



- DESIGN: MODULAR
- DEGREE OF PROTECTION: IP65
- YEARS OF WARRANTY: 5
- UV RESISTANCE: YES
- READY TO CONNECT: YES
- WEIGHT: 3.100 KG



The connection panel from the Polish manufacturer KENO is intended for supplying power to photovoltaic inverters., protects against the effects of short circuits and overloads, It also ensures protection against the effects on the alternating and direct current sides. The distribution board should be used in grounded and isolated photovoltaic installations. 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 DC SIDE

Number of inputs PV string outputs	1 1
Quantity Type of DC surge arrester Type	1 Noark T2
Connection type	Array MC4 Stäubli

BASIC PARAMETERS AC SIDE

AC Surge Protector Type	Noark T2
Overcurrent circuit breaker	Noark B10A 3F

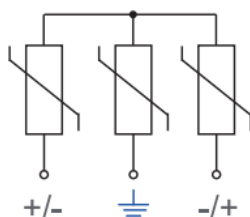
ELECTRICAL AND MECHANICAL PARAMETERS OF THE HOUSING

Model	PHS 12 T
Number of fields	12
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

DC surge arrester used (SPD)

Manufacturer / Model	Noark Ex9UEP 20(R) 3P 1000
Made in accordance with	EN 50539-11
Surge protection	T2 (klasa II, C, T2)
Making the insert	MOV (Warystor)
Rated operational voltage U_n	1000 V
Maximum continuous operating voltage $U_{CPV} + \rightarrow PE, - \rightarrow PE + \leftrightarrow -$	1000 V
Maximum open circuit voltage $U_{OC} \max$	905 V
Frequency	DC
Nominal discharge current I_n (8/20 μs)	20 kA
Maximum discharge current I_{max} (8/20 μs)	40 kA
Total discharge current I_{total} (8/20 μs)	40 kA
Voltage protection level U_p by $I_n + \rightarrow PE, - \rightarrow PE + \leftrightarrow -$	3.8 kV
Leakage current I_{PE} by U_{REF} DC	< 50 μA
Leakage current I_{PE} by U_{REF} AC	< 1 mA
Maximum short-circuit current I_{SCPV}	1000 As



Overcurrent circuit breaker used (MCB) (1)

Manufacturer / Model	Noark / Ex9BN 3P B10
Rated current	10A; 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

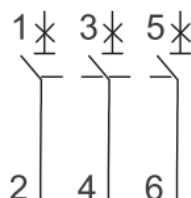
Mechanical durability 20 000 connections

Electrical durability 10 000 connections

Energy limitation class 3

Category of use A

Feed direction Any (top or bottom)



Overvoltage limiter used AC (SPD)

Manufacturer / Model Noark Ex9UE2 20 3PN 275

Connection L-N/PE N-PE

Made in accordance with EN 61643-11

Type of delimiter Typee 2 (klasa II, C, T2)

Making the insert MOV (Warystor) GDT (Iskiernik)

Rated voltage U_n 230 / 400 V AC

Reference test voltage U_{REF} 255 V AC

Continuous working voltage U_c 275 V AC 255 V AC

Frequency f 50/60 Hz

Nominal discharge current I_n (8/20 μ s) 20 kA to the pole 40 kA to the pole

Maximum impulse current I_{imp} (10/350 μ s) - 12 kA to the pole

Maximum discharge current $I_{\max}$ (8/20 μs)	40 kA to the pole	
Voltage protection level U_p for electricity I_n	1.4 kV	1.5 kV
Voltage protection level U_p for electricity $I_{\max}$	2 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
Occasional surges U_t (paused)	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	125 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)	

