



- DESIGN: MODULAR
- DEGREE OF PROTECTION: IP65
- YEARS OF WARRANTY: 5
- UV RESISTANCE: YES
- READY TO CONNECT: YES
- WEIGHT: 2.700 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 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	Dehn T2
Overcurrent circuit breaker	Noark B16A 3F
Residual current circuit breaker	0 x 100mA type A
Phase signaling	YES

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

Overcurrent circuit breaker used (MCB) (1)

Manufacturer / Model Noark / Ex9BN 3P B16

Rated current 16A; 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

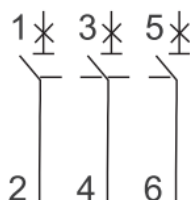
Mechanical durability 20 000 connections

Electrical durability 10 000 connections

Energy limitation class 3

Category of use A

Feed direction Any (top or bottom)

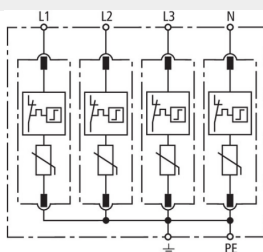


Overvoltage limiter used AC (SPD)

Manufacturer / Model Dehn DG M TN 275

Surge arrester according to PN-EN 61643-11 Type 2 / klasa II

Energy coordination with the terminal device (≤ 10 m)	Type 2 + Type 3
Rated voltage AC (U_n)	230 / 400 V (50 / 60 Hz)
The greatest voltage of permanent work AC (U_c)	275 V (50 / 60 Hz)
Nominal discharge current (8/20 μ s) (I_n)	20 kA
Maximum discharge current (8/20 μ s) (I_{max})	40 kA
Voltage protection level [L-PE]/[N-PE] (U_p)	$\leq 1,5$ / $\leq 1,5$ kV
Voltage protection level [L-PE] / [N-PE] by 5 kA (U_p)	≤ 1 / ≤ 1 kV
Response time (t_A)	≤ 25 ns
Maximum fuse protection	125 A gG
Short-circuit withstand at maximum fuse (I_{SCCR})	50 kArms
Occasional surges (TOV) (U_t) – characteristic	335 V / 5 s – durable
Occasional surges (TOV) (U_t) – characteristic	440 V / 120 min – safe damage



Residual current circuit breaker used (RCD)

Manufacturer / Model	Noark / Ex9L-N 100mA
Made in accordance with	EN 61008
Number of fields	2 / 4
Characteristic	A
Rated operational voltage U_e	240/415 V AC
Rated current	40 / 63 A
Minimum voltage for the RCD function	Independence from tension
Voltage range for test button	150 — 440 V
Frequency f	50 Hz
Rated voltage of the insulation U_i	500 V
Conditional rated short-circuit current I_{nc}	6 kA
Rated residual current Δn	100mA
Tenderness	sensitive to residual sinusoidal current, rectified pulsed and smooth, high frequency (1 kHz)
Response time	immediate
Rated impulse withstand voltage U_{imp}	6 kV
Shock resistance	3000 A

Mechanical durability 20 000 connections

Electrical durability 4 000 connections

Maximum fuse protection against overload

$I_n = 40 \text{ A}$ 32 A gG

$I_n = 63 \text{ A}$ 50 A gG

Maximum fuse protection against short-circuit effects

$I_n = 40 \text{ A}$ 63 A gG

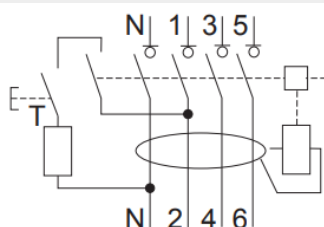
$I_n = 63 \text{ A}$ 63 A gG

Rated making and breaking capacity $I_m I_m$

$I_n = 40 \text{ A}$ 500 A

$I_n = 63 \text{ A}$ 630 A

Feed direction Any (top or bottom)



Phase indicator used

Model Ex9PDe

Made in accordance with EN 60947-5-1

Rated operational voltage U_e 24/48 DC 240 V AC

Rated current I_e $\leq 20 \text{ mA}$ / LED

Conventional thermal current in open space I_n 20 mA

Frequency f 50 Hz

Rated voltage of the insulation U_i 500V

Rated voltage impact resistance U_{imp} 4kV

Electrical durability $\geq 30\,000$ work hours

Diode luminance $\geq 40 \text{ cd/m}^2$

