

ATO

DC Contactors Product Catalog



High Voltage DC Contactor

Model	ATO-ADH30	ATO-ADH50	ATO-ADH100	ATO-ADH150
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Product Picture



Dimension	51 x 36 x 40 mm	55 x 42 x 62 mm	55 x 42 x 62 mm	80 x 65 x 67 mm
Weight	130 g	230 g	230 g	440 g

Main Contact Parameters

Contact Form	1 NO		1 NO		1 NO		1 NO	
Leading-Out	M5 internal thread/18 mm		M5 internal thread/18 mm		M5 internal thread/18 mm		M6 Internal thread/27mm	
Rated Load Current	30 A		50 A		100 A		150 A	
Contact Resistance	≤30mΩ		0.5mΩ		0.4mΩ		0.3mΩ	
Rated Load Voltage	12 - 900V DC		12 - 900V DC		12 - 900V DC		12 - 900V DC	
Maximum Switching Current	300A 320V DC (≥1 times)		500A 320V DC (≥1 times)		1000A 320V DC (≥1 times)		1500A 320V DC (≥1 times)	
Maximum Switching Power	160 kW		160 kW		320 kW		480 kW	
Min Load	1A 12VDC		1A 12VDC		1A 12VDC		1A 12VDC	
Rated Electric Life	10,000 times		10,000 times		10,000 times		10,000 times	

Coil Parameters

Standard Type Voltage	12V DC	24V DC	12V DC	24V DC	12V DC	24V DC	12/24V DC	
Work Voltage	9~16V	18~32 V	9~16V	18~32 V	9~16V	18~32 V	8~36V	
Max Voltage	16 V	32 V	16 V	32 V	16 V	32 V	36 V	
Coil Resistance	40 Ω	152 Ω	40 Ω	152 Ω	40 Ω	152 Ω	3.1Ω	
Average Holding Current	0.46 A	0.25 A	0.46 A	0.25 A	0.46 A	0.25 A	0.14 A@12V	
Steady State Power	5.5 W	6 W	5.5 W	6 W	5.5 W	6 W	1.7~2 W	
Actuation Time								≤25 ms
Release Time								≤10 ms
Bounce Time								≤5 ms

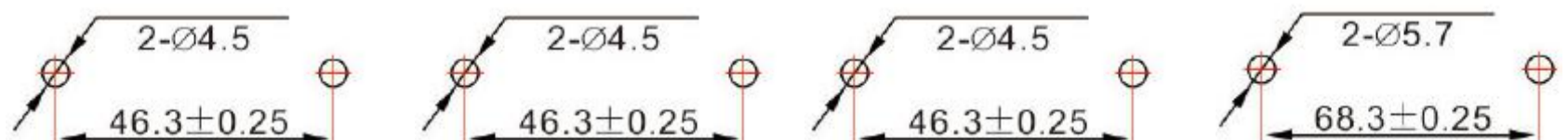
Mechanical Specification

Stability	196m/s ² (20G)						
Strength	490 m/s ² (50G)						
Vibration	80 ~2000Hz 98m/s ² (20G)						
IP Grade	IP67						

Environment

Operating Temperature	-40°C~85°C						
Operating Humidity	5~95% RH						

Mounting Hole Dimension



High Voltage DC Contactor

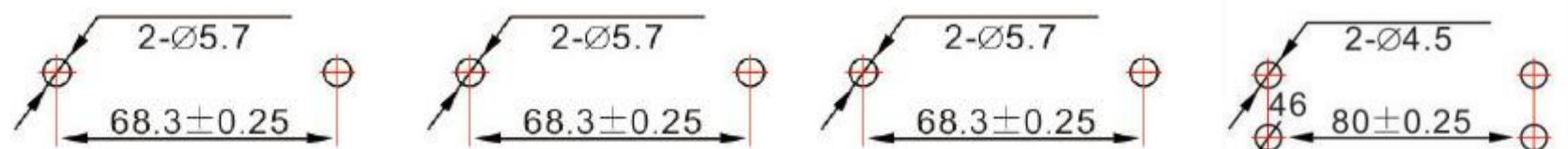
Model	ATO-ADH200	ATO-ADH250	ATO-ADH300	ATO-ADH100-2K
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Product Picture







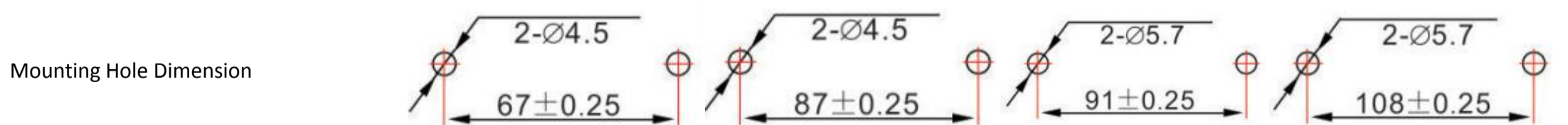
Dimension	80 x 65 x 74 mm	80 x 65 x 74 mm	80 x 65 x 74 mm	92 x 59 x 80 mm
Weight	480 g	480 g	480 g	530 g
Main Contact Parameters				
Contact Form	1 NO	1 NO	1 NO	2 NO
Leading-Out	M8 internal thread/27 mm	M10 internal thread/27 mm	M10 internal thread/27 mm	M6 Internal thread/18mm
Rated Load Current	200 A	250 A	300 A	100 A
Contact Resistance	0.2m Ω	0.2m Ω	0.2m Ω	0.4m Ω
Rated Load Voltage	12 - 900V DC	12 - 900V DC	12 - 900V DC	12 - 900V DC
Maximum Switching Current	2000A 320V DC (≥1 times)	2000A 320V DC (≥1 times)	2000A 320V DC (≥1 times)	1000A 320V DC (≥1 times)
Maximum Switching Power	640 kW	640 kW	640 kW	320 kW
Min Load	1A 12VDC	1A 12VDC	1A 12VDC	1A 12VDC
Rated Electric Life	10,000 times	10,000 times	6000 times	6000 times
Coil Parameters				
Standard Type Voltage	12/24V DC	12/24V DC	12/24V DC	12V DC 24V DC
Work Voltage	8~36V	8~36V	8~36V	9~16V 18~32 V
Max Voltage	36 V	36 V	36 V	16 V 32 V
Coil Resistance	3.1 Ω	3.1 Ω	3.1 Ω	13 Ω 48 Ω
Average Holding Current	0.14 A@12V	0.14 A@12V	0.14 A@12V	0.9 A 0.5 A
Steady State Power	1.7~2 W	1.7~2 W	1.7~2 W	11 W 12 W
Actuation Time	≤30 ms			
Release Time	≤10 ms			
Bounce Time	≤5 ms			
Mechanical Specification				
Stability	196m/s ² (20G)			
Strength	490 m/s ² (50G)			
Vibration	80 ~2000Hz 98m/s ² (20G)			
IP Grade	IP67			
Environment				
Operating Temperature	-40°C~85°C			
Operating Humidity	5~95% RH			

Mounting Hole Dimension







DC Reversing Contactor

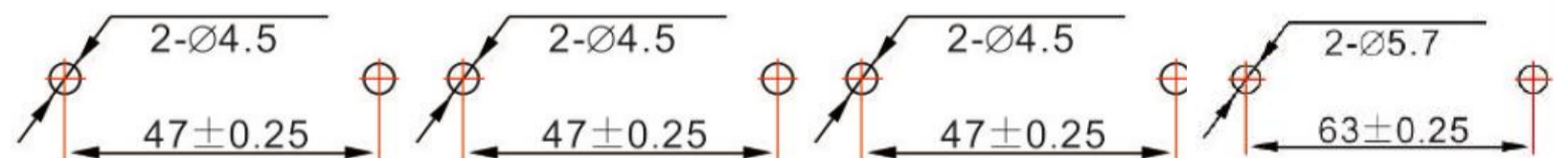
Model	ATO-ADC50	ATO-ADC100	ATO-ADC125	ATO-ADC200
Product Picture				
Dimension	81x52x76 mm	105x63x101 mm	105x53x94 mm	127x73x120 mm
Weight	410 g	1.0 kg	1.1 kg	1.8 kg
Technical Parameters				
Contact Form	2 NO and 2 NC	2 NO and 2 NC	2 NO and 2 NC	2 NO and 2 NC
Load Terminal and Center Distance	M6 Male Terminal/29.35mm	M8 Male Terminal/34.5mm	M8 Male Terminal/34.5mm	M8 Male Terminal/91mm
Coil Rated Voltage	12V/24V/48V	12V/24V/48V	12V/24V/48V	12V/24V/48V
Contact Circuit Rated Load Current	50 A	100 A	125 A	200 A
Rated Load Voltage	12V~60V DC	12V~60V DC	12V~60V DC	12V~60V DC
Starting Current	≤4 A	≤4 A	≤4 A	≤4 A
Overload Current	≤8 Ie	≤8 Ie	≤7 Ie	≤7 Ie
Coil Power	≤8 W	≤8 W	≤12 W	≤11 W
Main Contact Voltage Drop at 100A Load	≤80 mV	≤80 mV	≤100 mV	≤100 mV
The Allowed Range of Coil Voltage Pull-	±20%	±20%	±20%	±20%
In Time (N/O Contacts to Open) Drop-	≤20 ms	≤20 ms	≤30 ms	≤30 ms
Out Time (N/O Contact to Close)	≤10 ms	≤10 ms	≤20 ms	≤20 ms
Insulation Resistance	≥50 MΩ	≥50 MΩ	≥50 MΩ	≥50 MΩ
Dielectric Withstanding Voltage	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min
Operation Duty	Continuous 50A Intermittent 200A	Continuous 100A Intermittent 400A	Continuous 125A Intermittent 500A	Continuous 200A Intermittent 800A
Electric Life	Continuous 30000 times	Continuous 30000 times	Continuous 20000 times	Continuous 20000 times
Mechanical Life	300 thousand times	300 thousand times	300 thousand times	300 thousand times
Use of The Environment				
Vibration	80 ~2000Hz 98m/s ² (20G)	80 ~2000Hz 98m/s ² (20G)	2.5G, 5~50 Hz	2.5G, 5~50 Hz
Environmental Protection	IP 67	IP 67	IP 50	IP 50
Operating Temperature	-40°C~85°C	-40°C~85°C	-25°C~55°C	-25°C~55°C
Operating Humidity	5~95% RH	5~95% RH	5~95% RH	5~95% RH



DC Contactor

Model	ATO-AZJ50	ATO-AZJ100	ATO-AZJ200	ATO-AZJ400
Product Picture				
Dimension	56x38x57 mm	70x44x68 mm	85x57x85 mm	104x66x102 mm
Weight	180 g	260 g	450 g	860 g
Technical Parameters				
Contact Form	1NO	1 NO	1 NO	1NO
Load Terminal and Center Distance	M5 Male Terminal/43mm	M6 Male Terminal/55mm	M8 Male Terminal/65.5mm	M10 Male Terminal/80mm
Coil Rated Voltage	12V/24V/48V	12V/24V/48V	12V/24V/48V	12V/24V/48V
Contact Circuit Rated Load Current	50 A	100A	200 A	400 A
Rated Load Voltage	12V~72V DC	12V~72V DC	12V~72V DC	12V~72V DC
Overload Current	$\leq 7 I_e, \leq 1s$	$\leq 7 I_e, \leq 1s$	$\leq 7 I_e, \leq 1s$	$\leq 7 I_e, \leq 1s$
Coil Power	$\leq 5.5 W$	$\leq 6.5 W$	$\leq 9.5 W$	$\leq 8.0 W$
Main Contact Voltage Drop at 100A Load	$\leq 100 mV$	$\leq 100 mV$	$\leq 100 mV$	$\leq 100 mV$
The Allowed Range of Coil Voltage Pull-	$\pm 20\%$	$\pm 20\%$	$\pm 20\%$	$\pm 20\%$
In Time (N/O Contacts to Open) Drop-	$\leq 30 ms$	$\leq 30 ms$	$\leq 30 ms$	$\leq 30 ms$
Out Time (N/O Contact to Close) Contact	$\leq 20 ms$	$\leq 20 ms$	$\leq 20 ms$	$\leq 20 ms$
Opening Max Bounce Period Insulation	$\leq 5 ms$	$\leq 5 ms$	$\leq 5 ms$	$\leq 5 ms$
Resistance	$\geq 50 M \Omega$	$\geq 50 M \Omega$	$\geq 50 M \Omega$	$\geq 50 M \Omega$
Dielectric Withstanding Voltage	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min
Operation Duty	Continuous	Continuous	Continuous	Continuous
Electric Life	Continuous 20000 times	Continuous 20000 times	Continuous 20000 times	Continuous 20000 times
Mechanical Life	300 thousand times	300 thousand times	300 thousand times	300 thousand times
Use of The Environment				
Vibration	2.5G, 5~50 Hz	2.5G, 5~50 Hz	2.5G, 5~50 Hz	2.5G, 5~50 Hz
Environmental Protection	IP 50	IP 50	IP 50	IP 50
Operating Temperature	-25°C~55°C	-25°C~55°C	-25°C~55°C	-25°C~55°C
Operating Humidity	5~95% RH	5~95% RH	5~95% RH	5~95% RH




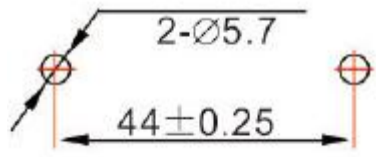
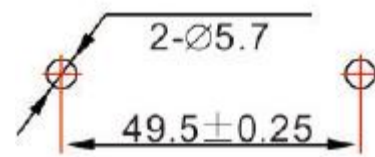
Mounting Hole Dimension



DC Contactor

Model	ATO-AZJ600	ATO-ANR80	ATO-ANR200/500	ATO-ASW400-2Z
Product Picture				
Dimension	130x82x110 mm	75x55x82 mm	85x68x93 mm	51x114x160 mm
Weight	1.5 kg	210 g	800 g	3.2 kg
Technical Parameters				
Contact Form	1NO	1NO	1 NO	2 NO and 2 NC
Load Terminal and Center Distance	M12 Male Terminal/105mm	M8 Male Terminal/22.5mm	M8 Male Terminal/29.5mm	M10 Male Terminal/57mm
Coil Rated Voltage	12V/24V/48V	12V/24V/48V	12V/24V/48V	12V/24V/48V
Contact Circuit Rated Load Current	600 A	80 A	200A/500A	400 A
Rated Load Voltage	12V~72V DC	12V~72V DC	12V~72V DC	12V~60V DC
Overload Current	$\leq 7 I_e, \leq 1s$	$\leq 7 I_e, \leq 1s$	$\leq 7 I_e, \leq 1s$	$\leq 7 I_e, \leq 1s$
Coil Power	$\leq 12.0W$	4W-10W	$\leq 7.2W$	$\leq 24 W$
Main Contact Voltage Drop at 100A Load	$\leq 100 mV$	$\leq 100 mV$	$\leq 100 mV$	$\leq 100 mV$
The Allowed Range of Coil Voltage Pull-	$\pm 20\%$	$\pm 20\%$	$\pm 20\%$	$\pm 20\%$
In Time (N/O Contacts to Open) Drop-	$\leq 30 ms$	$\leq 30 ms$	$\leq 30 ms$	$\leq 30 ms$
Out Time (N/O Contact to Close) Contact	$\leq 20 ms$	$\leq 20 ms$	$\leq 20 ms$	$\leq 20 ms$
Opening Max Bounce Period Insulation	$\leq 5 ms$	$\leq 5 ms$	$\leq 5 ms$	$\leq 5 ms$
Resistance	$\geq 50 M \Omega$	$\geq 50 M \Omega$	$\geq 50 M \Omega$	$\geq 50 M \Omega$
Dielectric Withstanding Voltage	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min
Operation Duty	Continuous	Continuous	Continuous	Continuous
Electric Life	Continuous 20000 times	Continuous 20000 times	Continuous 20000 times	Continuous 30000 times
Mechanical Life	300 thousand times	300 thousand times	300 thousand times	300 thousand times
Use of The Environment				
Vibration	2.5G, 5~50 Hz	2.5G, 5~50 Hz	2.5G, 5~50 Hz	2.5G, 5~50 Hz
Environmental Protection	IP 50	IP 50	IP 50	IP 50
Operating Temperature	-25°C~55°C	-25°C~55°C	-25°C~55°C	-25°C~55°C
Operating Humidity	5~95% RH	5~95% RH	5~95% RH	5~95% RH
Mounting Hole Dimension				

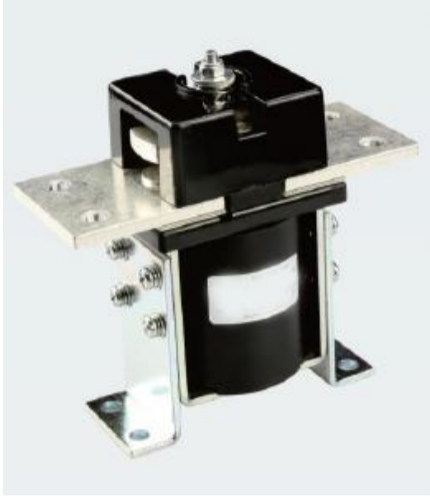

DC Magnetic Contactor

Model	ATO-ADL50	ATO-ADL100	ATO-ADL200	ATO-ADL400
Product Picture				
Dimension	43x43x69 mm	52x45x82 mm	60x50x89 mm	72.5x65.5x123 mm
Weight	200 g	400 g	600 g	1.1 kg
Technical Parameters				
Contact Form	1NO or 1NC or 1C/O	1NO or 1NC or 1C/O	1NO or 1NC or 1C/O	1NO or 1NC or 1C/O
Load Terminal and Center Distance	M6 Male Terminal/21mm	M8 Male Terminal/27mm	M8 Male Terminal/30mm	M10 Male Terminal/35.5mm
Coil Rated Voltage	12V/24V/48V	12V/24V/48V	12V/24V/48V	12V/24V/48V
Contact Circuit Rated Load Current	50 A	100 A	200 A	200 A
Rated Load Voltage	12V~72V DC	12V~72V DC	12V~72V DC	12V~72V DC
Overload Current	≤10 I _e , ≤1s	≤10 I _e , ≤1s	≤10 I _e , ≤1s	≤10 I _e , ≤1s
Coil Power	≤7.0W	≤8.0 W	≤10.0 W	≤12 W
Main Contact Voltage Drop at 100A Load	≤80 mV	≤80 mV	≤80 mV	≤100 mV
The Allowed Range of Coil Voltage Pull-In Time (N/O Contacts to Open) Drop-	±20%	±20%	±20%	±20%
Out Time (N/O Contact to Close) Contact	≤25 ms	≤25 ms	≤25 ms	≤25 ms
Opening Max Bounce Period Insulation	≤10 ms	≤10 ms	≤10 ms	≤10 ms
Resistance	≤5 ms	≤5 ms	≤5 ms	≤5 ms
Dielectric Withstanding Voltage	≥50 MΩ	≥50 MΩ	≥50 MΩ	≥50 MΩ
Operation Duty	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min
Electric Life	Continuous or Intermittent	Continuous or Intermittent	Continuous or Intermittent	Continuous or Intermittent
Mechanical Life	Continuous 50000 times	Continuous 50000 times	Continuous 50000 times	Continuous 50000 times
	300 thousand times	300 thousand times	300 thousand times	300 thousand times
Use of The Environment				
Vibration	20G, 5~50 Hz	20G, 5~50 Hz	20G, 5~50 Hz	20G, 5~50 Hz
Environmental Protection	IP 67	IP 67	IP 67	IP 67
Operating Temperature	-40°C~85°C	-40°C~85°C	-40°C~85°C	-40°C~85°C
Operating Humidity	5~95% RH	5~95% RH	5~95% RH	5~95% RH
Mounting Hole Dimension				

DC Magnetic Contactor

Model	ATO-ASW50	ATO-ASW100	ATO-ASW200	ATO-ASW400
Product Picture				
Dimension	69x34x88 mm	59x40x93 mm	86x46x122 mm	102x85x160 mm
Weight	240 g	420 g	700 g	1350 g
Technical Parameters				
Contact Form	1NO or 1NC	1NO or 1NC	1NO or 1NC	1NO or 1NC or 1C/O
Load Terminal and Center Distance	M6 Male Terminal/21mm	M8 Male Terminal/29mm	M8 Male Terminal/35mm	M10 Male Terminal/39.5mm
Coil Rated Voltage	12V/24V/48V	12V/24V/48V	12V/24V/48V	12V/24V/48V
Contact Circuit Rated Load Current	50 A	100 A	200 A	400 A
Rated Load Voltage	12V~72V DC	12V~72V DC	12V~72V DC	12V~72V DC
Overload Current	$\leq 7 I_e, \leq 1s$	$\leq 7 I_e, \leq 1s$	$\leq 7 I_e, \leq 1s$	$\leq 7 I_e, \leq 1s$
Coil Power	$\leq 7.0W$	$\leq 8.5W$	$\leq 12 W$	$\leq 15 W$
Main Contact Voltage Drop at 100A Load	$\leq 100 mV$	$\leq 100 mV$	$\leq 100 mV$	$\leq 100 mV$
The Allowed Range of Coil Voltage Pull-	$\pm 20\%$	$\pm 20\%$	$\pm 20\%$	$\pm 20\%$
In Time (N/O Contacts to Open) Drop-	$\leq 30 ms$	$\leq 30 ms$	$\leq 30 ms$	$\leq 30 ms$
Out Time (N/O Contact to Close) Contact	$\leq 20 ms$	$\leq 20 ms$	$\leq 20 ms$	$\leq 20 ms$
Opening Max Bounce Period Insulation	$\leq 5 ms$	$\leq 5 ms$	$\leq 5 ms$	$\leq 5 ms$
Resistance	$\geq 50 M \Omega$	$\geq 50 M \Omega$	$\geq 50 M \Omega$	$\geq 50 M \Omega$
Dielectric Withstanding Voltage	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min
Operation Duty	Continuous or Intermittent	Continuous or Intermittent	Continuous or Intermittent	Continuous or Intermittent
Electric Life	20000 times	20000 times	20000 times	20000 times
Mechanical Life	300 thousand times	300 thousand times	300 thousand times	300 thousand times
Use of The Environment				
Vibration	2.5G, 5~50 Hz	2.5G, 5~50 Hz	2.5G, 5~50 Hz	2.5G, 5~50 Hz
Environmental Protection	IP 50	IP 50	IP 50	IP 50
Operating Temperature	-25°C~55°C	-25°C~55°C	-25°C~55°C	-25°C~55°C
Operating Humidity	5~95% RH	5~95% RH	5~95% RH	5~95% RH
Mounting Hole Dimension				

DC Magnetic Contactor

Model	ATO-ASW500	ATO-ASW800	ATO-ASW100-2K	ATO-ASW200-1Z
Product Picture				
Dimension	128x56x130 mm	129x64x143 mm	59x39x94 mm	86x64x122 mm
Weight	1.5 kg	1.9 kg	500 g	900 g
Technical Parameters				
Contact Form	1NO	1NO	2NO	1NO and 1NC
Load Terminal and Center Distance	/	/	M8 Male Terminal/34mm	M8 Male Terminal/35mm
Coil Rated Voltage	12V/24V/48V	12V/24V/48V	12V/24V/48V	12V/24V/48V
Contact Circuit Rated Load Current	500 A	800 A	100 A	200 A
Rated Load Voltage	12V~72V DC	12V~72V DC	12V~72V DC	12V~72V DC
Overload Current	$\leq 7 I_e, \leq 1s$	$\leq 7 I_e, \leq 1s$	$\leq 7 I_e, \leq 1s$	$\leq 7 I_e, \leq 1s$
Coil Power	$\leq 15W$	$\leq 15W$	$\leq 24 W$	$\leq 24 W$
Main Contact Voltage Drop at 100A Load	$\leq 100 mV$	$\leq 100 mV$	$\leq 100 mV$	$\leq 100 mV$
The Allowed Range of Coil Voltage Pull-	$\pm 20\%$	$\pm 20\%$	$\pm 20\%$	$\pm 20\%$
In Time (N/O Contacts to Open) Drop-	$\leq 30 ms$	$\leq 30 ms$	$\leq 30 ms$	$\leq 30 ms$
Out Time (N/O Contact to Close) Contact	$\leq 20 ms$	$\leq 20 ms$	$\leq 20 ms$	$\leq 20 ms$
Opening Max Bounce Period Insulation	$\leq 5 ms$	$\leq 5 ms$	$\leq 5 ms$	$\leq 5 ms$
Resistance	$\geq 50 M\Omega$	$\geq 50 M\Omega$	$\geq 50 M\Omega$	$\geq 50 M\Omega$
Dielectric Withstanding Voltage	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min	50Hz/60Hz 1500VAC/Min
Operation Duty	Continuous	Continuous	Continuous	Continuous
Electric Life	20000 times	20000 times	20000 times	20000 times
Mechanical Life	300 thousand times	300 thousand times	300 thousand times	300 thousand times
Use of The Environment				
Vibration	2.5G, 5~50 Hz	2.5G, 5~50 Hz	2.5G, 5~50 Hz	2.5G, 5~50 Hz
Environmental Protection	IP 50	IP 50	IP 50	IP 50
Operating Temperature	-25°C~55°C	-25°C~55°C	-25°C~55°C	-25°C~55°C
Operating Humidity	5~95% RH	5~95% RH	5~95% RH	5~95% RH
Mounting Hole Dimension	