



- DESIGN: MODULAR
- DEGREE OF PROTECTION: IP65
- YEARS OF WARRANTY: 5
- UV RESISTANCE: YES
- READY TO CONNECT: YES
- WEIGHT: 3.800 KG



The connection switchgear from Polish producer KENO is designed to power photovoltaic inverters in grounded and isolated photovoltaic installations. It realizes protection against the effects of short circuits and overloads, as well as protection against the effects of direct and indirect discharges on the AC side. Due to the high degree of IP protection, outdoor installation is possible. The design of the switchgear is intended for surface mounting. Depending on the equipment, switchboards can perform various functions.

BASIC PARAMETERS AC SIDE

AC Surge Protector Type	Noark T1/T2
Overcurrent circuit breaker (1)	2x Noark B20A 3F
Overcurrent circuit breaker (2)	Noark B6A 1F

ELECTRICAL AND MECHANICAL PARAMETERS OF THE HOUSING

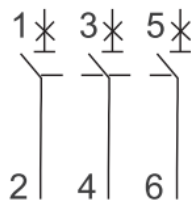
Model	PHS 24 T
Number of fields	24
Dimensions of housing without chokes and MC4 (Length Width Height)	144.00 259.00 319.00
Design in accordance with	EN 60670-1, EN 62208
Level of security	IP65
Protection class	II
Rated insulation voltage U_i	400 V AC, 1500 V DC
The incandescent rod test	650°C
Impact resistance	IK08
UV resistance	YES
Recyclable plastic	bezhalogenowy

Working temperature

-25°C - +60°C

Overcurrent circuit breaker used (MCB) (1)

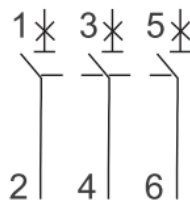
Manufacturer / Model	Noark / Ex9BN 3P B20
Rated current	20A; 3-F
Rated operational voltage U_e	230/415 V AC
-	72 V DC to the pole (1P, 2P)
-	48 V DC to the pole (3P, 4P)
Minimum voltage	12 V AC/DC
Rated impulse withstand voltage U_{imp} in accordance with IEC 60898-1	6 kV
Rated impulse withstand voltage U_{imp} in accordance with IEC 60947-2	6 kV
Rated short-circuit breaking capacity I_{cn} in accordance with IEC 60898-1	6 kA
Rated short-circuit breaking capacity I_{cn} in accordance with IEC 60947-2	10 kA
Rated voltage of the insulation U_i	690 V AC
Number of poles	3
Frequency	50/60 Hz
Characteristic	B
Design in accordance with	IEC/EN 60898-1, IEC/EN 60947-2
Mechanical durability	20 000 connections
Electrical durability	10 000 connections
Energy limitation class	3
Category of use	A
Feed direction	Any (top or bottom)



Overcurrent circuit breaker used (MCB) (2)

Manufacturer / Model	Noark / Ex9BN 3P B20
Rated current	20A; 3-F
Rated operational voltage U_e	230/415 V AC

-	72 V DC to the pole (1P, 2P)
-	48 V DC to the pole (3P, 4P)
Minimum voltage	12 V AC/DC
Rated impulse withstand voltage U_{imp} in accordance with IEC 60898-1	6 kV
Rated impulse withstand voltage U_{imp} in accordance with IEC 60947-2	6 kV
Rated short-circuit breaking capacity I_{cn} in accordance with IEC 60898-1	6 kA
Rated short-circuit breaking capacity I_{cn} in accordance with IEC 60947-2	10 kA
Rated voltage of the insulation U_i	690 V AC
Number of poles	3
Frequency	50/60 Hz
Characteristic	B
Design in accordance with	IEC/EN 60898-1, IEC/EN 60947-2
Mechanical durability	20 000 connections
Electrical durability	10 000 connections
Energy limitation class	3
Category of use	A
Feed direction	Any (top or bottom)



Overcurrent circuit breaker used (MCB) (3)

Manufacturer / Model	Noark / Ex9BN 1P B6
Rated current	6A; 1-F
Rated operational voltage U_e	230/415 V AC
-	72 V DC to the pole (1P, 2P)
-	48 V DC to the pole (3P, 4P)
Minimum voltage	12 V AC/DC
Rated impulse withstand voltage U_{imp} in accordance with IEC 60898-1	6 kV
Rated impulse withstand voltage U_{imp} in accordance with IEC 60947-2	6 kV

Rated short-circuit breaking capacity I_{cn} in accordance with IEC 60898-1 6 kA

Rated short-circuit breaking capacity I_{cn} in accordance with IEC 60947-2 10 kA

Rated voltage of the insulation U_i 690 V AC

Number of poles 1

Frequency 50/60 Hz

Characteristic B

Design in accordance with IEC/EN 60898-1, IEC/EN 60947-2

Mechanical durability 20 000 connections

Electrical durability 10 000 connections

Energy limitation class 3

Category of use A

Feed direction Any (top or bottom)



Overvoltage limiter used AC (SPD)

Manufacturer / Model Noark Ex9UE1+2 12.5 3PN 275

Connection L-N/PE N-PE

Made in accordance with EN 61643-11

Type of delimiter Typee 1+2 (klasa I+II, B+C, T1+T2)

Making the insert MOV (Warystor)GDT (Iskiernik)

Rated voltage U_n 230 V AC

Reference test voltage U_{REF} 255 V AC

Continuous working voltage U_c 275 V AC 255 V AC

Frequency f 25 kA to the pole 50 kA to the pole

Specific energy W/R 156.25 kJ/Ω

Maximum impulse current I_{imp} (10/350 μs) 12.5 kA to the pole 50 kA to the pole

Maximum discharge current I_{max} (8/20 μs) 50 kA to the pole

Voltage protection level U_p for electricity I_n 1.5 kV 1.5 kV

Voltage protection level U_p for electricity I_{max} 1.8 kV 1.5 kV

Voltage protection level U_p dla 5 kA (8/20 μs) 1 kV -

N-PE Follow current extinguishing capability I_{fi} - 100 A

5 s	335 V	335 V
200 ms	335 V	1200 V
Residual current I_{PE} by U_{REF}	≤ 1 mA	-
Limiter voltage for current 1mA	387 - 473 V	
Response time	≤ 25 ns	≤ 100 ns
Maximum fuse protection	160 A gG	-
Ability to withstand short-circuit current	50kA	-
Short-circuit withstand I_{SCCR}	10kA	-
Current factor k	1kA	-
Type of system LV	TN-S, TT (3+1)	

