

# Himel



## MINIATURE CIRCUIT BREAKER

[www.himel.com](http://www.himel.com)

## FINAL DISTRIBUTION

# 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, including 18mm AC MCB, 27mm AC MCB, phase neutral MCB, and DC MCB.

### Features

- ◆ Full product range: AC and DC MCB, from 1 to 125A
- ◆ MCB without or with indicator window (H series) to display tripping status.
- ◆ DPN: Phase neutral MCB in single pole
- ◆ Smart design: Complete range of accessories with convenient mounting hole
- ◆ HDB3w, HDB3wH: SNI (Indonesia)
- ◆ HDB3w, HDB3wH: PS MARK (Philippines)
- ◆ HDB3wH: SIRIM (Malaysia)
- ◆ HDB3wH, HDB3w-125: TSE (Turkey)

### Selection Code

Range name	Breaking capacity	Number of poles	Tripping type	Rated current
<b>HDB3w</b>	<b>N</b>	<b>3</b>	<b>C</b>	<b>10</b>
<b>HDB3w</b> : MCB without indicator <b>HDB3wH</b> : MCB with indicator	<b>N</b> : 6kA	<b>1</b> : 1P <b>2</b> : 2P <b>3</b> : 3P <b>4</b> : 4P <b>5</b> : 1P+N <b>6</b> : 3P+N	<b>B</b> : Type B <b>C</b> : Type C <b>D</b> : Type D	<b>1</b> : 1A <b>2</b> : 2A <b>3</b> : 3A <b>4</b> : 4A <b>5</b> : 5A <b>6</b> : 6A <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
<b>HDB3w125</b> : 27mm MCB with indicator, up to 125A	<b>N</b> : 6kA <b>H</b> : 10kA	<b>1</b> : 1P <b>2</b> : 2P <b>3</b> : 3P <b>4</b> : 4P	<b>B</b> : Type B <b>C</b> : Type C <b>D</b> : Type D	<b>63</b> : 63A <b>80</b> : 80A <b>100</b> : 100A <b>125</b> : 125A2
<b>HDB3wP</b> : Phase Neutral MCB without indicator <b>HDB3wHP</b> : Phase Neutral MCB with indicator	<b>N</b> : 4.5kA (HDB3wP) <b>Default</b> : 4.5kA (HDB3wHP)	<b>Default</b> : all are 1P+N in single pole	<b>C</b> : Type C <b>D</b> : Type D	<b>6</b> : 6A <b>10</b> : 10A <b>20</b> : 20A <b>25</b> : 25A <b>32</b> : 32A <b>40</b> : 40A
<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



HDB3w



HDB3wH



HDB3w-125



HDB3wP



HDB3wHP



HDB3wZ

# 3 Series MCB

Standard: IEC/EN 60898-1



## 3 Series MCB

IEC/EN 60898-1



### FEATURES

- High performance and long durability
- Smart design provides easy installation
- With indicator window to display the breaker status
- Complete range of accessories including Shunt release and Alarm contact

### SPECIFICATIONS

- High Breaking Capacity upto 6kA
- Current range from 1A to 63A
- Available in 1P/2P/3P/4P/1P+N/3P+N
- Wide Operating Temperature from -20°C to +60°C

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# 3 Series MCB

Standard: IEC/EN 60898-1



Technical Parameters						
MCB	HDB3w	HDB3wH	HDB3w-125	HDB3wP	HDB3wHP	HDB3wZ
Description	18mm Miniature Circuit Breaker without indicator	18mm Miniature Circuit Breaker with indicator	27mm Miniature Circuit Breaker with indicator	18mm Phase Neutral MCB without indicator	18mm Phase Neutral MCB with indicator	18mm DC MCB without indicator
Indication: red and green tripping indication window	No	Yes	Yes	No	Yes	No
<b>Electrical characteristics</b>						
Standard	IEC 60898-1		IEC 60947-2	IEC 60898-1		IEC60947-2
Certificate	CE, TUV, CB, ROHS		CE, CB, TUV, ROHS	CE, CB, TUV, ROHS		CE, CB, ROHS
Rated insulation voltage $U_i$	500V		500V	500V		500V
Frequency	50/60Hz		50/60Hz	50/60Hz		/
Rated operational voltage $U_e$	240 (1P, 1P+N) 415V (2P, 3P, 4P, 3P+N)		230V (1P) 400V (2P, 3P, 4P)	240V		DC 250V (1P) DC 500V (2P/3P)
Rated short-circuit capacity $I_{cn}$	6kA		6kA 10kA	4.5kA		6kA
Rated impulse withstand voltage $U_{imp}$	4kV		4kV	4kV		4kV
Pollution class	2		2	2		2
Isolation function	Yes		Yes	Yes		Yes
Tripping characteristics	B, C, D Type		B, C, D Type	C, D Type		B, C Type
<b>Mechanical characteristics</b>						
Mechanical endurance	25000		8500 ( $I_n \leq 100A$ ) 7000 ( $I_n > 100A$ )	10000		20000
Electrical endurance	6000		1500 ( $I_n \leq 100A$ ) 1000 ( $I_n > 100A$ )	4000		3000
Protection class	IP40(Installed in DB box) IP20(Installed directly)		IP40 (Installed in DB box) IP20 (Installed directly)	IP40 (Installed in DB box) IP20 (Installed directly)		IP40 (Installed in DB box) IP20 (Installed directly)
Mechanical shock resistance	30g, 3 shocks, lasting 11ms		30g, 3 shocks, lasting 11ms	30g, 3 shocks, lasting 11ms		30g, 3 shocks, lasting 11ms
Rated ambient temperature	30°C ; 50°C		30°C ; 50°C	30°C ; 50°C		30°C ; 50°C
Operating ambient temperature	-20°C ~ +60°C		-20°C ~ +60°C	-20°C ~ +60°C		-20°C ~ +60°C
Storage temperature	-40°C ~ +70°C		-40°C ~ +70°C	-40°C ~ +70°C		-40°C ~ +70°C
<b>Installation features</b>						
Maximum wiring capacity	25mm <sup>2</sup>		50mm <sup>2</sup>	16mm <sup>2</sup>		25mm <sup>2</sup>
Maximum torque	2.5N.m		3.5N.m	1.5N.m		2.5N.m
Tool	Cross head screwdriver or flat head screwdriver		Cross head screwdriver or flat head screwdriver	Cross head screwdriver or flat head screwdriver		Cross head screwdriver or flat head screwdriver
Installation	35mm DIN rail		35mm DIN rail	35mm DIN rail		35mm DIN rail
Line incoming type	Top or bottom		Top or bottom	Top or bottom		Top or bottom

## FINAL DISTRIBUTION

# 3 Series RCBO

Standard: IEC/EN 61009-1



### Range Presentation

Himel 3 series range of Residual Current Operated Circuit Breakers (RCBO) is designed to protect people and power system from short circuit, overload faults and earth leakage.

3 series RCBO is mainly used in commercial and residential buildings including standard RCBO and phase neutral RCBO.

### Features

- ◆ Full product range
- ◆ Short circuit protection
- ◆ Overload protection
- ◆ Isolating function
- ◆ Earthleakage protection function
- ◆ Residual Current Operated Circuit Breaker over voltage protection function

### Selection Code

Range name	Breaking capacity	Number of poles	Tripping type	Rated current	Residual current	Over-voltage protection
<b>HDB3wLE125</b>	<b>N</b>	<b>1</b>	<b>C</b>	<b>6</b>	<b>R50</b>	<b>G</b>
<b>HDB3wLE125:</b> RCBO with indicator, up to 125A	<b>Default:</b> 10kA	<b>1:</b> 1P+N <b>2:</b> 2P <b>3:</b> 3P <b>4:</b> 4P <b>6:</b> 3P+N	<b>C:</b> Type C <b>D:</b> Type D	<b>63:</b> 63A <b>80:</b> 80A <b>100:</b> 100A <b>125:</b> 125A	<b>Default:</b> 30mA <b>W:</b> 50mA <b>Q:</b> 75mA <b>Y:</b> 100mA <b>T:</b> 300mA	<b>Default:</b> NO <b>G:</b> Over-voltage protection
Product name	Incoming mode	Number of poles	Trip type	Rated current	Residual current	Other functions
<b>HDB3LE</b>	<b>R</b>	<b>2</b>	<b>C</b>	<b>16</b>	<b>R10</b>	<b>A</b>
<b>HDB3LE:</b> RCBO with indicator	<b>Default:</b> Line <b>R:</b> Bottom	<b>2:</b> 2P <b>3:</b> 3P <b>4:</b> 4P	<b>B:</b> B type <b>C:</b> C type <b>D:</b> D type	<b>6:</b> 6A <b>10:</b> 10A <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	<b>Default:</b> 30mA <b>R10:</b> 10mA (2P only) <b>R50:</b> 50mA <b>R75:</b> 75mA <b>R100:</b> 100mA <b>R300:</b> 300mA	<b>Default:</b> AC type <b>A:</b> A type
Product name	Number of poles	Trip type	Rated current	Other functions		
<b>HDB3PLE</b>	<b>Default</b>	<b>C</b>	<b>16</b>	<b>G</b>		
<b>HDB3PLE:</b> Phase Neutral RCBO with indicator	<b>Default:</b> 1P+N	<b>C:</b> C type <b>D:</b> D type	<b>6:</b> 6A <b>10:</b> 10A <b>16:</b> 16A <b>20:</b> 20A <b>25:</b> 25A <b>32:</b> 32A <b>40:</b> 40A	<b>Default:</b> No <b>G:</b> Over-voltage protection		

# 3 Series RCBO

Standard: IEC/EN 61009-1



**Compact Protection**

## CompaPRO RCBO

Protection and safety for your loved ones from electric shocks

- **Smaller size, greater cost saving**  
30-50% more compact, fits in smaller size distribution board
- **Greater functionality**  
Available in A-Type to suit both AC and pulse DC environments
- **Bigger wiring terminal**  
Enhanced convenience with 25 mm<sup>2</sup> wiring capacity
- **Next-generation technology**  
Anti-arc spray and quicker break for greater safety
- **Enhanced life**  
Quick connect function for more durability
- **RoHS Compliant**  
Safeguard life, property and environment
- **Protection in extreme temperatures**  
Tested for wide range temperature -35°C ~ 70°C
- **Integral overcurrent protection**  
Complies with IEC61009-1



## Online Content



HDB3wLE125



HDB3LE



HDB3PLE

## FINAL DISTRIBUTION

# 3 Series RCBO

Standard: IEC61009-1



Technical Parameters				
RCBO	HDB3wLE125	HDB3LE	HDB3PLE	
Certification	CE, CB, RoHS	CE, CB, RoHS	CE, CB, RoHS	
<b>Electrical characteristics</b>				
Rated insulation voltage $U_i$ (V)	500	500	500	
Maximum working voltage $U_{Bmax}$ 1P+N (V)	"230VAC (1P+N, 2P) 400VAC (3P,4P,3P+N)"	"230VAC (2P) 400VAC (3P,4P)"	230VAC	
Rated short-circuit capacity $I_{cn}$ (kA)	10( IEC/EN 60947-2)	6 (IEC/EN 60898)	3.5 (IEC/EN61009-1)	
Rated impulse withstand voltage $U_{imp}$ (1.2/50) (kA)	4	4	4	
Isolating function	Available	Available	Available	
Pollution class	2	2	2	
Electric shock protection grade	II	II	II	
Tripping type	Thermal magnetic tripping	Thermal magnetic tripping	Thermal magnetic tripping	
	C curve (5I <sub>n</sub> ~10I <sub>n</sub> )	Y	Y	Y
	D curve (10I <sub>n</sub> ~14I <sub>n</sub> )	Y	Y	Y
Electrical and mechanical accessories	-	Y	Y	
<b>Mechanical characteristics</b>				
Trip indication	Upspring of the reset button indicates leakage of trip	Upspring of the reset button indicates leakage of trip	Upspring of the reset button indicates leakage of trip	
Handle	Red, pad printing indicating ON-OFF position	Red, pad printing indicating ON-OFF position	Red, pad printing indicating ON-OFF position	
Mechanical life	8,500 times	20,000 times	20,000 times	
Electrical life	3,000 times	10,000 times	10,000 times	
Protection rating	Installed in distribution box IP40 Installed directly IP20	Installed in distribution box IP40 Installed directly IP20	Installed in distribution box IP40 Installed directly IP20	
Mechanical shock resistance	30g, 3 shocks, last for 11ms (No significant vibration or shock)	30g, 3 shocks, last for 11ms (No significant vibration or shock)	30g, 3 shocks, last for 11ms (No significant vibration or shock)	
Anti-vibration (IEC/EN 60068-2-6)	No significant vibration or shock	No significant vibration or shock	No significant vibration or shock	
Reference ambient temperature °C	30°C	30°C	30°C	
Operating ambient temperature (daily mean temperature ≤ +35°)°C	-20°C~+60°C	-35°C~+70°C	-35°C~+70°C	
Storage temperature °C	-40°C~+70°C	-40°C~+85°C	-40°C~+85°C	
<b>Installation Features</b>				
Terminal form	U type	U type	U type	
Wiring capacity (A)	Max 50mm <sup>2</sup>	25mm <sup>2</sup>	25mm <sup>2</sup>	
Ultimate torque	3.5N.m	2.5N.m	2.5N.m	
Tool	Cross head screwdriver or flat head screwdriver	Cross head screwdriver or flat head screwdriver	Cross head screwdriver or flat head screwdriver	
Installation	Installed on standard DIN guide rail (35mm)	Installed on standard DIN guide rail (35mm)	Installed on standard DIN guide rail (35mm)	
Line incoming mode	Top	Top & Bottom (only for 2P)	Top	

## FINAL DISTRIBUTION

# HDB3LT Longtail Residual Current Operated Circuit Breaker

Standard: IEC/EN 61009-1



### Function

**HDB3LT** Longtail Residual Current Operated Circuit Breaker has the following features:

- ◆ Overload protection
- ◆ Short-circuit protection
- ◆ Earth leakage current protection
- ◆ Isolating function
- ◆ Extend Neutral-wire and Ground-wire

### Online Content



HDB3LT

### Selection Guide

Product Name	Breaking Capacity	Number of Poles	Trip Type	Rated Current	Residual Current
<b>HDB3LT</b>	<b>H</b>	<b>1</b>	<b>C</b>	<b>32</b>	<b>R100</b>
<b>HDB3LT</b> : Electronic RCBO	<b>H</b> : 10kA <b>N</b> : 6kA	1P+N	C type	<b>6</b> : 6A <b>10</b> : 10A <b>16</b> : 16A <b>20</b> : 20A <b>25</b> : 25A <b>32</b> : 32A <b>40</b> : 40A <b>50</b> : 50A 50A(only for 10kA)	<b>R10</b> : 10mA <b>R30</b> : 30mA <b>R100</b> : 100mA <b>R300</b> : 300mA

### Functions and Features

#### Electrical Characteristics

Standard	IEC/EN 61009-1	
Certificates	CE, CB, SEMKO, ROHS	
Rated insulation voltage $U_i$	(V)	500
Rated operating voltage $U_e$	(V)	230~240VAC
Rated short-circuit capacity $I_{cn}$ (IEC/EN60898)	(kA)	6kA, 10kA
Rated impulse withstand voltage $U_{imp}$	(kV)	4
Dielectric test voltage	2500	
Isolating function	Available	
Pollution class	2	
Electric shock protection grade	II	
Type	AC	
Trip type	Thermal magnetic trip	
Thermal magnetic trip characteristics	Type B curve (3In~5In)	/
	Type C curve (5In~10In)	
	Type D curve (10In~14In)	/
Electrical and mechanical accessories	/	

#### Mechanical Characteristics

Handle	Red, pad printing indicating ON-OFF position	
Mechanical endurance	Times 20,000	
Electrical endurance	Times 10,000	
Protection grade	Installed directly IP20 ; Installed in distribution box IP40	
High temperature humidity resistant	Category 2, 28 cycles	
	Relative humidity <50% at 60°C	
	Relative humidity <90% at 20°C	
Rated ambient temperature	30°C	
Operating ambient temperature (daily mean temperature $\leq +35^\circ\text{C}$ )	-20°C~+60°C ; Storage temperature -40°C~+70°C	

#### Installation Features

Terminal form	U type	
Wiring capacity (A)	25mm <sup>2</sup>	
Ultimate torque	Input terminal	2.0N.m
	Output terminal	1.2N.m
Tool	Cross head screwdriver or flat head screwdriver	
Installation	Installed on standard DIN guide rail (35mm)	
Line incoming mode	Top	



## FINAL DISTRIBUTION

# 3 Series Switch Disconnectors

Standard: IEC/EN 60947-3



### Range Presentation

HDG3 is the Himel 3 series range of switch disconnector designed to switch on and off the power system.

The 3 series switch disconnector is mainly used in commercial and residential buildings.

### Features

- ◆ Full product portfolio from 20A to 125A
- ◆ Suitable for industrial application

### Online Content



HDG3

### Selection Code

Range name	Number of poles	Rated current
<b>HDG3</b>	<b>3</b>	<b>32</b>
<b>HDG3</b>	<b>1:</b> 1P <b>2:</b> 2P <b>3:</b> 3P <b>4:</b> 4P	<b>20:</b> 20A <b>63:</b> 63A <b>25:</b> 25A <b>80:</b> 80A <b>32:</b> 32A <b>100:</b> 100A <b>40:</b> 40A <b>125:</b> 125A <b>50:</b> 50A

Technical Parameters	
<b>Switch Disconnectors</b>	<b>HDG3</b>
<b>Electrical characteristics</b>	
Standard	IEC 60947-3
Certificate	CE, CB, ROHS
Rated insulation voltage $U_i$	500V
Frequency	50/60Hz
Rated operational voltage $U_e$	230 (1P) 400V (2P, 3P, 4P)
Rated short-time withstand current $I_{cw}$ (kA)	20le/1s
Rated short-circuit making capacity $I_{cm}$ (kA)☒	28, 1le
Rated impulse withstand voltage $U_{imp}$	4kV
Pollution class	2
Isolation function	Yes
<b>Mechanical characteristics</b>	
Mechanical endurance	8500(≤100A) 7000(125A)
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	-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
Installation	35mm DIN rail
Line incoming type	Top or bottom

## FINAL DISTRIBUTION

# 3 Series RCCB

Standard: IEC/EN 61008-1



### Range Presentation

HDB3VR is Himel 3 series range of Residual Current Circuit Breaker (RCCB) designed to protect people and power system from earth leakage. HDB3VR RCCB can be widely used in commercial and residential buildings.

### Features

- ◆ Full range from 10A to 100A
- ◆ 4 residual current sensitivity: 10mA, 30mA, 100mA, and 300mA
- ◆ Two types for application: AC type and A type
- ◆ HDB3VR: Safety mark (Singapore) TSE (Turkey)
- ◆ SNI (Indonesia)

### Online Content



HDB3VR

### Selection Code

Range name	Number of poles	Rated current	Residual current	Type
<b>HDB3VR</b>	<b>2</b>	<b>10</b>	<b>L</b>	<b>C</b>
<b>HDB3VR :</b> Electromagnetic Type RCCB	<b>2:</b> 2P <b>4:</b> 4P	<b>10:</b> 10A <b>16:</b> 16A <b>25:</b> 25A <b>40:</b> 40A <b>63:</b> 63A <b>80:</b> 80A <b>100:</b> 100A	<b>L:</b> 10mA <b>S:</b> 30mA <b>Y:</b> 100mA <b>T:</b> 300mA <b>F:</b> 500mA	<b>C:</b> ACType <b>A:</b> AType

Technical Parameters	
RCCB	HDB3VR
<b>Electrical characteristics</b>	
Standard	IEC 61008-1
Certificate	CE, TUV, ROHS
Rated insulation voltage $U_i$	500V
Frequency	50/60Hz
Rated operational voltage $U_e$	240 (2P) 415V (4P)
Rated short-circuit capacity $I_{cn}$	6kA
Rated impulse withstand voltage $U_{imp}$	4kV
Pollution class	2
Type	A, ACType
Isolation function	Yes
Rated residual operating current $I_{\Delta n}$	10, 30, 100, 300, 500 mA
<b>Mechanical characteristics</b>	
Endurance	Mechanical endurance: 8500( $\leq$ 100A) 7000(125A) 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	-20°C ~ +60°C
Storage temperature	-40°C ~ +70°C
<b>Installation Features</b>	
Maximum wiring capacity	25mm <sup>2</sup> ( $\leq$ 63A) 35mm <sup>2</sup> ( $>$ 63A)
Maximum torque	Rated current 6-32A: 2.5N.m Rated current 40-63A: 3N.m
Installation	35mm DIN rail
Line incoming type	Top or bottom

# 3 Series RCCB

Standard: IEC/EN 61008-1



## HIMEL ON, SAFETY ON

HDB3VR is Himel 3 series range of Residual current circuit breaker (RCCB) designed to protect people and power system from earth leakage.



### Features

- Standard IEC/EN 61008-1
- Operating Temperature -20°C to 60°C
- Suitable for A-Type & AC-Type applications
- ROHS Compliant

### Specifications

- Sensitivity range 10mA, 30mA, 100mA, 300mA
- Current range from 10A to 100A
- Available in 2P & 4P

## FINAL DISTRIBUTION

# 3 Series Accessories for MCB & RCBO

Standard: IEC/EN 60947

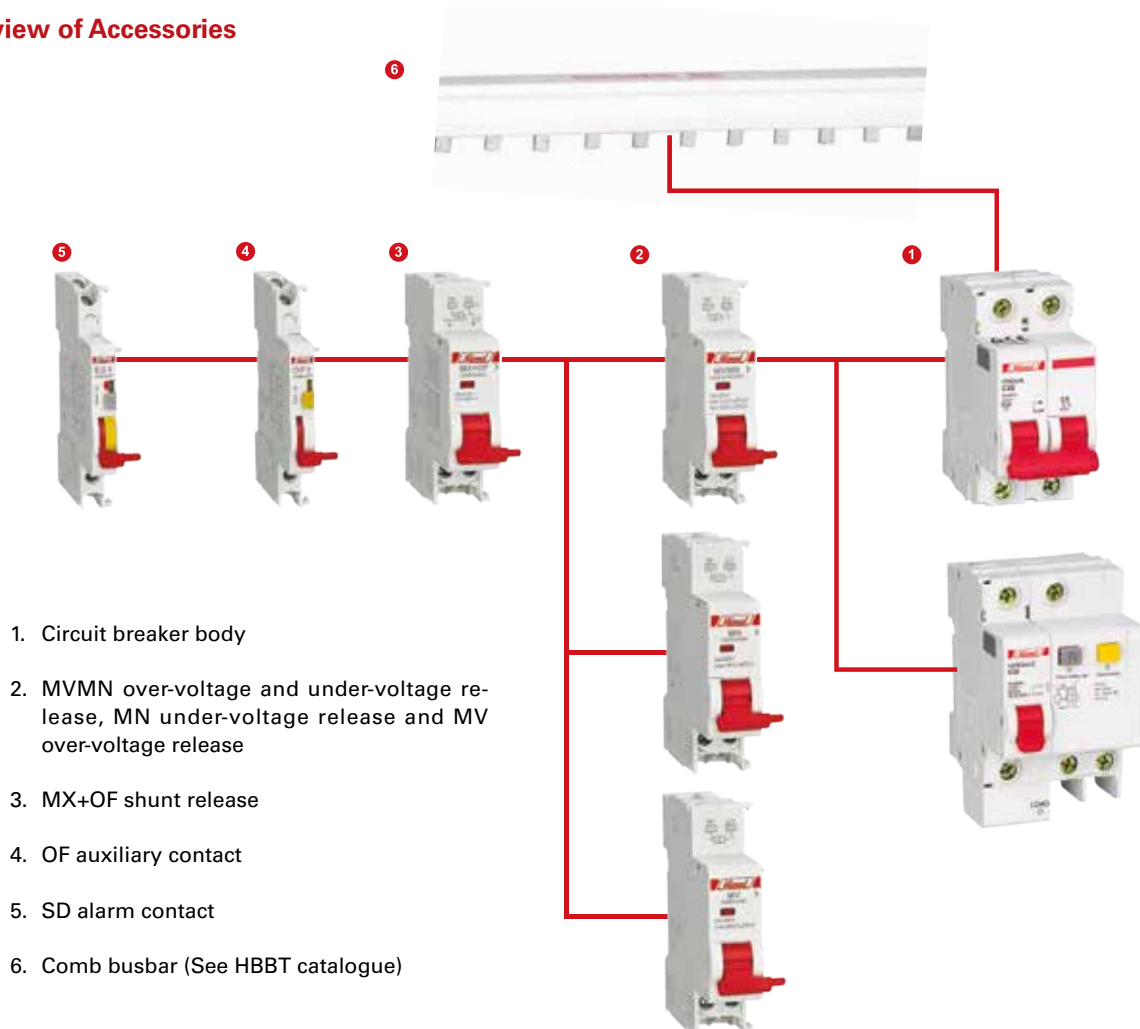


Compatible with HDB3w, HDB3wH, HDB3wP, HDB3wHP, HDB3LE, HDB3PLE

Technical Parameters						
MCB Accessories	OF	SD	MO	MV	MN	MVMN
Description	Auxiliary contact	Alarm contact	Shunt release MOWY model: Passive type	Over-voltage release	Under-voltage release	Over-voltage and under-voltage release
Reference	HDB3wOFN	HDB3wSDN	HDB3WMO24N HDB3WMO220N HDB3WMOWY24N HDB3WMOWY220N	HDB3wMVN	HDB3wMNN	HDB3wMVMNN
Rated voltage	AC 240/415V DC 130V,48V,24V	AC 240/415V DC 130V,48V,24V	MO24N: AC/DC 24~28V MO220N: AC 110~415V DC 110~130V	Ue:230V Uvo:280(1±5%)V	Ue:230V Uoe:161(1±5%)V	Ue: 230V MN: Uoe: 161(1±5%)V MV: Uvo: 280(1±5%)V
Wiring capacity	1~2.5mm <sup>2</sup>	1~2.5mm <sup>2</sup>	1~2.5mm <sup>2</sup>	1~2.5mm <sup>2</sup>	1~2.5mm <sup>2</sup>	1~2.5mm <sup>2</sup>
Width	9mm	9mm	18mm	18mm	18mm	18mm
Installation side of MCB	Left	Left	Left	Left	Left	Left
Max installation quantity	6	3	2	2	2	2

**Remark:** Maximum width of the accessory assembly is 54mm

## Overview of Accessories



## FINAL DISTRIBUTION

# 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. HDB9 is Himel's most advanced range of miniature circuit breakers.

9 series MCB can be widely used in commercial and residential buildings including 18mm AC MCB, phase neutral MCB, and DC MCB.

### Features

- ◆ Breaking capacity up to 10kA
- ◆ Energy limiting class 3
- ◆ Standard open and close state indication window
- ◆ High performance
- ◆ HDB9:
  - SNI (Indonesia), SIRIM (Malaysia),
  - TSE (Turkey), PS MARK (Philippines)

### Selection Code

Range name	Breaking capacity	Number of poles	Tripping type	Rated current
<b>HDB9</b>	<b>N63A</b>	<b>3</b>	<b>C</b>	<b>10</b>
<b>HDB9:</b> MCB	<b>N63A:</b> 6kA <b>H63A:</b> 10kA	<b>1:</b> 1P <b>2:</b> 2P <b>3:</b> 3P <b>4:</b> 4P <b>5:</b> 1P+N <b>6:</b> 3P+N	<b>B:</b> Type B <b>C:</b> Type C <b>D:</b> Type D	<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
<b>HDB9P:</b> Phase Neutral MCB	<b>A40:</b> 4.5kA <b>N40:</b> 6kA	<b>Default:</b> all are 1P+N in single pole	<b>C:</b> Type C	<b>6:</b> 6A <b>10:</b> 10A <b>16:</b> 16A <b>20:</b> 20A <b>32:</b> 32A <b>40:</b> 40A
<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



HDB9



HDB9P



HDB9Z

# 9 Series MCB

Standard: IEC/EN 61009-1



## Miniature Circuit Breaker 9 Series



### FEATURES

- Wide breaking capacity up to 10kA
- Smart design and easy installation
- Energy limiting class 3
- Complete range of accessories

### APPLICATION

- Residential and office
- Hospital and school
- Manufacturing and industry
- As component of electrical appliances

[www.himel.com](http://www.himel.com)

## 9 Series MCB

Standard: IEC/EN 60898-1



Technical Parameters			
MCB	HDB9	HDB9P	HDB9Z
Description	18mm Miniature Circuit Breaker	18mm Phase neutral MCB	18mm DC Miniature Circuit Breaker
Indication: red and green tripping indication window	Yes	Yes	Yes
<b>Electrical characteristics</b>			
Standard	IEC 60898-1	IEC 60898-1	IEC60947-2
Certificate	CE, KEMA, CB, ROHS	CE, CB, TUV, ROHS	CE, CB, SEMKO, ROHS
Rated insulation voltage $U_i$	500V	500V	1000V
Frequency	50/60Hz	50/60Hz	/
Rated operational voltage $U_e$	230 (1P, 1P+N) 400V(2P, 3P, 3P+N, 4P)	240V	DC 125V, 250V (1P) DC 250V, 500V (2P) DC 1000V (4P)
Rated short-circuit capacity $I_{cn}$	6kA 10kA	6kA	10KA (125V/1P,250V/2P) 6kA (250V/1P, 500V/2P, 1000V/4P)
Rated impulse withstand voltage $U_{imp}$	4kV	4kV	6kV
Pollution class	2	2	2
Isolation function	Yes	Yes	Yes
Tripping characteristics	B, C, DType	CType	B, C, DType
Energy limiting class 3	B, CType	No	No
<b>Mechanical characteristics</b>			
Mechanical endurance	20000	20000	20000
Electrical endurance	10000	10000	3000
Protection class	IP40 (Installed in DB box) IP20 (Installed directly)	IP40 (Installed in DB box) IP20 (Installed directly)	IP40 (Installed in DB box) IP20 (Installed directly)
Mechanical shock resistance	30g, 3 shocks, lasting 11ms	30g, 3 shocks, lasting 11ms	30g, 3 shocks, lasting 11ms
Rated ambient temperature	30° C	30° C	30° C
Operating ambient temperature	- 30° C~ + 70° C	- 30° C~ + 70° C	- 30° C~ + 70° C
Storage temperature	- 40° C~ + 70° C	- 40° C~ + 70° C	- 40° C~ + 70° C
<b>Installation Features</b>			
Maximum wiring capacity	25mm <sup>2</sup>	16mm <sup>2</sup>	25mm <sup>2</sup>
Maximum torque	2.5N.m	1.5N.m	2.5N.m
Tool	Cross head screwdriver or flat head screwdriver	Cross head screwdriver or flat head screwdriver	Cross head screwdriver or flat head screwdriver
Installation	35mm DIN rail	35mm DIN rail	35mm DIN rail
Line incoming type	Top or bottom	Top or bottom	Top or bottom

## FINAL DISTRIBUTION

# 9 Series RCBO

Standard: IEC/EN 61009-1



### Range Presentation

HDB9LE series is Himel 9 series range of Residual Current Operated Circuit Breakers, designed to protect people and power system from short circuit, overload faults, earth leakage.

9 series RCBO can be widely used in commercial and residential building. It includes electronic type and electromagnetic type (HDB9LM).

### Features

- ◆ Multi-selection: Electronic or electromagnetic type.
- ◆ High performance: up to 6kA breaking capacity
- ◆ Standard open and close state indication

### Selection Code

Range name	Breaking capacity	Number of poles	Tripping type	Rated current	Residual current
<b>HDB9LE</b>	<b>N63A</b>	<b>2</b>	<b>C</b>	<b>6</b>	<b>R50</b>
<b>HDB9LE:</b> Electronic RCBO	<b>N32A:</b> 6kA for rating up to 32A <b>N63A:</b> 6kA for rating above 32A	<b>1:</b> 1P+N <b>2:</b> 2P <b>3:</b> 3P <b>4:</b> 4P <b>6:</b> 3P+N	<b>C:</b> Type C	<b>6:</b> 6A <b>10:</b> 10A <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	<b>S:</b> 30mA <b>Y:</b> 100mA <b>T:</b> 300mA
<b>HDB9LM:</b> Electromagnetic RCBO	<b>63:</b> 6kA	<b>5:</b> 1P+N <b>6:</b> 3P+N	<b>C:</b> Type C	<b>6:</b> 6A <b>10:</b> 10A <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	<b>S:</b> 30mA <b>T:</b> 300mA
<b>HDB9PLE:</b> Phase Neutral RCBO	<b>N:</b> 6kA	<b>Default:</b> 1P+N	<b>C:</b> Type C	<b>6:</b> 6A <b>10:</b> 10A <b>16:</b> 16A <b>20:</b> 20A <b>32:</b> 32A <b>40:</b> 40A	<b>L:</b> 10mA <b>S:</b> 30mA

### Online Content



HDB9LE



HDB9LM



HDB9PLE



# 9 Series RCBO

Standard: IEC/EN 61009-1



Technical Parameters			
RCBO	HDB9LE	HDB9LM	HDB9PLE
Description	Electronic RCBO	Electromagnetic RCBO	Electronic phase neutral RCBO
Indication: red and green tripping indication window	Yes	Yes	Yes
<b>Electrical characteristics</b>			
Standard	IEC 61009-1	IEC 61009-1	IEC 61009-1
Certificate	CE, ROHS (2P, 3P, 4P)	CE, CB, TUV, RoHS	CE, CB, TUV, RoHS
Rated insulation voltage $U_i$	500V	500V	500V
Frequency	50/60Hz	50/60Hz	50/60Hz
Rated operational voltage $U_e$	230 (1P+N, 2P) 400V (3P, 4P, 3P+N)	230 (1P+N) 400V (3P+N)	240V
Rated short-circuit capacity $I_{cn}$	6kA	6kA	6kA
Rated impulse withstand voltage $U_{imp}$	4kV	4kV	4kV
Pollution class	2	2	2
Tripping type	Thermal magnetic tripping	Thermal magnetic tripping	Thermal magnetic tripping
Isolation function	Yes	Yes	Yes
Rated residual operating current $I_{\Delta n}$	30, 50, 75, 100, 300mA	30, 300mA	30mA
Tripping characteristics	C, DType	CType	C, DType
<b>Mechanical characteristics</b>			
Mechanical endurance	20000	20000	20000
Electrical endurance	10000	10000	4000
Protection class	IP40 (Installed in DB box) IP20 (Installed directly)	IP40 (Installed in DB box) IP20 (Installed directly)	IP40 (Installed in DB box) IP20 (Installed directly)
Mechanical shock resistance	30g, 3 shocks, lasting 11ms	30g, 3 shocks, lasting 11ms	30g, 3 shocks, lasting 11ms
Rated ambient temperature	30°C	30°C	30°C
Operating ambient temperature	-30°C ~ +70°C	-30°C ~ +70°C	-30°C ~ +70°C
Storage temperature	-40°C ~ +70°C	-40°C ~ +70°C	-40°C ~ +70°C
<b>Installation features</b>			
Maximum wiring capacity	Rated current 6-32A: 16mm <sup>2</sup> Rated current 40-63A: 25mm <sup>2</sup>	25mm <sup>2</sup> (< 40A) 35mm <sup>2</sup> (≥ 40A)	16mm <sup>2</sup>
Maximum torque	Rated current 6-32A: 2N.m Rated current 40-63A: 2.5N.m	3N.m (< 40A) 3.5N.m (≥ 40A)	1.5N.m
Tool	Cross head screwdriver or flat head screwdriver	Cross head screwdriver or flat head screwdriver	Cross head screwdriver or flat head screwdriver
Installation	35mm DIN rail	35mm DIN rail	35mm DIN rail
Line incoming type	Top	Top	Top

## FINAL DISTRIBUTION

# 9 Series Switch Disconnectors

Standard: IEC 60947-3



### Range Presentation

HDG9 is Himel 9 series range of Switch disconnectors designed to switch on and off the power system.

9 series switch disconnector is mainly used in commercial and residential buildings.

### Features

- ◆ Rated current up to 125A
- ◆ High performance

### Online Content



HDG9

### Selection Code

Range name	Frame	Number of poles	Rated current
<b>HDG9</b>	<b>125</b>	<b>3</b>	<b>32</b>
HDG9	125	1: 1P 2: 2P 3: 3P 4: 4P	32: 32A 63: 63A 100: 100A 125: 125A

### Technical Parameters

Switch Disconnectors	HDG9
<b>Electrical characteristics</b>	
Standard	IEC 60947-3
Certificate	CE, CB, TUV, ROHS
Rated insulation voltage $U_i$	500V
Frequency	50/60Hz
Rated operational voltage $U_e$	230V (1P) 400V (2P, 3P, 4P)
Rated short-time withstand current $I_{cw}$	20le/1s
Rated short-circuit making capacity $I_{cm}$	28,1le
Rated impulse withstand voltage $U_{imp}$	4kV
Pollution class	2
Isolation function	Yes
<b>Mechanical characteristics</b>	
Mechanical endurance	50000
Electrical endurance	30000 (32A) 20000 (63A) 10000 (100A) 2500 (125A)
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	50mm <sup>2</sup>
Maximum torque	3.5N.m
Installation	35mm DIN rail
Line incoming type	Top or bottom

## FINAL DISTRIBUTION

# 9 Series Accessories

Standard: IEC/EN 60947



Compatible with HDB9, HDB9P, HDB9LE, HDB9PLE

### Technical Parameters

MCB Accessories	OF	SD	MX	MV	MN	MVMN
Description	Auxiliary contact	Alarm contact	Shunt release MOWY model: passive type	Over-voltage release	Under-voltage release	Over-voltage and under-voltage release
Reference	HDB963OFN	HDB963SDN	HDB963MX24N HDB963MX48N HDB963MX415N HDB363MOWY24N HDB963MOWY48N HDB963MOWY415N	HDB9MVN	HDB9MNN	HDB9MVMNN
Rated voltage	AC 240/415V DC 130V, 48V, 24V	AC 240/415V DC 130V, 48V, 24V	AC 100-415V DC 110V-130V AC/DC 12/24/48V	Ue: 230V Uvo: 280(1±5%)V	Ue: 230V Uoe: 161(1±5%)V	Ue: 230V MN: Uoe:161(1±5%)V MV: Uvo:280(1±5%)V
Wiring capacity	1-2.5mm <sup>2</sup>	1-2.5mm <sup>2</sup>	1-2.5mm <sup>2</sup>	1-2.5mm <sup>2</sup>	1-2.5mm <sup>2</sup>	1-2.5mm <sup>2</sup>
Width	9mm	9mm	18mm	18mm	18mm	18mm
Installation side of MCB	Left	Left	Left	Left	Left	Left
Max installation quantity (From left to right)	3	3	2	2	2	2

**Remark:** The total width of the accessory assembly is within 54mm

## Overview of Accessories

Sketch map of installation with breaker





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