

# Himel



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## FINAL DISTRIBUTION

# HDYNEZ DC Surge Protector

Standard IEC/EN 61643-31



### Function

HDYNEZ the DC SPD has following features:

- ◆ Surge protection
- ◆ Protection from discharge surge energy
- ◆ DC application only, upto 1500V
- ◆ Special offer for Photovoltaic, certificated by IEC 61643-31

### Specification

HDYNEZ-40/2P				
Technical Parameters				
Certification	CE, CB, TUV, ROHS			
Test type	T2			
Poles	2P			
Rated discharge current In	20kA			
Maximum discharge current I <sub>max</sub>	40kA			
Wave form μs	8/20			
Maximum continuous operating voltage U <sub>c</sub>	DC 800V	DC 1000V	DC 1200V	DC 1500V
Protection level U <sub>p</sub>	3.0kV	3.6kV	4.0kV	4.5kV
Maximum allowable backup f <sub>uss</sub> gL	80A/40A (DC)			
Recommended backup MCB	40A (DC)			
Others				
Working indicator	Available (GREEN: normal; RED: fault)			
Respose time	25 ns			
Terminal wiring capacity	Hard wire: 35mm <sup>2</sup> ; Flexible wire: 2.5-25mm <sup>2</sup>			
Torque capacity	3.5 N.m			
Recommended wiring for L/N	≥6mm <sup>2</sup>			
Recommended wiring for Grounding	≥10mm <sup>2</sup>			
IP grade	IP 20			
Optional function	YX-remote signaling			

### HDYNEZ Selection Guide

Range Name	Max discharge current	Number of poles	Max continuous voltage	Accessory
<b>HDYNEZ</b>	<b>40</b>	<b>2</b>	<b>H</b>	<b>YX</b>
HDYNEZ: PV SPD	40: 40kA	2P	L: 800VDC M: 1000VDC H: 1200VDC E: 1500VDC	Default: No accessory YX: Remote signaling

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# HDYNEZ DC Surge Protector

Standard IEC/EN 61643-31

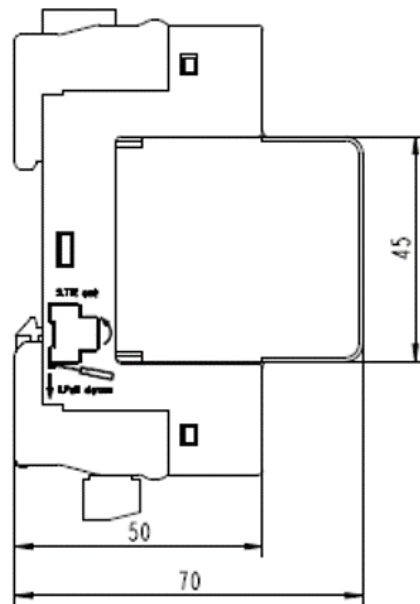
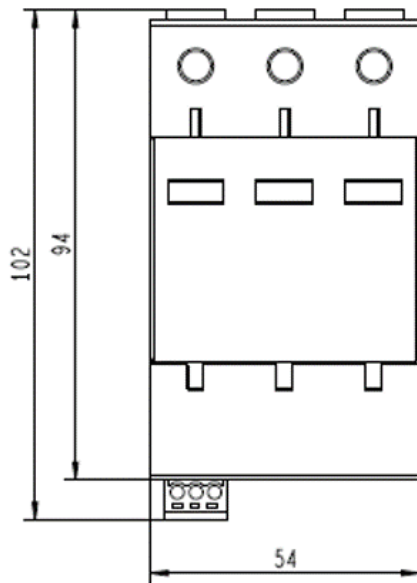


### Order information

Product name	Max discharge current	Number of poles	Max continuous voltage	Without accessory
HDYNEZ	40kA	2P	800VDC	HDYNEZ402L
			1000VDC	HDYNEZ402M
			1200VDC	HDYNEZ402H
			1500VDC	HDYNEZ402E

Product name	Max discharge current	Number of poles	Max continuous voltage	With accessory
HDYNEZ	40kA	2P	800VDC	HDYNEZ402LYX
			1000VDC	HDYNEZ402MYX
			1200VDC	HDYNEZ402HYX
			1500VDC	HDYNEZ402EYX

### Overall dimension



## FINAL DISTRIBUTION

# HDYNZT DC Surge Protector

Standard IEC/EN 61643-31



### Function

HDYNZT the DC SPD has following features:

- ◆ Surge protection
- ◆ Protection from discharge surge energy
- ◆ DC application only, lower operating volt from 30V to 275V
- ◆ Special offer for Photovoltaic, certificated by IEC 61643-31

### Specification

HDYNZT				
Technical Parameters				
Certification	CE, CB, TUV, ROHS			
Test type	T2			
Poles	2P			
Rated discharge current In	10kA		20kA	
Maximum discharge current I <sub>max</sub>	20kA		40kA	
Rated operating voltage U <sub>o</sub>	DC 24V	DC 48V	DC 110V	DC 220V
Maximum continuous operating voltage U <sub>c</sub>	DC 30V	DC 60V	DC 150V	DC 275V
Protection level U <sub>p</sub>	0.6kV	0.6kV	1.2kV	1.6kV
Maximum allowable backup fuss gL	80A (DC)			
Recommended backup MCB	40A (DC)			
Others				
Working indicator	Available (GREEN: normal; RED: fault)			
Respose time	25 ns			
Terminal wiring capacity	Hard wire: 35mm <sup>2</sup> ; Flexible wire: 2.5-25mm <sup>2</sup>			
Torque capacity	3.5 N.m			
Recommended wiring for L/N	≥4mm <sup>2</sup>			
Recommended wiring for Grounding	≥6mm <sup>2</sup>			
IP grade	IP 20			
Optional function	YX-remote signaling			

### HDYNZT Selection Guide

Range Name	Max discharge current	Number of poles	Max continuous voltage	Accessory
<b>HDYNZT</b>	<b>20</b>	<b>2</b>	<b>30</b>	<b>YX</b>
HDYNZT: PV SPD	20: 20kA 40: 40kA	2P	30: 30VDC 60: 60VDC 150: 150VDC 275: 275VDC	Default: No accessory YX: Remote signaling

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# HDYNZT DC Surge Protector

Standard IEC/EN 61643-31

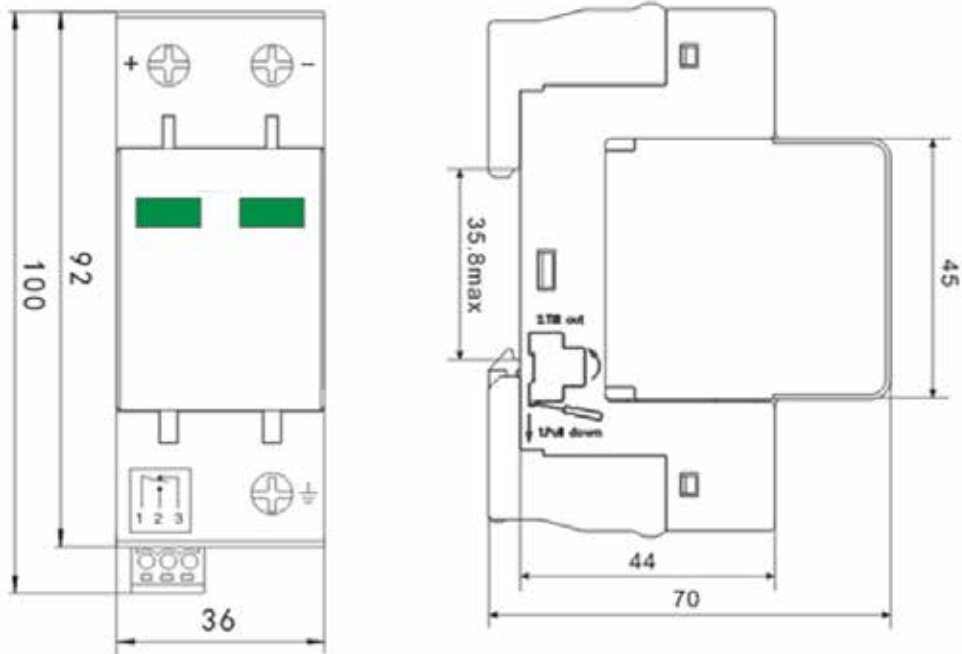


### Order information

Product name	Max discharge current	Number of poles	Max continuous voltage	Without accessory
HDYNZT	20kA	2P	30VDC	HDYNZT20230
			60VDC	HDYNZT20260
	40kA	2P	150VDC	HDYNZT402150
			275VDC	HDYNZT402275

Product name	Max discharge current	Number of poles	Max continuous voltage	With accessory
HDYNZT	20kA	2P	30VDC	HDYNZT20230YX
			60VDC	HDYNZT20260YX
	40kA	2P	150VDC	HDYNZT402150YX
			275VDC	HDYNZT402275YX

### Overall dimension



## FINAL DISTRIBUTION

# HDG9Z DC Switch Disconnectors

Standard IEC/EN 60947-3



### Function

HDG9Z the DC switch disconnectors has following features:

- ◆ Isolation function
- ◆ Circuit breaking with load
- ◆ Power switch function
- ◆ Special offer for DC application, upto 1000VDC

### Specification

HDG9Z				
<b>Electrical characteristics</b>				
Certification	CE, CB, TUV, ROHS			
Rated current $I_n$	20, 25, 32, 40, 50, 63A			
Usage category	DC-22B			
Poles	1P	2P	3P	4P
Rated operating voltage $U_e$	250VDC	500VDC	750VDC	1000VDC
Rated short-time withstand current $I_{cw}$	12 $I_n$ , 1s			
Rated short-circuit making capacity $I_{cm}$	20 $I_n$ , 0.1s			
Rated impulse withstand voltage $U_{imp}$	6kV			
Pollution class	2			
Isolation function	Yes			
<b>Mechanical characteristics</b>				
Mechanical endurance	15,000			
Electrical endurance	1,500			
Protection class	IP20 (Installed directly); IP40 (Installed in DB box)			
Mechanical shock resistance	30g, 3 shocks, lasting 11ms			
Rated ambient temperature	30°C			
Operating ambient temperature	-30~70°C			
Storage temperature	-40~80°C			
<b>Installation features</b>				
Maximum wiring capacity	50mm <sup>2</sup>			
Maximum torque capacity	3.5 N·m			
Installation	35mm Din Rail			

### HDG9Z Selection Guide

Range Name	Number of poles	Rated current
<b>HDG9Z</b>	<b>1</b>	<b>20</b>
HDG9Z	1: 1P 2: 2P 3: 3P 4: 4P	20: 20A ..... 63: 63A

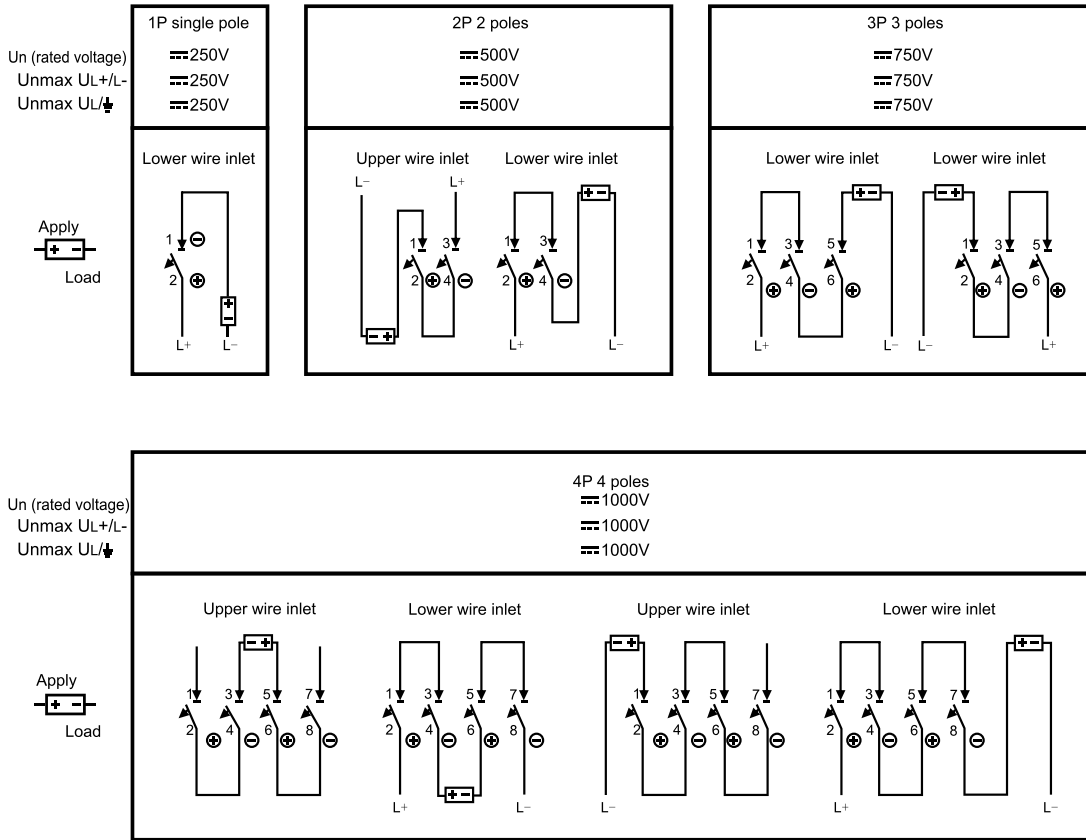
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## HDG9Z DC Switch Disconnectors

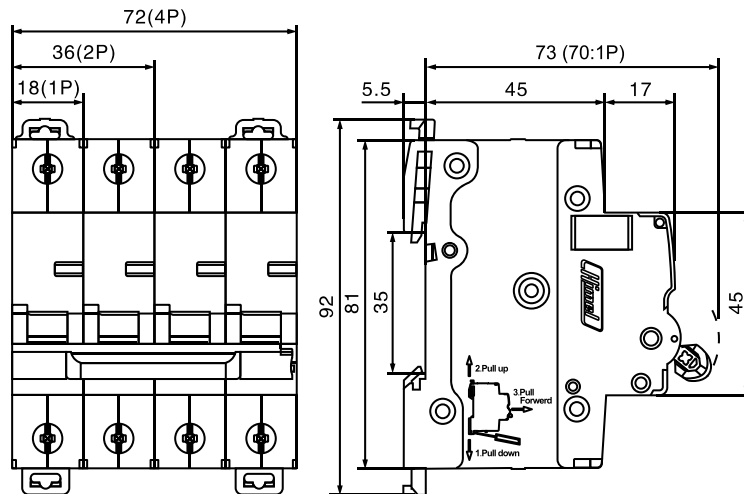
Standard IEC/EN 60947-3



### Wiring diagram



### Overall dimension



## FINAL DISTRIBUTION

# HDPV1-20 Photovoltaic Fuse

Standard: IEC/EN 60269; IEC/EN 60947-3



### Function

- ◆ The **HDPV1-20(X)** fuse for solar photovoltaic system protection is suitable for the power distribution line with the rated voltage of not greater than DC1000V, the rated current of not greater than 20A, and the rated short circuit capacity of not greater than 20kA as short circuit overload protection.
- ◆ Main material of fuse type disconnector is PA66 reinforced nylon, and the material of conductive socket is T2 copper.
- ◆ Small size can mounted with din-rail.
- ◆ Good fusing characteristics and low power loss

### Installation Conditions

- ◆ Ambient temperature: -25°C~+60°C refers to the working temperature directly around the fuse, not room temperature. The temperature of the fuse might be quite high since the fuse is arranged in the support piece/base of different structures and the entire fuse is enclosed in the power distribution control cabinet.
- ◆ Atmospheric conditions: The relative humidity of the air at the highest temperature +60°C at the installation site shall not exceed 50%. The minimum temperature in the wettest month does not exceed -25°C, and the maximum relative humidity of that month does not exceed 90%.
- ◆ Pollution class: 3
- ◆ Installation category: III
- ◆ Installation site: The fuse shall be installed at a place free of obvious shaking and impact vibration

### Selection Guide

#### HDPV1-20 fuse-links

Range Name	Model	Size	Type	Rated current
<b>HDPV1</b>	<b>20</b>		<b>T</b>	<b>20</b>
HDPV1	20	Default: 10x38mm	T: Fuse-link	1: 1A ..... 20: 20A



#### HDPV1-20 fuse-disconnector

Range Name	Model	Size	Type	Rated current
<b>HDPV1</b>	<b>20</b>			<b>X</b>
HDPV1	20	Default: Used with 10x38mm fuse links	Default: Fuse-disconnector	Default: No indicator X: with indicator





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# HDPV1-20 Photovoltaic Fuse

Standard: IEC/EN 60269; IEC/EN 60947-3



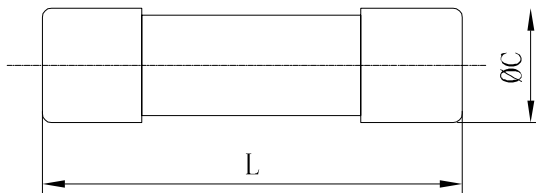
### Specification

Fuse-link					
Product	Size (mm)	Rated voltage (V)	Rated current (A)	Rated breaking I1 (kA)	Rated dissipates power (W)
HDPV1-20	10X38	DC 1000V	1,2,3,4,5,6,8,10,12,15,20	DC 20	≤3.5

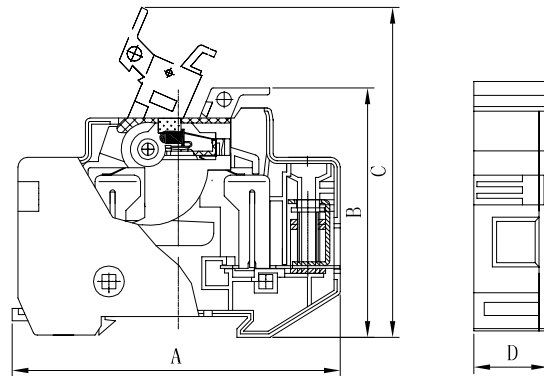
Fuse-disconnector									
Product	Rated current (A)	Resistive current (A)	Rated voltage (V)	Rated insulation voltage (V)	Usage category	Rated impulse voltage (V)	Rated limit short current (kA)	Poles	Fuse-link
HDPV1-20(X)	20	20	DC 1000	DC 1000	DC-20B	6	20	1P	HDPV1-20

### Dimension

#### Fuse-link



#### Fuse-disconnector



Product	L	C
HDPV1-20	38±0.6	10.2±0.215

Product	A	B	C	D
HDPV1-20	80±1.5	61±1.5	78±1.5	18±0.2

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# HDPV2-32(L) Photovoltaic Fuse

Standard: IEC/EN 60269; IEC/EN 60947-3



### Function

- ◆ The **HDPV2-32(L)** fuse for solar photovoltaic system protection is suitable for the power distribution line with the rated voltage of not greater than DC1500V, the rated current of not greater than 32A, and the rated short circuit capacity of not greater than 33kA as short circuit overload protection.
- ◆ This product is composed of molten tube, contact cap, quartz sand and melt. The melt adopts spot welding process, which give a stronger and has stable performance.
- ◆ Small size can mounted with din-rail.
- ◆ Good fusing characteristics and low power loss

### Installation Conditions

- ◆ Ambient temperature: -25°C~+60°C refers to the working temperature directly around the fuse, not room temperature. The temperature of the fuse might be quite high since the fuse is arranged in the support piece/base of different structures and the entire fuse is enclosed in the power distribution control cabinet.
- ◆ Atmospheric conditions: The relative humidity of the air at the highest temperature +60°C at the installation site shall not exceed 50%. The minimum temperature in the wettest month does not exceed -25°C, and the maximum relative humidity of that month does not exceed 90%.
- ◆ Pollution class: 3
- ◆ Installation category: III
- ◆ Installation site: The fuse shall be installed at a place free of obvious shaking and impact vibration

### Selection Guide

#### HDPV2-32(L) fuse-links

Range Name	Model	Size	Type	Rated current
<b>HDPV2</b>	<b>32</b>	<b>L</b>	<b>T</b>	<b>30</b>
HDPV2	32	Default: 10x65mm L: 10x85mm	T: Fuse-link	1: 1A ..... 32:32A



#### HDPV2-32(L) fuse-disconnector

Range Name	Model	Size	Type	Rated current
<b>HDPV2</b>	<b>32</b>	<b>L</b>	<b>G</b>	
HDPV2	32	Default: 10x65mm L: 10x85mm	G: Fuse-disconnector	Default: all current



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# HDPV2-32(L) Photovoltaic Fuse

Standard: IEC/EN 60269; IEC/EN 60947-3



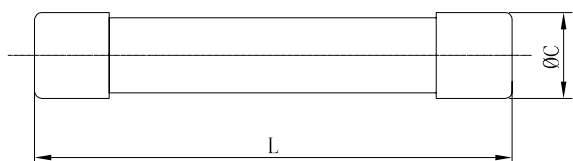
### Specification

Fuse-link					
Product	Size (mm)	Rated voltage (V)	Rated current (A)	Rated breaking I1 (kA)	Rated dissipates power (W)
HDPV2-32	10x65	DC 1500V	1,2,3,4,5,6, 8,10,12,15, 20,25,30,32	33	≤8
HDPV2-32L	10x85				

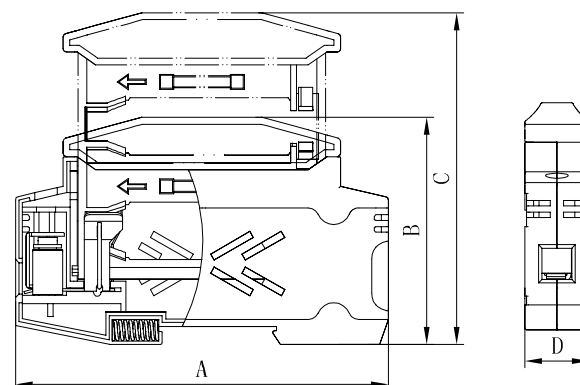
Fuse-disconnector									
Product	Rated current (A)	Resistive current (A)	Rated voltage (V)	Rated insulation voltage (V)	Usage category	Rated impulse voltage (V)	Rated limit short current (kA)	Poles	Fuse-link
HDPV2-32(L)	32	32	DC 1500	DC 1500	DC-20B DC-PV0	8	33	1P	HDPV2-32(L)

### Dimension

#### Fuse-link



#### Fuse-disconnector



Product	L	C
HDPV2-32	65 <sup>+0.6</sup> <sub>-1.0</sub>	10.3±0.1
HDPV2-32L	85 <sup>+0.6</sup> <sub>-1.0</sub>	10.3±0.1

Product	A	B	C	D
HDPV2-32	107±1.5	65±1.5	95±1.5	18±0.5
HDPV2-32L	127±1.5	67±1.5	97.5±1.5	18±0.5

## FINAL DISTRIBUTION

# HDB3WZ 3 Series MCB

Standard: IEC/EN 60898-1



### Range Presentation

HDB3w series is Himel 3 series range of Miniature Circuit Breakers designed to protect the power system from short circuit and overload faults. 3 series MCB is mainly used in commercial and residential buildings, DC MCB.

### Features

- ◆ Full product range
- ◆ DPN: Phase neutral MCB in single pole
- ◆ Smart design: Complete range of accessories with convenient mounting hole

### Selection Code

Range name	Breaking capacity	Number of poles	Tripping type	Rated current
<b>HDB3wZ</b>	<b>N</b>	<b>3</b>	<b>C</b>	<b>10</b>
<b>HDB3wZ:</b> DC MCB (Direct Current) without indicator	<b>Default:</b> 6kA (1P: 250V, 2/3P: 500V)	<b>1:</b> 1P <b>2:</b> 2P <b>3:</b> 3P	<b>B:</b> Type B <b>C:</b> Type C	<b>1:</b> 1A (Type C) <b>2:</b> 2A (Type C) <b>3:</b> 3A (Type C) <b>4:</b> 4A (Type C) <b>5:</b> 5A (Type C) <b>6:</b> 6A <b>8:</b> 8A <b>10:</b> 10A <b>13:</b> 13A <b>16:</b> 16A <b>20:</b> 20A <b>25:</b> 25A <b>32:</b> 32A <b>40:</b> 40A <b>50:</b> 50A <b>63:</b> 63A

### Online Content



HDB3wZ

# HDB3WZ 3 Series MCB

Standard: IEC/EN 60898-1



## Technical Parameters

MCB	HDB3wZ	
Description	18mm DC MCB without indicator	
Indication: red and green tripping indication window	No	
<b>Electrical characteristics</b>		
Standard	IEC60947-2	
Certificate	CE, CB, ROHS	
Rated insulation voltage Ui	500V	
Frequency	/	
Rated operational voltage Ue	DC 250V (1P)	DC 500V (2P/3P)
Rated short-circuit capacity Icn	6kA	
Rated impulse withstand voltage Uimp	4kV	
Pollution class	2	
Isolation function	Yes	
Tripping characteristics	B, C Type	
<b>Mechanical characteristics</b>		
Mechanical endurance	20000	
Electrical endurance	3000	
Protection class	IP40 (Installed in DB box) ; IP20 (Installed directly)	
Mechanical shock resistance	30g, 3 shocks, lasting 11ms	
Rated ambient temperature	30°C ; 50°C	
Operating ambient temperature	-20°C ~ +60°C	
Storage temperature	-40°C ~ +70°C	
<b>Installation features</b>		
Maximum wiring capacity	25mm <sup>2</sup>	
Maximum torque	2.5N.m	
Tool	Cross head screwdriver or flat head screwdriver	
Installation	35mm DIN rail	
Line incoming type	Top or bottom	

## FINAL DISTRIBUTION

# HDB9Z 9 Series MCB

Standard: IEC/EN 60898-1



### Range Presentation

HDB9 series is Himel 9 series range of Miniature Circuit Breakers designed to protect the power system from short circuit and overload.

### Features

- ◆ Breaking capacity up to 10kA
- ◆ Energy limiting class 3
- ◆ Standard open and close state indication window
- ◆ High performance

### Selection Code

Range name	Breaking capacity	Number of poles	Tripping type	Rated current
<b>HDB9Z</b>	<b>N63A</b>	<b>3</b>	<b>C</b>	<b>10</b>
<b>HDB9Z:</b> DC MCB (Direct Current)	<b>63:</b> 1P/2P 125V/250V(10kA) 1P/2P/4P 250V/500V/1000V (6kA)	<b>1:</b> 1P <b>2:</b> 2P <b>4:</b> 4P	<b>B:</b> BType <b>C:</b> CType	<b>1:</b> 1A <b>20:</b> 20A <b>2:</b> 2A <b>25:</b> 25A <b>4:</b> 4A <b>32:</b> 32A <b>6:</b> 6A <b>40:</b> 40A <b>10:</b> 10A <b>50:</b> 50A <b>16:</b> 16A <b>63:</b> 63A

### Online Content



HDB9Z

## FINAL DISTRIBUTION

# HDB9Z 9Series MCB

Standard: IEC/EN 60898-1



### Technical Parameters

MCB	HDB9Z
Description	18mm DC Miniature Circuit Breaker
Indication: red and green tripping indication window	Yes
<b>Electrical characteristics</b>	
Standard	IEC60947-2
Certificate	CE, CB, SEMKO, ROHS
Rated insulation voltage $U_i$	1000V
Frequency	/
Rated operational voltage $U_e$	DC 125V, 250V (1P) DC 250V, 500V (2P) DC 1000V (4P)
Rated short-circuit capacity $I_{cn}$	10KA (125V/1P, 250V/2P) 6kA (250V/1P, 500V/2P, 1000V/4P)
Rated impulse withstand voltage $U_{imp}$	6kV
Pollution class	2
Isolation function	Yes
Tripping characteristics	B, C, D Type
Energy limiting class 3	No
<b>Mechanical characteristics</b>	
Mechanical endurance	20000
Electrical endurance	3000
Protection class	IP40 (Installed in DB box) IP20 (Installed directly)
Mechanical shock resistance	30g, 3 shocks, lasting 11ms
Rated ambient temperature	30° C
Operating ambient temperature	- 30° C ~ + 70° C
Storage temperature	- 40° C ~ + 70° C
<b>Installation Features</b>	
Maximum wiring capacity	25mm <sup>2</sup>
Maximum torque	2.5N.m
Tool	Cross head screwdriver or flat head screwdriver
Installation	35mm DIN rail
Line incoming type	Top or bottom



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