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Приложение № 3

ПРЕДЛОЖЕНИЕ

за участие в „открита" по вид процедура за сключване на рамково споразумение с предмет:
" Доставка на миниатюрни прекъсвачи", реф. № PPD 17-109, обособена позиция № 2

ДО: „ЧЕЗ РАЗПРЕДЕЛЕНИЕ БЪЛГАРИЯ" АД,

ОТ: „Филкаб" АД
адрес: гр. Пловдив, ул. „Коматевско шосе" № 92
тел.: 032/277 191, факс: 032/671 133; e-mail: office@filkab.com
Единен идентификационен код: 115328801,
Представлявано от Атанас Иванов Танчев – Изпълнителен директор
Лице за контакти: инж. Веселин Гичев, тел.: 032/277 197, факс: 032/671 133, E-mail: veselin.gichev@filkab.com

УВАЖАЕМИ ГОСПОЖИ И ГОСПОДА,

Предоставяме на Вашето внимание предложението ни за изпълнение на обществена поръчка с реф. PPD 17-109 и предмет: Доставка на миниатюрни прекъсвачи", обособена позиция №: 2: „Доставка на еднополюсни и триполюсни миниатюрни товарови прекъсвачи".

1. Запознат съм и приемам изискванията на Възложителя, като представям техническите спецификации от раздел II на документацията за участие с попълнени всички изисквани стойности за всички позиции от предмета на поръчката и изискванията, описани в рамковото споразумение и приложенията към него.
2. Представям всички изисквани данни и документи, посочени в Приложение 2 от настоящото техническо предложение. Запознат съм с изискването, че представените документи трябва да бъдат на български език или с превод на български език, придружени с оригиналните документи, с изключение на протоколите от типовите изпитвания, които могат да се представят и само на английски език.
3. Запознат съм, че представените от нас технически документи (протоколи от изпитания, каталози и др.) са доказателство за декларираните от мен технически данни и параметри в техническите спецификации на стоката.
4. Потвърждавам, че представяните от нас стоки, описани в Техническото ни предложение, ще отговарят на посочените от Възложителя стандарти или на еквивалентни. В случай, че даден материал отговаря на стандарт, еквивалентен на посочения, се задължаваме да го отразим в отделен документ и да представим доказателства за еквивалентността на двата стандарта.
5. Всички стойности, попълнени в колона **„Гарантирано предложение"** на приложените таблици от Технически спецификации от раздел II от документацията за участие, са точни и истински.
6. Предлагам следният гаранционен срок за предлаганите стоки –24 месеца (словом: двадесет и четири месеца), от датата на приемо - предавателен протокол за получаване на стоката от Възложителя.
7. Запознат съм, че видовете стоки и прогнозните количества за доставка ще бъдат посочени от Възложителя при провеждане на вътрешен конкурентен избор.
8. Приемам количества със срокове за доставка на стоката, съгласно Приложение 3 към настоящото Техническо предложение.

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9. Приемам, че в срок до _____ *(не повече от 14 дни)* от датата на подписване на рамково споразумение с Възложителя, ще сключа договор с посоченият/те в офертата подизпълнител/и *(попълва се, ако участникът е декларирал, че ще използва подизпълнител/и)*.
10. Запознат съм, че при последваща обществена поръчка чрез вътрешен конкурентен избор за сключване на конкретен договор, изборът на изпълнител при определяне на икономически най-изгодната оферта ще бъде направен по критерий за възлагане - „най-ниска цена".
11. Запознат съм, че максималният срок за изпълнение на конкретен договор ще бъде определен от Възложителя в поканата за участие при последващата обществена поръчка чрез вътрешен конкурентен избор.

Приложения към настоящото техническо предложение:

1. *Технически изисквания и спецификации за изпълнение на поръчката – раздел II от документацията за участие – попълнени на съответните места;*
2. *Изисквани документи от Технически изисквания и спецификации;*
3. *Срокове за доставка.*

Дата 26.09.2017 г.

ПОДПИС и ПЕЧАТ:

.....

Атанас Танчев
Изпълнителен директор
Филкаб АД

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II. ТЕХНИЧЕСКИ СПЕЦИФИКАЦИИ И ИЗИСКВАНИЯ НА ВЪЗЛОЖИТЕЛЯ ЗА ИЗПЪЛНЕНИЕ НА ПОРЪЧКАТА

ОБОСОБЕНА ПОЗИЦИЯ 2

Наименование на материала: Еднополюсни и триполюсни миниатюрни товарови прекъсвач-разединители 63 А, широчина на полюс 18 mm

Кратко наименование на материала: Мини тов. прек. 63 А, шир. 18 mm

Област: G – Инсталации (Електромерни табла)

Категория: 17–Комутационни апарати НН

Мерна единица: Брой

Аварийни запаси: Да

Характеристика на материала:

Миниатюрните товарови прекъсвач-разединители представляват механични комутационни апарати, способни да провеждат и да включват/изключват ръчно електрически ток 63 А във вериги при нормални условия и да провеждат за определено време токове във вериги при условията на претоварване и късо съединение.

Тялото на миниатюрните товарови прекъсвач-разединители е изработено чрез формоване на устойчив на нагряване, на огън и на механични удари изолационен материал с максимална широчина на един полюс 18 mm. В монтирано състояние съгласно инструкциите на производителя и след опроводяване активните части на миниатюрните товарови прекъсвач-разединители не са достъпни.

Средството (лостът) за управление при вертикално монтиране на миниатюрните товарови прекъсвач-разединители се движи в направление „нагоре – надолу", при което контактите се затварят при движение „нагоре". Миниатюрните товарови прекъсвач-разединители са снабдени с ясно видимо от челната страна средство за указване на затвореното и отвореното положение на контактната система.

Стойностите на прегряването на частите на миниатюрните товарови прекъсвач-разединители при нормален работен режим при температура до 40°C не трябва да надвишават посочените в таблица 2 и таблица 3 от БДС EN 60947-1:2007 стойности или еквивалентно/и.

За свързване на проводниците от външната верига се използват винтови клеми с притискаща пластина с обхват на номиналните напречни сечения на проводниците от 6 mm^2 до 25 mm^2. Конструкцията на винтовите клеми трябва да позволява лесно въвеждане на проводниците, при което не се освобождават напълно съставните им части, както и лесно освобождаване на проводниците в експлоатационни условия.

Миниатюрните товарови прекъсвач-разединители конструктивно са приспособени за закрепване на монтажна шина с DIN – профил с размери 35x7,5 mm съгласно БДС EN 60715:2003 "Размери на комутационни апарати за ниско напрежение или еквивалентно/и. Стандартизирано монтиране върху релси за механична опора на електрически устройства в уредби с комутационни апарати за ниско напрежение (IEC 60715:1981 +A1:1995) или еквивалентно/и.

Миниатюрните товарови прекъсвач-разединители са маркирани с информацията съгласно т. 5.2 от БДС EN 60947-3:2009 и CE маркировка за съответствие или еквивалентно/и.

Миниатюрните товарови прекъсвач-разединители са пакетирани в картонени кутии, на които е залепен етикет с наименование на материала „Миниатюрен товаров прекъсвач-разединител", техническите данни и броя на миниатюрните товарови прекъсвач-разединители, годината на

производство, партидните номера и стандарта, в съответствие с който са произведени и изпитани - БДС EN 60947-3:2009 или еквивалентно/и.

Използване:
Миниатюрните товарови прекъсвач-разединители са предназначени за монтиране в електромерни табла за директно измерване на електрическата енергия и се използват за ръчно включване и изключване на вериги, захранващи битови и други подобни уреди.

Съответствие на предлаганото изпълнение с нормативно-техническите документи:
Триполюсните и еднополюсните стопяем цилиндричен предпазител-прекъсвач-разединители трябва да отговарят най-малко на посочените по-долу стандарти или еквиваленти:

- БДС EN 60947-1:2007 „Комутационни апарати за ниско напрежение. Част 1: Общи правила (IEC 60947-1:2007)" или еквивалентно;
- БДС EN 60947-1:2007/A1:2011 „Комутационни апарати за ниско напрежение. Част 1: Общи правила (IEC 60947-1:2007/A1:2010)" или еквивалентно; и
- БДС EN 60947-3:2009 „Комутационни апарати за ниско напрежение. Част 3: Товарови прекъсвачи, разединители, товаров прекъсвач-разединители и апарати, комбинирани с предпазители (IEC 60947-3:2008)" или еквивалентно.

и
да бъдат оценени положително по реда и при условията на Наредбата за съществените изисквания и оценяване на съответствието на електрически съоръжения, предназначени за използване в определени граници на напрежението, приета с ПМС № 182 от 6.07.2001 г., обн., ДВ, бр. 62 от 13.07.2001 г.

Изискване към документацията и изпитванията

№ по ред	Документ	Приложение № или текст
1.	Точно означение на типа, производителя и страната на производство (произход) и последно издание на каталога на производителя	Ex9I125, NOARK Electric Europe s.r.o., Китай Приложение 2.1.
2.	Техническо описание и чертежи с нанесени на тях размери	Приложение 2.1.
3.	ЕО декларация за съответствие	Приложение 2.2.
4.	Протоколи от типови изпитвания на английски или български език, проведени от независима изпитвателна лаборатория – заверени копия, с приложен списък на отделните изпитвания на български език	Приложение 2.3.1. Приложение 2.3.2.
5.	Сертификат/акредитация на независимата изпитвателна лаборатория, провела типовите изпитвания по т. 4 – заверено копие	Приложение 2.4.
6.	Инструкции за транспортиране, складиране, монтиране, вкл. въртящия момент на затягане на клемовите съединения, обслужване и поддържане	Приложение 2.5.

Технически данни
1. Работна среда:

№ по ред	Наименование	Стойност
1.1	Място на монтиране	На закрито
1.2	Максимална околна температура	+ 40°C
1.3	Минимална околна температура	Минус 5°C
1.4	Максимална средна околна температура за период от 24 ч.	+ 35°C
1.5	Относителна влажност (при 20 °C)	До 90 %
1.6	Степен на замърсяване	3
1.7	Надморска височина	До 2000 m

2. Параметри на електроразпределителната мрежа НН:

№ по ред	Наименование	Стойност
2.1	Номинално напрежение	400 / 230 V
2.2	Максимално напрежение	440 / 253 V
2.3	Номинална честота	50 Hz
2.4	Брой проводници в разпределителната мрежа	4 проводна мрежа (L_1, L_2, L_3, PEN)
2.5	Схема на разпределителната мрежа	TN-C

3. Технически параметри и други данни

№ по ред	Характеристика	Изискване	Гарантирано предложение
3.1	Обявен ток *(I_e)*	63 A	63 A
3.2	Обявено работно напрежение *(U_e)*	-	-
3.2.1	Еднополюсни прекъсвачи	230/400 V	230/400 V
3.2.2	Триполюсни прекъсвачи	400 V	400 V
3.3	Обявена честота *(f_n)*	50 Hz	50/60 Hz
3.4	Обявено издържано импулсно напрежение *(U_{imp})*	min 6 kV	6 kV
3.5	Обявено напрежение на изолацията *(U_i)*	min. 440 V	500 V
3.6	Изпитване на включвателната и изключвателната способност съгл. т. т. 4.3.5.2 и 4.3.5.3 от БДС EN 60947-3:2009 или еквивалентно/и	min 189 A (1,05 U_e,cosф=0,65)	1260 A
3.7	Обявен краткотрайно издържан ток *(I_{cw})* съгл. т. 4.3.6.1 от БДС EN 60947-3:2009 или еквивалентно/и	min 756 A / 1 s	756 A / 1 s

№ по ред	Характеристика	Изискване	Гарантирано предложение
3.8	Категория на приложение (при 400V AC)	AC 22 B или по-висока	AC-22A
3.9	Степен на защита от проникване на твърди тела и вода	min IP20	IP40
3.10	Износоустойчивост	-	-
3.10.1	Електрическа (брой к.ц.)	min 200 бр.	4 000
3.10.2	Механична (брой к.ц.)	min 800 бр.	20 000
3.11	Монтажна ширина на един полюс	max 18 mm	18 mm
3.12	Експлоатационна дълготрайност	min 30 години	30 г

4. Миниатюрни товарови прекъсвач-разединители 63 А, широчина на полюс 18 mm

№ на стандарта	Брой на полюсите	Съкратено наименование	Обявен ток, А	Тегло, g
20 17 1881	1	Мини тов. прек. 63 А, шир. 18 mm, 1P	63	90
20 17 1883	3	Мини тов. прек. 63 А, шир. 18 mm, 3P	63	270

Наименование на материала: Еднополюсни и триполюсни миниатюрни товарови прекъсвач разединители 125 А, широчина на полюс 27 mm

Съкратено наименование на материала: Мини тов. прек. 125 А, шир. 27 mm

Област на приложение: G – Инсталации (Електромерни табла)

Категория: 17–Комутационни апарати НН

Мерна единица: Брой

Аварийни запаси: Да

Характеристика на материала:

Миниатюрните товарови прекъсвач-разединители представляват механични комутационни апарати, способни да провеждат и да включват/изключват ръчно електрически ток 125 А във вериги при нормални условия и да провеждат за определено време токове във вериги при условията на претоварване и късо съединение.

Тялото на миниатюрните товарови прекъсвач-разединители е изработено чрез формоване на устойчив на нагряване, на огън и на механични удари изолационен материал с максимална широчина на един полюс 27 mm. В монтирано състояние съгласно инструкциите на производителя и след опроводяване активните части на миниатюрните товарови прекъсвач-разединители не са достъпни.

Средството (лостът) за управление при вертикално монтиране на миниатюрните товарови прекъсвач-разединители се движи в направление „нагоре – надолу", при което контактите се затварят при движение „нагоре". Миниатюрните товарови прекъсвач-разединители са снабдени с ясно видимо от челната страна средство за указване на затвореното и отвореното положение на контактната система.

Стойностите на прегряването на частите на миниатюрните товарови прекъсвач-разединители при нормален работен режим при температура до 40°C не трябва да надвишават посочените в таблица 2 и таблица 3 от БДС EN 60947-1 стойности или еквивалентно/и.
За свързване на проводниците от външната верига се използват винтови клеми с притискаща пластина с обхват на номиналните напречни сечения на проводниците от 6 mm^2 до 25 mm^2. Конструкцията на винтовите клеми трябва да позволява лесно въвеждане на проводниците, при което не се освобождават напълно съставните им части, както и лесно освобождаване на проводниците в експлоатационни условия.
Миниатюрните товарови прекъсвач-разединители конструктивно са приспособени за закрепване на монтажна шина с DIN – профил с размери 35x7,5 mm съгласно БДС EN 60715 или еквивалентно/и.
Миниатюрните товарови прекъсвач-разединители са маркирани с информацията съгласно т. 5.2 от БДС EN 60947-3 и CE маркировка за съответствие или еквивалентно/и.
Миниатюрните товарови прекъсвач-разединители са пакетирани в картонени кутии, на които е залепен етикет с наименование на материала „Миниатюрен товаров прекъсвач-разединител", техническите данни и броя на миниатюрните товарови прекъсвач-разединители, годината на производство, партидните номера и стандарта, в съответствие с който са произведени и изпитани - БДС EN 60947-3 или еквивалентно/и.

Използване:

Миниатюрните товарови прекъсвач-разединители са предназначени за монтиране в електромерни табла за директно измерване на електрическата енергия и се използват за ръчно включване и изключване на вериги, захранващи битови и други подобни уреди.

Съответствие на предлаганото изпълнение с нормативно-техническите документи:

Миниатюрните товарови прекъсвач-разединители трябва да отговарят най-малко на посочените по-долу стандарти или еквиваленти:

- БДС EN 60947-1:2007 „Комутационни апарати за ниско напрежение. Част 1: Общи правила (IEC 60947-1:2007)" или еквивалентно; и
- БДС EN 60947-3: 2009 „Комутационни апарати за ниско напрежение. Част 3: Товарови прекъсвачи, разединители, товарови прекъсвач-разединители и апарати комбинирани със стопяеми предпазители (IEC 60947-3:2008)" или еквивалентно; и

да бъдат оценени положително по реда и при условията на Наредбата за съществените изисквания и оценяване на съответствието на електрически съоръжения, предназначени за използване в определени граници на напрежението, приета с ПМС № 182 от 6.07.2001 г., обн., ДВ, бр. 62 от 13.07.2001 г.

Изискване към документацията и изпитванията:

№ по ред	Документ	Приложение № (или текст)
1.	Точно означение на типа, производителя и страната на производство (произход) и последно издание на каталога на производителя	Ex9I125, NOARK Electric Europe s.r.o., Китай Приложение 2.1.
2.	Техническо описание и чертежи с нанесени на тях размери	Приложение 2.1.
3.	ЕО декларация за съответствие	Приложение 2.2.

№ по ред	Документ	Приложение № (или текст)
4.	Протоколи от типови изпитвания на английски или български език, проведени от независима изпитвателна лаборатория – заверени копия, с приложен списък на отделните изпитвания на български език	Приложение 2.3.1. Приложение 2.3.2.
5.	Сертификат/акредитация на независимата изпитвателна лаборатория, провела типовите изпитвания по т. 4 – заверено копие	Приложение 2.4.
6.	Инструкции за транспортиране, складиране, монтиране, вкл. въртящия момент на затягане на клемовите съединения, обслужване и поддържане	Приложение 2.5.

Забележка: Всички оригинални документи трябва да бъдат на български език или с превод на български език. Каталозите и протоколите от проверките и изпитванията могат да бъдат и само на английски език.

Технически данни:

1. Характеристики на работната среда

№ по ред	Характеристика	Стойност
1.1	Място на монтиране	На закрито
1.2	Максимална околна температура	+ 40°C
1.3	Минимална околна температура	Минус 5°C
1.4	Максимална средна околна температура за период от 24 ч.	+ 35°C
1.5	Относителна влажност (при 20°C)	До 90 %
1.6	Степен на замърсяване	3
1.7	Надморска височина	До 2000 m

2. Параметри на електрическата разпределителна мрежа

№ по ред	Параметър	Стойност
2.1	Номинално напрежение	400 / 230 V
2.2	Максимално напрежение	440 / 253 V
2.3	Номинална честота	50 Hz
2.4	Брой проводници в разпределителната мрежа	4 проводна мрежа (L_1, L_2, L_3, PEN)
2.5	Схема на разпределителната мрежа	TN-C

3. Общи технически характеристики и други данни

ФИЛКАБ АД
ул. Коматевско шосе 92
4004 Пловдив, България
Т +359 32 277 171
Ф +359 32 671 133
office@filkab.com
www.filkab.com

№ по ред	Характеристика	Изискване	Гарантирано предложение
3.1	Обявен ток *(I_e)*	125 A	125 A
3.2	Обявено работно напрежение *(U_e)*	-	-
3.2.1	Еднополюсни прекъсвачи	230 V	230 V
3.2.2	Триполюсни прекъсвачи	230/400 V	230/400 V
3.3	Обявена честота *(f_n)*	50 Hz	50/60 Hz
3.4	Обявено издържано импулсно напрежение *(U_{imp})*	min 6 kV	6 kV
3.5	Обявено напрежение на изолацията *(U_i)*	min. 440 V	500 V
3.6	Изпитване на включвателната и изключвателната способност съгл. т. т. 4.3.5.2 и 4.3.5.3 от БДС EN 60947-3 или еквивалентно/и	min 375 A (1,05 U_e,cosφ=0,65)	2500 A
3.7	Обявен краткотрайно издържан ток *(I_{cw})* съгл. т. 4.3.6.1 от БДС EN 60947-3 или еквивалентно/и	min 1500 A / 1 s	1500 A / 1 s
3.8	Категория на приложение (при 400V AC)	AC 22 B или по-висока	AC-22A
3.9	Степен на защита от проникване на твърди тела и вода	min IP20	IP40
3.10	Износоустойчивост	-	-
3.10.1	Електрическа (брой к.ц.)	min 200 бр.	4 000
3.10.2	Механична (брой к.ц.)	min 1400 бр.	20 000
3.11	Монтажна ширина на един полюс	max 27 mm	18 mm
3.12	Експлоатационна дълготрайност	min 30 години	30 г

4. Миниатюрни товарови прекъсвач-разединители 125 A, широчина на полюс 27 mm

№ на стандарта	Брой на полюсите	Обявен ток, A	Тегло, g
20 17 2791	1	125	90
20 17 2793	3	125	270

Дата 26.09.2017 г.

ПОДПИС и ПЕЧАТ:

.....

Атанас Танчев
Изпълнителен директор
Филкаб АД

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Приложение 2 към Техническото предложение

за обособена позиция № 2

ИЗИСКВАНИ ДОКУМЕНТИ ОТ ТЕХНИЧЕСКИ СПЕЦИФИКАЦИИ
ОПИС

Приложение 2.1:	Каталожна листовка на миниатюрни товарови прекъсвачи тип Ex9I125 от последно издание на каталога на производителя NOARK Electrics, включваща техническо описание и чертежи с нанесени на тях размери;
Приложение 2.2:	ЕС Декларация за съответствие на миниатюрни товарови прекъсвачи тип Ex9I125, издадена от NOARK Electrics;
Приложение 2.31:	Сертификат за съответствие № CE110304003151-A3/H2 на миниатюрни товарови прекъсвачи тип Ex9I125, издаден от China Quality Certification Centre
Приложение 2.3.2:	Протокол № 00901-CE2017CQC0304-008903 за проведени типови изпитания на миниатюрен товаров прекъсвачи тип Ex9I125, издаден от China Quality Certification Centre, Shanghai Testing & Inspection Institute for Electrical Equipment;
Приложение 2.4:	Сертификат за акредитация на China Quality Certification Centre и Сертификат за акредитация на Shanghai Testing & Inspection Institute for Electrical Equipment рег. № TL030b/17.07.2017;
Приложение 2.5:	Инструкция за монтаж и съхранение на предложената за доставка комутационна апаратура ниско напрежение, издадена от производителя NOARK Electrics;

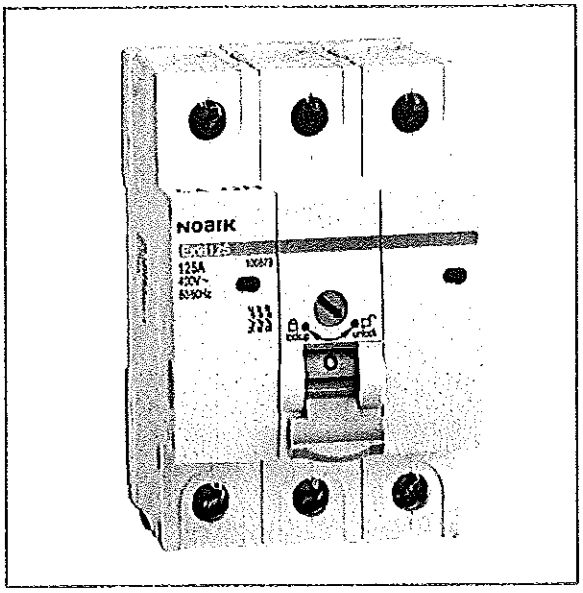
Дата 26.09.2017 г.

ПОДПИС и ПЕЧАТ: .....

АКЦИОНЕРНО ДРУЖЕСТВО ФИЛКАБ 16 ПЛОВДИВ

Атанас Танчев
Изпълнителен директор
Филкаб АД

Isolators Ex9I125



- **Modular Isolators**
- **Rated current up to 125 A**
- **Rated voltage 230 / 400 V AC**
- **Rated short-time withstand current I_{cw} = 12 x I_e, 1 s**
- **Meet requirements of IEC / EN 60947-3**
- **Built-in lock mechanism for OFF position**
- **1 up to 4-pole version**

Isolators Ex9I125 can be used as a main switch in wide variety of applications. These switches are tested according to IEC / EN 60947-3 standards and fulfill also requirements for isolation function.

Utilization category AC-22A ensures possibility of switching mixed resistive and inductive loads with low overloads with cos φ = 0.65. Subcategory A allows frequent operation.

Isolators of line Ex9I125 are produced in modular design with width one module unit per pole. Can be connected via standard busbars of both fork as well as pin type of connection.

Type Key

Ex9	I	125	1P	32A
Product family	Product	Version	Poles	Rated current
Ex9	I: Isolator	125:1 MU per pole	1, 2, 3, 4	16, 25, 32, 40, 63, 80, 100, 125

Certification marks

Isolators Ex9I125

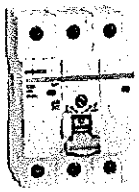
1-pole

Rated current	Poles	Width	Article No.	Type	Packing
16 A	1	1 MU	102304	Ex9I125 1P 16A	1/12/144
25 A	1	1 MU	102305	Ex9I125 1P 25A	1/12/144
32 A	1	1 MU	100862	Ex9I125 1P 32A	1/12/144
40 A	1	1 MU	100863	Ex9I125 1P 40A	1/12/144
63 A	1	1 MU	100864	Ex9I125 1P 63A	1/12/144
80 A	1	1 MU	100865	Ex9I125 1P 80A	1/12/144
100 A	1	1 MU	100866	Ex9I125 1P 100A	1/12/144
125 A	1	1 MU	100867	Ex9I125 1P 125A	1/12/144

2-pole

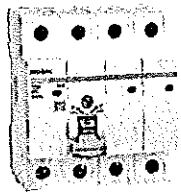
Rated current	Poles	Width	Article No.	Type	Packing
16 A	2	2 MU	102306	Ex9I125 2P 16A	1/6/72
25 A	2	2 MU	102307	Ex9I125 2P 25A	1/6/72
32 A	2	2 MU	100868	Ex9I125 2P 32A	1/6/72
40 A	2	2 MU	100869	Ex9I125 2P 40A	1/6/72
63 A	2	2 MU	100870	Ex9I125 2P 63A	1/6/72
80 A	2	2 MU	100871	Ex9I125 2P 80A	1/6/72
100 A	2	2 MU	100872	Ex9I125 2P 100A	1/6/72
125 A	2	2 MU	100873	Ex9I125 2P 125A	1/6/72

3-pole



Rated current	Poles	Width	Article No.	Type	Packing
16 A	3	3 MU	102308	Ex9I125 3P 16A	1/4/48
25 A	3	3 MU	102309	Ex9I125 3P 25A	1/4/48
32 A	3	3 MU	100874	Ex9I125 3P 32A	1/4/48
40 A	3	3 MU	100875	Ex9I125 3P 40A	1/4/48
63 A	3	3 MU	100876	Ex9I125 3P 63A	1/4/48
80 A	3	3 MU	100877	Ex9I125 3P 80A	1/4/48
100 A	3	3 MU	100878	Ex9I125 3P 100A	1/4/48
125 A	3	3 MU	100879	Ex9I125 3P 125A	1/4/48

4-pole



Rated current	Poles	Width	Article No.	Type	Packing
16 A	4	4 MU	102310	Ex9I125 4P 16A	1/3/36
25 A	4	4 MU	102311	Ex9I125 4P 25A	1/3/36
32 A	4	4 MU	100880	Ex9I125 4P 32A	1/3/36
40 A	4	4 MU	100881	Ex9I125 4P 40A	1/3/36
63 A	4	4 MU	100882	Ex9I125 4P 63A	1/3/36
80 A	4	4 MU	100883	Ex9I125 4P 80A	1/3/36
100 A	4	4 MU	100884	Ex9I125 4P 100A	1/3/36
125 A	4	4 MU	100885	Ex9I125 4P 125A	1/3/36

Technical data p. 3

Technical Data EX9I125

Isolators up to 125 A

General parameters

Modular design

Main switches with isolation function

Built-in lock mechanism for OFF position

Electrical parameters

Tested according to	IEC/EN 60947-3
Rated op. voltage	230/400 V AC
Rated frequency	50/60 Hz
Rated current I_e AC-22A 230/400 V AC	16, 25, 32, 40, 63, 80, 100, 125 A
Number of poles	1, 2, 3, 4
Utilization category	AC-22A
Rated insulation voltage U_i	500 V
Rated impulse withstand voltage U_{imp}	6 kV
Rated short-time withstand current I_{cw}, 1 s	12 x I_e
Rated short-circuit making capacity I_{cm}	
I_n = 16, 25, 32 A	640 A
I_n = 40, 63 A	1 260 A
I_n = 80, 100, 125 A	2 500 A
Maximum back-up fuse	160 A gG
Mechanical service life	20 000 operation cycles
Electrical service life	4 000 operation cycles

Mechanical parameters

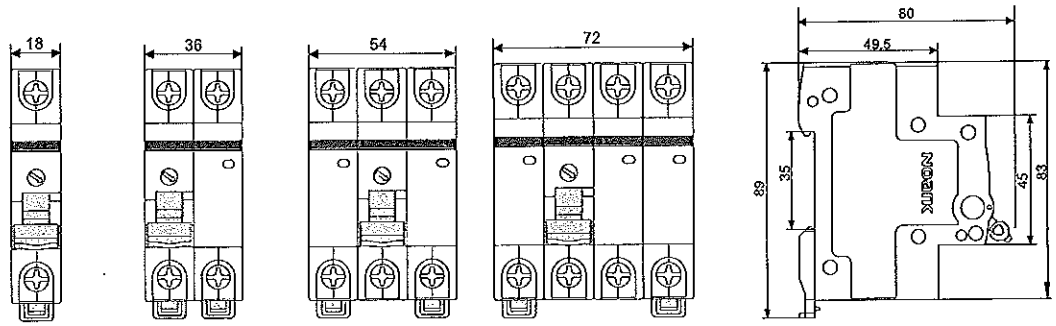
Device width	18 mm (per pole)
Device height	83 mm (89 mm including rail clip)
Frame size	45 mm
Mounting	easy fastening onto 35 mm device rail (DIN)
Degree of protection	IP40, terminals IP20
Terminals	combined lift + open mouthed
Terminal capacity	10 — 50 mm²
Fastening torque of terminals	2 — 3.5 Nm
Busbar thickness	0.8 — 2 mm
Ambient temperature	-30 — +70 °C
Altitude	≤ 2000 m
Relative humidity	≤ 95 %
Resistance to humidity and heat	class 2
Pollution degree	2
Installation class	III
Weight	0.09 kg per pole

Ordering data p. 2

Technical Data Ex9H125

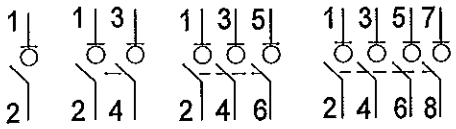
Isolators up to 125 A

Dimensions



1P 2P 3P 4P

Wiring diagrams



1P 2P 3P 4P

Ordering data p. 2

NOARK | NOARK Electric Europe s.r.o.

ЕС ДЕКЛАРАЦИЯ ЗА СЪОТВЕТСТВИЕ

Реф. Номер: 01008-20160708-Ex9I125-EUBG

Предмет на декларацията (продукт):

Шалтери (товарови прекъсвачи) до 125 A

Тип на продукта:

Ex9I125

Емитент: NOARK Electric Europe s.r.o.
Sezemická 2757/2
193 00 Prague 9, Czech Republic
Упълномощен представител на производител съгласно Директива 2014/35/ЕС

Настоящата декларация за съответствие е издадена на отговорността на упълномощения представител на производителя (Емитент).

Предметът на декларацията, описан по-горе, отговаря на съответното законодателство на Съюза за хармонизация:

ДИРЕКТИВА 2014/35/ЕС на Европейския парламент и на Съвета
ДИРЕКТИВА 2011/65/ЕС на Европейския парламент и на Съвета

Позоваване на използваните хармонизирани стандарти или позоваване на други технически спецификации, по отношение на които се декларира съответствие:

EN 60947-3:2008 + A1:2012
EN 60947-1:2007 + A1:2010

Място на издаване: Прага **Дата на издаване:** 8.7.2016 г.

Подписано за и от името на: NOARK Electric Europe s.r.o.

NOARK Electric Europe s.r.o.
Sezemická 2757/2, 193 00 Praha9
DIČ: CZ24123846 IČ: 24123846

Име, длъжност, подпис:

Beilei Zheng
Managing Director

ВЯРНО С ОРИГИНАЛА

АКЦИОНЕРНО ДРУЖЕСТВО * ФИЛКАБ 16 * ПЛОВДИВ *

NOARK Electric Europe s.r.o.

EU Declaration of Conformity

Ref. Number: 01008-20160708-Ex9I125-EUEN

Object of the declaration (product):

Isolators to 125 A

Product type:

Ex9I125

Issuer: NOARK Electric Europe s.r.o.
Sezemická 2757/2
193 00 Prague 9, Czech Republic
Authorized representative of producer according to Directive 2014/35/EU

This declaration of conformity is issued under the sole responsibility of the Authorized representative of producer (the Issuer).

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

DIRECTIVE 2014/35/EU of the European Parliament and of the Council
DIRECTIVE 2011/65/EU of the European Parliament and of the Council

References to the relevant harmonised standards used or references to the other technical specifications in relation to which conformity is declared:

EN 60947-3:2008 + A1:2012
EN 60947-1:2007 + A1:2010

Place of issue: Prague **Date of issue:** 08 July 2016

Signed for and on behalf of: NOARK Electric Europe s.r.o.

Representative, function and signature:

NOARK Electric Europe s.r.o.
Sezemicka 2757/2, 193 00 Praha9
DIC: CZ24123846 IČ: 24123846

Beilei Zheng
Managing Director

ВЯРНО С ОРИГИНАЛА

АКЦИОНЕРНО ДРУЖЕСТВО ФИЛКАБ 16 ПЛОВДИВ

Превод от английски език

Бланка на Чайна Куолити Сертификейшън Сентър (China Quality Certification Centre)

СЕРТИФИКАТ ЗА СЪОТВЕТСТВИЕ

Сертификат № CE110304003151-A3/H2

Продукт:	**Миниатюрни товарови прекъсвачи**
Кандидат:	НОАРК Електрикс (Шанхай) Ко., Лтд. (NOARK Electrics (Shanghai) Co., Ltd.) Сиксиан Роуд № 3857, район Сонгджианг, Шанхай, Китайска народна република
Тип/модел:	Ex9I125
Технически данни:	UI:500V, Ith:32A(Ie:16/25/32A), 63A(Ie:63/40A), 125A (Ie:80/100/125A); Ue:AC230V(1P), AC400V(2P,3P,4P); Ie:16A,25A,32A,40A,63A,80A,100A,125A; Icw:12Ie 1s;Icm;20Ie;AC-22A; 1P, 2P, 3P, 4P

С настоящото се удостоверява, че въз основа на изпитанията, проведени съгласно Протокол № C009-CE2017CQC0304-008903, предоставеният образец от гореспоменатия артикул отговаря на:

EN 60947-3:2009 (Трето издание) + A1: 2012 във връзка с EN 60947-1:2007 (Пето издание) + A1:2010

и отговаря на изискванията за провеждане на изпитания на Европейска директива **2014/35/ЕС.**

Дата на издаване: 01 август 2017 г.
Валиден до 01 август 2020 г.

Президент: подпис */не се чете/*
/Кръгъл печат на Чайна Куолити Сертификейшън Сентър (China Quality Certification Centre)/

CE 0001368

Подписаният Пламен Константинов Грънчаров удостоверявам верността на извършения от мен превод от английски на български език на приложения документ – Сертификат за съответствие. Преводът се състои от 1 страница.
Преводач:
Пламен Константинов Грънчаров

АКЦИОНЕРНО ДРУЖЕСТВО * ФИЛКАБ 16 * ПЛОВДИВ *

ВЯРНО С ОРИГИНАЛА

CHINA QUALITY CERTIFICATION CENTRE

CERTIFICATE OF CONFORMITY

Certificate No.: CE110304003151-A3/H2

Product	Switch-disconnectors
Applicant	NOARK Electrics (Shanghai) Co., Ltd. 3857 Sixian Road, Songjiang District, Shanghai, P.R.China
Type/Model	Ex9I125
Technical data	Ui:500V;Ith:32A(Ie:16/25/32A),63A(Ie:63/40A),125A(Ie:80/100/125A);Ue:AC230V(1P),AC400V(2P,3P,4P);Ie:16A,25A,32A,40A,63A,80A,100A,125A;Icw:12Ie 1s;Icm:20Ie;AC-22A;1P,2P,3P,4P

This is to certify that, on the basis of the tests undertaken as per Report No. 00901-CE2017CQC0304-008903, the submitted sample(s) of the above item complies with:

EN 60947-3:2009 + A1:2012 in conjunction with EN 60947-1:2007 (Fifth Edition) + A1:2010

and fulfills testing requirements of the European Directive:

Low voltage equipment (LVD) 2014/35/EU;

Valid from: Aug.01,2017

Valid until: Aug.01,2020

President:

CHINA QUALITY CERTIFICATION CENTRE

Section 9,No.188,Nansihuan Xilu, Beijing 100070 P.R.China

http://www.cqc.com.cn

ВЯРНО С ОРИГИНАЛА

АКЦИОНЕРНО ДРУЖЕСТВО * ПЛОВДИВ * ФИЛКАБ 10

38 0004415

Test Report issued under the responsibility of:

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

Report Number. ..... :	00901-CE2017-CQC0304-008903
Date of issue ..... :	2017-07-18
Total number of pages ..... :	98
Applicant's name ..... :	NOARK Electrics(Shanghai) Co.,Ltd.
Address ..... :	3857 Sixian Road,Songjiang District,Shanghai.
Test specification:	
Standard ..... :	EN 60947-3:2009 (Third Edition) + A1:2012
Test procedure ..... :	CCA-Scheme
Non-standard test method ..... :	N/A
Test Report Form No ..... :	EN60947_3C
Test Report Form(s) Originator ..... :	OVE
Master TRF ..... :	Dated 2013-05

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.

Test item description ..... :	Switch-Disconnector
Trade Mark ..... :	Noark
Manufacturer ..... :	NOARK Electrics (Shanghai) Co., Ltd.
Model/Type reference ..... :	Ex9l125
Ratings ..... :	See page14

ВЯРНО С ОРИГИНАЛА

Testing procedure and testing location:			
☒	**CB Testing Laboratory:**	Shanghai Testing & Inspection Institute for Electrical Equipment (STIEE)	
Testing location/ address.....:		505 Wu Ning Rd. Shanghai 200063, P.R. CHINA	
☐	**Associated CB Laboratory:**		
Testing location/ address.....:			
	Tested by (name + signature).....:	**Yin Jifu**	殷吉福
	Approved by (name + signature)...:	**Wei Qingyuan**	魏庆媛
☐	**Testing procedure: TMP**		
Testing location/ address.....:			
	Tested by (name + signature).....:		
	Approved by (name + signature)...:		
☐	**Testing procedure: WMT**		
Testing location/ address.....:			
	Tested by (name + signature).....:		
	Witnessed by (name + signature) .:		
	Approved by (name + signature)...:		
☐	**Testing procedure: SMT**		
Testing location/ address.....:			
	Tested by (name + signature).....:		
	Approved by (name + signature)...:		
	Supervised by (name + signature) :		

Remark: N/A

List of Attachments (including a total number of pages in each attachment): N/A

Summary of testing:

Tests performed (name of test and test clause):

CE2010CQC0304-004339:
Test Sequence I(AC-22A):
#01: Ex9I125 Ue:AC400V Ith:125A Ie:80A 4P

#02: Ex9I125 Ue:AC400V Ith:125A Ie:80A 2P

#03: Ex9I125 Ue:AC230V Ith:125A Ie:80A 1P

#04: Ex9I125 Ue:AC400V Ith:63A Ie:40A 4P

Test Sequence II(AC-22A):
#05: Ex9I125 Ue:AC400V Ith:125A Ie:80A 4P

#06: Ex9I125 Ue:AC230V Ith:125A Ie:80A 1P

#07: Ex9I125 Ue:AC400V Ith:63A Ie:40A 4P

Test Sequence III(AC-22A):
#08: Ex9I125 Ue:AC400V Ith:125A Ie:80A 4P

#09: Ex9I125 Ue:AC400V Ith:125A Ie:80A 2P

#10: Ex9I125 Ue:AC230V Ith:125A Ie:80A 1P

#11: Ex9I125 Ue:AC400V Ith:63A Ie:40A 4P

CE2010CQC0304-004339-M1:

Test Sequence I(AC-22A):
#01: Ex9I125 Ue:AC400V Ith:32A Ie:16A 4P
Test Sequence II(AC-22A):
#02: Ex9I125 Ue:AC400V Ith:32A Ie:16A 4P
Test Sequence III(AC-22A):
#03: Ex9I125 Ue:AC400V Ith:32A Ie:16A 4P
Test Sequence I(AC-22A):
#04: Ex9I125 Ue:AC400V Ith:32A Ie:16A 2P
Test Sequence III(AC-22A):
#05: Ex9I125 Ue:AC400V Ith:32A Ie:16A 2P

Test Sequence I(AC-22A):
#06: Ex9I125 Ue:AC230V Ith:32A Ie:16A 1P

Test Sequence II(AC-22A):
#07: Ex9I125 Ue:AC230V Ith:32A Ie:16A 1P

Test Sequence III(AC-22A):
#08: Ex9I125 Ue:AC230V Ith:32A Ie:16A 1P

Test Sequence III(AC-22A):
#09: Ex9I125 Ue:AC400V Ith:32A Ie:25A 4P

Testing location:

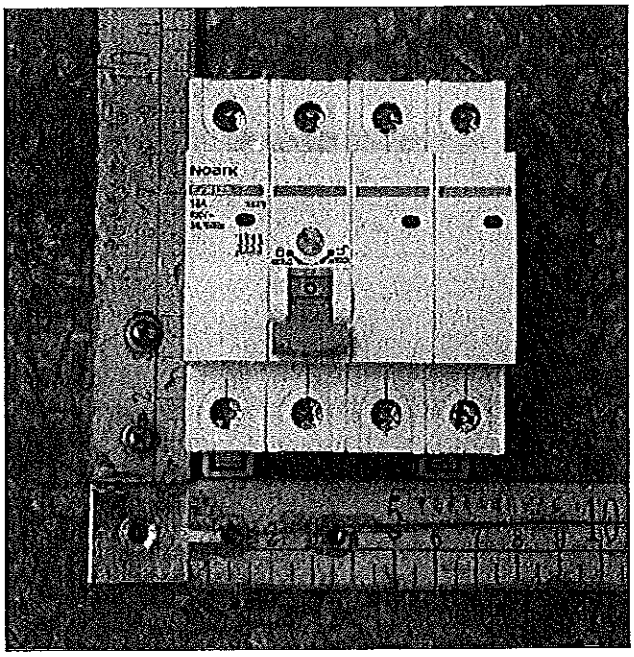
Shanghai Testing & Inspection Institute for Electrical Equipment (STIEE)
505 Wu Ning Rd. Shanghai 200063, P.R. CHINA

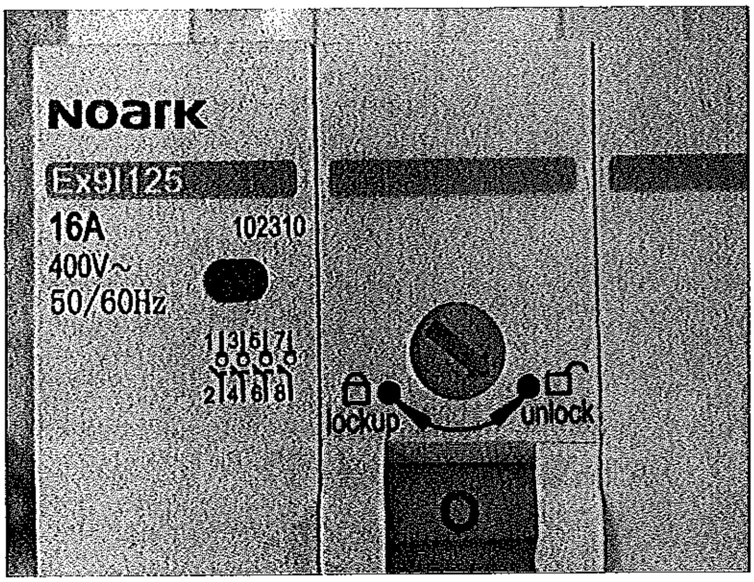
Summary of compliance with National Differences

List of countries addressed: N/A

☐ **The product fulfils the requirements of _____ (insert standard number and edition and delete the text in parenthesis or delete the whole sentence if not applicable)**

Copy of marking plate





ВЯРНО С ОРИГИНАЛА

АКЦИОНЕРНО ДРУЖЕСТВО ФИЛКАБ ПЛОВДИВ

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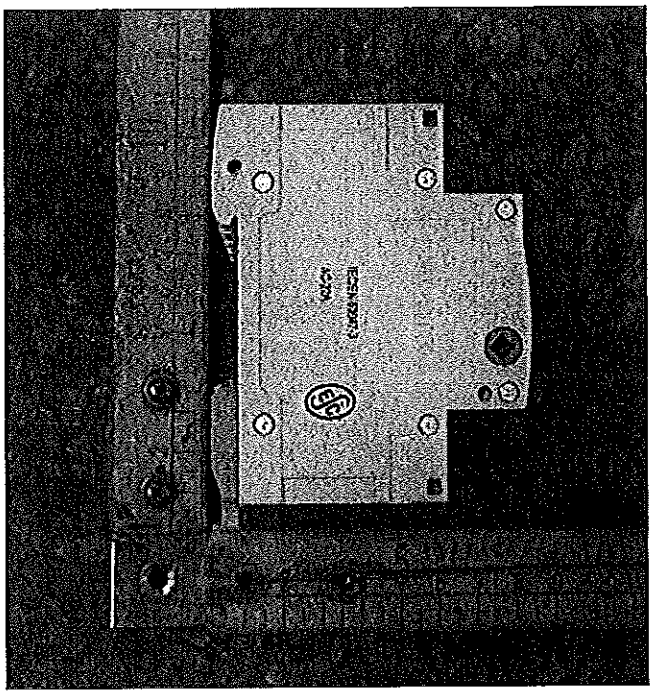

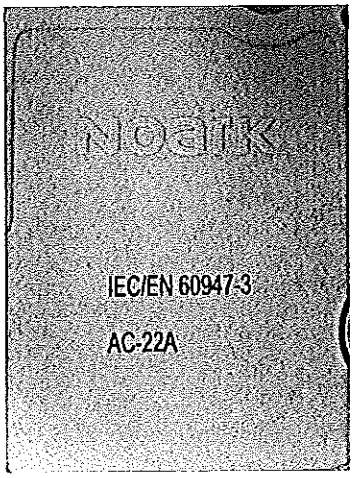

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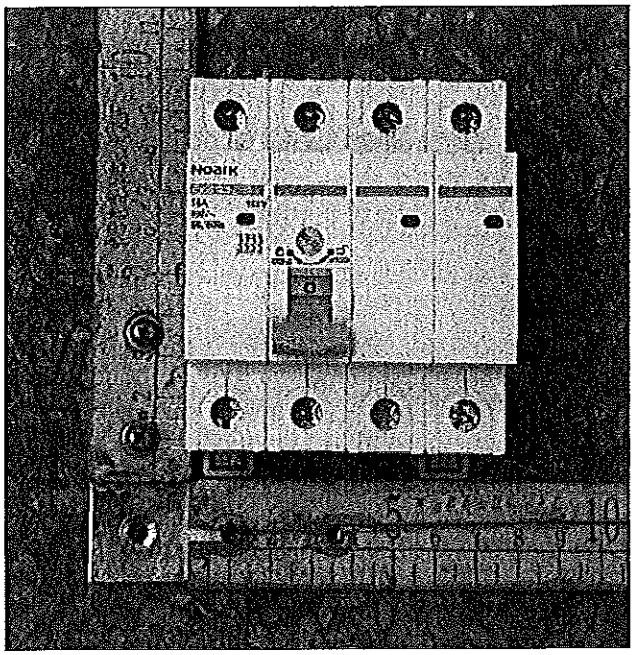

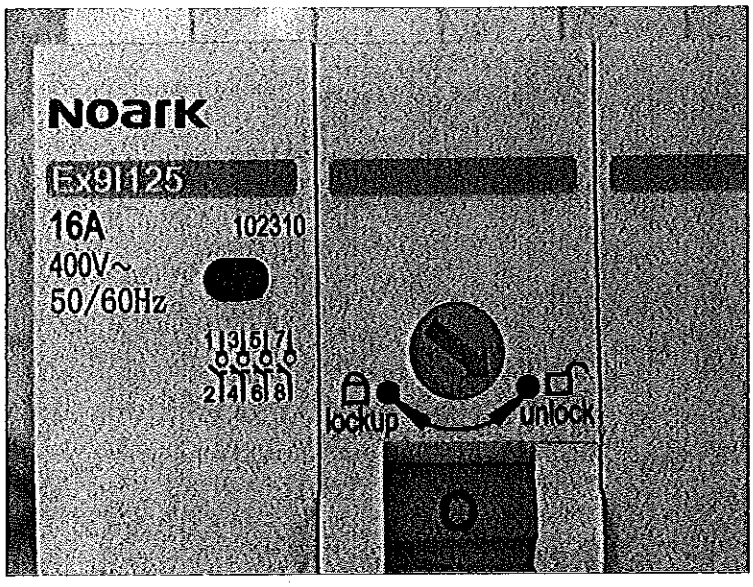

ВЯРНО С ОРИГИНАЛА

АКЦИОНЕРНО ДРУЖЕСТВО * ФИЛКАБ 13 * ПЛОВДИВ

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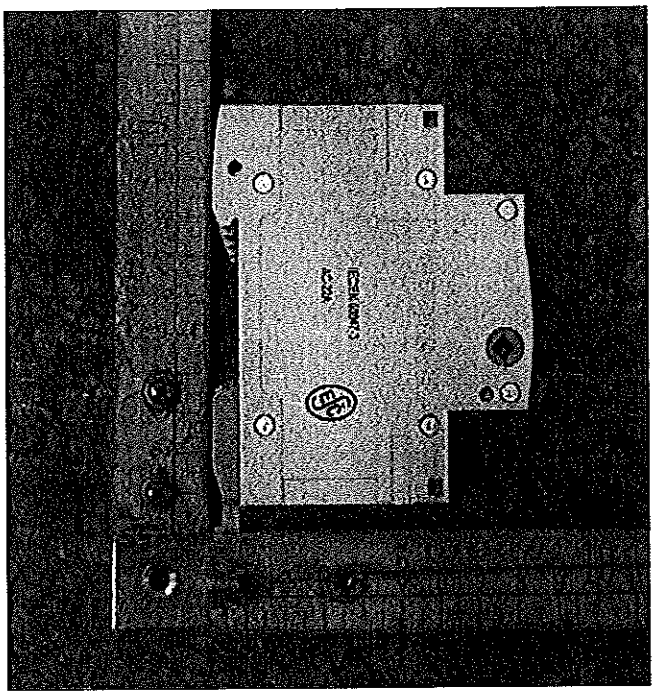

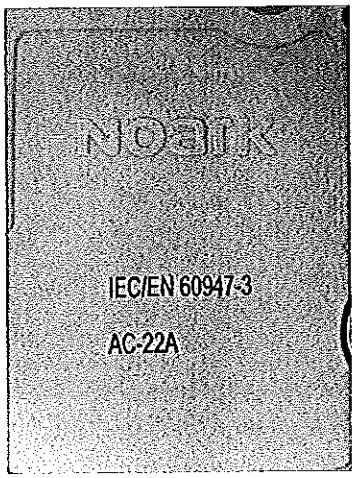

ВЯРНО С ОРИГИНАЛА

АКЦИОНЕРНО ДРУЖЕСТВО ПЛОВДИВ ФИЛИАЛ 13

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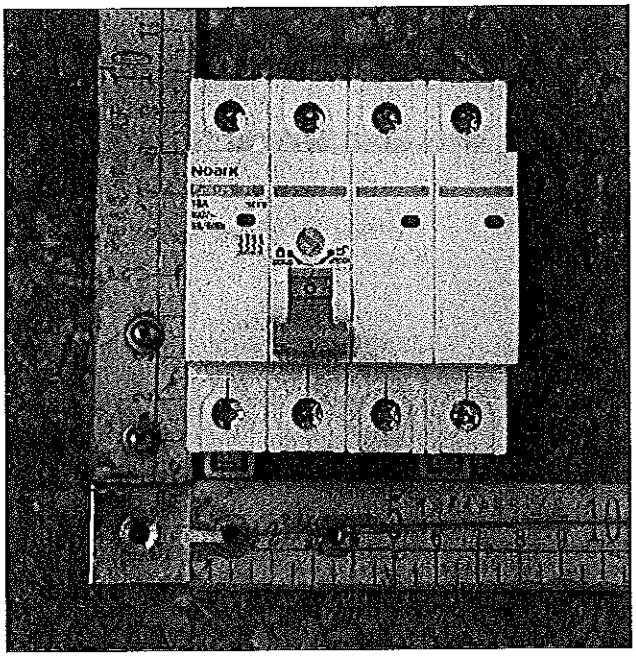

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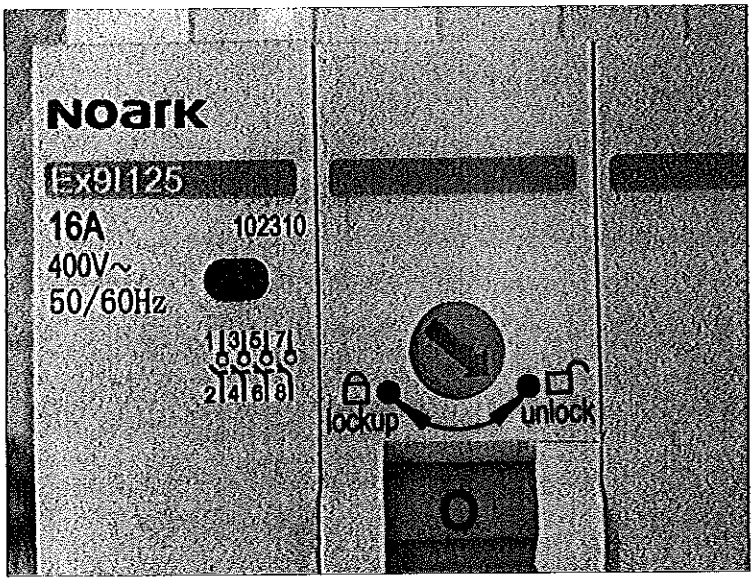

ВЯРНО С ОРИГИНАЛА

ФИЛКАБ 16 ПЛОВДИВ

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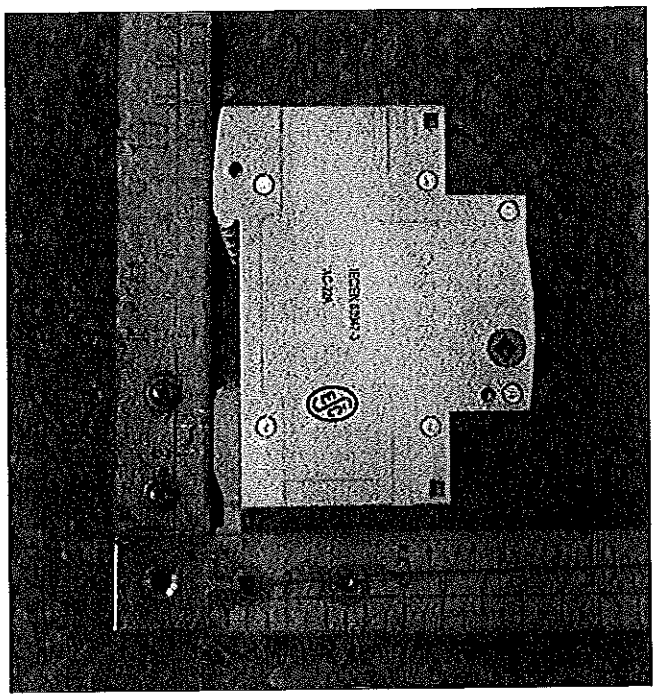

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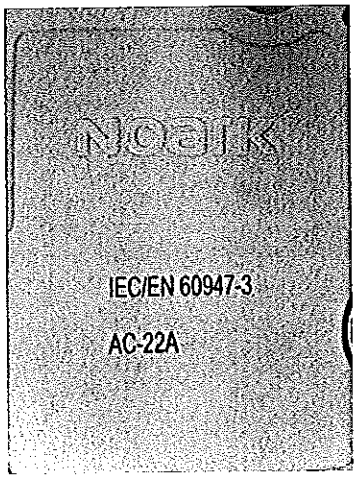

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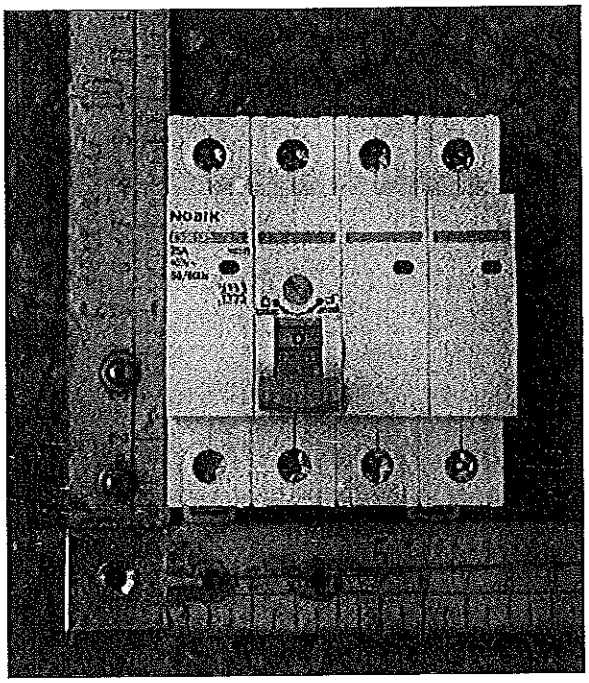

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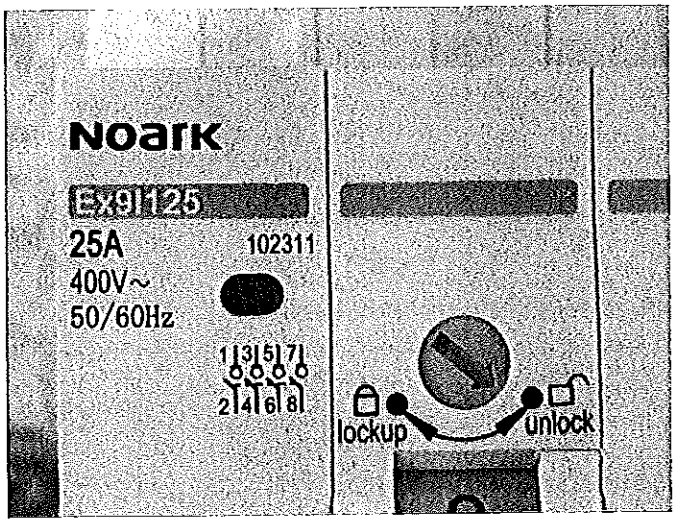

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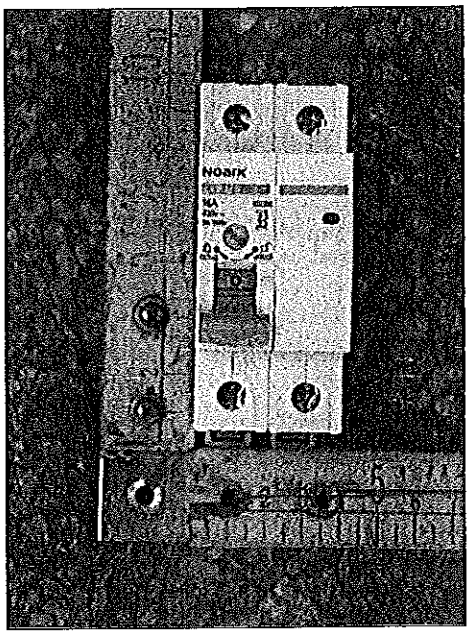

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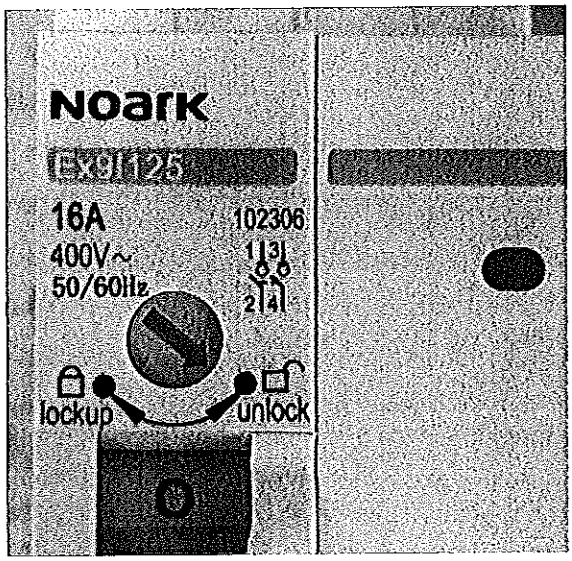
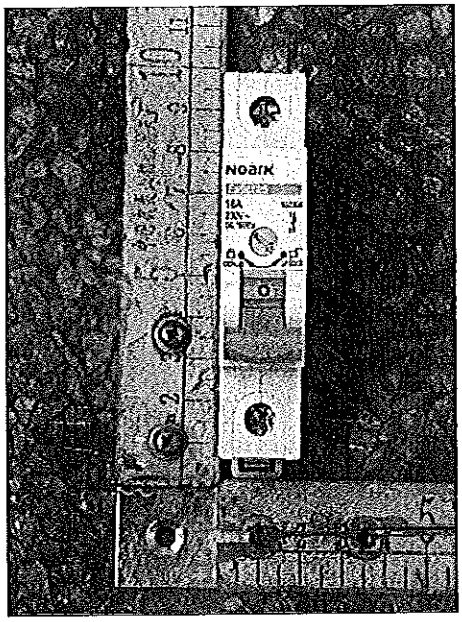


ВЯРНО С ОРИГИНАЛА

АКЦИОНЕРНО ДРУЖЕСТВО * ПЛОВДИВ * ОНЛКАБ 16

Copy of marking plate



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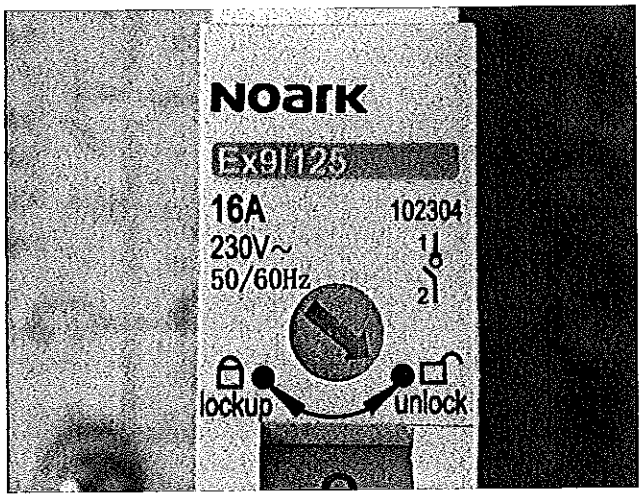

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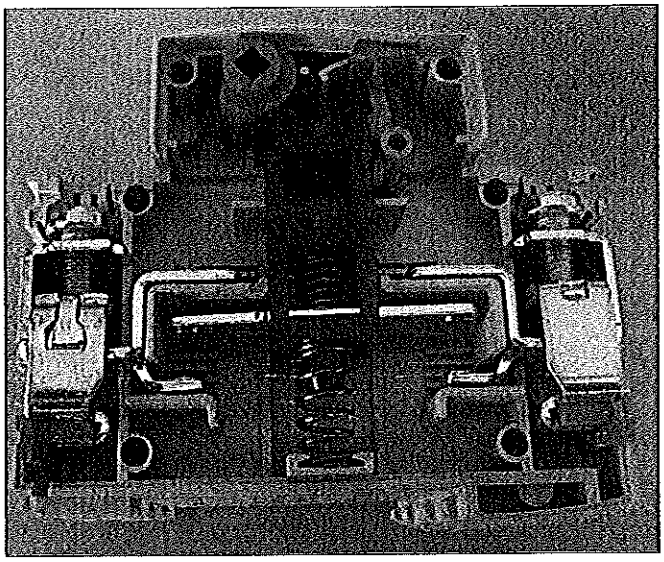
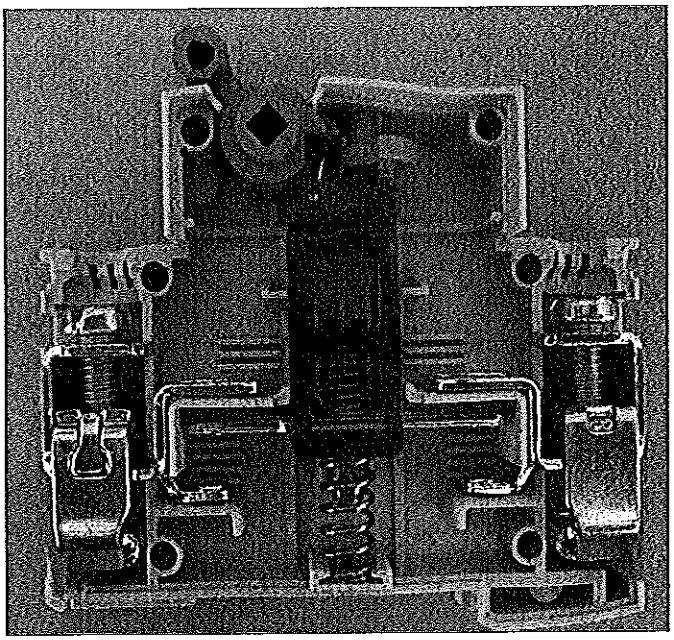


25A

Copy of marking plate



16A

Test item particulars ..... :	
- method of operation ..... :	dependent manual operation
- suitability for isolation ..... :	suitable
- degree of protection ..... :	/
- number of poles..... :	1P, 2P, 3P, 4P
- kind of current..... :	AC
-in the case of a.c., number of phases and rated frequency..... :	3, 1 50/60Hz
- number of positions of the main contacts (if more than two)..... :	2
-breaking arrangement for fused devices ..... :	-
Rated and limiting values, main circuit..... :	
- rated operational voltage U_e (V)..... :	AC230V (1P), AC400V (2P, 3P, 4P)
- rated insulation voltage U_i (V) ..... :	500V
- rated impulse withstand voltage U_{imp} (kV) ..... :	6kV
- conventional free air thermal current I_{th} (A) ..... :	32A(Ie:16/25/32A), 63A(Ie:40/63A),125A(Ie:80/100/125A)
- conventional enclosed thermal current I_{the} (A)..... :	-
- rated operational current I_e (A)..... :	16A, 25A, 32A, 40A, 63A, 80A, 100A, 125A
- rated uninterrupted current I_u (A) ..... :	16A, 25A, 32A, 40A, 63A, 80A, 100A, 125A
- rated frequency (Hz)..... :	-
- utilization category..... :	AC-22A
Short-circuit characteristic..... :	-
- rated short-time withstand current I_{cw} (kA)..... :	12Ie/1s
- rated short-time making capacity I_{cm} (kA)..... :	20Ie
- rated conditional short-circuit current..... :	-
Control circuits..... :	-
Auxiliary circuits ..... :	-
Relays and releases..... :	-
Co-ordination with short-circuit protective devices ..... :	-
- kind of protective device..... :	-

ВЯРНО С ОРИГИНАЛА

АКЦИОНЕРНО ДРУЖЕСТВО * ПЛОВДИВ * ОФИС 13

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 ....: 2012-05, 2010-11

Date (s) of performance of tests...............................: 2012-06, 2010-12

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.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ....:

☐ **Yes**

☒ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies)...........................: Same as applicant

General product information:

Ex9I125
Ui:500V
Ith: 32A(Ie:16/25/32A), 63A(Ie:63/40A),125A(Ie:80/100/125A)
Ue: AC230V(1P), AC400V(2P, 3P, 4P)
Ie: 16A, 25A, 32A, 40A, 63A, 80A, 100A, 125A
Icw: 12Ie/1s
Icm:20Ie
Utilization category: AC-22A
1P, 2P, 3P, 4P

Type Explanation:

Ex(1) 9(2) I(3) 125(4)

(1) Corporation feature code

(2) Corporation design serial number

(3) Code for switch-disconnector

(4) Rated current of frame size,125A means 125A

ВЯРНО С ОРИГИНАЛА

ПЛОВДИВ

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		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	Noark	P
	- type designation or serial number	Ex9IP	P
	- rated operational current	125A	P
	- rated operational voltage	AC690V	P
	- utilization category	AC-22A	P
	- rated frequency		N/A
	- manufacturer's claim for compliance with IEC/EN 60947-3	EN 60947-3	P
	- degree of protection	IP20	P
	Marking on fuse-combination units:		—
	- fuse type		N/A
	- maximum rated current		N/A
	- power loss of the fuse-link		N/A
	Identification of terminals:		P
	- line terminals		P
	- load terminals		P
	- neutral pole terminal		N/A
	- protective earth terminal		N/A
	Data in the manufacturer's published information:		P
	- rated insulation voltage	500V	P
	- rated impulse withstand voltage for equipment suitable for isolation or when determined	6kV	P
	- pollution degree, if different from 3		N/A
	- rated duty	Uninterrupted duty	P
	- rated short-time withstand current and duration	12Ie/1s	P
	- rated short-circuit making capacity	20Ie	P
	- rated conditional short-circuit current		N/A

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
7.1	CONSTRUCTION		
7.1.1	Materials	Base:PA6 Handle:PA66	P
7.1.1.1	Resistance to abnormal heat and fire		
	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 (PA6)		P
	No visible flame and no sustained glowing		N/A
	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 (PA66)		P
	No visible flame and no sustained glowing		P
	Flames and glowing extinguish within 30 s		N/A
	No ignition of the tissue paper		P
7.1.2	Current-carrying parts and their connection		
7.1.3	Clearances ..... :	see appended table 7.1.3 on page 58	P
	Creepage distances ..... :	see appended table 7.1.3 on page 58	P
	Pollution degree ..... :	3	—
	Comparative tracking index (V) ..... :	CTI:400	—
	Material group ..... :	II	—
7.1.4	Actuator		P
7.1.4.1	Insulation		—
	Actuator insulated from live parts for		—
	- rated insulation voltage	1000V	P
	- rated impulse withstand voltage	6kV	P
	Actuator made of metal	No	—
	- connected to a protective conductor or provided with an additional insulation		N/A
	Actuator made of or covered by insulating material :	Yes	—
	- 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
7.1.4.2	Direction of movement		P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	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	Actuator	P
7.1.5.2	Indication by the actuator	Yes	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		N/A
	- construction of the actuating mechanism		P
	- minimum clearances across open contacts (see Table XIII, Part 1) (mm) .....:	5,5mm	—
	- measured clearances (mm) .....:	6,0mm	P
	- test Uimp across gap (kV) .....:	9,80kV	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) .....:		—
	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

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
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		P
	Mechanical strength of terminals		P
	Maximum cross-sectional area of conductor (mm²) .....:	50mm²	—
	Diameter of thread (mm) .....:	-	—
	Torque (Nm) .....:	5Nm	—
	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) .....:	1,0mm²	—
	Number of conductor of the smallest cross section :	1	—
	Diameter of bushing hole (mm) .....:	6,4mm	—
	Height between the equipment and the platen .....:	260mm	—
	Mass at the conductor(s) (kg) .....:	0,4kg	—
	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. .....:	35N	—
	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) .....:	50mm²	—
	Number of conductor of the largest cross section .:	1	—
	Diameter of bushing hole (mm) .....:	15,9mm	—
	Height between the equipment and the platen .....:	343mm	—
	Mass at the conductor(s) (kg) .....:	9,5kg	—

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	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. .....:	235N	—
	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) .....:	Smallest:1,0mm² Largest:50,0mm²	—
	Number of conductor of the smallest cross section, number of conductor of the largest cross section ..:	1 1	—
	Diameter of bushing hole (mm) .....:	Smallest:6,4mm Largest:15,9mm	—
	Height between the equipment and the platen .....:	Smallest:260 mm Largest:343 mm	—
	Mass at the conductor(s) (kg) .....:	Smallest:0,4kg Largest:9,5kg	—
	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.....:	Smallest:35N Largest:235N	—
	During the test, the conductor neither slips out of the terminal nor breaks near the clamping unit		P
7.1.7.2	Connection capacity		
	Type of conductors .....:	Copper conductors	—
	Minimum cross-sectional area of conductor (mm²) :	6,0mm²	—
	Maximum cross-sectional area of conductor (mm²) .....:	50,0mm²	—
	Number of conductors simultaneously connectable to the terminal .....:	1	—
7.1.7.3	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
7.1.7.4	Terminal identification and marking		P
	Terminal intended exclusively for the neutral conductor		P
	Protective earth terminal		N/A

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Other terminals		N/A
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		N/A
7.1.10.1	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

ВЯРНО С ОРИГИНАЛА

АКЦИОНЕРНО ДРУЖЕСТВО * ФИЛКАБ 15 * ПЛОВДИВ *

IEC / EN 60947-3			
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
7.1.10.2	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		P
	Degree of protection .....:	IP20	P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (#01 Ex9I125 Ue:AC400V Ith:125A Ie:80A 4P AC-22A)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....:	20°C	—
	test enclosure W x H x D (mm x mm x mm) .....:		—
	material of enclosure .....:		—
	Main circuits, test conditions:		—
	- conventional thermal current Ith (A) .....:	125,0A	—
	- conventional enclosed thermal current Ithe (A) ...:		—
	- cable/busbar cross-section (mm²) / length (mm)..:	50mm²/2m	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—
	- rated current (A) .....:		—
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	Measured temperature-rise .....:	see appended table 8.3.3.1 on page 59	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		P
	Rated impulse withstand voltage (kV) .....:	6kV	—
	- test Uimp main circuits (kV) .....:	7,30kV	P
	- test Uimp auxiliary circuits (kV) .....:	-	N/A
	- test Uimp on open main contacts (equipment suitable for isolation) (kV) .....:	9,80kV	P
	Power-frequency withstand voltage (V) .....:	1890V	—
	- main circuits, test voltage for 5 sec. (V) .....:		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) ..... :	440V	—
	Measured leakage current (mA) ..... :	<0,005mA	N/A
8.3.3.3	Making and breaking capacity		P
	- utilization category ..... :	AC-22A	—
	- rated operational voltage Ue (V) ..... :	AC400V	—
	- rated operational current Ie (A) or power (kW) .... :	125A	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue ..... (V):	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 ..... (V):	L1: L2: L3:	—
	- test current, I = ... x Ie (A):	L1: L2: L3:	—
	- power factor ..... :	L1: L2: L3:	—
	Conditions for make/break operations, other than AC-23A/B:		P
	- test voltage, U = 1,05 Ue ..... (V):	L1: 422V L2: 422V L3: 422V	—
	- test current, I = ... 3x Ie (A):	L1: 379A L2: 379A L3: 379A	—
	- power factor/ time constant 0,65:	L1: 0,67 L2: 0,67 L3: 0,67	—
	Number of make/break or make and break operations ..... :	5	P
	- recovery voltage duration (≥ 50 ms)		P
	- current duration (ms) ..... :	500ms	—

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- time interval between operations .....:	30s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) .....:	54,2kHz	—
	- measured oscillatory frequency (kHz) .....:	L1: 54,7 L2: 54,7 L3: 54,7	P
	- factor γ .....:	L1: 1,11 L2: 1,11 L3: 1,11	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		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~ .....:	1000V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	440V	—
	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) .....:	<0,005mA	P
8.3.3.6	Temperature-rise verification		P
	- conductor cross-section (mm²) .....:	50mm²	—
	- test current Ie (A) .....:	125A	—
	Measured temperature-rise .....:	see appended table 8.3.3.6 on page 59	P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.7	Strength of actuator mechanism		N/A
8.2.5	Verification of the strength of actuator mechanism and position indicating device		P
	- actuator type (fig.) .....:	fig.1b	—
8.2.5.2.1	Dependent and independent manual operation		P
	- actuating force for opening (N) .....:	25N	—
	- test force with blocked main contacts (N) .....:	75N	—
	- used method to keep the contact closed .....:	Screw through the moving and fixing contact	—
	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
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

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (#02 Ex9I125 Ue:AC400V Ith:125A Ie:80A 2P AC-22A)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....:	20°C	—
	test enclosure W x H x D (mm x mm x mm) .....:		—
	material of enclosure .....:		—
	Main circuits, test conditions:		—
	- conventional thermal current Ith (A) .....:	125,0A	—
	- conventional enclosed thermal current Ithe (A) ...:		—
	- cable/busbar cross-section (mm²) / length (mm)..:	50mm²/2m	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—
	- rated current (A) .....:		—
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	Measured temperature-rise .....:	see appended table 8.3.3.1 on page 60	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		P
	Rated impulse withstand voltage (kV) .....:	6kV	—
	- test Uimp main circuits (kV) .....:	7,30kV	P
	- test Uimp auxiliary circuits (kV) .....:	-	N/A
	- test Uimp on open main contacts (equipment suitable for isolation) (kV) .....:	9,80kV	P
	Power-frequency withstand voltage (V) .....:	1890V	—
	- main circuits, test voltage for 5 sec. (V) .....:		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).....:	440V	—
	Measured leakage current (mA).....:	<0,005mA	N/A
8.3.3.3	Making and breaking capacity		P
	- utilization category .....:	AC-22A	—
	- rated operational voltage Ue (V) .....:	AC400V	—
	- rated operational current Ie (A) or power (kW) ....:	125A	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....(V):	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 .....(V):	L1: L2: L3:	—
	- test current, I = ...x Ie (A):	L1: L2: L3:	—
	- power factor .....:	L1: L2: L3:	—
	Conditions for make/break operations, other than AC-23A/B:		P
	- test voltage, U = 1,05 Ue .....(V):	L1: 422V L2: 422V L3:	—
	- test current, I = ...3x Ie (A):	L1: 378A L2: 378A L3:	—
	- power factor/ time constant 0,65:	L1: 0,67 L2: 0,67 L3:	—
	Number of make/break or make and break operations .....:	5	P
	- recovery voltage duration (≥ 50 ms)		P
	- current duration (ms) .....:	500ms	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- time interval between operations .....:	30s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) .....:	54,2kHz	—
	- measured oscillatory frequency (kHz) .....:	L1: 54,3 L2: 54,3 L3:	P
	- factor γ .....:	L1: 1,12 L2: 1,12 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		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~ .....:	1000V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	440V	—
	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) .....:	<0,005mA	P
8.3.3.6	Temperature-rise verification		P
	- conductor cross-section (mm²) .....:	50mm²	—
	- test current Ie (A) .....:	125A	—
	Measured temperature-rise .....:	see appended table 8.3.3.6 on page 60	P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.7	Strength of actuator mechanism		N/A
8.2.5	Verification of the strength of actuator mechanism and position indicating device		P
	- actuator type (fig.) .....:	fig.1b	—
8.2.5.2.1	Dependent and independent manual operation		P
	- actuating force for opening (N) .....:	25N	—
	- test force with blocked main contacts (N) .....:	75N	—
	- used method to keep the contact closed .....:	Screw through the moving and fixing contact	—
	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
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
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (#03 Ex9I125 Ue:AC230V Ith:125A Ie:80A 1P AC-22A)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....:	20°C	—
	test enclosure W x H x D (mm x mm x mm) .....:		—
	material of enclosure .....:		—
	Main circuits, test conditions:		—
	- conventional thermal current Ith (A) .....:	125,0A	—
	- conventional enclosed thermal current Ithe (A) ...:		—
	- cable/busbar cross-section (mm²) / length (mm)...:	50mm²/2m	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—
	- rated current (A) .....:		—
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	Measured temperature-rise .....:	see appended table 8.3.3.1 on page 61	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		P
	Rated impulse withstand voltage (kV) .....:	6kV	—
	- test Uimp main circuits (kV) .....:	7,30kV	P
	- test Uimp auxiliary circuits (kV) .....:	-	N/A
	- test Uimp on open main contacts (equipment suitable for isolation) (kV) .....:	9,80kV	P
	Power-frequency withstand voltage (V) .....:	1890V	—
	- main circuits, test voltage for 5 sec. (V) .....:		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

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Clause	Requirement + Test	Result - Remark	Verdict
	Equipment suitable for isolation, leakage current not exceed 0,5 mA		—
	Test voltage 1,1 Ue (V) ..... :	440V	—
	Measured leakage current (mA) ..... :	<0,005mA	N/A
8.3.3.3	Making and breaking capacity		P
	- utilization category ..... :	AC-22A	—
	- rated operational voltage Ue (V) ..... :	AC400V	—
	- rated operational current Ie (A) or power (kW) .... :	125A	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue ..... (V):	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 ..... (V):	L1: L2: L3:	—
	- test current, I = ... x Ie (A):	L1: L2: L3:	—
	- power factor ..... :	L1: L2: L3:	—
	Conditions for make/break operations, other than AC-23A/B:		P
	- test voltage, U = 1,05 Ue ..... (V):	L1: 430V L2: L3:	—
	- test current, I = ... 3x Ie (A):	L1: 380A L2: L3:	—
	- power factor/ time constant 0,65:	L1: 0,68 L2: L3:	—
	Number of make/break or make and break operations ..... :	5	P
	- recovery voltage duration (≥ 50 ms)		P
	- current duration (ms) ..... :	500ms	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- time interval between operations .....:	30s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) .....:	54,2kHz	—
	- measured oscillatory frequency (kHz) .....:	L1: 54,3 L2: L3:	P
	- factor γ .....:	L1: 1,12 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		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~ .....:	1000V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	440V	—
	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) .....:	<0,005mA	P
8.3.3.6	Temperature-rise verification		P
	- conductor cross-section (mm²) .....:	50mm²	—
	- test current Ie (A) .....:	125A	—
	Measured temperature-rise .....:	see appended table 8.3.3.6 on page 61	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.7	Strength of actuator mechanism		N/A
8.2.5	Verification of the strength of actuator mechanism and position indicating device		P
	- actuator type (fig.) .....:	fig.1b	—
8.2.5.2.1	Dependent and independent manual operation		P
	- actuating force for opening (N) .....:	25N	—
	- test force with blocked main contacts (N) .....:	75N	—
	- used method to keep the contact closed .....:	Screw through the moving and fixing contact	—
	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
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

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (#04 Ex9I125 Ue:AC400V Ith:63A Ie:40A 4P AC-22A)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....:	20°C	—
	test enclosure W x H x D (mm x mm x mm) .....:		—
	material of enclosure .....:		—
	Main circuits, test conditions:		—
	- conventional thermal current Ith (A) .....:	63A	—
	- conventional enclosed thermal current Ithe (A) ...:		—
	- cable/busbar cross-section (mm²) / length (mm)..:	16mm²/1m	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—
	- rated current (A) .....:		—
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	Measured temperature-rise .....:	see appended table 8.3.3.1 on page 62	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		P
	Rated impulse withstand voltage (kV) .....:	6kV	—
	- test Uimp main circuits (kV) .....:	7,30kV	P
	- test Uimp auxiliary circuits (kV) .....:	-	N/A
	- test Uimp on open main contacts (equipment suitable for isolation) (kV) .....:	9,80kV	P
	Power-frequency withstand voltage (V) .....:	1890V	—
	- main circuits, test voltage for 5 sec. (V) .....:		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

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Clause	Requirement + Test	Result - Remark	Verdict
	Equipment suitable for isolation, leakage current not exceed 0,5 mA		—
	Test voltage 1,1 Ue (V) ..... :	440V	—
	Measured leakage current (mA) ..... :	<0,005mA	N/A
8.3.3.3	Making and breaking capacity		P
	- utilization category ..... :	AC-22A	—
	- rated operational voltage Ue (V) ..... :	AC400V	—
	- rated operational current Ie (A) or power (kW) .... :	63A	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue ..... (V):	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 ..... (V):	L1: L2: L3:	—
	- test current, I = ... x Ie (A):	L1: L2: L3:	—
	- power factor ..... :	L1: L2: L3:	—
	Conditions for make/break operations, other than AC-23A/B:		P
	- test voltage, U = 1,05 Ue ..... (V):	L1: 422V L2: 422V L3: 422V	—
	- test current, I = ... 3x Ie (A):	L1: 192A L2: 192A L3: 192A	—
	- power factor/ time constant 0,65:	L1: 0,67 L2: 0,67 L3: 0,67	—
	Number of make/break or make and break operations ..... :	5	P
	- recovery voltage duration (≥ 50 ms)		P
	- current duration (ms) ..... :	500ms	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- time interval between operations .....:	30s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) .....:	47,3kHz	—
	- measured oscillatory frequency (kHz) .....:	L1: 47,5 L2: 47,5 L3: 47,5	P
	- factor γ .....:	L1: 1,12 L2: 1,12 L3: 1,12	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		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~ .....:	1000V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	440V	—
	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) .....:	<0,005mA	P
8.3.3.6	Temperature-rise verification		P
	- conductor cross-section (mm²) .....:	16mm²	—
	- test current Ie (A) .....:	63A	—
	Measured temperature-rise .....:	see appended table 8.3.3.6 on page 62	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.7	Strength of actuator mechanism		N/A
8.2.5	Verification of the strength of actuator mechanism and position indicating device		P
	- actuator type (fig.) .....:	fig.1b	—
8.2.5.2.1	Dependent and independent manual operation		P
	- actuating force for opening (N) .....:	25N	—
	- test force with blocked main contacts (N) .....:	75N	—
	- used method to keep the contact closed .....:	Screw through the moving and fixing contact	—
	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
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 (#05 Ex9l125 Ue:AC400V Ith:125A Ie:80A 4P AC-22A)		P
8.3.4.1	Operational performance test		P
	- utilization category .....:	AC-22A	—
	- rated operational voltage (V) .....:	AC400V	—
	- rated operational current (A) .....:	125A	—
	Test conditions for electrical operation cycles:		
	- test voltage (V) .....:	L1: 402V L2: 402V L3: 402V	—
	- test current (A) .....:	L1: 129A L2: 129A L3: 129A	—
	- power factor/time constant 0,80:	L1: 0,80 L2: 0,80 L3: 0,80	—
	Number of cycles with current .....:	1200	P
	Number of cycles without current .....:	7000	P
	First test sequence (with/without current) .....:	with current	—
	Second test sequence (with/without current) .....:	without current	—
	- time interval between first and second test sequence .....:		—
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		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~ .....:	1000V	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	440V	—
	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 .....:	<0,005mA	P
8.3.4.4	Temperature-rise verification		P
	- conductor cross-section (mm²) .....:	50mm²	—
	- test current Ie (A) .....:	125A	—
	Measured temperature-rise .....:	see appended table 8.3.4.4 on page 63	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.4	TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY (#06 Ex9I125 Ue:AC400V Ith:125A Ie:80A 1P AC-22A)		P
8.3.4.1	Operational performance test		P
	- utilization category .....:	AC-22A	—
	- rated operational voltage (V) .....:	AC400V	—
	- rated operational current (A) .....:	125A	—
	Test conditions for electrical operation cycles:		
	- test voltage (V) .....:	L1: 402V L2: 402V L3: 402V	—
	- test current (A) .....:	L1: 128A L2: 128A L3: 128A	—
	- power factor/time constant 0,80:	L1: 0,80 L2: 0,80 L3: 0,80	—
	Number of cycles with current .....:	1200	P
	Number of cycles without current .....:	7000	P
	First test sequence (with/without current) .....:	with current	—
	Second test sequence (with/without current) .....:	without current	—
	- time interval between first and second test sequence .....:		—
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		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~ .....:	1000V	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	440V	—
	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 .....:	<0,005mA	P
8.3.4.4	Temperature-rise verification		P
	- conductor cross-section (mm²) .....:	50mm²	—
	- test current Ie (A) .....:	125A	—
	Measured temperature-rise .....:	see appended table 8.3.4.4 on page 64	P

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Clause	Requirement + Test	Result - Remark	Verdict

8.3.4	TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY (#07 Ex9I125 Ue:AC400V Ith:63A Ie:40A 1P AC-22A)		P
8.3.4.1	Operational performance test		P
	- utilization category .....:	AC-22A	—
	- rated operational voltage (V) .....:	AC400V	—
	- rated operational current (A) .....:	63A	—
	Test conditions for electrical operation cycles:		
	- test voltage (V) .....:	L1: 402V L2: 402V L3: 402V	—
	- test current (A) .....:	L1: 63,6A L2: 63,6A L3: 63,6A	—
	- power factor/time constant 0,80:	L1: 0,80 L2: 0,80 L3: 0,80	—
	Number of cycles with current .....:	1500	P
	Number of cycles without current .....:	8500	P
	First test sequence (with/without current) .....:	with current	—
	Second test sequence (with/without current) .....:	without current	—
	- time interval between first and second test sequence .....:		—
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		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~ .....:	1000V	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	440V	—
	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 .....:	<0,005mA	P
8.3.4.4	Temperature-rise verification		P
	- conductor cross-section (mm²) .....:	16mm²	—
	- test current Ie (A) .....:	63A	—
	Measured temperature-rise .....:	see appended table 8.3.4.4 on page 65	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.5	TEST SEQUENCE III: SHORT-CIRCUIT PERFORMANCE CAPABILITY (#08 Ex9I125 Ue:AC400V Ith:125A Ie:80A 4P AC-22A)		P
8.3.5.1	Short-time withstand current test		P
	Rated short-time withstand current Icw (A) (>12.Ie max) .....:	1.50kA/1s	P
	test voltage (V) .....:	L1: 404V L2: 404V L3: 404V	—
	r.m.s. test current (A) .....:	L1: 1,52kA L2: 1,52kA L3: 1,52kA	—
	peak test current (A) .....:	L1: 2,17kA L2: 2,17kA L3: 2,17kA	—
	power factor/time constant .....:	L1: 0,94 L2: 0,94 L3: 0,94	—
	test duration (s) .....:	1,03s	—
8.3.5.1.5	Behaviour of the equipment during the 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
8.3.5.1.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.2	Short-circuit making capacity		P
	Rated short-circuit making capacity Icm (A) .....:	2,50kA(peak)	P
	test voltage (1,05xUe) .....(V):	L1: 404V L2: 404V L3: 404V	—

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Clause	Requirement + Test	Result - Remark	Verdict
	r.m.s. test current (A) .....:	L1: - L2: - L3: -	—
	maximum peak test current (factor n)	2,59kA	P
	power factor/time constant .....:	L1: 0,90 L2: 0,90 L3: 0,90	P
	current duration (s) .....:	>0,05s	—
	Time interval between the cycles	3min	—
8.3.5.2.5	Behaviour of the equipment during the 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
8.3.5.2.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.3	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~ .....:	AC1000V	—
	No flashover or breakdown		P
8.3.5.4	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	AC440V	—
	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 .....:	<0,005mA	P
8.3.5.5	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- rated current (A) .....:		—
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	- conductor cross-section (mm²) .....:	50mm²	—
	- test current Ie (A) .....:	125A	—
	Measured temperature-rise .....:	see appended table 8.3.5.5 on page 66	P

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IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.5	TEST SEQUENCE III: SHORT-CIRCUIT PERFORMANCE CAPABILITY (#09 Ex9I125 Ue:AC400V Ith:125A Ie:80A 2P AC-22A)		P
8.3.5.1	Short-time withstand current test		P
	Rated short-time withstand current Icw (A) (>12.Ie max) .....:	1.50kA/1s	P
	test voltage (V) .....:	L1: 404V L2: 404V L3:	—
	r.m.s. test current (A) .....:	L1: 1,51kA L2: 1,51kA L3:	—
	peak test current (A) .....:	L1: 2,17kA L2: 2,17kA L3:	—
	power factor/time constant .....:	L1: 0,94 L2: 0,94 L3:	—
	test duration (s) .....:	1,04s	—
8.3.5.1.5	Behaviour of the equipment during the 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
8.3.5.1.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.2	Short-circuit making capacity		P
	Rated short-circuit making capacity Icm (A) .....:	2,50kA(peak)	P
	test voltage (1,05xUe) .....(V):	L1: 404V L2: 404V L3:	—

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Clause	Requirement + Test	Result - Remark	Verdict
	r.m.s. test current (A) .....:	L1: - L2: - L3: -	—
	maximum peak test current (factor n)	2,57kA	P
	power factor/time constant .....:	L1: 0,89 L2: 0,89 L3:	P
	current duration (s) .....:	>0,05s	—
	Time interval between the cycles	3min	—
8.3.5.2.5	Behaviour of the equipment during the 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
8.3.5.2.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.3	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~ .....:	AC1000V	—
	No flashover or breakdown		P
8.3.5.4	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	AC440V	—
	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 .....:	<0,005mA	P
8.3.5.5	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- rated current (A) .....:		—
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	- conductor cross-section (mm²) .....:	50mm²	—
	- test current Ie (A) .....:	125A	—
	Measured temperature-rise .....:	see appended table 8.3.5.5 on page 67	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.5	TEST SEQUENCE III: SHORT-CIRCUIT PERFORMANCE CAPABILITY (#10 Ex9I125 Ue:AC400V Ith:125A Ie:80A 1P AC-22A)		P
8.3.5.1	Short-time withstand current test		P
	Rated short-time withstand current Icw (A) (>12.Ie max) .....:	1.50kA/1s	P
	test voltage (V) .....:	L1: 404V L2: L3:	—
	r.m.s. test current (A) .....:	L1: 1,51kA L2: L3:	—
	peak test current (A) .....:	L1: 2,17kA L2: L3:	—
	power factor/time constant .....:	L1: 0,94 L2: L3:	—
	test duration (s) .....:	1,04s	—
8.3.5.1.5	Behaviour of the equipment during the 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
8.3.5.1.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.2	Short-circuit making capacity		P
	Rated short-circuit making capacity Icm (A) .....:	2,50kA(peak)	P
	test voltage (1,05xUe) .....(V):	L1: 404V L2: L3:	—

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	r.m.s. test current (A) .....:	L1: - L2: - L3: -	—
	maximum peak test current (factor n)	2,57kA	P
	power factor/time constant .....:	L1: 0,89 L2: L3:	P
	current duration (s) .....:	>0,05s	—
	Time interval between the cycles	3min	—
8.3.5.2.5	Behaviour of the equipment during the 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
8.3.5.2.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.3	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~ .....:	AC1000V	—
	No flashover or breakdown		P
8.3.5.4	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	AC440V	—
	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 .....:	<0,005mA	P
8.3.5.5	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- rated current (A) .....:		—
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	- conductor cross-section (mm²) .....:	50mm²	—
	- test current Ie (A) .....:	125A	—
	Measured temperature-rise .....:	see appended table 8.3.5.5 on page 68	P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.5	TEST SEQUENCE III: SHORT-CIRCUIT PERFORMANCE CAPABILITY (#11 Ex9I125 Ue:AC400V Ith:63A Ie:40A 4P AC-22A)		P
8.3.5.1	Short-time withstand current test		P
	Rated short-time withstand current Icw (A) (>12.Ie max) .....:	0,756kA/1s	P
	test voltage (V) .....:	L1: 404V L2: 404V L3: 404V	—
	r.m.s. test current (A) .....:	L1: 0,773kA L2: 0,773kA L3: 0,773kA	—
	peak test current (A) .....:	L1: 1,10kA L2: 1,10kA L3: 1,10kA	—
	power factor/time constant .....:	L1: 0,92 L2: 0,92 L3: 0,92	—
	test duration (s) .....:	1,04s	—
8.3.5.1.5	Behaviour of the equipment during the 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
8.3.5.1.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.2	Short-circuit making capacity		P
	Rated short-circuit making capacity Icm (A) .....:	2,50kA(peak)	P
	test voltage (1,05xUe) .....(V):	L1: 404V L2: 404V L3: 404V	—

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	r.m.s. test current (A) .....:	L1: - L2: - L3: -	—
	maximum peak test current (factor n)	1,30kA	P
	power factor/time constant .....:	L1: 0,93 L2: 0,93 L3: 0,93	P
	current duration (s) .....:	>0,05s	—
	Time interval between the cycles	3min	—
8.3.5.2.5	Behaviour of the equipment during the 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
8.3.5.2.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.3	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~ .....:	AC1000V	—
	No flashover or breakdown		P
8.3.5.4	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	AC440V	—
	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 .....:	<0,005mA	P
8.3.5.5	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- rated current (A) ..... :		—
	- power loss (W) ..... :		—
	- rated breaking capacity (kA) ..... :		—
	- conductor cross-section (mm^2) ..... :	16mm^2	—
	- test current Ie (A) ..... :	63A	—
	Measured temperature-rise ..... :	see appended table 8.3.5.5 on page 69	P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.6	TEST SEQUENCE IV: CONDITIONAL SHORT-CIRCUIT CURRENT		N/A
8.3.7	TEST SEQUENCE V: OVERLOAD PERFORMANCE CAPABILITY		N/A
8.4	ELECTROMAGNETIC COMPATIBILITY TESTS		N/A
Annex A (normative)			N/A
Annex C (normative)			N/A

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

7.1.3	**TABLE: Clearance and creepage distance measurements**					
clearance cl and creepage distance dcr at/of:	Uimp (V)	U r.m.s. (V)	required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)
Between poles	6000	500	8,0	16,0	10,0	17,2
Between open contacts	6000	500	5,5	6,0	-	-
supplementary information: N/A						

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

8.3.3.1	TABLE: Temperature-rise (measurements #01)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	32	70
		L2	30	70
		L3	30	70
		L4	29	70
Terminals (Lower position):		L1	28	70
		L2	30	70
		L3	29	70
		L4	31	70
Manual operating means: non-metallic			5	25
Parts intended to be touched but not hand-held: non-metallic			15	40
Parts which need not be touched during normal operation: non-metallic			13	50
supplementary information:N/A				

8.3.3.6	TABLE: Temperature-rise (measurements #01)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	35	80
		L2	33	80
		L3	34	80
		L4	32	80
Terminals (Lower position):		L1	31	80
		L2	30	80
		L3	29	80
		L4	30	80
Manual operating means: non-metallic			6	35
Parts intended to be touched but not hand-held: non-metallic			17	50
Parts which need not be touched during normal operation: non-metallic			15	60
supplementary information: N/A				

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

8.3.3.1	TABLE: Temperature-rise (measurements #02)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	32	70
		L2	31	70
		L3		70
		L4		70
Terminals (Lower position):		L1	30	70
		L2	28	70
		L3		70
		L4		70
Manual operating means: non-metallic			5	25
Parts intended to be touched but not hand-held: non-metallic			14	40
Parts which need not be touched during normal operation: non-metallic			13	50
supplementary information:N/A				

8.3.3.6	TABLE: Temperature-rise (measurements #02)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	34	80
		L2	32	80
		L3		80
		L4		80
Terminals (Lower position):		L1	32	80
		L2	31	80
		L3		80
		L4		80
Manual operating means: non-metallic			5	35
Parts intended to be touched but not hand-held: non-metallic			13	50
Parts which need not be touched during normal operation: non-metallic			13	60
supplementary information: N/A				

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

8.3.3.1	TABLE: Temperature-rise (measurements #03)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	31	70
		L2		70
		L3		70
		L4		70
Terminals (Lower position):		L1	29	70
		L2		70
		L3		70
		L4		70
Manual operating means: non-metallic			4	25
Parts intended to be touched but not hand-held: non-metallic			11	40
Parts which need not be touched during normal operation: non-metallic			12	50
supplementary information:N/A				

8.3.3.6	TABLE: Temperature-rise (measurements #03)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	32	80
		L2		80
		L3		80
		L4		80
Terminals (Lower position):		L1	30	80
		L2		80
		L3		80
		L4		80
Manual operating means: non-metallic			4	35
Parts intended to be touched but not hand-held: non-metallic			12	50
Parts which need not be touched during normal operation: non-metallic			12	60
supplementary information: N/A				

ВЯРНО С ОРИГИНАЛА

АКЦИОНЕРНО ДРУЖЕСТВО ФИЛКАБ ПЛОВДИВ

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

8.3.3.1	TABLE: Temperature-rise (measurements #04)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	22	70
		L2	24	70
		L3	23	70
		L4	24	70
Terminals (Lower position):		L1	21	70
		L2	23	70
		L3	22	70
		L4	23	70
Manual operating means: non-metallic			5	25
Parts intended to be touched but not hand-held: non-metallic			11	40
Parts which need not be touched during normal operation: non-metallic			11	50
supplementary information:N/A				

8.3.3.6	TABLE: Temperature-rise (measurements #04)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	23	80
		L2	25	80
		L3	24	80
		L4	25	80
Terminals (Lower position):		L1	22	80
		L2	24	80
		L3	23	80
		L4	23	80
Manual operating means: non-metallic			6	35
Parts intended to be touched but not hand-held: non-metallic			12	50
Parts which need not be touched during normal operation: non-metallic			12	60
supplementary information: N/A				

ВЯРНО С ОРИГИНАЛА

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

8.3.4.4	**TABLE: Temperature-rise (measurements #05)**			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	34	80
		L2	36	80
		L3	37	80
		L4	35	80
Terminals (Lower position):		L1	32	80
		L2	30	80
		L3	31	80
		L4	30	80
Manual operating means: non-metallic			7	35
Parts intended to be touched but not hand-held: non-metallic			16	50
Parts which need not be touched during normal operation: non-metallic			14	60
supplementary information:N/A				

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

8.3.4.4	TABLE: Temperature-rise (measurements #06)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	32	80
		L2		80
		L3		80
		L4		80
Terminals (Lower position):		L1	31	80
		L2		80
		L3		80
		L4		80
Manual operating means: non-metallic			4	35
Parts intended to be touched but not hand-held: non-metallic			12	50
Parts which need not be touched during normal operation: non-metallic			13	60
supplementary information:N/A				

ВЯРНО С ОРИГИНАЛА

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

8.3.4.4	TABLE: Temperature-rise (measurements #07)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	24	80
		L2	23	80
		L3	24	80
		L4	25	80
Terminals (Lower position):		L1	22	80
		L2	22	80
		L3	23	80
		L4	23	80
Manual operating means: non-metallic			6	35
Parts intended to be touched but not hand-held: non-metallic			12	50
Parts which need not be touched during normal operation: non-metallic			12	60
supplementary information:N/A				

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

8.3.6.5	TABLE: Temperature-rise (measurements #08)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	34	80
		L2	33	80
		L3	32	80
		L4	35	80
Terminals (Lower position):		L1	31	80
		L2	30	80
		L3	30	80
		L4	31	80
Manual operating means: non-metallic			6	35
Parts intended to be touched but not hand-held: non-metallic			15	50
Parts which need not be touched during normal operation: non-metallic			14	60
supplementary information:N/A				

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

8.3.6.5	TABLE: Temperature-rise (measurements #09)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	34	80
		L2	33	80
		L3		80
		L4		80
Terminals (Lower position):		L1	32	80
		L2	31	80
		L3		80
		L4		80
Manual operating means: non-metallic			5	35
Parts intended to be touched but not hand-held: non-metallic			13	50
Parts which need not be touched during normal operation: non-metallic			14	60
supplementary information:N/A				

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

8.3.6.5	TABLE: Temperature-rise (measurements #10)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	33	80
		L2		80
		L3		80
		L4		80
Terminals (Lower position):		L1	31	80
		L2		80
		L3		80
		L4		80
Manual operating means: non-metallic			5	35
Parts intended to be touched but not hand-held: non-metallic			13	50
Parts which need not be touched during normal operation: non-metallic			11	60
supplementary information:N/A				

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

8.3.6.5	TABLE: Temperature-rise (measurements #11)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	24	80
		L2	25	80
		L3	26	80
		L4	24	80
Terminals (Lower position):		L1	21	80
		L2	24	80
		L3	24	80
		L4	22	80
Manual operating means: non-metallic			6	35
Parts intended to be touched but not hand-held: non-metallic			12	50
Parts which need not be touched during normal operation: non-metallic			13	60
supplementary information:N/A				

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (#01 Ex9I125 Ue:AC400V Ith:32A Ie:16A 4P AC-22A)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....:	20°C	—
	test enclosure W x H x D (mm x mm x mm) .....:		—
	material of enclosure .....:		—
	Main circuits, test conditions:		—
	- conventional thermal current Ith (A) .....:	32,0A	—
	- conventional enclosed thermal current Ithe (A) ...:		—
	- cable/busbar cross-section (mm²) / length (mm)..:	6mm²/1m	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—
	- rated current (A) .....:		—
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	Measured temperature-rise .....:	see appended table 8.3.3.1 on page 38	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		P
	Rated impulse withstand voltage (kV) .....:	6kV	—
	- test Uimp main circuits (kV) .....:	7,30kV	P
	- test Uimp auxiliary circuits (kV) .....:	-	N/A
	- test Uimp on open main contacts (equipment suitable for isolation) (kV) .....:	9,80kV	P
	Power-frequency withstand voltage (V) .....:	1890V	—
	- main circuits, test voltage for 5 sec. (V) .....:		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

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Clause	Requirement + Test	Result - Remark	Verdict
	Equipment suitable for isolation, leakage current not exceed 0,5 mA		—
	Test voltage 1,1 Ue (V) ..... :	440V	—
	Measured leakage current (mA) ..... :	<0,005mA	N/A
8.3.3.3	Making and breaking capacity		P
	- utilization category ..... :	AC-22A	—
	- rated operational voltage Ue (V) ..... :	AC400V	—
	- rated operational current Ie (A) or power (kW) .... :	16,0A	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue ..... (V):	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 ..... (V):	L1: L2: L3:	—
	- test current, I = ... x Ie (A):	L1: L2: L3:	—
	- power factor ..... :	L1: L2: L3:	—
	Conditions for make/break operations, other than AC-23A/B:		P
	- test voltage, U = 1,05 Ue ..... (V):	L1: 422V L2: 424V L3: 420V	—
	- test current, I = ... 3x Ie (A):	L1: 96,5A L2: 97,2A L3: 96,3A	—
	- power factor/ time constant 0,65:	L1: 0,65 L2: 0,67 L3: 0,66	—
	Number of make/break or make and break operations ..... :	5	P
	- recovery voltage duration (≥ 50 ms)		P
	- current duration (ms) ..... :	515ms	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- time interval between operations .....:	30s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) .....:	41,3kHz	—
	- measured oscillatory frequency (kHz) .....:	L1: 41,5 L2: 41,5 L3: 41,5	P
	- factor γ .....:	L1: 1,10 L2: 1,10 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		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~ .....:	1000V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	440V	—
	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) .....:	<0,005mA	P
8.3.3.6	Temperature-rise verification		P
	- conductor cross-section (mm²) .....:	6mm²	—
	- test current Ie (A) .....:	32,0A	—
	Measured temperature-rise .....:	see appended table 8.3.3.6 on page 38	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.7	Strength of actuator mechanism		N/A
8.2.5	Verification of the strength of actuator mechanism and position indicating device		P
	- actuator type (fig.) .....:	fig.1b	—
8.2.5.2.1	Dependent and independent manual operation		P
	- actuating force for opening (N) .....:	22N	—
	- test force with blocked main contacts (N) .....:	66N	—
	- used method to keep the contact closed .....:	Screw through the moving and fixing contact	—
	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
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

8.3.4	TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY (#02 Ex9I125 Ue:AC400V Ith:32A Ie:16A 4P AC-22A)	P
8.3.4.1	Operational performance test	P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- utilization category .....:	AC-22A	—
	- rated operational voltage (V) .....:	AC400V	—
	- rated operational current (A) .....:	16,0A	—
	Test conditions for electrical operation cycles:		
	- test voltage (V) .....:	L1: 403V L2: 403V L3: 400V	—
	- test current (A) .....:	L1: 32,5A L2: 32,7A L3: 32,2A	—
	- power factor/time constant 0,80:	L1: 0,81 L2: 0,78 L3: 0,80	—
	Number of cycles with current .....:	1500	P
	Number of cycles without current .....:	8500	P
	First test sequence (with/without current) .....:	with current	—
	Second test sequence (with/without current) .....:	without current	—
	- time interval between first and second test sequence .....:		—
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		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~ .....:	1000V	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P

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Clause	Requirement + Test	Result - Remark	Verdict
	test voltage (1,1 Ue) (V) .....:	440V	—
	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 .....:	<0,005mA	P
8.3.4.4	Temperature-rise verification		P
	- conductor cross-section (mm²) .....:	6mm²	—
	- test current Ie (A) .....:	32,0A	—
	Measured temperature-rise .....:	see appended table 8.3.4.4 on page 39	P

8.3.5	TEST SEQUENCE III: SHORT-CIRCUIT PERFORMANCE CAPABILITY (#03 Ex9I125 Ue:AC400V Ith:32A Ie:16A 4P AC-22A)		P
8.3.5.1	Short-time withstand current test		P
	Rated short-time withstand current Icw (A) (>12.Ie max) .....:	192A/1s	P
	test voltage (V) .....:	L1: 402V L2: 402V L3: 402V	—
	r.m.s. test current (A) .....:	L1: 396A L2: 398A L3: 395A	—
	peak test current (A) .....:	L1: 563A L2: 563A L3: 563A	—
	power factor/time constant .....:	L1: 0,93 L2: 0,93 L3: 0,93	—
	test duration (s) .....:	1,03s	—
8.3.5.1.5	Behaviour of the equipment during the 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
8.3.5.1.6	Condition of the equipment after making and breaking capacity tests		P

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.2	Short-circuit making capacity		P
	Rated short-circuit making capacity Icm (A) .....:	320A(peak)	P
	test voltage (1,05xUe) .....(V):	L1: 402V L2: 402V L3: 402V	—
	r.m.s. test current (A) .....:	L1: 455A L2: 457A L3: 459A	—
	maximum peak test current (factor n)	650A	P
	power factor/time constant .....:	L1: 0,95 L2: 0,95 L3: 0,95	P
	current duration (s) .....:	>0,05s	—
	Time interval between the cycles	3min	—
8.3.5.2.5	Behaviour of the equipment during the 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
8.3.5.2.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.3	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~ .....:	AC1000V	—
	No flashover or breakdown		P
8.3.5.4	Leakage current		P

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Clause	Requirement + Test	Result - Remark	Verdict
	test voltage (1,1 Ue) (V) .....:	AC440V	—
	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 .....:	<0,005mA	P
8.3.5.5	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—
	- rated current (A) .....:		—
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	- conductor cross-section (mm²) .....:	6mm²	—
	- test current Ie (A) .....:	32,0A	—
	Measured temperature-rise .....:	see appended table 8.3.5.5 on page 39	P
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (#04 Ex9I125 Ue:AC400V Ith:32A Ie:16A 2P AC-22A)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....:	20°C	—
	test enclosure W x H x D (mm x mm x mm) .....:		—
	material of enclosure .....:		—
	Main circuits, test conditions:		—
	- conventional thermal current Ith (A) .....:	32,0A	—
	- conventional enclosed thermal current Ithe (A) ...:		—
	- cable/busbar cross-section (mm²) / length (mm)..:	6mm²/1m	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—
	- rated current (A) .....:		—
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	Measured temperature-rise .....:	see appended table 8.3.3.1 on page 40	P

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Clause	Requirement + Test	Result - Remark	Verdict
	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		P
	Rated impulse withstand voltage (kV) .....:	6kV	—
	- test Uimp main circuits (kV) .....:	7,30kV	P
	- test Uimp auxiliary circuits (kV) .....:	-	N/A
	- test Uimp on open main contacts (equipment suitable for isolation) (kV) .....:	9,80kV	P
	Power-frequency withstand voltage (V) .....:	1890V	—
	- main circuits, test voltage for 5 sec. (V) .....:		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
	Equipment suitable for isolation, leakage current not exceed 0,5 mA		—
	Test voltage 1,1 Ue (V).....:	440V	—
	Measured leakage current (mA).....:	<0,005mA	N/A
8.3.3.3	Making and breaking capacity		P
	- utilization category .....:	AC-22A	—
	- rated operational voltage Ue (V) .....:	AC400V	—
	- rated operational current Ie (A) or power (kW) ....:	16,0A	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....(V):	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 .....(V):	L1: L2: L3:	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- test current, I = ... x Ie (A):	L1: L2: L3:	—
	- power factor .....:	L1: L2: L3:	—
	Conditions for make/break operations, other than AC-23A/B:		P
	- test voltage, U = 1,05 Ue .....(V):	L1: 422V L2: 422V L3: -	—
	- test current, I = ...3x Ie (A):	L1: 97,2A L2: 97,2A L3: -	—
	- power factor/ time constant 0,65:	L1: 0,68 L2: 0,68 L3: -	—
	Number of make/break or make and break operations .....:	5	P
	- recovery voltage duration (≥ 50 ms)		P
	- current duration (ms) .....:	280ms	—
	- time interval between operations .....:	30s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) .....:	41,3kHz	—
	- measured oscillatory frequency (kHz) .....:	L1: 41,5 L2: 41,5 L3: -	P
	- factor γ .....:	L1: 1,09 L2: 1,09 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

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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		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~ .....:	1000V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	440V	—
	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) .....:	<0,005mA	P
8.3.3.6	Temperature-rise verification		P
	- conductor cross-section (mm²) .....:	6mm²	—
	- test current Ie (A) .....:	32,0A	—
	Measured temperature-rise .....:	see appended table 8.3.3.6 on page 40	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		P
	- actuator type (fig.) .....:	fig.1b	—
8.2.5.2.1	Dependent and independent manual operation		P
	- actuating force for opening (N) .....:	13N	—
	- test force with blocked main contacts (N) .....:	50N	—
	- used method to keep the contact closed .....:	Screw through the moving and fixing contact	—
	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
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

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Clause	Requirement + Test	Result - Remark	Verdict
	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

8.3.5	TEST SEQUENCE III: SHORT-CIRCUIT PERFORMANCE CAPABILITY (#05 Ex9I125 Ue:AC400V Ith:32A Ie:16A 2P AC-22A)		P
8.3.5.1	Short-time withstand current test		P
	Rated short-time withstand current Icw (A) (>12.Ie max) .....:	192A/1s	P
	test voltage (V) .....:	L1: 402V L2: 402V L3: -	—
	r.m.s. test current (A) .....:	L1: 396A L2: 396A L3: -	—
	peak test current (A) .....:	L1: 561A L2: 561A L3: -	—
	power factor/time constant .....:	L1: 0,94 L2: 0,94 L3: -	—
	test duration (s) .....:	1,07s	—
8.3.5.1.5	Behaviour of the equipment during the 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

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Clause	Requirement + Test	Result - Remark	Verdict
	No melting of the fuse in the detection circuit		P
8.3.5.1.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.2	Short-circuit making capacity		P
	Rated short-circuit making capacity Icm (A) .....:	320A(peak)	P
	test voltage (1,05xUe) .....(V):	L1: 464V L2: 464V L3: -	—
	r.m.s. test current (A) .....:	L1: 464A L2: 464A L3: -	—
	maximum peak test current (factor n)	670A	P
	power factor/time constant .....:	L1: 0,94 L2: 0,94 L3: -	P
	current duration (s) .....:	>0,05s	—
	Time interval between the cycles	3min	—
8.3.5.2.5	Behaviour of the equipment during the 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
8.3.5.2.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.3	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V.....:	AC1000V	—

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Clause	Requirement + Test	Result - Remark	Verdict
	No flashover or breakdown		P
8.3.5.4	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	AC440V	—
	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 .....:	<0,005mA	P
8.3.5.5	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—
	- rated current (A) .....:		—
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	- conductor cross-section (mm²) .....:	6mm²	—
	- test current Ie (A) .....:	32,0A	—
	Measured temperature-rise .....:	see appended table 8.3.5.5 on page 40	P

8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS (#06 Ex9I125 Ue:AC230V Ith:32A Ie:16A 1P AC-22A)		P
8.3.3.1	Temperature-rise		P
	ambient temperature 10-40 °C .....:	20°C	—
	test enclosure W x H x D (mm x mm x mm) .....:		—
	material of enclosure .....:		—
	Main circuits, test conditions:		—
	- conventional thermal current Ith (A) .....:	32,0A	—
	- conventional enclosed thermal current Ithe (A) ...:		—
	- cable/busbar cross-section (mm²) / length (mm)..:	6mm²/1m	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—
	- rated current (A) .....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	Measured temperature-rise .....:	see appended table 8.3.3.1 on page 41	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		P
	Rated impulse withstand voltage (kV) .....:	6kV	—
	- test Uimp main circuits (kV) .....:	7,30kV	P
	- test Uimp auxiliary circuits (kV) .....:	-	N/A
	- test Uimp on open main contacts (equipment suitable for isolation) (kV) .....:	9,80kV	P
	Power-frequency withstand voltage (V) .....:	1890V	—
	- main circuits, test voltage for 5 sec. (V) .....:		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
	Equipment suitable for isolation, leakage current not exceed 0,5 mA		—
	Test voltage 1,1 Ue (V).....:	253V	—
	Measured leakage current (mA).....:	<0,005mA	N/A
8.3.3.3	Making and breaking capacity		P
	- utilization category .....:	AC-22A	—
	- rated operational voltage Ue (V) .....:	AC230V	—
	- rated operational current Ie (A) or power (kW) ....:	16,0A	—
	Conditions for make/break operations or make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....(V):	L1: L2: L3:	—
	- test current, I = ... x Ie (A):	L1: L2: L3:	—
	- power factor .....:	L1: L2: L3:	—

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Clause	Requirement + Test	Result - Remark	Verdict
	Conditions for break operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue .....(V):	L1: L2: L3:	—
	- test current, I = ...x Ie (A):	L1: L2: L3:	—
	- power factor .....:	L1: L2: L3:	—
	Conditions for make/break operations, other than AC-23A/B:		P
	- test voltage, U = 1,05 Ue .....(V):	L1: 242V L2: - L3: -	—
	- test current, I = ...3x Ie (A):	L1: 96,8A L2: - L3: -	—
	- power factor/ time constant 0,65:	L1: 0,68 L2: - L3: -	—
	Number of make/break or make and break operations .....:	5	P
	- recovery voltage duration (≥ 50 ms)		P
	- current duration (ms) .....:	298ms	—
	- time interval between operations .....:	30s	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only		P
	- oscillatory frequency (kHz) .....:	64,3kHz	—
	- measured oscillatory frequency (kHz) .....:	L1: 64,5 L2: - L3: -	P
	- factor γ .....:	L1: 1,09 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

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Clause	Requirement + Test	Result - Remark	Verdict
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		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~ .....:	1000V	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	253V	—
	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) .....:	<0,005mA	P
8.3.3.6	Temperature-rise verification		P
	- conductor cross-section (mm²) .....:	6mm²	—
	- test current Ie (A) .....:	32,0A	—
	Measured temperature-rise .....:	see appended table 8.3.3.6 on page 41	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		P
	- actuator type (fig.) .....:	fig.1b	—
8.2.5.2.1	Dependent and independent manual operation		P
	- actuating force for opening (N) .....:	9N	—
	- test force with blocked main contacts (N) .....:	50N	—
	- used method to keep the contact closed .....:	Screw through the moving and fixing contact	—
	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
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

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Clause	Requirement + Test	Result - Remark	Verdict
	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

8.3.4	TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY (#07 Ex9I125 Ue:AC230V Ith:32A Ie:16A 1P AC-22A)		P
8.3.4.1	Operational performance test		P
	- utilization category ..... :	AC-22A	—
	- rated operational voltage (V) ..... :	AC230V	—
	- rated operational current (A) ..... :	16,0A	—
	Test conditions for electrical operation cycles:		
	- test voltage (V) ..... :	L1: 232V L2: - L3: -	—
	- test current (A) ..... :	L1: 32,7A L2: - L3: -	—
	- power factor/time constant 0,80:	L1: 0,82 L2: - L3: -	—
	Number of cycles with current ..... :	1500	P
	Number of cycles without current ..... :	8500	P
	First test sequence (with/without current) ..... :	with current	—
	Second test sequence (with/without current) ..... :	without current	—

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Clause	Requirement + Test	Result - Remark	Verdict
	- time interval between first and second test sequence .....:		—
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		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~ .....:	1000V	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	254V	—
	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 .....:	<0,005mA	P
8.3.4.4	Temperature-rise verification		P
	- conductor cross-section (mm²) .....:	6mm²	—
	- test current Ie (A) .....:	32,0A	—
	Measured temperature-rise .....:	see appended table 8.3.4.4 on page 42	P

8.3.5	TEST SEQUENCE III: SHORT-CIRCUIT PERFORMANCE CAPABILITY (#08 Ex9I125 Ue:AC230V Ith:32A Ie:16A 1P AC-22A)	P
8.3.5.1	Short-time withstand current test	P

ВЯРНО С ОРИГИНАЛА

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Rated short-time withstand current Icw (A) (>12.Ie max) .....:	192A/1s	P
	test voltage (V) .....:	L1: 232V L2: - L3: -	—
	r.m.s. test current (A) .....:	L1: 394A L2: - L3: -	—
	peak test current (A) .....:	L1: 558A L2: - L3: -	—
	power factor/time constant .....:	L1: 0,93 L2: 0,93 L3: 0,93	—
	test duration (s) .....:	1,01s	—
8.3.5.1.5	Behaviour of the equipment during the 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
8.3.5.1.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.2	Short-circuit making capacity		P
	Rated short-circuit making capacity Icm (A) .....:	320A(peak)	P
	test voltage (1,05xUe) .....(V):	L1: 232V L2: - L3: -	—
	r.m.s. test current (A) .....:	L1: 463A L2: - L3: -	—
	maximum peak test current (factor n)	654A	P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	power factor/time constant .....:	L1: 0,95 L2: - L3: -	P
	current duration (s) .....:	>0,05s	—
	Time interval between the cycles	3min	—
8.3.5.2.5	Behaviour of the equipment during the 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
8.3.5.2.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.3	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~ .....:	AC1000V	—
	No flashover or breakdown		P
8.3.5.4	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	AC254V	—
	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 .....:	<0,005mA	P
8.3.5.5	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—
	- rated current (A) .....:		—
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	- conductor cross-section (mm²) .....:	6mm²	—

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- test current Ie (A) .....:	32,0A	—
	Measured temperature-rise .....:	see appended table 8.3.5.5 on page 42	P

8.3.5	TEST SEQUENCE III: SHORT-CIRCUIT PERFORMANCE CAPABILITY (#09 Ex9I125 Ue:AC400V Ith:32A Ie:25A 4P AC-22A)		P
8.3.5.1	Short-time withstand current test		P
	Rated short-time withstand current Icw (A) (>12.Ie max) .....:	300A/1s	P
	test voltage (V) .....:	L1: 402V L2: 402V L3: 402V	—
	r.m.s. test current (A) .....:	L1: 396A L2: 389A L3: 395A	—
	peak test current (A) .....:	L1: 563A L2: 561A L3: 563A	—
	power factor/time constant .....:	L1: 0,93 L2: 0,93 L3: 0,93	—
	test duration (s) .....:	1,05s	—
8.3.5.1.5	Behaviour of the equipment during the 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
8.3.5.1.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.2	Short-circuit making capacity		P

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Rated short-circuit making capacity Icm (A) .....:	500A(peak)	P
	test voltage (1,05xUe) .....(V):	L1: 402V L2: 402V L3: 402V	—
	r.m.s. test current (A) .....:	L1: 455A L2: 457A L3: 459A	—
	maximum peak test current (factor n)	650A	P
	power factor/time constant .....:	L1: 0,95 L2: 0,95 L3: 0,95	P
	current duration (s) .....:	>0,05	—
	Time interval between the cycles	3min	—
8.3.5.2.5	Behaviour of the equipment during the 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
8.3.5.2.6	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		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.5.3	Dielectric verification		P
	test voltage: 2*Ue with a minimum of 1000V~ .....:	AC1000V	—
	No flashover or breakdown		P
8.3.5.4	Leakage current		P
	test voltage (1,1 Ue) (V) .....:	AC440V	—
	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 .....:	<0,005mA	P
8.3.5.5	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—

IEC / EN 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- manufacturer's name, trademark or identification mark .....:		—
	- manufacturer's model or type reference .....:		—
	- rated current (A) .....:		—
	- power loss (W) .....:		—
	- rated breaking capacity (kA) .....:		—
	- conductor cross-section (mm^2) .....:	$6mm^2$	—
	- test current Ie (A) .....:	32,0A	—
	Measured temperature-rise .....:	see appended table 8.3.5.5 on page 42	P

ВЯРНО С ОРИГИНАЛА

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

8.3.3.1	TABLE: Temperature-rise (measurements #01)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	23	70
		L2	24	70
		L3	24	70
		L4	23	70
Terminals (Lower position):		L1	20	70
		L2	23	70
		L3	25	70
		L4	21	70
Manual operating means: non-metallic			9	25
Parts intended to be touched but not hand-held: non-metallic			17	40
Parts which need not be touched during normal operation: non-metallic			14	50
supplementary information:N/A				

8.3.3.6	TABLE: Temperature-rise (measurements #01)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	23	80
		L2	28	80
		L3	28	80
		L4	22	80
Terminals (Lower position):		L1	22	80
		L2	28	80
		L3	28	80
		L4	28	80
Manual operating means: non-metallic			11	35
Parts intended to be touched but not hand-held: non-metallic			18	50
Parts which need not be touched during normal operation: non-metallic			13	60
supplementary information: N/A				

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

8.3.4.4	TABLE: Temperature-rise (measurements #02)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	28	80
		L2	28	80
		L3	23	80
		L4	29	80
Terminals (Lower position):		L1	28	80
		L2	29	80
		L3	23	80
		L4	24	80
Manual operating means: non-metallic			11	35
Parts intended to be touched but not hand-held: non-metallic			16	50
Parts which need not be touched during normal operation: non-metallic			13	60
supplementary information:N/A				

8.3.6.5	TABLE: Temperature-rise (measurements #03)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	28	80
		L2	29	80
		L3	28	80
		L4	28	80
Terminals (Lower position):		L1	24	80
		L2	23	80
		L3	27	80
		L4	29	80
Manual operating means: non-metallic			12	35
Parts intended to be touched but not hand-held: non-metallic			18	50
Parts which need not be touched during normal operation: non-metallic			12	60
supplementary information:N/A				

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

8.3.3.1	TABLE: Temperature-rise (measurements #04)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	23	70
		L2	24	70
Terminals (Lower position):		L1	23	70
		L2	20	70
Manual operating means: non-metallic			9	25
Parts intended to be touched but not hand-held: non-metallic			16	40
Parts which need not be touched during normal operation: non-metallic			12	50
supplementary information:N/A				

8.3.3.6	TABLE: Temperature-rise (measurements #04)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	25	80
		L2	28	80
Terminals (Lower position):		L1	23	80
		L2	24	80
Manual operating means: non-metallic			11	35
Parts intended to be touched but not hand-held: non-metallic			16	50
Parts which need not be touched during normal operation: non-metallic			13	60
supplementary information: N/A				

8.3.5.5	TABLE: Temperature-rise (measurements #05)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	25	80
		L2	28	80
Terminals (Lower position):		L1	22	80
		L2	24	80
Manual operating means: non-metallic			11	35
Parts intended to be touched but not hand-held: non-metallic			16	50

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

Parts which need not be touched during normal operation: non-metallic	12	60
supplementary information: N/A		

8.3.3.1	**TABLE: Temperature-rise (measurements #06)**			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	24	70
Terminals (Lower position):		L1	25	70
Manual operating means: non-metallic			10	25
Parts intended to be touched but not hand-held: non-metallic			16	40
Parts which need not be touched during normal operation: non-metallic			14	50
supplementary information:N/A				

8.3.3.6	**TABLE: Temperature-rise (measurements #06)**			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	30	80
Terminals (Lower position):		L1	29	80
Manual operating means: non-metallic			11	35
Parts intended to be touched but not hand-held: non-metallic			17	50
Parts which need not be touched during normal operation: non-metallic			13	60
supplementary information: N/A				

8.3.4.4	**TABLE: Temperature-rise (measurements #07)**			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	30	80
Terminals (Lower position):		L1	29	80
Manual operating means: non-metallic			12	35
Parts intended to be touched but not hand-held: non-metallic			16	50
Parts which need not be touched during normal operation: non-metallic			12	60
supplementary information: N/A				

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

8.3.5.5	TABLE: Temperature-rise (measurements #08)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	28	80
Terminals (Lower position):		L1	23	80
Manual operating means: non-metallic			11	35
Parts intended to be touched but not hand-held: non-metallic			18	50
Parts which need not be touched during normal operation: non-metallic			13	60
supplementary information: N/A				

8.3.6.5	TABLE: Temperature-rise (measurements #09)			P
Temperature rise dT of part:			dT (K) measured	dT (K) required
Terminals(Upper position):		L1	29	80
		L2	31	80
		L3	30	80
		L4	33	80
Terminals (Lower position):		L1	33	80
		L2	30	80
		L3	29	80
		L4	27	80
Manual operating means: non-metallic			15	35
Parts intended to be touched but not hand-held: non-metallic			17	50
Parts which need not be touched during normal operation: non-metallic			14	60
supplementary information:N/A				

China National Accreditation Service for Conformity Assessment

QUALITY MANAGEMENT SYSTEM CERTIFICATION BODY ACCREDITATION CERTIFICATE

(No. CNAS C001-Q)

China National Accreditation Service for Conformity Assessment has accredited

China Quality Certification Center

Section 9,No.188,Nansihuan(the South Fourth Ring Road)Xilu(West Road),Beijing 100070, P.R.China

to ISO/IEC 17021:2011 Conformity assessment—Requirements for Bodies providing audit and Certification of management Systems (CNAS-CC01) and ISO/IEC TS 17021-3：2013 Conformity assessment—Requirements for Bodies providing audit and certification Part 3: Competence Requirements for Auditing and Certification of Quality Management Systems (CNAS-CC131) for the competence to undertake the quality management system certification service as described in the schedule attached to this certificate.

The scope of accreditation is detailed in the attached schedule bearing the same accreditation number as above. The schedule forms an integral part of this certificate.

Date of Issue：2015-07-09

Date of Expiry：2019-07-08

Date of Initial Accreditation：1998-11-16

Signed on behalf of China National Accreditation Service for Conformity Assessment

China National Accreditation Service for Conformity Assessment (CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation system for conformity assessment. CNAS is the member of International Accreditation Forum (IAF) and Pacific Accreditation Cooperation (PAC).

Certificate of Acceptance

To participate
in the IECEE CB Scheme – IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE)

Shanghai Testing & Inspection Institute for Electrical Equipment (STIEE)

505 Wu Ning Road Shanghai, P.R. China

has been assessed and determined to fully comply with the requirements of ISO/IEC 17025: 2005-05, The Basic Rules, IECEE 01: 2016-10 and Rules of Procedure IECEE 02: 2017-06, and the relevant IECEE CB-Scheme Operational Documents.

Shanghai Testing & Inspection Institute for Electrical Equipment (STIEE)

is therefore entitled to operate as a CB Testing Laboratory (CBTL) under the responsibility of LCIE as National Certification Body (NCB) and to carry out testing within the IECEE CB Scheme for the Scope (Product Category(ies) and Standard(s)) as listed in the relevant part of the IECEE Web Site at www.iecee.org, and is subject to all other terms as set forth in the IECEE Basic Rules and Rules of Procedure

The IECEE membership status of this CBTL can be verified on the aforementioned site.

Date of Issue: 2017-07-17
TL030b

Kerry McManama
IECEE Executive Secretary

ВЯРНО С ОРИГИНАЛА

NOARK Electric Europe s. r. o.

New opportunity for you

Инструкции за монтаж и съхранение

Търговското представителство

„Ноарк Електрик Юръп" ООД,
БУЛСТАТ:176229967,
Адрес: бул. Витоша № 86, ет.1,
гр. София

декларира, че комутационната апаратура ниско напрежение е произведена в заводите на Noark, съгласно споменатите в каталозите от производителя стандарти и отговаря на всички изисквания. Инструкциите за монтаж са в комплекта на изделието.

Въртящият момент на затягане на клемите на товаровите прекъсвачи е от 2 до 3,5Nm.

Гаранцията на комутационната апаратура ниско напрежение е 5 /пет/ години след доставка и е валидна при условие, че изделията са доставени, складирани, монтирани и поддържани съгласно инструкциите на производителя.

НОАРК ЕЛЕКТРИК ЮРЪП ООД Търговско представителство гр. София

Ралица Огнянова
/Изпълнителен Директор/

София, 07.08.2017г.

ВЯРНО С ОРИГИНАЛА

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Приложение 3 към Техническо предложение

За Обособена позиция 2

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	Мини тов. прек. 63 А, шир.18 mm, 1P	бр.	2 000	7 500
2	Мини тов. прек. 63 А, шир.18 mm, 3P	бр.	500	2 000
3	Мини тов. прек. 125 А, шир.27 mm, 1P	бр.	50	150
4	Мини тов. прек. 125 А, шир.27 mm, 3P	бр.	150	300

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 в обявлението 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.

Дата 26.09.2017 г.

ПОДПИС и ПЕЧАТ: .....

Атанас Танчев
Изпълнителен директор
Филкаб АД

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Приложение № 4

ДЕКЛАРАЦИЯ

за приемане на условията в проекта на рамково споразумение и проекта на конкретен договор, неразделна част от рамковото споразумение

Долуподписаният, Атанас Иванов Танчев в качеството ми на представляващ „Филкаб" АД, участник в процедура за възлагане на обществена поръчка с реф. № PPD 17-109 и предмет: „Доставка на миниатюрни прекъсвачи", обособена позиция № 2 „Доставка на еднополюсни и триполюсни миниатюрни товарови прекъсвачи"

Д Е К Л А Р И Р А М, ЧЕ:

1. Приемам условията в проекта на рамково споразумение, приложен в документацията за участие.
2. Приемам условията в проекта на конкретен договор, неразделна част от рамковото споразумение, приложен в документацията за участие.

АКЦИОНЕРНО ДРУЖЕСТВО * ФИЛКАБ 16 * ПЛОВДИВ *

Дата 26.09.2017 г.

Декларатор: .....

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Приложение № 5

Д Е К Л А Р А Ц И Я
за срока на валидност на офертата

Долуподписаният Атанас Иванов Танчев, притежаващ лична карта № 645380765, издадена на 10.09.2014 г. от МВР - град Пловдив, адрес: бул. „Любен Каравелов" № 11, ет. 7, ап. 55, в качеството ми на Изпълнителен директор на „Филкаб" АД, участник в процедура за възлагане на обществена поръчка с реф. № PPD 17-109 и предмет: „Доставка на миниатюрни прекъсвачи", обособена позиция № 2 „Доставка на еднополюсни и триполюсни миниатюрни товарови прекъсвачи"

Д Е К Л А Р И Р А М, ЧЕ:

С подаване на настоящата оферта, направените от нас предложения и поети ангажименти за обособена позиция № 2 са валидни за срока, посочен в обявлението, считано от крайния срок за подаване на офертите.

Дата 26.09.2017 г. Декларатор: .....

Атанас Танчев
Изпълнителен директор
Филкаб АД