

# ZPAC1

## Технические характеристики

### По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231	Казань (843)206-01-48	Новокузнецк (3843)20-46-81	Смоленск (4812)29-41-54
Архангельск (8182)63-90-72	Калининград (4012)72-03-81	Новосибирск (383)227-86-73	Сочи (862)225-72-31
Астрахань (8512)99-46-04	Калуга (4842)92-23-67	Омск (3812)21-46-40	Ставрополь (8652)20-65-13
Барнаул (3852)73-04-60	Кемерово (3842)65-04-62	Орел (4862)44-53-42	Сургут (3462)77-98-35
Белгород (4722)40-23-64	Киров (8332)68-02-04	Оренбург (3532)37-68-04	Тверь (4822)63-31-35
Брянск (4832)59-03-52	Краснодар (861)203-40-90	Пенза (8412)22-31-16	Томск (3822)98-41-53
Владивосток (423)249-28-31	Красноярск (391)204-63-61	Пермь (342)205-81-47	Тула (4872)74-02-29
Волгоград (844)278-03-48	Курск (4712)77-13-04	Ростов-на-Дону (863)308-18-15	Тюмень (3452)66-21-18
Вологда (8172)26-41-59	Липецк (4742)52-20-81	Рязань (4912)46-61-64	Ульяновск (8422)24-23-59
Воронеж (473)204-51-73	Магнитогорск (3519)55-03-13	Самара (846)206-03-16	Уфа (347)229-48-12
Екатеринбург (343)384-55-89	Москва (495)268-04-70	Санкт-Петербург (812)309-46-40	Хабаровск (4212)92-98-04
Иваново (4932)77-34-06	Мурманск (8152)59-64-93	Саратов (845)249-38-78	Челябинск (351)202-03-61
Ижевск (3412)26-03-58	Набережные Челны (8552)20-53-41	Севастополь (8692)22-31-93	Череповец (8202)49-02-64
Иркутск (395)279-98-46	Нижний Новгород (831)429-08-12	Симферополь (3652)67-13-56	Ярославль (4852)69-52-93
Россия (495)268-04-70	Киргизия (996)312-96-26-47	Казахстан (7172)727-132	

# TYPE 1 + 2 + 3 3-PHASE SURGE PROTECTOR



## ZPAC1 SERIES

- Type 1 + 2 + 3 AC SPD
- Mounting on 40 mm busbar system
- VG Technology
- Iimp: 12.5 kA or 8 kA
- Itotal: 50 kA or 32 kA
- No leakage current
- Optimized to TOV
- EN 61643-11, IEC 61643-11 certified
- UL1449 ed.4 compliance
- VDE-AR-N 4100 compliance

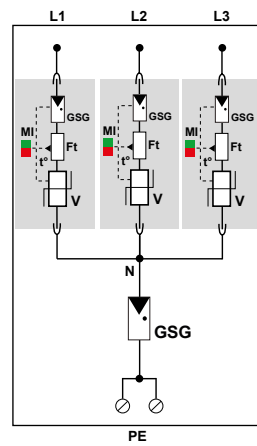
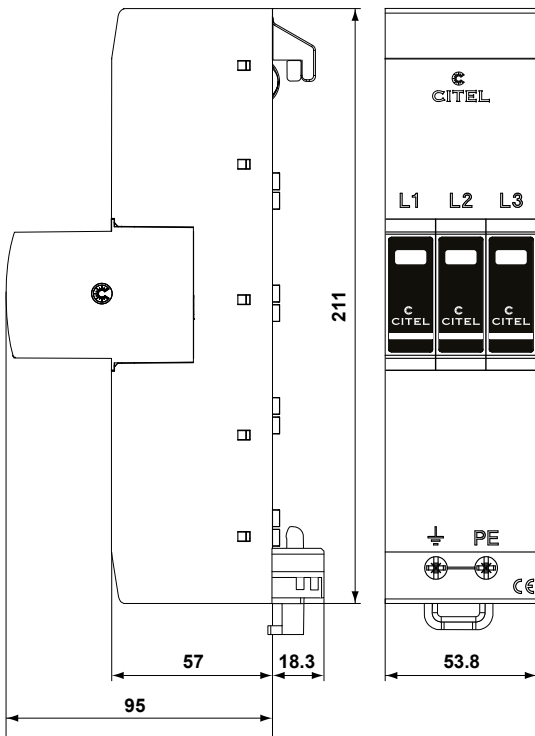
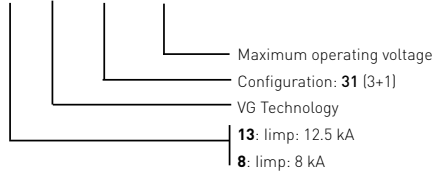


### Characteristics

CITEL Model		ZPAC1-13VG-31-275	ZPAC1-8VG-31-275
Network		230/400 V 3L+N	230/400 V 3L+N
Max. AC operating voltage	Uc	275 Vac	275 Vac
Temporary Over Voltage (TOV) characteristic - 5 sec.	UT	335 Vac withstand	335 Vac withstand
Temporary Over Voltage (TOV) characteristic - 120 mn	UT	440 Vac withstand	440 Vac withstand
Temporary Over Voltage N/PE (TOV HT)	UT	1200V/300 V/200 ms withstand	1200V/300 V/200 ms withstand
Residual current - Leakage current at Uc	Ipe	None	None
Follow current	If	None	None
Nominal discharge current <i>15 x 8/20 μs impulses</i>	In	20 kA	20 kA
Max. discharge current <i>max. withstand @ 8/20 μs by pole</i>	I <sub>max</sub>	50 kA	50 kA
Impulse current by pole <i>max. withstand 10/350 μs</i>	I <sub>imp</sub>	12.5 kA	8 kA
Specific energy by pole	W/R	40 kJ/ohm	16 kJ/ohm
Total lightning current - @ 10/350 μs by pole	I <sub>total</sub>	50 kA	32 kA
Withstand on Combination waveform <i>Class III test</i>	Uoc	6 kV	6 kV
Protection level <i>@ In (8/20 μs) and 6 kV (1.2/50 μs)</i>	Up L/N	1.5 kV	1.5 kV
	Up N/PE	1.5 kV	1.5 kV
Residual Voltage @ 5 kA (8/20 μs)	Up-5kA	0.7 kV	0.7 kV
Admissible short-circuit current	I <sub>sccr</sub>	50 000 A	50 000 A
<b>Associated disconnectors</b>			
Thermal disconnecter		Internal	
Fuses (existing upstream)		160 A max. - gG type	
<b>Mechanical characteristics</b>			
Dimensions		see diagram - 3TE (DIN43880)	
Connection to Network		Mounting on 40 mm busbar and wire for PE: 10-50 mm <sup>2</sup>	
Failsafe Mode		Disconnection from AC network	
Disconnection indicator		1 mechanical indicator by pole Green/Red	
Mounting		Symmetrical rail 35 mm (EN60715)	
Operating temperature		-40/+85°C	
Protection rating		IP20	
Housing material		Thermoplastic UL94 V-0	
Spare unit		MDAC1-13VG-275	MDAC1-8VG-275
<b>Standards</b>			
Certification		KEMA /EAC	
Compliance		IEC 61643-11 / EN 61643-11 / UL1449 ed.4	
<b>Part number</b>			
		64004	64006

# TYPE 1 + 2 + 3 3-PHASE AC SURGE PROTECTOR

ZPAC1-**xx**VG-**xx**-**xxx**



V: High energy varistor  
 GSG: Specific gas Tube  
 MI: Disconnection indicator  
 Ft: Thermal fuse  
 t°: Thermal disconnection system



- Type 1 + 2 + 3 multipolar surge protector
- For 40 mm Busbar system
- Gas Discharge Tube technology
- Iimp 12,5 kA (10/350 μs)
- Plug-in protection modules
- Integrated safety device
- RFZ and APZ Power Supply
- Tool-free installation
- With remote signaling
- Compliance IEC 61643-11 and EN 61643-11

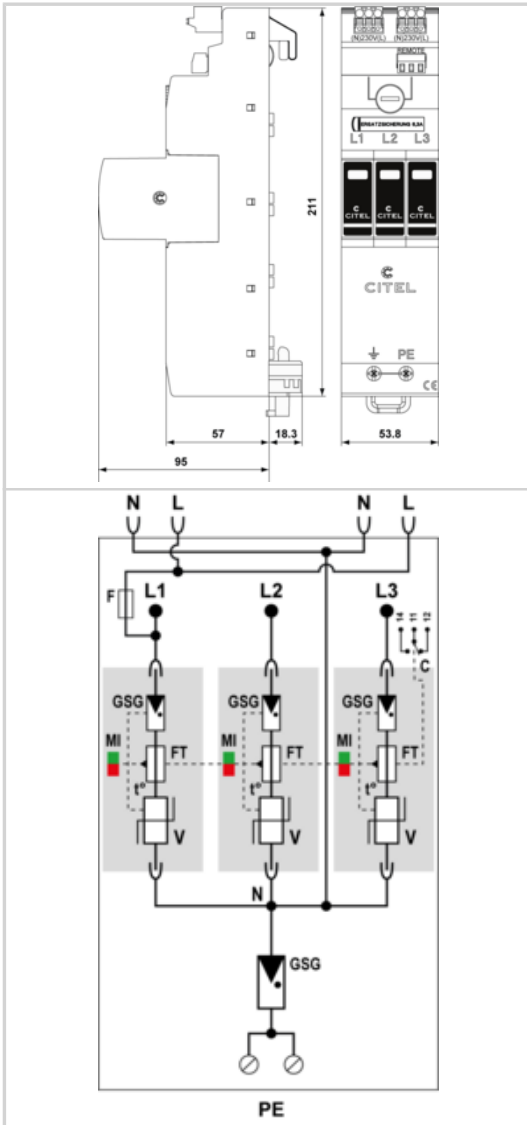


**Electrical Characteristics**

SPD type (following IEC tests)		1+2+3
Network		230/400 V 3-phase+N
AC system		TT-TNS
Max. AC operating voltage	Uc	275 Vac
Temporary Over Voltage (TOV) Characteristics - 5 sec. (Without disconnection)	UT	335 Vac withstand
Temporary Over Voltage (TOV) Characteristics - 120 mn (Without disconnection or with safety disconnection)	UT	440 Vac withstand
Temporary Over Voltage N/PE (TOV HT) (Without disconnection or with safety disconnection)	UT	1200 V/300A/200 ms withstand
Residual Current (Leakage current to Ground)	Ipe	None
Follow current	If	None
Nominal discharge current (15 x 8/20 μs impulses)	In	20 kA
Max. discharge current (max. withstand @ 8/20 μs by pole)	I <sub>max</sub>	50 kA
Impulse current by pole (max. withstand 10/350 μs by pole)	I <sub>imp</sub>	12.5 kA
Total lightning current (max. total withstand @ 10/350 μs)	I <sub>total</sub>	50 kA
Withstand on Combination waveform IEC 61643-11 (Class III test: 1.2/50 μs - 8/20 μs)	Uoc	6 kV
Withstand on overvoltages IEEE C62.41.1		20 kV
Specific energy by pole (max. withstand 10/350 μs)	W/R	40 kJ/ohm
Connection mode(s)		L/N and N/PE
Protection mode(s)		Common/Differential mode
Protection level L/N (@ In (8/20 μs))	Up L/N	1.5 kV
Protection level L/PE (@ In (8/20 μs))	Up L/PE	1.5 kV
Residual voltage L/N at 5 kA (@ 5 kA (8/20 μs))	Up-5kA	0.7 kV
Admissible short-circuit current	I <sub>scrr</sub>	50 000 A

**Mechanical Characteristics**

Technology		VG Technology (MOV+GSG)
SPD configuration		3-phase+Neutral
Connection to Network		By 40mm busbar and wire for PE: 10-35mm <sup>2</sup>
Format		Plug-in modular box
Mounting		40 mm busbar systems
Housing material		Thermoplastic UL94 V-0
Operating temperature	Tu	-40/+85°C
Protection rating		IP20
Failsafe mode		Disconnection
Disconnection indicator		1 mechanical indicator by pole
Spare module (s)		ZMDAC1-13VG-PRO-275
Remote signaling of disconnection		Output on changeover contact
Wiring for remote signaling		1.5 mm <sup>2</sup> max.
Max. Voltage/Current for remote signaling		250 V / 0.5 A (AC) / 30 V / 2 A (DC)
Dimensions		See diagram
Weight		0.7401 kg





Type 1+2+3 AC surge protector - 3-phase+N

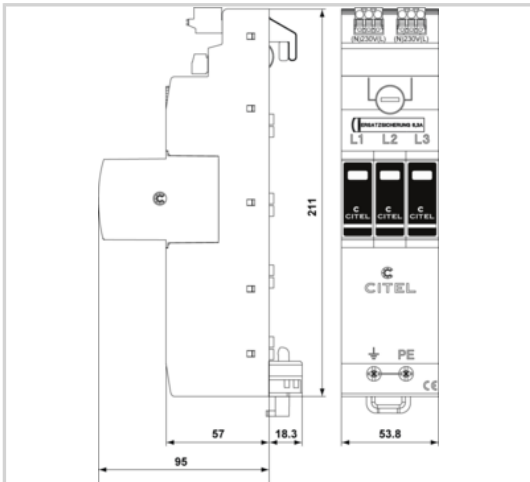
AC POWER

## ZPAC1-13VG-PRO-SU

Disconnectors		
Thermal disconnector		Internal
Installation ground fault breaker		Type 'S' or delayed
Fuses		max. 315 A (gLUgG)
Standards		
Standards compliance		IEC 61643-11 / EN 61643-11 / UL1449 4ed.
Certification		EAC
Part number		
64092		

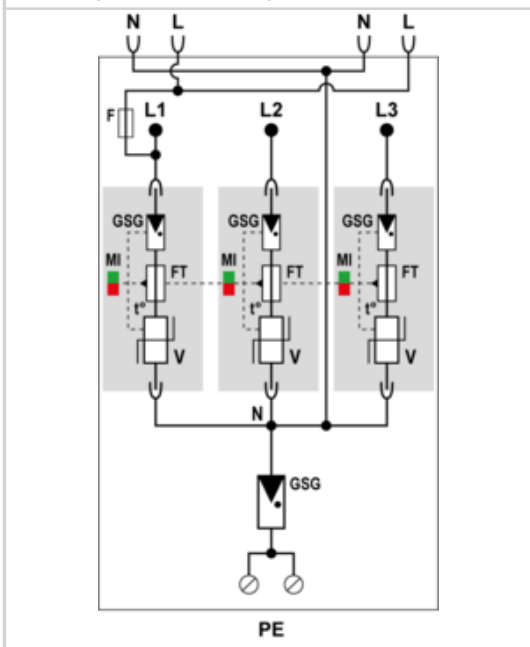


- Type 1 + 2 + 3 multipolar surge protector
- For 40 mm Busbar system
- Gas Discharge Tube technology
- Iimp 12,5 kA (10/350 μs)
- RFZ and APZ Power Supply
- Plug-in protection modules
- Integrated safety device
- Tool-free installation
- "DE-AR-N 4100 compliant" Use of overvoltage protection devices (SPD) type 1 in main power supply systems
- Compliance IEC 61643-11 and EN 61643-11



**Electrical Characteristics**

SPD type (following IEC tests)		1+2+3
Network		230/400 V 3-phase+N
AC system		TT-TNS
Max. AC operating voltage	Uc	275 Vac
Temporary Over Voltage (TOV) Characteristics - 5 sec. (Without disconnection)	UT	335 Vac withstand
Temporary Over Voltage (TOV) Characteristics - 120 mn (Without disconnection or with safety disconnection)	UT	440 Vac withstand
Temporary Over Voltage N/PE (TOV HT) (Without disconnection or with safety disconnection)	UT	1200 V/300A/200 ms withstand
Residual Current (Leakage current to Ground)	Ipe	None
Follow current	If	None
Nominal discharge current (15 x 8/20 μs impulses)	In	20 kA
Max. discharge current (max. withstand @ 8/20 μs by pole)	Imax	50 kA
Impulse current by pole (max. withstand 10/350μs by pole)	Iimp	12.5 kA
Total lightning current (max. total withstand @ 10/350μs)	Itotal	50 kA
Withstand on Combination waveform IEC 61643-11 (Class III test: 1.2/50μs - 8/20μs)	Uoc	6 kV
Withstand on overvoltages IEEE C62.41.1		20 kV
Specific energy by pole (max. withstand 10/350 μs)	W/R	40 kJ/ohm
Connection mode(s)		L/N and N/PE
Protection mode(s)		Common/Differential mode
Protection level L/N (@ In (8/20μs))	Up L/N	1.5 kV
Protection level L/PE (@ In (8/20μs))	Up L/PE	1.5 kV
Residual voltage L/N at 5 kA (@ 5 kA (8/20μs))	Up-5kA	0.7 kV
Admissible short-circuit current	Iscrr	50 000 A



**Mechanical Characteristics**

Technology		VG Technology (MOV+GSG)
SPD configuration		3-phase+Neutral
Connection to Network		By 40mm busbar and wire for PE: 10-35mm <sup>2</sup>
Format		Plug-in modular box
Mounting		40 mm busbar systems
Housing material		Thermoplastic UL94 V-0
Operating temperature	Tu	-40/+85°C
Protection rating		IP20
Failsafe mode		Disconnection
Disconnection indicator		1 mechanical indicator by pole
Spare module(s)		ZMDAC1-13VG-PRO-275
Remote signaling of disconnection		none
Dimensions		See diagram
Weight		0.7401 kg



Type 1+2+3 AC surge protector - 3-phase+N

AC POWER

## ZPAC1-13VG-PRO-U

Disconnectors		
Thermal disconnector		Internal
Installation ground fault breaker		Type 'S' or delayed
Fuses		max. 315 A (gLU/g)
Standards		
Standards compliance		IEC 61643-11 / EN 61643-11 / UL1449 4ed.
Certification		EAC
Part number		
64087		

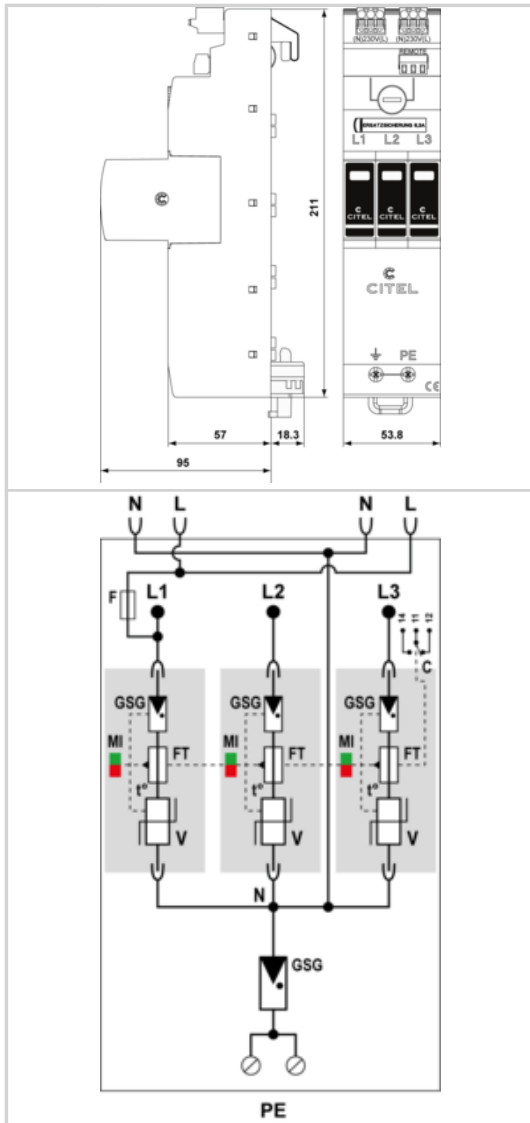


CITEL

ZPAC1-8VG-PRO-SU



- Type 1 + 2 + 3 multipolar surge protector
- For 40 mm Busbar system
- Gas Discharge Tube technology
- Iimp 8 kA (10/350 μs)
- RFZ and APZ Power Supply
- Plug-in protection modules
- Integrated safety device
- Tool-free installation
- With remote signaling
- "DE-AR-N 4100 compliant" Use of overvoltage protection devices (SPD) type 1 in main power supply systems
- Compliance IEC 61643-11 and EN 61643-11



Electrical Characteristics		
SPD type (following IEC tests)		1+2+3
Network		230/400 V 3-phase+N
AC system		TT-TNS
Max. AC operating voltage	Uc	275 Vac
Temporary Over Voltage (TOV) Characteristics - 5 sec. (Without disconnection)	UT	335 Vac withstand
Temporary Over Voltage (TOV) Characteristics - 120 mn (Without disconnection or with safety disconnection)	UT	440 Vac withstand
Temporary Over Voltage N/PE (TOV HT) (Without disconnection or with safety disconnection)	UT	1200 V/300A/200 ms withstand
Residual Current (Leakage current to Ground)	Ipe	None
Follow current	If	None
Nominal discharge current (15 x 8/20 μs impulses)	In	20 kA
Max. discharge current (max. withstand @ 8/20 μs by pole)	I <sub>max</sub>	50 kA
Impulse current by pole (max. withstand 10/350 μs by pole)	I <sub>imp</sub>	8 kA
Total lightning current (max. total withstand @ 10/350 μs)	I <sub>total</sub>	32 kA
Withstand on Combination waveform IEC 61643-11 (Class III test: 1.2/50 μs - 8/20 μs)	Uoc	6 kV
Withstand on overvoltages IEEE C62.41.1		20 kV
Specific energy by pole (max. withstand 10/350 μs)	W/R	16 kJ/ohm
Connection mode(s)		L/N and N/PE
Protection mode(s)		Common/Differential mode
Protection level L/N (@ In (8/20 μs))	Up L/N	1.5 kV
Protection level L/PE (@ In (8/20 μs))	Up L/PE	1.5 kV
Residual voltage L/N at 5 kA (@ 5 kA (8/20 μs))	Up-5kA	0.7 kV
Admissible short-circuit current	I <sub>sc</sub>	50 000 A
Mechanical Characteristics		
Technology		VG Technology (MOV+GSG)
SPD configuration		3-phase+Neutral
Connection to Network		By screw terminals: 2.5-25 mm <sup>2</sup> / by bus
Format		Plug-in modular box
Mounting		40 mm busbar systems
Housing material		Thermoplastic UL94 V-0
Operating temperature	Tu	-40/+85°C
Protection rating		IP20
Failsafe mode		Disconnection
Disconnection indicator		1 mechanical indicator by pole
Spare module(s)		ZMDAC1-8VG-PRO-275
Remote signaling of disconnection		Output on changeover contact
Wiring for remote signaling		1.5 mm <sup>2</sup> max.

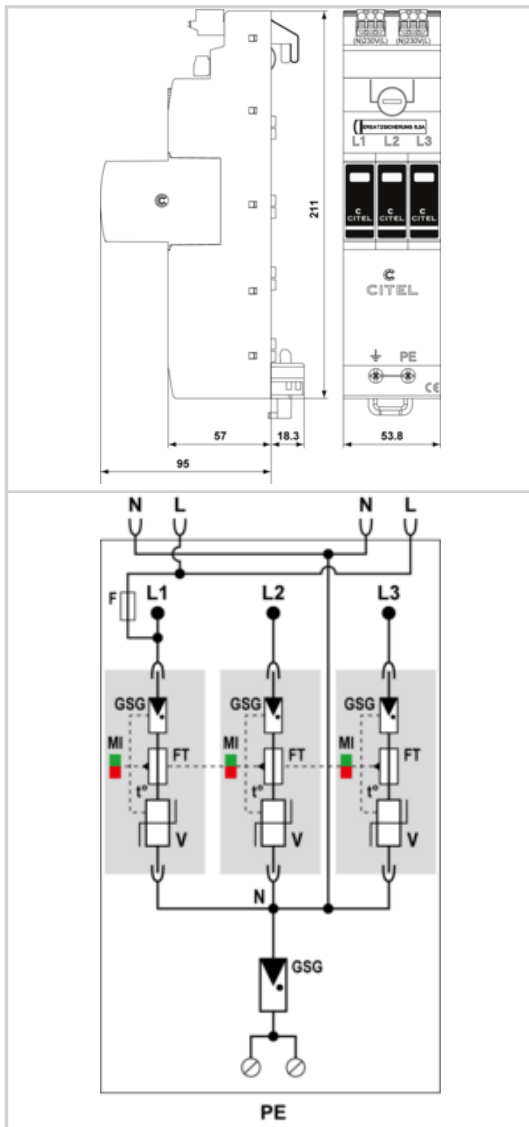


ZPAC1-8VG-PRO-SU

Max. Voltage/Current for remote signaling	250 V / 0.5 A (AC) / 30 V / 2 A (DC)
Dimensions	See diagram
<b>Disconnectors</b>	
Thermal disconnecter	Internal
Installation ground fault breaker	Type 'S' or delayed
Fuses	max. 315 A (gL/gG)
<b>Standards</b>	
Standards compliance	IEC 61643-11 / EN 61643-11 / UL1449 4ed.
Certification	EAC
<b>Part number</b>	
<b>64085</b>	



- Type 1 + 2 + 3 multipolar surge protector
- For 40 mm Busbar system
- Gas Discharge Tube technology
- Iimp 8 kA (10/350 μs)
- RFZ and APZ Power Supply
- Plug-in protection modules
- Integrated safety device
- Tool-free installation
- "DE-AR-N 4100 compliant" Use of overvoltage protection devices (SPD) type 1 in main power supply systems
- Compliance IEC 61643-11 and EN 61643-11



Electrical Characteristics		
SPD type (following IEC tests)		1+2+3
Network		230/400 V 3-phase+N
AC system		TT-TNS
Max. AC operating voltage	Uc	275 Vac
Temporary Over Voltage (TOV) Characteristics - 5 sec. (Without disconnection)	UT	335 Vac withstand
Temporary Over Voltage (TOV) Characteristics - 120 mn (Without disconnection or with safety disconnection)	UT	440 Vac withstand
Temporary Over Voltage N/PE (TOV HT) (Without disconnection or with safety disconnection)	UT	1200 V/300A/200 ms withstand
Residual Current (Leakage current to Ground)	Ipe	None
Follow current	If	None
Nominal discharge current (15 x 8/20 μs impulses)	In	20 kA
Max. discharge current (max. withstand @ 8/20 μs by pole)	Imax	50 kA
Impulse current by pole (max. withstand 10/350 μs by pole)	Iimp	8 kA
Total lightning current (max. total withstand @ 10/350 μs)	Itotal	32 kA
Withstand on Combination waveform IEC 61643-11 (Class III test: 1.2/50 μs - 8/20 μs)	Uoc	6 kV
Withstand on overvoltages IEEE C62.41.1		20 kV
Specific energy by pole (max. withstand 10/350 μs)	W/R	16 kJ/ohm
Connection mode(s)		L/N and N/PE
Protection mode(s)		Common/Differential mode
Protection level L/N (@ In (8/20 μs))	Up L/N	1.5 kV
Protection level L/PE (@ In (8/20 μs))	Up L/PE	1.5 kV
Residual voltage L/N at 5 kA (@ 5 kA (8/20 μs))	Up-5kA	0.7 kV
Admissible short-circuit current	Iscrr	50 000 A
Mechanical Characteristics		
Technology		VG Technology (MOV+GSG)
SPD configuration		3-phase+Neutral
Connection to Network		By screw terminals: 2.5-25 mm <sup>2</sup> / by bus
Format		Plug-in modular box
Mounting		40 mm busbar systems
Housing material		Thermoplastic UL94 V-0
Operating temperature	Tu	-40/+85°C
Protection rating		IP20
Failsafe mode		Disconnection
Disconnection indicator		1 mechanical indicator by pole
Spare module(s)		ZMDAC1-8VG-PRO-275
Remote signaling of disconnection		none
Dimensions		See diagram
Disconnectors		



Type 1+2+3 AC surge protector - 3-phase+N

AC POWER

## ZPAC1-8VG-PRO-U

Thermal disconnecter	Internal
Installation ground fault breaker	Type 'S' or delayed
Fuses	max. 315 A (gL/gG)
<b>Standards</b>	
Standards compliance	IEC 61643-11 / EN 61643-11 / UL1449 4ed.
Certification	EAC
<b>Part number</b>	
64079	

**По вопросам продаж и поддержки обращайтесь:**

Алматы (7273)495-231	Казань (843)206-01-48	Новокузнецк (3843)20-46-81	Смоленск (4812)29-41-54
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Астрахань (8512)99-46-04	Калуга (4842)92-23-67	Омск (3812)21-46-40	Ставрополь (8652)20-65-13
Барнаул (3852)73-04-60	Кемерово (3842)65-04-62	Орел (4862)44-53-42	Сургут (3462)77-98-35
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