A gG
Possible test case verdicts:	
- 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)
Testing	
Date of receipt of test item	2008-05-16
Date (s) of performance of tests	2008-05-16 … 2008-07-31

General remarks:

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.

Note: EN Group Differences together with National Differences and Special National Conditions, if any, are in the Appendix to the main body of this TRF.

Throughout this report a comma (point) is used as the decimal separator.

General product information: —

IEC / EN 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		P
	- indication of the open and closed position	Visible isolating distance between open contacts	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:		P
	- manufacturer's name or trademark	APATOR	P
	- type designation or serial number	ARS 3	P
	- rated operational current	See copies of marking plates	P
	- rated operational voltage	690 V - AC	P
	- utilization category	AC-22B, AC-21B	P
	- rated frequency	40 – 60 Hz	P
	- manufacturer's claim for compliance with IEC/EN 60947-3	EN 60947-3	P
	- degree of protection		N/A
	Marking on fuse-combination units:		P
	- fuse type	3 gG	P
	- maximum rated current	630 A	P
	- power loss of the fuse-link	60 W	P
	Identification of terminals:		P
	- line terminals		P
	- load terminals	L1, L2, L3	P
	- neutral pole terminal		N/A
	- protective earth terminal		N/A
	Data in the manufacturer's published information:		P
	- rated insulation voltage	1000 V	P
	- rated impulse withstand voltage for equipment suitable for isolation or when determined	12 kV	P
	- pollution degree, if different from 3	3	P
	- rated duty	Uninterrupted duty	P
	- rated short-time withstand current and duration		N/A

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- rated short-circuit making capacity		N/A
	- rated conditional short-circuit current	100 kA (500V AC)	P
7.1	CONSTRUCTION		P
7.1.1	Materials		P
7.1.1.1	Resistance to abnormal heat and fire		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	see appended table 7.1.1.1	P
	Flames and glowing extinguish within 30 s	see appended table 7.1.1.1	P
	No ignition of the tissue paper	see appended table 7.1.1.1	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	see appended table 7.1.1.1	P
	Flames and glowing extinguish within 30 s	see appended table 7.1.1.1	P
	No ignition of the tissue paper	see appended table 7.1.1.1	P
7.1.2	Current-carrying parts and their connection		P
7.1.3	Clearances..... :	see appended table 7.1.3	P
	Creepage distances ..... :	see appended table 7.1.3	P
	Pollution degree ..... :	3	—
	Comparative tracking index (V) ..... :	500 V	—
	Material group ..... :	II	—
7.1.4	Actuator		P
7.1.4.1	Insulation		—
	Actuator insulated from live parts for		—
	- rated insulation voltage	1000 V	P
	- rated impulse withstand voltage	12 kV	P
	Actuator made of metal		—
	- connected to a protective conductor or provided with an additional insulation		N/A
	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		N/A

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
7.1.4.2	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
7.1.5 of Part 1	Indication of contact position		P
7.1.5.1	Indicating means	Visible isolating distance between open contacts in the open position	P
7.1.5.2	Indication by the actuator		P
7.1.6	Additional safety requirements for equipment suitable for isolation		P
7.1.6.1	Additional constructional requirements for equipment suitable for isolation (Ue > 50 V):		P
	- marking according to 5.2.1b		P
	- indication of the position of the contacts		P
	- construction of the actuating mechanism		P
	- minimum clearances across open contacts (see Table XIII, Part 1) (mm) ..... :	14 mm	—
	- measured clearances (mm) ..... :	33 mm	P
	- test Uimp across gap (kV) ..... :	18,1 kV	P
7.1.6.2	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: ≥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
7.1.6.3	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) ..... :	—	—

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Rated impulse withstand voltage (kV) ..... :	—	—
	Test Uimp on open main contacts at the test force		N/A
7.1.7 of Part 1	Terminals		P
7.1.7.1	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
8.2.4	Mechanical properties of terminals	Terminals of type V	P
	Mechanical strength of terminals	Sample No A3/11	P
	Maximum cross-sectional area of conductor (mm²) ..... :	300 mm² (rigid)	—
	Diameter of thread (mm) ..... :	13,8 mm	—
	Torque (Nm) ..... :	1,1 x 40 Nm = 44 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 (mm²) ..... :	70 mm² (flexible)	—
	Number of conductor of the smallest cross section:	1	—
	Diameter of bushing hole (mm) ..... :	19,1 mm	—
	Height between the equipment and the platen .... :	368 mm	—
	Mass at the conductor(s) (kg) ..... :	10,4 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. ..... :	285 N	—
	During the test, the conductor neither slips out of the terminal nor breaks near the clamping unit		P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Conductor of the largest cross-sectional area (mm²) ..... :	300 mm² (rigid)	—
	Number of conductor of the largest cross section :	1	—
	Diameter of bushing hole (mm) ..... :	28,6 mm	—
	Height between the equipment and the platen .... :	464 mm	—
	Mass at the conductor(s) (kg) ..... :	22,7 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. ..... :	578 N	—
	During the test, the conductor neither slips out of the terminal nor breaks near the clamping unit		P
	Conductor of the largest and smallest cross-sectional area (mm²) ..... :		—
	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
7.1.7.2	Connection capacity		P
	Type of conductors ..... :	Rigid/flexible	—
	Minimum cross-sectional area of conductor (mm²) :	70 mm²	—
	Maximum cross-sectional area of conductor (mm²) ..... :	300 mm²	—
	Number of conductors simultaneously connectable to the terminal ..... :	1	—

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.2.4	Mechanical properties of terminals	Terminals of type 2V	P
	Mechanical strength of terminals	Sample No. A3/15	P
	Maximum cross-sectional area of conductor (mm²) ..... :	2x240 mm^2 (rigid)	—
	Diameter of thread (mm) ..... :	11,8 mm	—
	Torque (Nm) ..... :	1,1 x 40 Nm = 44 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 (mm²) ..... :	50 mm^2 (flexible)	—
	Number of conductor of the smallest cross section:	2	—
	Diameter of bushing hole (mm) ..... :	15,9 mm	—
	Height between the equipment and the platen .... :	343 mm	—
	Mass at the conductor(s) (kg) ..... :	9,5 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. ..... :	236 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 (mm²) ..... :	240 mm^2 (rigid)	—
	Number of conductor of the largest cross section :	2	—
	Diameter of bushing hole (mm) ..... :	28,6 mm	—
	Height between the equipment and the platen .... :	464 mm	—
	Mass at the conductor(s) (kg) ..... :	20 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. ..... :	578 N	—
	During the test, the conductor neither slips out of the terminal nor breaks near the clamping unit		P
	Conductor of the largest and smallest cross-sectional area (mm²) ..... :	240 mm^2 + *50 mm^2*	—

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Number of conductor of the smallest cross section, number of conductor of the largest cross section :	1 1	—
	Diameter of bushing hole (mm) ..... :	28,6 mm	—
	Height between the equipment and the platen .... :	464 mm	—
	Mass at the conductor(s) (kg) ..... :	20 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. ..... :	578 N	—
	During the test, the conductor neither slips out of the terminal nor breaks near the clamping unit		P
	Conductor of the largest and smallest cross-sectional area (mm²) ..... :	50 mm^2 + *240 mm^2*	—
	Number of conductor of the smallest cross section, number of conductor of the largest cross section :	1 1	—
	Diameter of bushing hole (mm) ..... :	15,9 mm	—
	Height between the equipment and the platen .... :	343 mm	—
	Mass at the conductor(s) (kg) ..... :	9,5 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. ..... :	236 N	—
	During the test, the conductor neither slips out of the terminal nor breaks near the clamping unit		P
7.1.7.2	Connection capacity		P
	Type of conductors ..... :	Rigid/flexible	—
	Minimum cross-sectional area of conductor (mm²) :	50 mm^2	—
	Maximum cross-sectional area of conductor (mm²) ..... :	240 mm^2	—
	Number of conductors simultaneously connectable to the terminal ..... :	2	—
7.1.7.3	Connection		P
	Terminals for connection to external conductors are readily accessible during installation		P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Clamping screws and nuts do not serve to fix any other component		P
7.1.7.4	Terminal identification and marking		P
	Terminal intended exclusively for the neutral conductor		N/A
	Protective earth terminal		N/A
	Other terminals	L1, L2, L3	P
7.1.8	Additional requirements for equipment provided with a neutral pole		N/A
	Equipment provided with a pole intended for the connection of neutral, this pole shall be clearly marked by the letter "N"		N/A
	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		N/A
	Conventional thermal current of neutral pole		N/A
7.1.9	Provisions for protective earthing		N/A
7.1.9.1	The exposed conductive parts are electrically interconnected and connected to a protective earth terminal		N/A
7.1.9.2	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
7.1.9.3	Protective earth terminal marking and identification		N/A
7.1.10	Enclosure for equipment		P
7.1.10.1	Design		P
	When the enclosure is opened, all parts requiring access for installation and maintenance are readily accessible	Integral enclosure	P
	Sufficient space is provided inside the enclosure		P

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IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	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
	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
7.1.10.2	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
7.1.11	Degree of protection of enclosed equipment		N/A
	Degree of protection ..... :	—	N/A

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS		P
8.3.3.1	Temperature-rise	Samples Nos. A3/10, A3/11 and A3/15	P
	ambient temperature 10-40 °C ..... :	See appended tables 8.3.3.1	—
	test enclosure W x H x D (mm x mm x mm) ..... :	—	—
	material of enclosure ..... :	—	—
	Main circuits, test conditions:		—
	- conventional thermal current Ith (A) ..... :	630 A	—
	- conventional enclosed thermal current Ithe (A) . :	—	—
	- cable/busbar cross-section (mm²) / length (mm) :	2x185 mm²	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ..... :	APATOR	—
	- manufacturer's model or type reference ..... :	WTNH gG	—
	- rated current (A) ..... :	630 A	—
	- power loss (W) ..... :	43 W	—
	- rated breaking capacity (kA) ..... :	120 kA	—
	Measured temperature-rise..... :	See appended tables 8.3.3.1	P
	Auxiliary circuits, test conditions:		N/A
	- rated operation current (A) ..... :	—	—
	- cable cross-section (mm²) ..... :	—	—
	Measured temperature-rise..... :	—	N/A
8.3.3.2	Test of dielectric properties	Samples Nos. A3/10, A3/11 and A3/15	P
	Rated impulse withstand voltage (kV) ..... :	12 kV	—
	- test Uimp main circuits (kV) ..... :	14,5 kV	P
	- test Uimp auxiliary circuits (kV) ..... :	—	N/A
	- test Uimp on open main contacts (equipment suitable for isolation) (kV) ..... :	18,1 kV	P
	Power-frequency withstand voltage (V) ..... :	2200 V	—
	- main circuits, test voltage for 5 sec. (V) ..... :	5 s	P
	- control and auxiliary circuits, test voltage for 5 sec. (V) ..... :	—	N/A
	Devices, which have been disconnected for the power-frequency withstand voltage test..... :	—	N/A

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Equipment suitable for isolation, leakage current not exceed 0,5 mA		—
	Test voltage 1,1 Ue (V) ..... :	759 V	—
	Measured leakage current (mA) ..... :	0,010 mA	P
8.3.3.3	Making and breaking capacity	Sample No.: A3/1	P
	- utilization category ..... :	AC-22B	—
	- rated operational voltage Ue (V) ..... :	690 V	—
	- rated operational current Ie (A) or power (kW) .. :	630 A	—
	Conditions for make/break operations or make operation, AC-22B:		P
	- test voltage, U = 1,05 Ue.....(V):	L1: 725 V L2: 726 V L3: 725 V	—
	- test current, I = 3 .....x Ie (A):	L1: 1916 A L2: 1929 A L3: 1926 A	—
	- power factor..... :	L1: 0,69 L2: 0,68 L3: 0,68	—
	Conditions for break operation, AC-22B		P
	- test voltage, U = 1,05 Ue.....(V):	L1: 725 V L2: 726 V L3: 725 V	—
	- test current, I = 3 .....x Ie (A):	L1: 1916 A L2: 1929 A L3: 1926 A	—
	- power factor ..... :	L1: 0,69 L2: 0,68 L3: 0,68	—
	Number of make/break or make and break operations ..... :	5 make 5 break	P
	- recovery voltage duration (≥ 50 ms)	725 V	P
	- current duration (ms) ..... :	425 ms	—
	- time interval between operations ..... :	35 s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) ..... :	48,44 kHz	—
	- measured oscillatory frequency (kHz) ..... :	L1: 47,90 kHz L2: 48,90 kHz L3: 48,30 kHz	P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- factor γ ..... :	L1: 1,09 L2: 1,11 L3: 1,10	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	150 N (before the test 130 N)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.3.4	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~..... :	1380 V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 Ue) (V) ..... :	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B): ≤ 0,5 mA/pole ... :	—	N/A
	Leakage current (other utilization categories): ≤ 2 mA/pole) ..... :	0,091 mA	P
8.3.3.6	Temperature-rise verification		P
	- conductor cross-section (mm²) ..... :	2x185 mm²	—
	- test current Ie (A) ..... :	630 A	—
	Measured temperature-rise..... :	See appended tables 8.3.3.6	P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.3	Making and breaking capacity	Sample No.: A3/4	P
	- utilization category ..... :	AC-22B	—
	- rated operational voltage Ue (V) ..... :	400 V	—
	- rated operational current Ie (A) or power (kW) .. :	630 A	—
	Conditions for make/break operations or make operation, AC-22B:		P
	- test voltage, U = 1,05 Ue.....(V):	L1: 420 V L2: 420 V L3: 421 V	—
	- test current, I = 3 .....x Ie (A):	L1: 1910 A L2: 1900 A L3: 1912 A	—
	- power factor..... :	L1: 0,65 L2: 0,66 L3: 0,66	—
	Conditions for break operation, AC-22B		P
	- test voltage, U = 1,05 Ue.....(V):	L1: 420 V L2: 420 V L3: 421 V	—
	- test current, I = 3 .....x Ie (A):	L1: 1910 A L2: 1900 A L3: 1912 A	—
	- power factor ..... :	L1: 0,65 L2: 0,66 L3: 0,66	—
	Number of make/break or make and break operations ..... :	5 make 5 break	P
	- recovery voltage duration (≥ 50 ms)	420 V	P
	- current duration (ms) ..... :	410 ms	—
	- time interval between operations ..... :	35 s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) ..... :	74,93 kHz	—
	- measured oscillatory frequency (kHz) ..... :	L1: 72,95 Hz L2: 73,80 kHz L3: 73,30 kHz	P
	- factor γ ..... :	L1: 1,13 L2: 1,08 L3: 1,10	P
8.3.3.3.5	Behaviour of the equipment during making and breaking capacity tests		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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	150 N (before the test 110 N)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.3.4	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~..... :	1380 V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 Ue) (V) ..... :	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B): ≤ 0,5 mA/pole ... :	—	N/A
	Leakage current (other utilization categories): ≤ 2 mA/pole) ..... :	0,009 mA	P
8.3.3.6	Temperature-rise verification		P
	- conductor cross-section (mm²) ..... :	2 x 185 mm²	—
	- test current Ie (A) ..... :	630 A	—
	Measured temperature-rise..... :	see appended tables 8.3.3.6	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.3	Making and breaking capacity	Sample No.: A3/6	P
	- utilization category ..... :	AC-21B	—
	- rated operational voltage Ue (V) ..... :	690 V	—
	- rated operational current Ie (A) or power (kW) .. :	630 A	—
	Conditions for make/break operations or make operation, AC-21B:		P
	- test voltage, U = 1,05 Ue.....(V):	L1: 725 V L2: 725 V L3: 725 V	—
	- test current, I = 1,5 .....x Ie (A):	L1: 968 A L2: 975 A L3: 956 A	—
	- power factor..... :	L1: 0,95 L2: 0,94 L3: 0,94	—
	Conditions for break operation, AC-21B		P
	- test voltage, U = 1,05 Ue.....(V):	L1: 725 V L2: 725 V L3: 725 V	—
	- test current, I = 1,5 .....x Ie (A):	L1: 968 A L2: 975 A L3: 956 A	—
	- power factor ..... :	L1: 0,95 L2: 0,94 L3: 0,94	—
	Number of make/break or make and break operations ..... :	5 make 5 break	P
	- recovery voltage duration (≥ 50 ms)	725 V	P
	- current duration (ms) ..... :	400 ms	—
	- time interval between operations ..... :	35 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 γ ..... :	L1: L2: L3:	N/A
8.3.3.3.5	Behaviour of the equipment during making and breaking capacity tests		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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	150 N (before the test 130 N)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.3.4	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~..... :	1380 V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 Ue) (V) ..... :	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B): ≤ 0,5 mA/pole ... :	—	N/A
	Leakage current (other utilization categories): ≤ 2 mA/pole) ..... :	0,010 mA	P
8.3.3.6	Temperature-rise verification		P
	- conductor cross-section (mm²) ..... :	2x185 mm²	—
	- test current Ie (A) ..... :	630 A	—
	Measured temperature-rise..... :	see appended tables 8.3.3.6	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.3	Making and breaking capacity	Sample No.: A3/5	P
	- utilization category ..... :	AC-21B	—
	- rated operational voltage Ue (V) ..... :	400 V	—
	- rated operational current Ie (A) or power (kW) .. :	630 A	—
	Conditions for make/break operations or make operation, AC-21B:		P
	- test voltage, U = 1,05 Ue.....(V):	L1: 420 V L2: 420 V L3: 421 V	—
	- test current, I = 1,5 .....x Ie (A):	L1: 950 A L2: 951 A L3: 953 A	—
	- power factor..... :	L1: 0,95 L2: 0,95 L3: 0,95	—
	Conditions for break operation, AC-21B		P
	- test voltage, U = 1,05 Ue.....(V):	L1: 420 V L2: 420 V L3: 421 V	—
	- test current, I = 1,5 .....x Ie (A):	L1: 950 A L2: 951 A L3: 953 A	—
	- power factor ..... :	L1: 0,95 L2: 0,95 L3: 0,95	—
	Number of make/break or make and break operations ..... :	5 make 5 break	P
	- recovery voltage duration (≥ 50 ms)	420 V	P
	- current duration (ms) ..... :	410 ms	—
	- time interval between operations ..... :	35 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 γ ..... :	L1: L2: L3:	N/A
8.3.3.3.5	Behaviour of the equipment during making and breaking capacity tests		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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	140 N (before the test 110 N)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.3.4	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~..... :	1380 V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 Ue) (V) ..... :	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B): ≤ 0,5 mA/pole ... :	—	N/A
	Leakage current (other utilization categories): ≤ 2 mA/pole) ..... :	0,010 mA	P
8.3.3.6	Temperature-rise verification		P
	- conductor cross-section (mm²) ..... :	2x185 mm²	—
	- test current Ie (A) ..... :	630 A	—
	Measured temperature-rise..... :	see appended tables 8.3.3.6	P

8.3.3.7	Strength of actuator mechanism		N/A
8.2.5	Verification of the strength of actuator mechanism and position indicating device		N/A
	- actuator type (fig.) ..... :	1e	—
8.2.5.2.1	Dependent and independent manual operation	—	N/A
	- actuating force for opening (N) ..... :	90 N	—
	- test force with blocked main contacts (N) ..... :	—	—
	- used method to keep the contact closed..... :	—	—

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Clause	Requirement + Test	Result - Remark	Verdict
	During and after the test, open position not indicated..... :	The main contacts position is visible in the open position – test not applicable	N/A
	Equipment with locking mean, no locking in the open position while test force is applied..... :	—	N/A
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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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4	TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY		P
8.3.4.1	Operational performance test	Sample No A3/3	P
	- utilization category ..... :	AC-22B	—
	- rated operational voltage (V) ..... :	690 V	—
	- rated operational current (A) ..... :	630 A	—
	Test conditions for electrical operation cycles:		—
	- test voltage (V) ..... :	L1: 691 V L2: 692 V L3: 691 V	—
	- test current (A) ..... :	L1: 644 A L2: 643 A L3: 641 A	—
	- power factor/time constant ..... :	L1: 0,80 L2: 0,80 L3: 0,80	—
	Number of cycles with current ..... :	200	P
	Number of cycles without current ..... :	800	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 ..... :	8000 s	—
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
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	120 N (before the test 110 N)	P
	- equipment is able to carry its rated current after normal closing operation		P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.2	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~..... :	1380 V	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 Ue) (V) ..... :	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole .... :	—	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole ..... :	0,011 mA	P
8.3.4.4	Temperature-rise verification		P
	- conductor cross-section (mm²) ..... :	2x185 mm^2	—
	- test current Ie (A) ..... :	630 A	—
	Measured temperature-rise..... :	see appended tables 8.3.4.4	P
8.3.4.1	Operational performance test	Sample No A3/8	P
	- utilization category ..... :	AC-22B	—
	- rated operational voltage (V) ..... :	400 V	—
	- rated operational current (A) ..... :	630 A	—
	Test conditions for electrical operation cycles:		—
	- test voltage (V) ..... :	L1: 400 V L2: 400 V L3: 401 V	—
	- test current (A) ..... :	L1: 638 A L2: 640 A L3: 635 A	—
	- power factor/time constant ..... :	L1: 0,80 L2: 0,80 L3: 0,80	—
	Number of cycles with current ..... :	200	P
	Number of cycles without current ..... :	800	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 ..... :	4000 s	—
8.3.4.1.5	Behaviour of the equipment during the operational performance test		P
	Test performed without:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- 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
8.3.4.1.6	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	150 N (before the test 110 N)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.4.2	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~..... :	1380 V	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 Ue) (V) ..... :	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole .... :	—	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole ..... :	0,010 mA	P
8.3.4.4	Temperature-rise verification		P
	- conductor cross-section (mm²) ..... :	2x185 mm^2	—
	- test current Ie (A) ..... :	630 A	—
	Measured temperature-rise..... :	see appended tables 8.3.4.4	P
8.3.4.1	Operational performance test Sample No A3/7		P
	- utilization category ..... :	AC-21B	—
	- rated operational voltage (V) ..... :	690 V	—
	- rated operational current (A) ..... :	630 A	—
	Test conditions for electrical operation cycles:		—
	- test voltage (V) ..... :	L1: 691 V L2: 691 V L3: 691 V	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- test current (A) ..... :	L1: 650 A L2: 636 A L3: 634 A	—
	- power factor/time constant ..... :	L1: 0,95 L2: 0,94 L3: 0,95	—
	Number of cycles with current ..... :	200	P
	Number of cycles without current ..... :	800	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 ..... :	2600 s	—
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
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	130 N (before the test 110 N)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.4.2	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~..... :	1380 V	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 Ue) (V) ..... :	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole .... :	—	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole ..... :	0,011 mA	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.4	Temperature-rise verification		P
	- conductor cross-section (mm²) ..... :	2x185 mm²	—
	- test current Ie (A) ..... :	630 A	—
	Measured temperature-rise..... :	see appended tables 8.3.4.4	P
8.3.4.1	Operational performance test	Sample No A3/9	P
	- utilization category ..... :	AC-21B	—
	- rated operational voltage (V) ..... :	400 V	—
	- rated operational current (A) ..... :	630 A	—
	Test conditions for electrical operation cycles:		—
	- test voltage (V) ..... :	L1: 401 V L2: 401 V L3: 402 V	—
	- test current (A) ..... :	L1: 636 A L2: 639 A L3: 635 A	—
	- power factor/time constant ..... :	L1: 0,96 L2: 0,96 L3: 0,96	—
	Number of cycles with current ..... :	200	P
	Number of cycles without current ..... :	800	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 ..... :	3000 s	—
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
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

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Clause	Requirement + Test	Result - Remark	Verdict
	- required opening force not greater than the test force of 8.2.5.2 and table 8	160 N (before the test 110 N)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.4.2	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~..... :	1380 V	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 Ue) (V) ..... :	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole .... :	—	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole ..... :	0,010 mA	P
8.3.4.4	Temperature-rise verification		P
	- conductor cross-section (mm²) ..... :	2x185 mm^2	—
	- test current Ie (A) ..... :	630 A	—
	Measured temperature-rise..... :	see appended tables 8.3.4.4	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.5	TEST SEQUENCE III: SHORT-CIRCUIT PERFORMANCE CAPABILITY		N/A
	Requirements of this clause not applicable to the tested products		

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.6	TEST SEQUENCE IV: CONDITIONAL SHORT-CIRCUIT CURRENT		P
	Short-circuit breaking capacity test was carried out at Laboratorium Badawcze Aparatury Rozdzielczej of Instytut Elektrotechniki in Warsaw. The particular results of the test are given in test report No. 7670/NBR/08		—
	Protective device details:	Sample No. 2W	P
	- manufacturer's name, trademark or identification mark ..... :	**APATOR**	—
	- manufacturer's model or type reference ..... :	WTNH 3 gG	—
	- rated voltage (V) ..... :	500 V	—
	- rated current (A) ..... :	630 A	—
	- rated breaking capacity (kA) ..... :	120 kA	—
8.3.6.2	Fuse protected short-circuit withstand		P
	test voltage (1,05 Ue) (V) ..... :	420 V	—
	test current (kA) ..... :	100 kA	—
	rated frequency (Hz) ..... :	50 Hz	—
	power factor ..... :	0,2	—
	Time constant (ms) ..... :	—	—
	Fuse protected short-circuit withstand (equipment in closed position)		
	- max. let-through current (kA) ..... :	L1: 21,86 kA L2: 33,99 kA L3: 60,02 kA	—
	- Joule integral I^2dt (A^2s) ..... :	L1: 1280 kA^2s L2: 2390 kA^2s L3: 4510 kA^2s	—
	Fuse protected short-circuit making		P
	- mean velocity of 15 manually under no-load conditions operations (m/s) ..... :	1 m/s	—
	- point at which the measurement is made ..... :	Actuator	—
	- test speed during the fuse protected short-circuit making (m/s) ..... :	1 m/s	—
	- max. let-through current (kA) ..... :	L1: 1,31 kA L2: 34,98 kA L3: 35,32 kA	—
	- Joule integral I^2dt (A^2s) ..... :	L1: — kA^2s L2: 1860 kA^2s L3: 1840 kA^2s	—
8.3.6.2.5	Behaviour of the equipment during the test		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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
8.3.6.2.6	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	150 N (before the test 110 N)	P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.6.3	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~..... :	1380 V	—
	No flashover or breakdown		P
8.3.6.4	Leakage current		P
	test voltage (1,1 Ue) (V) ..... :	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole .... :	—	N/A
	Leakage current (other utilization categories) ≤ 2,0 mA/pole ..... :	0,010 mA	P
8.3.6.5	Temperature-rise verification		P
	- conductor cross-section (mm²) ..... :	2x185 mm^2	—
	- test current Ie (A) ..... :	630 A	—
	Measured temperature-rise..... :	see appended table 8.3.6.5	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.7	TEST SEQUENCE V: OVERLOAD PERFORMANCE CAPABILITY		P
8.3.7.1	Overload test	Sample No. A3/10	P
	ambient temperature 10-40 ..... :	24 °C	—
	test enclosure W x H x D (mm x mm x mm) ..... :	—	—
	material of enclosure ..... :	—	—
	test current 1,6xIthe or 1,6xIth (A) ..... :	1008 A	—
	cable/busbar cross-section (mm²) / length (mm) . :	2x185 mm^2	—
	Fuse-link details:		P
	- manufacturer's name, trademark or identification mark ..... :	**APATOR** WTNH 3	—
	- rated current (A) ..... :	630 A	—
	- power loss (W) ..... :	44 W	—
	- rated breaking capacity (kA) ..... :	120 kA	—
	- time duration of the overload test (s) ..... :	1624 s	—
	Within 3 to 5 min after the fuse(s) has(have) operated (or 1 h), the equipment has been operated once, i.e. opened and closed	5 min open and close	P
	Required opening force not greater than the test force of 8.2.5.2 and table 8	110 N	P
	The equipment has not undergone any impairment hindering such operation		P
8.3.7.2	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~..... :	1380 N	—
	No flashover or breakdown		P
8.3.7.3	Leakage current		P
	test voltage (1,1 Ue) (V) ..... :	759 V	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole .... :	—	N/A
	Leakage current (other utilization categories) ≤ 2 mA)/pole ..... :	0,011 mA	P
8.3.7.4	Temperature-rise verification		P
	Fuse links aged during the overload test are replaced by new fuse-links ..... :		P
	- conductor cross-section (mm²) ..... :	630 A	—
	- test current Ie (A) ..... :	2x185 mm^2	—
	Measured temperature-rise..... :	see appended table 8.3.7.4	P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.4	ELECTROMAGNETIC COMPATIBILITY TESTS		P
8.4.1	Immunity		P
8.4.1.1	Equipment not incorporating electronic circuits: no tests necessary		P
8.4.1.2	Equipment incorporating electronic circuits:		N/A
	Equipment utilizing circuits in which all components are passive are not required to be tested		N/A
	All other equipment, requirements according to 7.3.3.2 and limits according table 6 apply		N/A
	Performed tests ..... :	see _____	N/A
	No unintentional separation or closing of contacts has occurred during these tests ..... :		N/A
8.4.2	Emission		P
8.4.2.1	Equipment not incorporating electronic circuits: no tests necessary		P
8.4.2.2	Equipment incorporating electronic circuits:		N/A
	Equipment utilizing circuits in which all components are passive are not required to be tested		N/A
	All other equipment, requirements according to 7.3.3.2 and limits according table 7 apply		N/A
	Performed tests ..... :	see _____	N/A

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
Annex A (normative)			N/A
A	Equipment for direct switching of a single motor		N/A
	Requirements of this clause not applicable to the tested products		

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict

7.1.3	TABLE: Clearance and creepage distance measurements						P
Type of fuse-switch disconnector	clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	required cl (mm) case A / B	cl (mm)	required dcr (mm)	dcr (mm)
ARS 3-6-M	L-L	12 kV	1000	14 / 4,5	20,9	14	55,6
	L-A				9,1		15,0
ARS 3-1-V	L-L				18,1		55,6
	L-A				9,1		15,0
ARS 3-1-2V	L-L				13,6		55,6
	L-A				9,1		15,0
supplementary information: —							

7.1.1.1	TABLE: resistance to heat and fire. Glow-wire flammability test.		P
	Conditioning time ..... :	24 h	—
	Ambient temperature ..... :	20 °C	—
	Relative humidity ..... :	50 %	—
	Time of glow-wire tip application (t_a) ..... :	(30 ±1) s	—

Tested part / material / market name / color	Thickness of material	Wire tempera-ture	Duration from tip application to ignition	Duration from tip application to flames extinguish-ing	Height of flame	Specified layer ignition	Verdict
	mm	°C	(t) s	(t_e) s	mm	no / yes	
Viewer I, Viewer II, terminals housing / policarbonate / Lexan 9945A / transparent	2	650	0	0	0	no	P
Enclosure, actuator, cover, conductor / poliamid / Starflam RX06082 / grey or black	3	650	0	0	0	no	P
Base, arc chamber, terminals cover, blocking plate / poliamid / Starflam RF0057E/ grey	2	960	5	31	3	no	P
supplemantary information:							
Test carried out on parts from equipment. Criteria of acceptance: $t_e \leq t_a + 30$ s.							

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict

8.3.3.1	TABLE: Temperature-rise (measurements)		Sample No A3/10	P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals		L1	60	70
		L2	69	
		L3	68	
		U	57	
		V	59	
		W	60	
Manual operating means: metallic / non-metallic			—/12	15/25
Parts intended to be touched but not hand-held: metallic / non-metallic			—/39	30/40
Parts which need not be touched during normal operation: metallic / non-metallic			—/42	40/50
supplementary information: ambient temperature 25 °C				

8.3.3.1	TABLE: Temperature-rise (measurements)		Sample No A3/11	P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals		L1	63	70
		L2	68	
		L3	65	
		U	49	
		V	52	
		W	51	
Manual operating means: metallic / non-metallic			—/11	15/25
Parts intended to be touched but not hand-held: metallic / non-metallic			—/38	30/40
Parts which need not be touched during normal operation: metallic / non-metallic			—/46	40/50
supplementary information: ambient temperature 25 °C				

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict

8.3.3.1	TABLE: Temperature-rise (measurements)		Sample No A3/15	P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals		L1	67	70
		L2	69	
		L3	68	
		U	59	
		V	60	
		W	61	
Manual operating means: metallic / non-metallic			—/12	15/25
Parts intended to be touched but not hand-held: metallic / non-metallic			—/39	30/40
Parts which need not be touched during normal operation: metallic / non-metallic			—/48	40/50
supplementary information: ambient temperature 25 °C				

8.3.3.6	TABLE: Temperature-rise (measurements)		Sample No A3/1	
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals		L1	60	80
		L2	74	
		L3	66	
		U	51	
		V	53	
		W	57	
Manual operating means: metallic / non-metallic			—/7	25/35
Parts intended to be touched but not hand-held: metallic / non-metallic			—/27	40/50
Parts which need not be touched during normal operation: metallic / non-metallic			—/45	50/60
supplementary information: ambient temperature 24 °C				

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict

8.3.3.6	TABLE: Temperature-rise (measurements)		Sample No A3/4	P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals		L1	60	80
		L2	49	
		L3	52	
		U	47	
		V	42	
		W	46	
Manual operating means: metallic / non-metallic			—/12	25/35
Parts intended to be touched but not hand-held: metallic / non-metallic			—/30	40/50
Parts which need not be touched during normal operation: metallic / non-metallic			—/39	50/60
supplementary information: ambient temperature 24 °C				

8.3.3.6	TABLE: Temperature-rise (measurements)		Sample No A3/5	P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals		L1	60	80
		L2	62	
		L3	56	
		U	45	
		V	49	
		W	40	
Manual operating means: metallic / non-metallic			—/13	25/35
Parts intended to be touched but not hand-held: metallic / non-metallic			—/32	40/50
Parts which need not be touched during normal operation: metallic / non-metallic			—/40	50/60
supplementary information: ambient temperature 24 °C				

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict

8.3.3.6	**TABLE: Temperature-rise (measurements)**		Sample No A3/6	P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals		L1	70	80
		L2	79	
		L3	66	
		U	77	
		V	78	
		W	76	
Manual operating means: metallic / non-metallic			—/14	25/35
Parts intended to be touched but not hand-held: metallic / non-metallic			—/44	40/50
Parts which need not be touched during normal operation: metallic / non-metallic			—/47	50/60
supplementary information: ambient temperature 24 °C				

8.3.4.4	**TABLE: Temperature-rise (measurements)**		Sample No A3/3	P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals		L1	62	80
		L2	75	
		L3	74	
		U	79	
		V	74	
		W	80	
Manual operating means: metallic / non-metallic			—/15	25/35
Parts intended to be touched but not hand-held: metallic / non-metallic			—/45	40/50
Parts which need not be touched during normal operation: metallic / non-metallic			—/59	50/60
supplementary information: ambient temperature 24 °C				

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict

8.3.4.4	**TABLE: Temperature-rise (measurements)**		Sample No A3/7	P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals		L1	52	80
		L2	67	
		L3	50	
		U	79	
		V	78	
		W	77	
Manual operating means: metallic / non-metallic			—/13	25/35
Parts intended to be touched but not hand-held: metallic / non-metallic			—/48	40/50
Parts which need not be touched during normal operation: metallic / non-metallic			—/53	50/60
supplementary information: ambient temperature 25 °C				

8.3.4.4	**TABLE: Temperature-rise (measurements)**		Sample No A3/8	P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals		L1	48	80
		L2	47	
		L3	46	
		U	52	
		V	54	
		W	54	
Manual operating means: metallic / non-metallic			—/10	25/35
Parts intended to be touched but not hand-held: metallic / non-metallic			—/26	40/50
Parts which need not be touched during normal operation: metallic / non-metallic			—/31	50/60
supplementary information: ambient temperature 24 °C				

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict

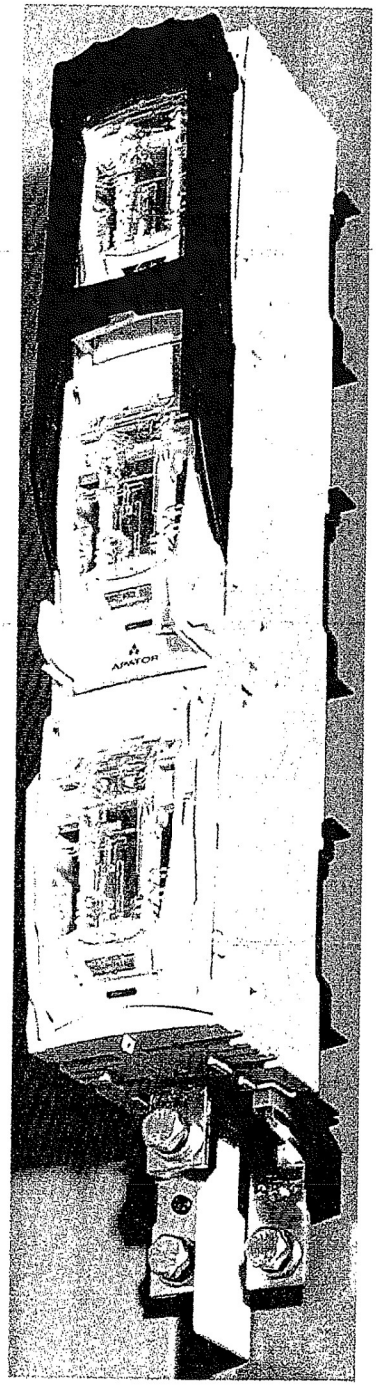
8.3.4.4	**TABLE: Temperature-rise (measurements)**		Sample No A3/9	P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals		L1	45	80
		L2	44	
		L3	43	
		U	56	
		V	53	
		W	52	
Manual operating means: metallic / non-metallic			—/10	25/35
Parts intended to be touched but not hand-held: metallic / non-metallic			—/28	40/50
Parts which need not be touched during normal operation: metallic / non-metallic			—/35	50/60
supplementary information: ambient temperature 25 °C				

8.3.6.5	**TABLE: Temperature-rise (measurements)**		Sample No. 2 W	P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals		L1	53	80
		L2	54	
		L3	50	
		U	52	
		V	54	
		W	56	
Manual operating means: metallic / non-metallic			—/11	25/35
Parts intended to be touched but not hand-held: metallic / non-metallic			—/37	40/50
Parts which need not be touched during normal operation: metallic / non-metallic			—41	50/60
supplementary information: ambient temperature 23 °C				

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict

8.3.7.4	**TABLE: Temperature-rise (measurements)**		Sample No. A3/10	P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals		L1	57	80
		L2	66	
		L3	60	
		U	54	
		V	50	
		W	49	
Manual operating means: metallic / non-metallic			—/10	25/35
Parts intended to be touched but not hand-held: metallic / non-metallic			—/36	40/50
Parts which need not be touched during normal operation: metallic / non-metallic			—/42	50/60
supplementary information: ambient temperature 24 °C				

Photos of ARS 3



ARS 3- 6 – M

Photos of ARS 3

ARS 3- 1 – V

STOWARZYSZENIE ELEKTRYKÓW POLSKICH
BIURO BADAWCZE DS JAKOŚCI O/Lublin
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Photos of ARS 3

ARS 3- 1 - 2V

STOWARZYSZENIE ELEKTRYKÓW POLSKICH
BIURO BADAWCZE DS JAKOŚCI O Lublin
ZAKŁAD APARATÓW NISKIEGO NAPIĘCIA
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Certification

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СПИСЪК НА ПРОВЕЖДАНИТЕ ИЗПИТВАНИЯ НА ЛИНЕЙНИ ЗАЩИТНО-КОМУТАЦИОННИ АПАРАТИ НИСКО НАПРЕЖЕНИЕ (НН) ЗА ВЕРТИКАЛЕН МОНТАЖ

Линейни защитно-комутационни апарати ниско напрежение (НН) за вертикален монтаж (ВПР):

ARS 2-6-V/400 A
ARS 3-6-V/630 A

Производство на: APATOR® SA
Улица: Zolkiewsuiego 13/29, Пощенски код: 87-100, Населено място: Torun, Страна: Poland
Телефонен номер: +48 56/ 61 91 627
Номер на телефакс+48 56/ 61 91 295
e-mail: trade@apator.com.pl
Homepage: www. apator.com.pl

Типовите изпитвания се провеждат съгласно изискванията на стандарти:

БДС EN 60269-1:2007 - Комутационни апарати за ниско напрежение. Част 1: Общи правила (IEC 60947-1:2007)

БДС EN 60947-3:2009+A1+A2 - Комутационни апарати за ниско напрежение. Част 3: Товарови прекъсвачи, разединители, товарови прекъсвач-разединители и апарати, комбинирани със стопяеми предпазители (IEC 60947-3:2008+A1+A2)

Рутинните (контролни) изпитания се провеждат на представителна извадка от произведените количества съгласно горепосочените стандарти, както следва:

1. Визуална проверка и контрол на продуктите, част от непрекъснатата система за следене на качеството;
2. Контролни изпитвания и сравнение на измерените стойности с нормативно указаните. Маркиране на всеки ВПР с идентификационен и сериен номер, запазване в архивен масив;
3. Механични рутинни изпитвания съгласно предписанията на горепосочените стандарти;
4. Проверка на проектните и фактически размери, контактни повърхности на изделията.

15.01.2020 г.

Кандидат: ИНТЕРКОМПЛЕКС ООД

На основание чл.36а ал.3 от ЗОП

тел

Приложение ТС 2.4

POLSKIE CENTRUM AKREDYTACJI

POLISH CENTRE FOR ACCREDITATION

PCA

Sygnatariusz EA MLA
EA MLA Signatory

CERTYFIKAT AKREDYTACJI

LABORATORIUM BADAWCZEGO

ACCREDITATION CERTIFICATE OF TESTING LABORATORY

Nr AB 044

Potwierdza się, że: / This is to confirm that:

STOWARZYSZENIE ELEKTRYKÓW POLSKICH
BIURO BADAWCZE ds. JAKOŚCI
LABORATORIUM BADAWCZE
ul. M. Pożaryskiego 28, 04-703 Warszawa

spełnia wymagania normy PN-EN ISO/IEC 17025:2005
meets requirements of the PN-EN ISO/IEC 17025:2005 standard

Akredytowana działalność jest określona w Zakresie Akredytacji Nr AB 044
Accredited activity is defined in the Scope of Accreditation No AB 044

Akredytacja pozostaje w mocy pod warunkiem przestrzegania wymagań jednostki akredytującej określonych w kontrakcie Nr AB 044
This accreditation remains in force provided the Laboratory observes the requirements of Accreditation Body defined in the Contract No AB 044

Certyfikat akredytacji ważny do dnia 20.06.2014 r.
The certificate of accreditation is valid until 20.06.2014

Akredytacji udzielono dnia 30.11.1995 r.
Accreditation was granted on 30.11.1995

POLSKIE CENTRUM AKREDYTACJI * 1 *

На основание чл.36а ал.3 от ЗОП

Warszawa, 4 czerwca 2010 roku

ВЯРНО С ОРИГИНАЛА

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Приложение ТС 2,5

ЕТ "АДИС - 9 -
Анелия Митева"

АГЕНЦИЯ ЗА ПРЕВОДИ

Адрес на управление: 4023 Пловдив, ж.р.Тракия, бл.20, ет.9, ап.53, тел: 032 826632; 266292

Превод от полски език

APATOR SA

Декларация CE за съответствие

№	0024/04
Производител:	APATOR SA
Адрес:	ул. Золкиевскиего 13/29; 87-100 Торун Полша
Обозначение на продукта (име, тип):	Вертикални разединители с ножови предпазители тип ARS 3-
Декларираме, че посочения продукт съответства на следните изисквания:	
Европейски директиви:	73/23/EEC + 93/68/EEC Директива за ниско напрежение, касаеща хармонизирането на правните предписанията на държавите членки, които се отнасят за електрическата техника, предназначена за използване в определени граници на напрежение.
Съгласувани стандарти и/или стандарти на IEC:	PN-EN 60947-1 Комутационна и контролна апаратура ниско напрежение Част 1: Общи решения PN-EN 60947-3 Комутационна и контролна апаратура ниско напрежение Част 3: Превключватели, разединители, превключващи разединители и комбинирани устройства със стопяеми предпазители
Държавни норми и/или техническа документация:	Техническа документация и комплект от чертежи 63-811216-*; 63-811217-*; 63-811463-*
Документи идентифициращи стоката:	Каталожна карта "Ножови включватели серия ARS, PBS" №1/2003/1.
Град, дата:	Торун, 30.04.2004г.
Име, фамилия, длъжност, подпис:	Генерален Директор Януш Ниеджвидзки Подпис: не се чете

В случай на въвеждане на изменения на продукта, несъгласувани с производителя или ако използването не е съгласно предназначението, тази декларация става невалидна.

Подписаната Анелия Иванова Митева удостоверявам верността на извършения от мен превод от полски език на български език на приложения документ "Декларация CE за съответствие". Преводът се състои от 1 (една) страница.

На основание чл.36а ал.3 от ЗОП

ВЯРНО С ОРИГИНАЛА

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APATOR® SA

DEKLARACJA CE ZGODNOŚCI
EC Declaration of conformity

ISO 14001
APATOR - SPÓŁKA AKCYJNA

CERTYFIKATY SYSTEMU JAKOŚCI ISO 9001 APATOR - SPÓŁKA AKCYJNA

Nr No	0024/04
Producent Manufacturer	APATOR SA
Adres Address	ul. Żółkiewskiego 13/29; 87-100 Toruń PL
Oznaczenie produktu (nazwa, typ) Product designation (name, type)	Rozłączniki izolacyjne bezpiecznikowe listwowe typu ARS 3-

Deklarujemy, że oznaczony wyrób jest zgodny z następującymi wymaganiami:
It is declared that the designed product is in conformity with the provisions of the following requirements:

Dyrektyw europejskich: European Directives:	**73/23/EEC + 93/68/EEC** **Dyrektywa niskonapięciowa dotycząca harmonizacji przepisów prawnych państw członkowskich odnoszących się do sprzętu elektrycznego przeznaczonego do użytkowania w określonych zakresach napięć.**
Norm zharmonizowanych i/lub norm IEC: Harmonised standards and/or IEC standars:	**PN-EN 60947-1** **Aparatura rozdzielcza i sterownicza niskonapięciowa** **Część 1: Postanowienia ogólne** **PN-EN 60947-3** **Aparatura rozdzielcza i sterownicza niskonapięciowa** **Część 3: Rozłączniki, odłączniki, rozłączniki izolacyjne i zestawy łączników z bezpiecznikami topikowymi**
Norm krajowych i/lub dokumentacji technicznych: National standards and/or technical specification:	**Dokumentacja techniczna rysunki zestawcze:** **63-811216-*; 63-811217-*; 63-811463-***
Dokumenty identyfikujące wyrób: Product identification documents:	**Karta katalogowa „Łączniki listwowe serii ARS, PBS" Nr 1/2003/1 .**
Miejscowość, data Place, date	**Toruń, 2004.04.30**
Imię nazwisko stanowisko podpis Name, surname, function, signature	На основание чл.36а ал.3 от ЗОП

W przypadku wprowadzenia nieuzgodnionych z producentem zmian w wyrobie lub zastosowania go niezgodnie z przeznaczeniem niniejsza deklaracja traci ważność.
If any changes of the product are not agreed with the manufacturer or the product is inappropriately used, this declaration becomes null and void.

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1113 София, ул. "Акад. Г. Бончев" № 20, тел. (02) 971 70 41, факс: (02) 971 71 41, e-mail: office.sf@intercomplex.bg

Приложение ТС-2.6
към Технически спецификации
по процедура PPD 19-130

ДЕКЛАРАЦИЯ

за съответствие на предлаганото изпълнение

Долуподписаният, **ЕХИЯЗАР ГАРАБЕД УЗУНЯН**, с л.к. На основание чл.36а ал.3 от ЗОП г. от МВР, гр. Пловдив, с На основание чл.36а ал.3 от ЗОП правител на **"ИНТЕРКОМПЛЕКС" ООД**, кандидат за участие в обществена поръчка чрез събиране на оферти с обява с предмет: „Доставка на линейни защитно-комутационни апарати ниско напрежение (НН) за вертикален закрит монтаж", реф. № PPD 19-130, с възложител „ЧЕЗ Разпределение България" АД

ДЕКЛАРИРАМ:

1. Доставяните от фирма „Интеркомплекс" ООД, линейни защитно-комутационни апарати ниско напрежение (НН) за вертикален монтаж (ВПР), тип ARS 3-6-V/630A, производство на "АПАТОР" – Полша, отговарят напълно на изискванията на техническата спецификация на този стандарт за материал, вкл. на параграфи „Характеристика на материала" и „Съответствие на предложеното изпълнение със нормативно-техническите документи".

2. Правя настоящата декларация на основание декларация на производителя.

Известно ми е, че при деклариране на неверни данни, нося наказателна отговорност по чл. 313 от НК.

15.01.2020 г.

Участник: ИНТЕРКОМПЛЕКС ООД

На основание чл.36а ал.3 от ЗОП .....

тел

96

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ISO 9001
ISO 14001
OHSAS 18001
BUREAU VERITAS
Certification

Приложение 3
към предложение за изпълнение на поръчката
по процедура реф.№ PPD 19-130

СРОКОВЕ ЗА ДОСТАВКА

№	Наименование	Мярка	Количество със срок на доставка до 7 кал. дни	Количество със срок на доставка до 30 кал. дни
1	2	3	4	5
1	Вертикален предпазител-разединител НН 400 А, с триполюсно управление	бр.	5	15
2	Вертикален предпазител-разединител НН 630 А, с триполюсно управление	бр.	3	3

Забележки:

1/ Срокът на доставките започва да тече от датата на изпращане на поръчката.

2/ Количествата в колона 4, със срок на доставка до 7 /седем/ календарни дни, се доставят след SAP поръчка до посочените складове на Възложителя за покриване на спешни нужди на Възложителя.

Възложителят може до поръчва посоченото спешно количество веднъж месечно.

3/ В случай, че крайният срок на доставката съвпада с празничен или неработен ден, то доставката се извършва не по-късно от първия работен ден след изтичането на срока.

4/ При поръчки на Възложителя на количества в рамките на потвърдените от Изпълнителя и недоставени в посочените срокове, ще бъдат налагани неустойки, съгласно условията на договора.

5/ Възложителят може да поръча количества по-малки от посочените в колони 4 и 5.

6/ Възложителят може да поръчва количества по-високи от посочените в колони 4 и 5, като това обстоятелство ще бъде посочено текстово в съответната поръчка изпратена към Изпълнителя. С потвърждението на поръчката, Изпълнителят вписва в същата очаквана дата за доставка на количествата надвишаващи посочените в колони 4 и 5.

7/ Количествата за доставка в колони 4 и 5 са отделни и независими едно от друго.

8/ Количествата за доставка в колона 5 не включват в себе си количествата за доставка в колона 4.

9/ Възложителят има право да направи едновременно поръчки за доставка на количества от колони 4 и 5.

15.01.2020 г.

Участ

На основание чл.36а ал.3 от ЗОП

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