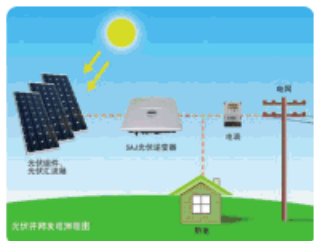


Application



photovoltaic



Cloud server power area



engineering machinery



wind power generation



passenger vehicles



cargo van



low speed car



bus



pick-up



charging pile

GDCR7 DC Contactor



P/N GDCR7-30



Characteristic

- Strong control load capacity: rated operational voltage12VDC~1000VDC, rated operational current 30A
- Safe: Fully sealed with epoxy resin, contact and coil will not be oxidized, product performance is not affected by external environment, no arc outbursts, can be worked in explosive and harmful environment
- Reliable: Adopt DC high voltage non - polarity design, the breaking capacity is higher and more reliable, convenient and reliable installation/wiring
- ROHS: All components meet the latest EU RoHS environmental requirements

Contact parameter

Main contact	Rated operational current Ie	30A
	Rated operational voltage Ue	12~1000 VDC
	Min. load	1A12VDC
	Main contact type	1SH (SPST NO DM)
	Nominal resistance of main circuit	2mΩ (@30A)
	Main contact mounting	M4 internal thread
	Connecting torque	2~3 N·m
	Max. switching current (more than one cycle)	300A320VDC

Electrical characteristics

Dielectric withstand voltage	DC3110V, AC2200V
Insulation resistance	≥1000MΩ@1000VDC
Nominal insulation voltage Ui	1000V

Life

Mechanical life	300,000 cycles
Resistive load life (L/R≤1ms)	see next page
Capacitive load life (RC=1ms, only connected)	60A 50,000 cycles

Note: For capacitive load life, When the contactor is used to control the main circuit of charge and discharge, the pre-charge circuit should be added.If there is no pre-charging path, a transient large current will be generated when the contactor closes, which may cause the contactor to stick

Coil parameter

Rated voltage Us	12VDC	24VDC
Operational voltage Range	9~16 VDC	18~32 VDC
Pick up voltage	≤9 VDC	≤18 VDC
Release voltage	1.2~3.6 VDC	2.4~7.2 VDC
Coil power	3.6W	3.6W
Inrush current	0.3A	0.15A
Holding current	0.3A	0.15A
Close time (@Us)	≤30ms	
Release time (@Us)	≤10ms	
Bounce time (@Us)	≤5ms	

Environmental characteristics

Shock	Stability test	196m/s ² (20G)
	Strength test	490m/s ² (50G)
Resistance to vibration		10~200Hz, 5G
Operating ambient Temperature		-40℃~+85℃
Operating ambient humidity		5%~85% RH
IP grade		IP67 (inner space)
Altitude		≤4000m

Other

Weight	≈104g
The cross-sectional area of an external conductor	≥6mm ²

Note: The above parameters are normal temperature rating, if other parameters need, manufacturers can customize.

DC Contactor

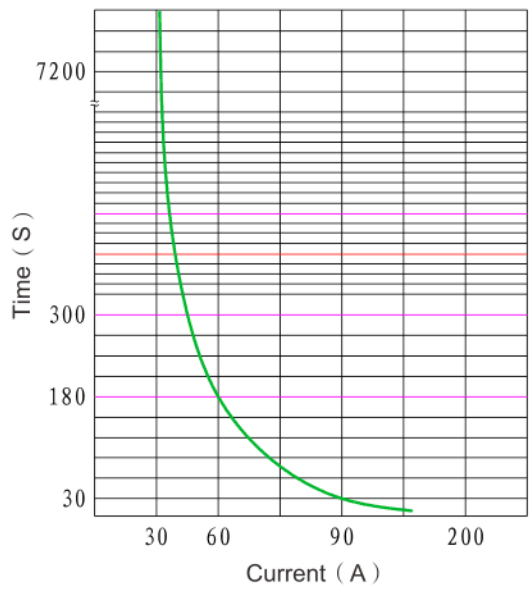
P/N GDCR7-30



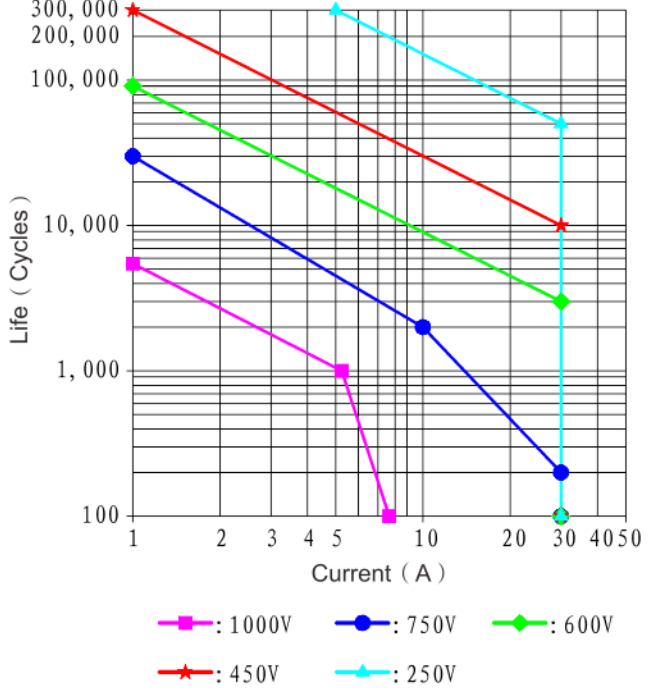
Ordering

GDCR		7	-30	B	-12	/XXX
DC Contactor						
Design No.						
Rated current		(30; 30A)				
Rated operational voltage		(B: 12VDC~200VDC, Nil: 12VDC~1000VDC)				
Rated control supply voltage		Us: (12: 12VDC, 24: 24VDC)				
Customer No.		(Customized code when customer has special requirements)				

Short overload capacity curve



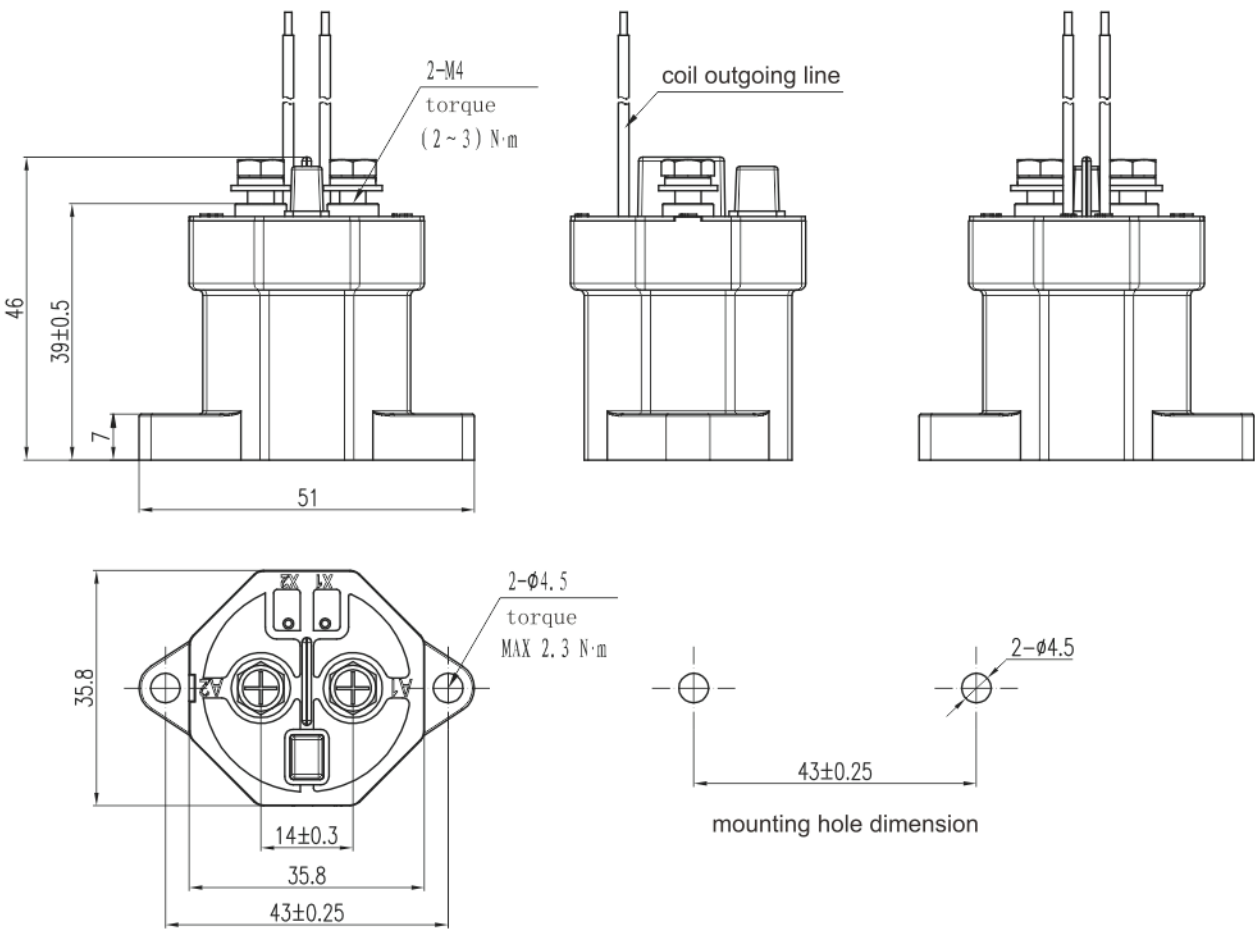
Cut-off life curve of resistive load



Note: Except for special notes, the ambient temperature of electrical durability test is 23℃, and the on-breakratiois: 1s: 9s;

DC Contactor

Unit: mm



outline dimension

Notes: outgoing line length: 300mm±20mm;
product without tolerance, when≤10mm, tolerance ±0.3mm;
when dimension between (10~50) mm, tolerance ±0.5mm;
when dimension ≥50mm, tolerance ±0.8mm.

DC Contactor



Characteristic

- Strong control load capacity: rated operational voltage12VDC~1000VDC, rated operational current 50A
- Safe: Fully sealed with epoxy resin, contact and coil will not be oxidized, product performance is not affected by external environment, no arc outbursts, can be worked in explosive and harmful environment
- Reliable: Adopt DC high voltage non - polarity design, the breaking capacity is higher and more reliable,convenient and reliable installation/wiring
- ROHS: All components meet the latest EU RoHS environmental requirements

Contact parameter

Main contact	Rated operational current Ie	50A
	Rated operational voltage Ue	12 ~ 1000 VDC
	Min. load	1A12VDC
	Main contact type	1SH (SPST NO DM)
	Nominal resistance of main circuit	2mΩ (@50A)
	Main contact mounting	M4 internal thread
	Connecting torque	2 ~ 3 N·m
Max. switching current (more than one cycle)		500A320VDC

Coil parameter

Rated voltage Us	12VDC	24VDC
Operational voltage Range	9 ~ 16 VDC	18 ~ 32 VDC
Pick up voltage	≤9 VDC	≤18 VDC
Release voltage	1.2 ~ 3.6 VDC	2.4 ~ 7.2 VDC
Coil power	3.6W	3.6W
Inrush current	0.3A	0.15A
Holding current	0.3A	0.15A
Close time (@Us)	≤30ms	
Release time (@Us)	≤10ms	
Bounce time (@Us)	≤5ms	

Electrical characteristics

Dielectric withstand voltage	DC3110V, AC2200V
Insulation resistance	≥1000MΩ@1000VDC
Nominal insulation voltage Ui	1000V

Life

Mechanical life	300,000 cycles
Resistive load life (L/R≤1ms)	see next page
Capacitive load life (RC=1ms, only connected)	90A 50,000 cycles

Note: For capacitive load life, When the contactor is used to control the main circuit of charge and discharge, the pre-charge circuit should be added.If there is no pre-charging path, a transient large current will be generated when the contactor closes, which may cause the contactor to stick

Environmental characteristics

Shock	Stability test	196m/s ² (20G)
	Strength test	490m/s ² (50G)
Resistance to vibration		10 ~ 200Hz, 5G
Operating ambient Temperature		-40℃ ~ +85℃
Operating ambient humidity		5% ~ 85% RH
IP grade		IP67 (inner space)
Altitude		≤4000m

Other

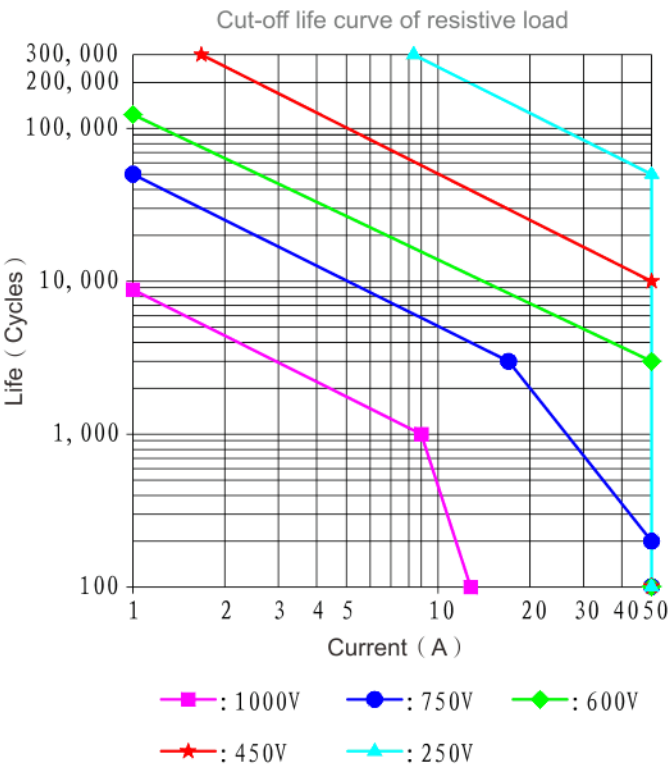
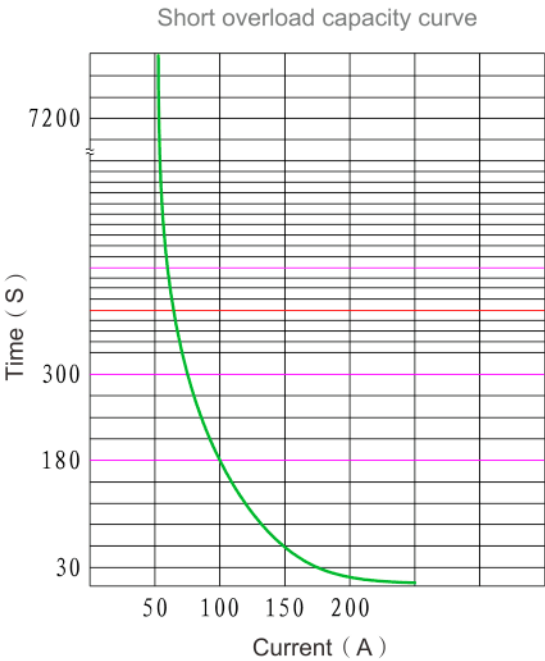
Weight	≈104g
The cross-sectional area of an external conductor	≥10mm ²

Note: The above parameters are normal temperature rating, if other parameters need, manufacturers can customize.

DC Contactor

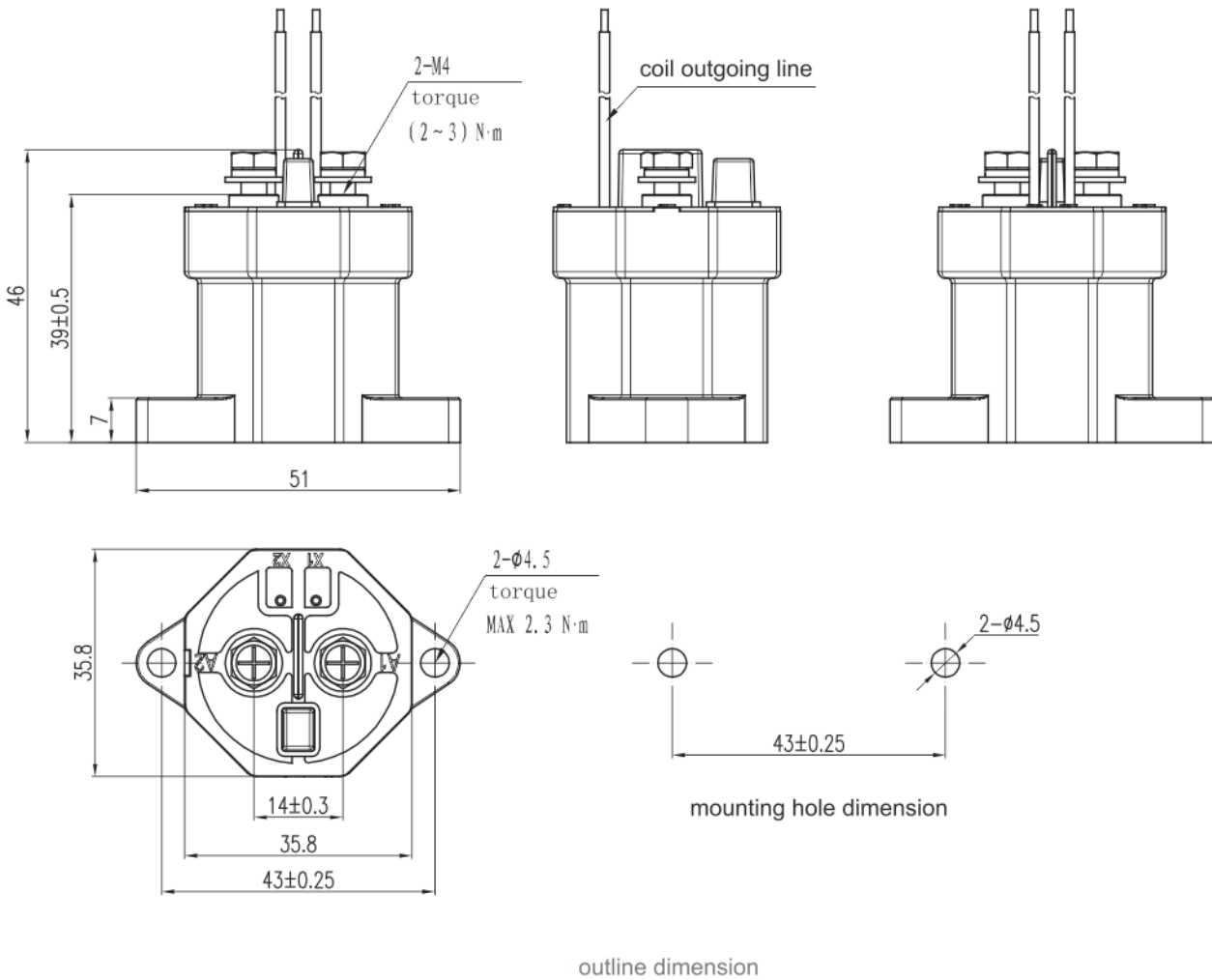
Ordering

				GDCR	7	-50	B	-12	/XXX
DC Contactor									
Design No.									
Rated current						(50; 50A)			
Rated operational voltage						(B; 12VDC~200VDC; Nil; 12VDC~1000VDC)			
Rated control supply voltage						Us; (12: 12VDC; 24: 24VDC)			
Customer No.						(Customized code when customer has special requirements)			



Note: Except for special notes, the ambient temperature of electrical durability test is 23℃, and the on-breakratiois: 1s: 9s;

Unit: mm



Note: outgoing line length: 300mm±20mm;
product without tolerance, when≤10mm, tolerance ±0.3mm;
when dimension between (10 ~ 50) mm, tolerance ±0.5mm;
when dimension≥50mm, tolerance ±0.8mm.

P/N GDCR7-100



Characteristic

- Strong control load capacity: rated operational voltage12VDC~1000VDC, rated operational current 100A
- Safe: Fully sealed with epoxy resin, contact and coil will not be oxidized, product performance is not affected by external environment, no arc outbursts, can be worked in explosive and harmful environment
- Reliable: Adopt DC high voltage non - polarity design, the breaking capacity is higher and more reliable, convenient and reliable installation/wiring
- ROHS: All components meet the latest EU RoHS environmental requirements

Contact parameter

Main contact	Rated operational current Ie	100A
	Rated operational voltage Ue	12 ~ 1000 VDC
	Min. load	1A12VDC
	Main contact type	1SH (SPST NO DM)
	Nominal resistance of main circuit	0.4mΩ (@100A)
	Main contact mounting	M5 internal thread
	Connecting torque	3 ~ 4 N·m
	Max. switching current (more than one cycle)	1000A320VDC
Auxiliary contact	Max. current	30VDC 0.8A
	Min. current	8VDC 100mA
	Contact resistance	< 0.15Ω

Electrical characteristics

Dielectric withstand voltage	DC3110V, AC2200V
Insulation resistance	≥ 1000MΩ@1000VDC
Nominal insulation voltage Ui	1000V

Life

Mechanical life	300,000 cycles
Resistive load life (L/R≤1ms)	see next page
Capacitive load life (RC=1ms, only connected)	180A 50,000 cycles

Note: For capacitive load life, When the contactor is used to control the main circuit of charge and discharge, the pre-charge circuit should be added.If there is no pre-charging path, a transient large current will be generated when the contactor closes, which may cause the contactor to stick

Coil parameter

Rated voltage Us	12VDC	24VDC
Operational voltage Range	9 ~ 16 VDC	18 ~ 32 VDC
Pick up voltage	≤9 VDC	≤18 VDC
Release voltage	1.2 ~ 3.6 VDC	2.4 ~ 7.2 VDC
Coil power	6W	6W
Inrush current	0.5A	0.25A
Holding current	0.5A	0.25A
Close time (@Us)	≤30ms	
Release time (@Us)	≤10ms	
Bounce time (@Us)	≤5ms	

Environmental characteristics

Shock	Stability test	196m/s ² (20G)
	Strength test	490m/s ² (50G)
Resistance to vibration		10 ~ 1000Hz, 10G
Operating ambient Temperature		-40℃ ~ +85℃
Operating ambient humidity		5% ~ 85% RH
IP grade		IP67 (inner space)
Altitude		≤4000m

Other

Weight	≈ 190g; with auxiliary ≈ 195g
The cross-sectional area of an external conductor	≥ 35mm ²

Note: The above parameters are normal temperature rating, if other parameters need, manufacturers can customize.

DC Contactor

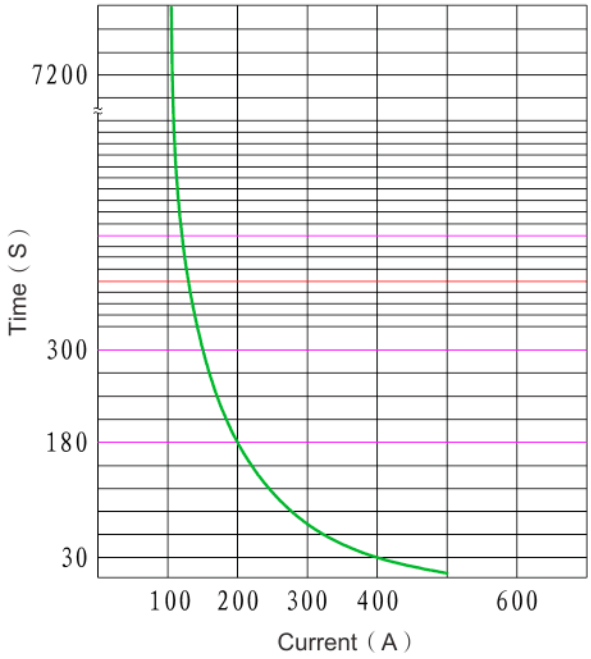
P/N GDCR7-100



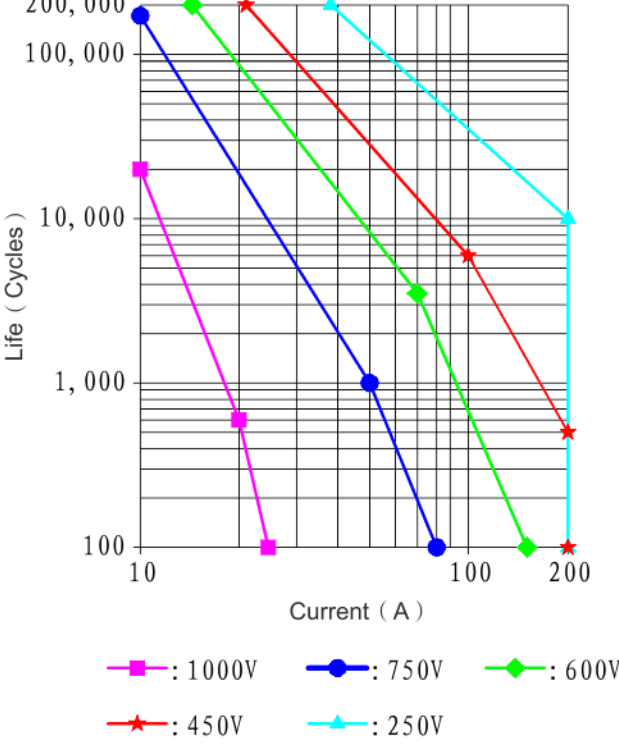
Ordering

	GDCR	7	-100	B	H	-12	W	/XXX
DC Contactor								
Design No.								
Rated current	(100; 100A)							
Rated operational voltage	(B: 12VDC~200VDC; Nil: 12VDC~1000VDC)							
Auxiliary contact type	(H: with normally open; C: with normally closed; Omit: without)							
Rated control supply voltage	Us: (12: 12VDC; 24: 24VDC)							
Mounting type	(Nil: Vertical; W: Horizontal)							
Customer No.	(Customized code when customer has special requirements)							

Short overload capacity curve



Cut-off life curve of resistive load

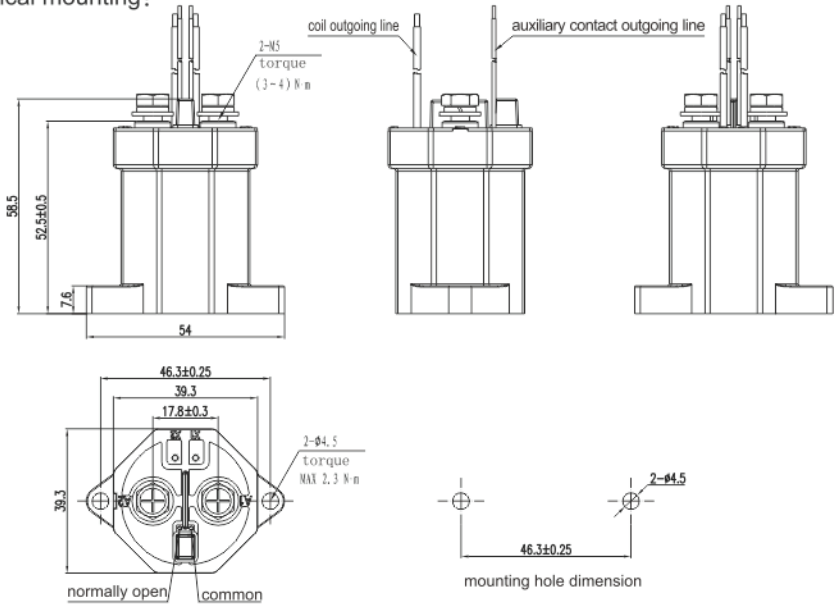


Note: Except for special notes, the ambient temperature of electrical durability test is 23℃, and the on-breakratiois: 1s: 9s;

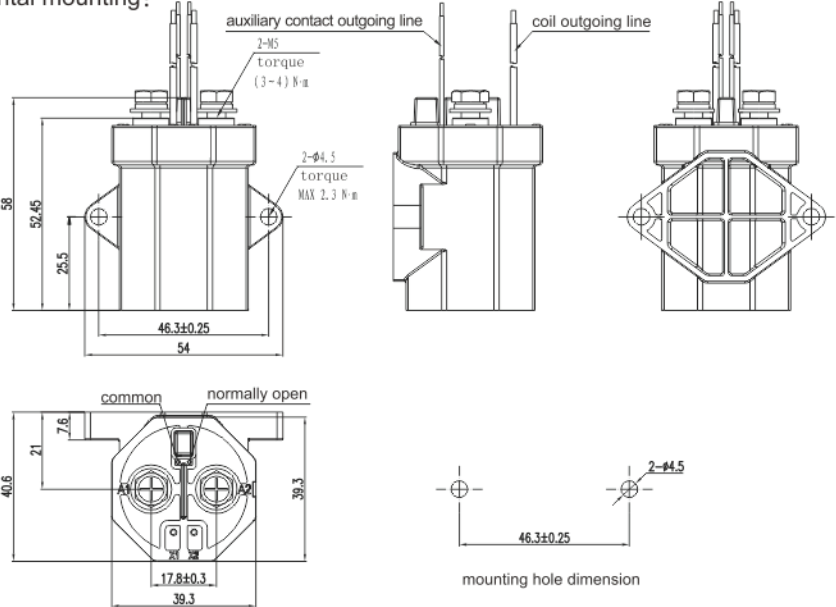
DC Contactor

Unit: mm

Vertical mounting:



Horizontal mounting:



outline dimension

Notes: outgoing line length: 300mm±20mm;
product without tolerance, when≤10mm, tolerance ±0.3mm;
when dimension between (10~50) mm, tolerance ±0.5mm;
when dimension ≥50mm, tolerance ±0.8mm.

DC Contactor



Characteristic

- Strong control load capacity: rated operational voltage 12VDC~1000VDC, rated operational current 100A
- Safe: Fully sealed with epoxy resin, contact and coil will not be oxidized, product performance is not affected by external environment, no arc outbursts, can be worked in explosive and harmful environment
- Reliable: Adopt DC high voltage non - polarity design, the breaking capacity is higher and more reliable, convenient and reliable installation/wiring
- Energy conservation: Using PWM control technology, effectively control the coil power and action characteristics, more energy saving
- ROHS: All components meet the latest EU RoHS environmental requirements

Contact parameter

Main contact	Rated operational current Ie	100A
	Rated operational voltage Ue	12~1000 VDC
	Min. load	1A12VDC
	Main contact type	1SH (SPST NO DM)
	Nominal resistance of main circuit	0.4mΩ (@100A)
	Main contact mounting	M5 internal thread
	Connecting torque	3~4 N·m
	Max. switching current (more than one cycle)	1000A320VDC
Auxiliary contact	Max. current	30VDC 0.8A
	Min. current	8VDC 100mA
	Contact resistance	< 0.15Ω

Coil parameter

Rated voltage Us	12/24VDC
Operational voltage Range	8~36 VDC
Pick up voltage	7~8 VDC
Release voltage	5~6 VDC
Coil power	keeping: 1.6W
Inrush current	2A (0.1s) (@12v)
Holding current	0.133A@12V; 0.067A@24V
Close time (@Us)	≤45ms
Release time (@Us)	≤10ms
Bounce time (@Us)	≤5ms

Electrical characteristics

Dielectric withstand voltage	DC3110V, AC2200V
Insulation resistance	≥1000MΩ@1000VDC
Nominal insulation voltage Ui	1000V

Environmental characteristics

Shock	Stability test	196m/s ² (20G)
	Strength test	490m/s ² (50G)
Resistance to vibration		10~1000Hz, 10G
Operating ambient Temperature		-40℃~+85℃
Operating ambient humidity		5%~85% RH
IP grade		IP67 (inner space)
Altitude		≤4000m

Life

Mechanical life	300,000 cycles
Resistive load life (L/R≤1ms)	see next page
Capacitive load life (RC=1ms, only connected)	180A 50,000 cycles

Note: For capacitive load life, When the contactor is used to control the main circuit of charge and discharge, the pre-charge circuit should be added. If there is no pre-charging path, a transient large current will be generated when the contactor closes, which may cause the contactor to stick

Other

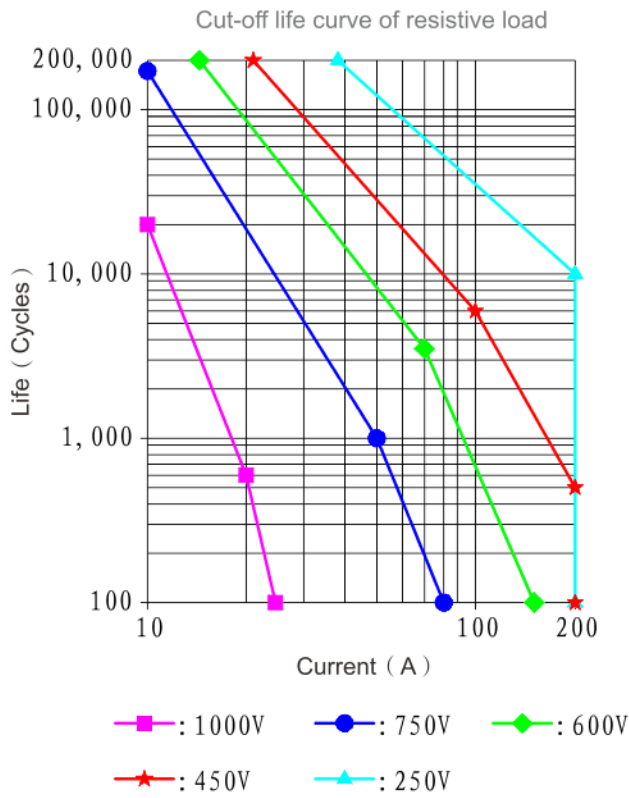
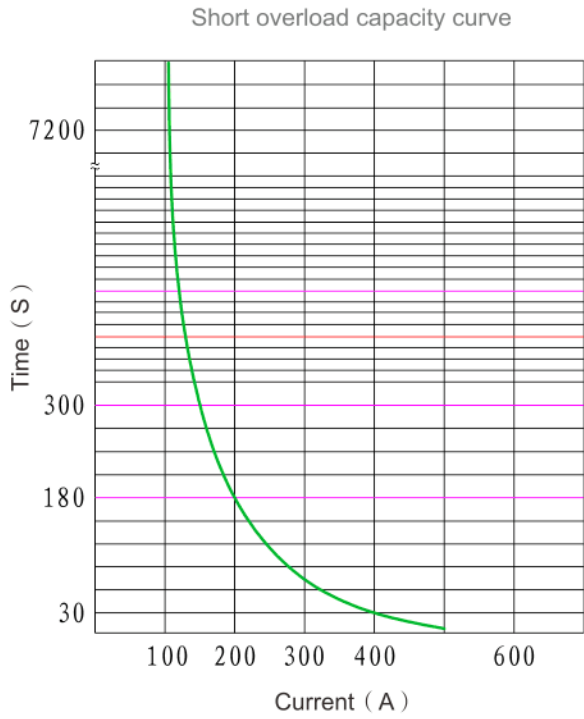
Weight	≈205g; with auxiliary ≈210g
The cross-sectional area of an external conductor	≥35mm ²

Note: The above parameters are normal temperature rating, if other parameters need, manufacturers can customize.

DC Contactor

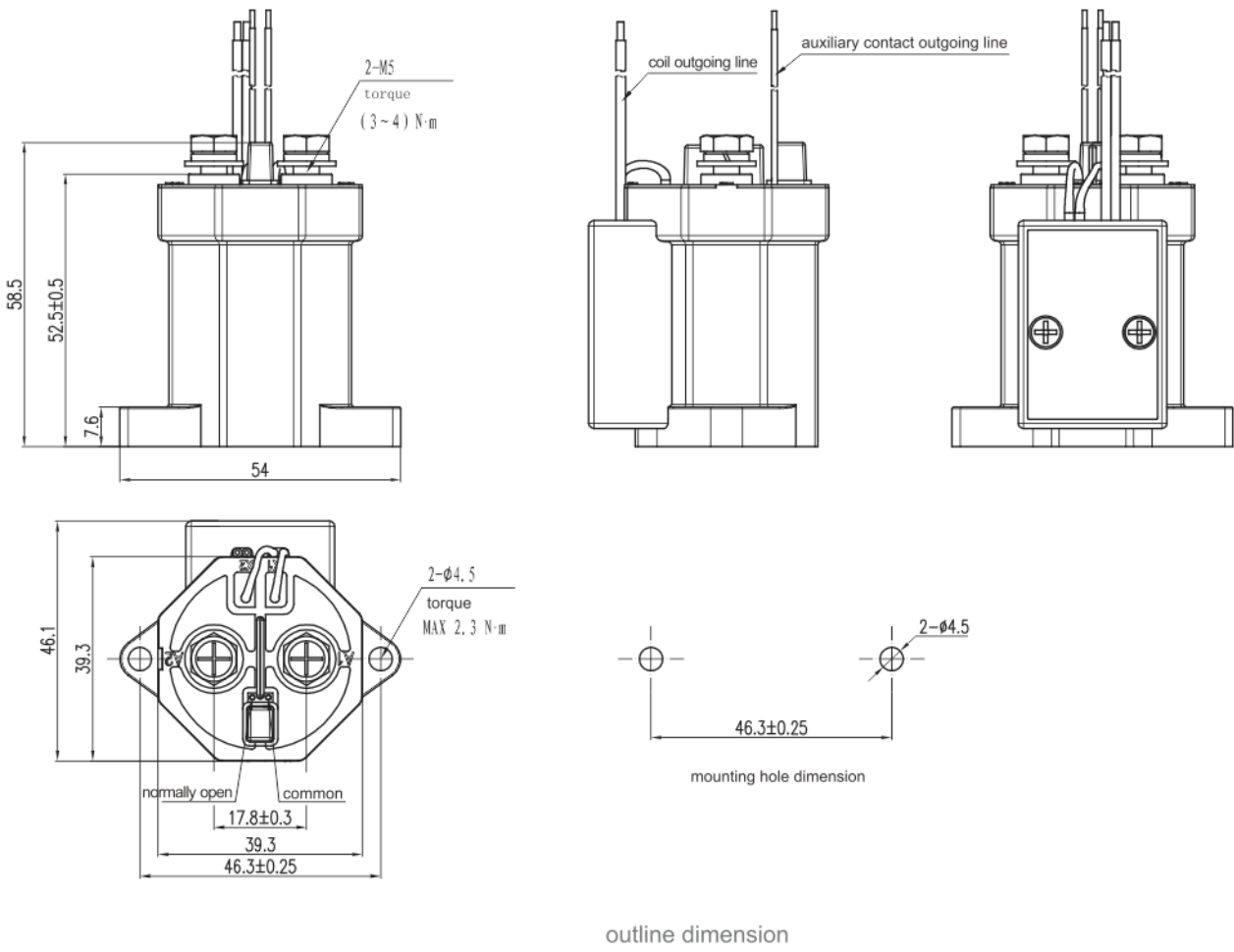
Ordering

	GDCR	7	-100	B	H	-P	/XXX
DC Contactor							
Design No.							
Rated current			(100; 100A)				
Rated operational voltage			(B: 12VDC~200VDC; Nil: 12VDC~1000VDC)				
Auxiliary contact type			(H: with normally open; C: with normally closed; Nil: without)				
Coil type			(P: Us=12/24VDC)				
Customer No.			(Customized code when customer has special requirements)				



Note: Except for special notes, the ambient temperature of electrical durability test is 23℃, and the on-breakratiois: 1s: 9s;

Unit: mm



Notes: outgoing line length: 300mm±20mm;
product without tolerance, when≤10mm, tolerance ±0.3mm;
when dimension between (10~50) mm, tolerance ±0.5mm;
when dimension ≥50mm, tolerance ±0.8mm.

P/N GDCR7-150



Characteristic

- Strong control load capacity: rated operational voltage12VDC~1000VDC, rated operational current 150A
- Safe: Fully sealed with epoxy resin, contact and coil will not be oxidized, product performance is not affected by external environment, no arc outbursts, can be worked in explosive and harmful environment
- Reliable: Adopt DC high voltage non - polarity design, the breaking capacity is higher and more reliable, convenient and reliable installation/wiring
- Energy conservation: Using PWM control technology, effectively control the coil power and action characteristics, more energy saving
- ROHS: All components meet the latest EU RoHS environmental requirements

Contact parameter

Main contact	Rated operational current Ie	150A
	Rated operational voltage Ue	12~1000 VDC
	Min. load	1A12VDC
	Main contact type	1SH (SPST NO DM)
	Nominal resistance of main circuit	0.2mΩ (@150A)
	Main contact mounting	M8 external thread
	Connecting torque	10~12 N·m
	Max. switching current (more than one cycle)	1500A320VDC
Auxiliary contact	Max. current	30VDC 2A; 125VAC 3A
	Min. current	8VDC 100mA
	Contact resistance	< 0.15Ω

Electrical characteristics

Dielectric withstand voltage	DC3110V, AC2200V
Insulation resistance	≥1000MΩ@1000VDC
Nominal insulation voltage Ui	1000V

Life

Mechanical life	300,000 cycles
Resistive load life (L/R≤1ms)	see next page
Capacitive load life (RC=1ms, only connected)	270A 50,000 cycles

Note: For capacitive load life, When the contactor is used to control the main circuit of charge and discharge, the pre-charge circuit should be added.If there is no pre-charging path, a transient large current will be generated when the contactor closes, which may cause the contactor to stick

Coil parameter

Rated voltage Us	12/24VDC
Operational voltage Range	8~36 VDC
Pick up voltage	7~8 VDC
Release voltage	5~6 VDC
Coil power	keeping: 2W
Inrush current	3A (0.1s) (@12v)
Holding current	0.17A@12V; 0.085A@24V
Close time (@Us)	≤45ms
Release time (@Us)	≤10ms
Bounce time (@Us)	≤5ms

Environmental characteristics

Shock	Stability test	196m/s ² (20G)
	Strength test	490m/s ² (50G)
Resistance to vibration		10~2000Hz, 20G
Operating ambient Temperature		-40℃~+85℃
Operating ambient humidity		5%~85% RH
IP grade		IP67 (inner space)
Altitude		≤4000m

Other

Weight	≈425g, with auxiliary ≈430g
The cross-sectional area of an external conductor	≥50mm ²

Note: The above parameters are normal temperature rating, if other parameters need, manufacturers can customize.

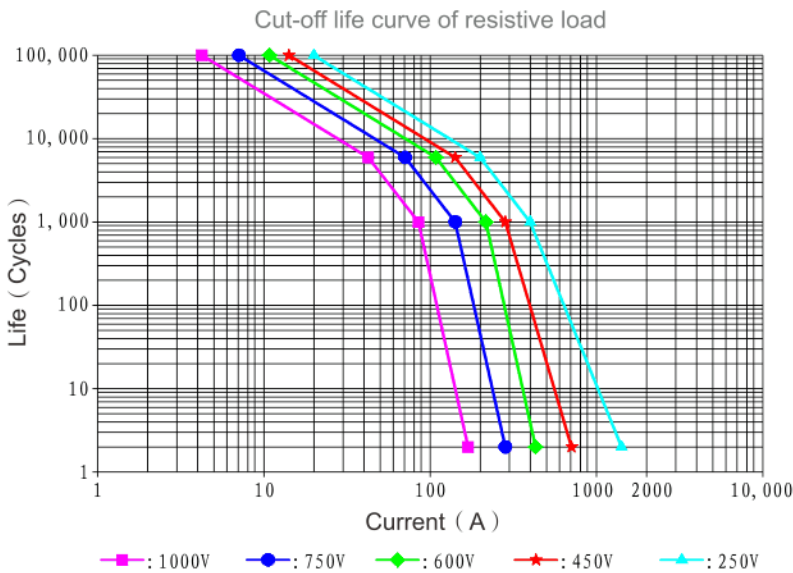
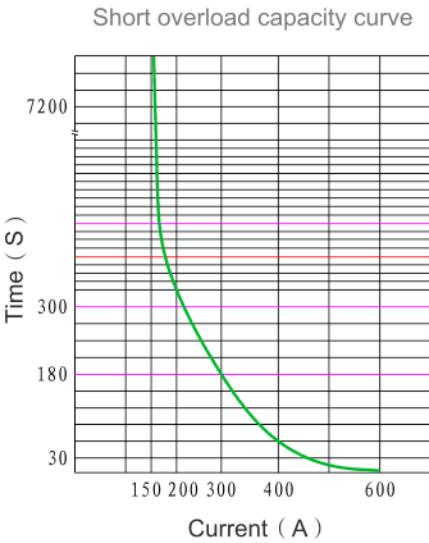
DC Contactor

P/N GDCR7-150



Ordering

	GDCR	7	-150	B	H	-P	W	/XXX
DC Contactor								
Design No.								
Rated current		(150: 150A)						
Rated operational voltage		(B: 12VDC~200VDC; Nil: 12VDC~1000VDC)						
Auxiliary contact type		(H: with normally open, C: with normally closed, Z: with convert, Nil: without)						
Coil type		(P: Us=12/24VDC)						
Mounting type		(Nil: Vertical mounting; W: Horizontal mounting)						
Customer No.		(Customized code when customer has special requirements)						



Note: Except for special notes, the ambient temperature of electrical durability test is 23℃, and the on-breakratiois: 1s: 9s;

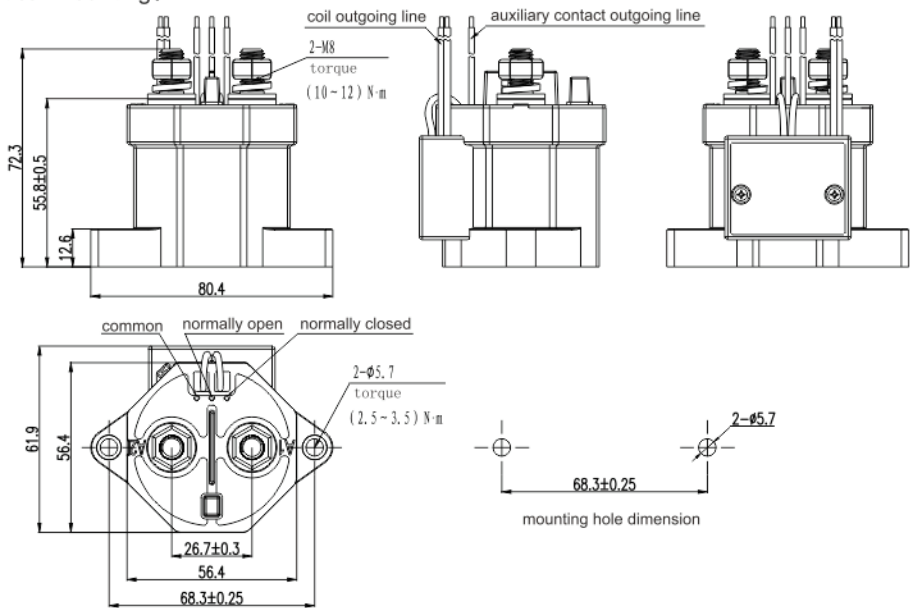
DC Contactor

P/N GDCR7-150

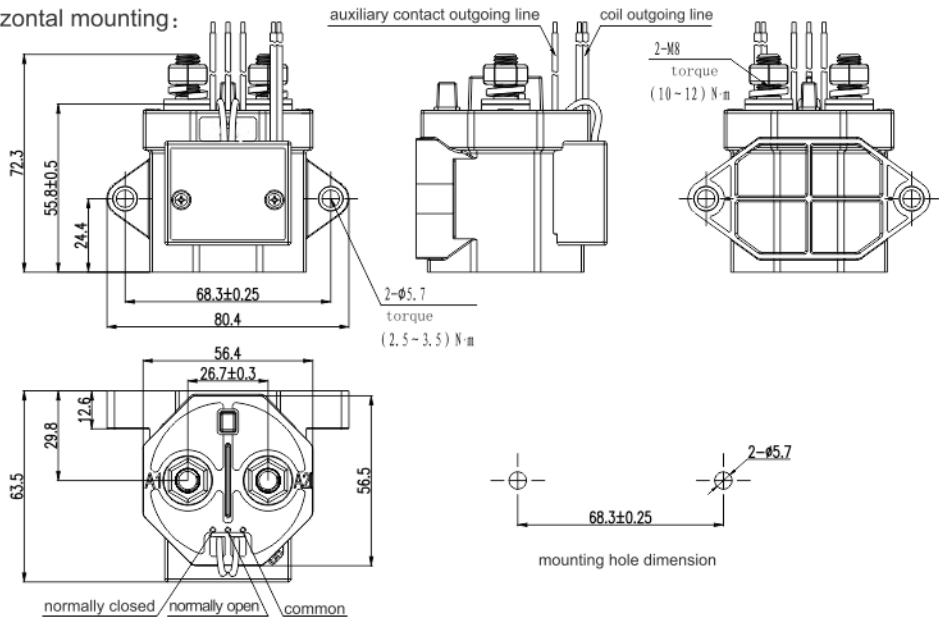


Unit: mm

Vertical mounting:



Horizontal mounting:



outline dimension

Notes: outgoing line length: 300mm±20mm;
product without tolerance, when≤10mm, tolerance ±0.3mm;
when dimension between (10~50) mm, tolerance ±0.5mm;
when dimension ≥50mm, tolerance ±0.8mm.

DC Contactor

P/N GDCR7-200



Characteristic



- Strong control load capacity: rated operational voltage 12VDC~1000VDC, rated operational current 200A
- Safe: Fully sealed with epoxy resin, contact and coil will not be oxidized, product performance is not affected by external environment, no arc outbursts, can be worked in explosive and harmful environment
- Reliable: Adopt DC high voltage non - polarity design, the breaking capacity is higher and more reliable, convenient and reliable installation/wiring
- Energy conservation: Using PWM control technology, effectively control the coil power and action characteristics, more energy saving
- ROHS: All components meet the latest EU RoHS environmental requirements

Contact parameter

Main contact	Rated operational current Ie	200A
	Rated operational voltage Ue	12~1000 VDC
	Min. load	1A12VDC
	Main contact type	1SH (SPST NO DM)
	Nominal resistance of main circuit	0.2mΩ (@200A)
	Main contact mounting	M8 external thread
	Connecting torque	10~12 N·m
	Max. switching current (more than one cycle)	2000A320VDC
Auxiliary contact	Max. current	30VDC 2A; 125VAC 3A
	Min. current	8VDC 100mA
	Contact resistance	< 0.15Ω

Coil parameter

Rated voltage Us	12/24VDC
Operational voltage Range	8~36 VDC
Pick up voltage	7~8 VDC
Release voltage	5~6 VDC
Coil power	keeping: 2W
Inrush current	3A (0.1s) (@12v)
Holding current	0.17A@12V; 0.085A@24V
Close time (@Us)	≤45ms
Release time (@Us)	≤10ms
Bounce time (@Us)	≤5ms

Electrical characteristics

Dielectric withstand voltage	DC3110V, AC2200V
Insulation resistance	≥1000MΩ@1000VDC
Nominal insulation voltage Ui	1000V

Life

Mechanical life	300,000 cycles
Resistive load life (L/R≤1ms)	see next page
Capacitive load life (RC=1ms, only connected)	360A 50,000 cycles

Note: For capacitive load life, When the contactor is used to control the main circuit of charge and discharge, the pre-charge circuit should be added. If there is no pre-charging path, a transient large current will be generated when the contactor closes, which may cause the contactor to stick

Environmental characteristics

Shock	Stability test	196m/s ² (20G)
	Strength test	490m/s ² (50G)
Resistance to vibration		10~2000Hz, 20G
Operating ambient Temperature		-40℃ ~ +85℃
Operating ambient humidity		5% ~ 85% RH
IP grade		IP67 (inner space)
Altitude		≤4000m

Other

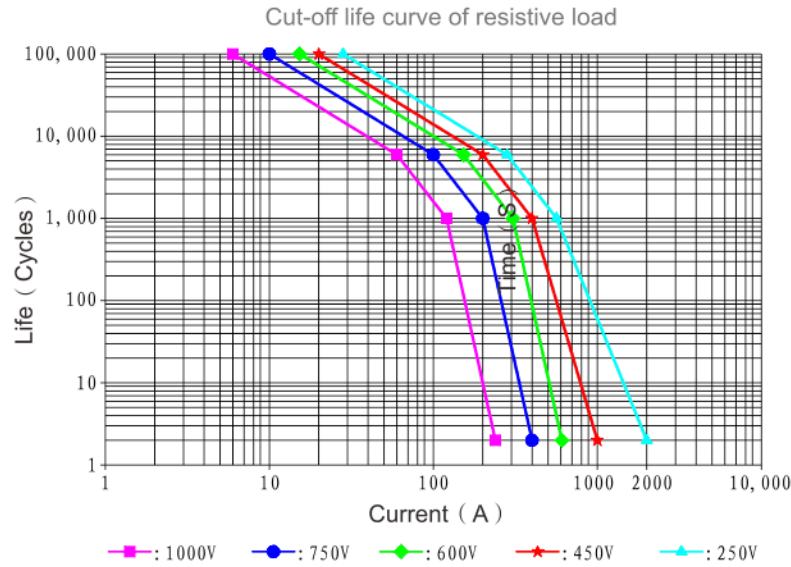
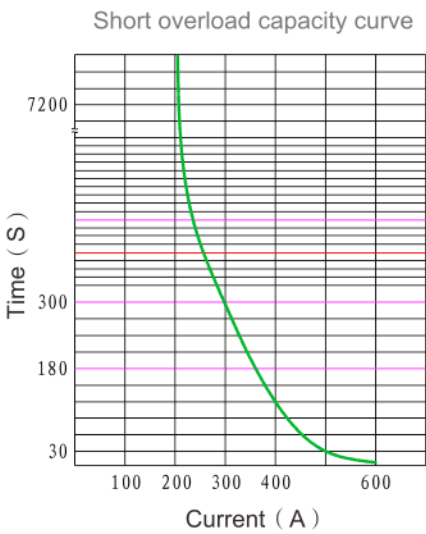
Weight	≈425g; with auxiliary ≈430g
The cross-sectional area of an external conductor	≥65mm ²

Note: The above parameters are normal temperature rating, if other parameters need, manufacturers can customize.

DC Contactor

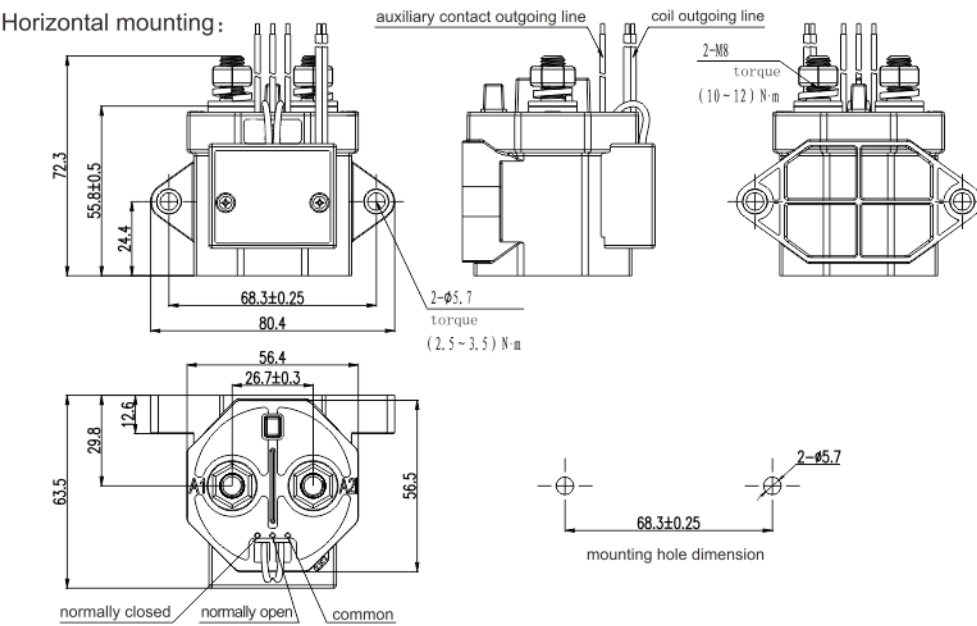
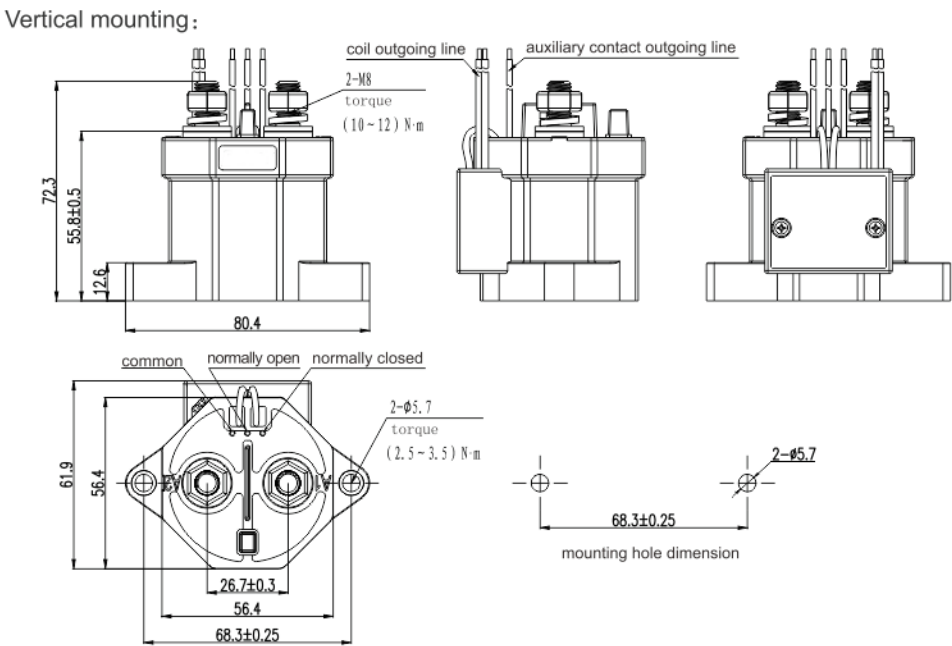
Ordering

	GDCR	7	-200	B	H	-P	W	/XXX
DC Contactor								
Design No.								
Rated current			(200; 200A)					
Rated operational voltage			(B: 12VDC~200VDC; Nil: 12VDC~1000VDC)					
Auxiliary contact type			(H: with normally open, C: with normally closed, Z: with convert, Nil: without)					
Coil type			(P: Us=12/24VDC)					
Mounting type			(Nil: Vertical mounting; W: Horizontal mounting)					
Customer No.			(Customized code when customer has special requirements)					



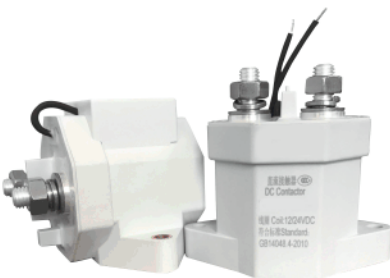
Note: Except for special notes, the ambient temperature of electrical durability test is 23℃, and the on-breakratiois: 1s: 9s;

Unit: mm



outline dimension

Notes: outgoing line length: 300mm±20mm;
product without tolerance, when≤10mm, tolerance ±0.3mm;
when dimension between (10~50) mm, tolerance ±0.5mm;
when dimension ≥50mm, tolerance ±0.8mm.



Characteristic

- Strong control load capacity: rated operational voltage12VDC~1000VDC, rated operational current 250A.
- Safe: Fully sealed with epoxy resin, contact and coil will not be oxidized, product performance is not affected by external environment, no arc outbursts, can be worked in explosive and harmful environment
- Reliable: Adopt DC high voltage non - polarity design, the breaking capacity is higher and more reliable, convenient and reliable installation/wiring
- Energy conservation: Using PWM control technology, effectively control the coil power and action characteristics, more energy saving
- ROHS: All components meet the latest EU RoHS environmental requirements

Contact parameter

Main contact	Rated operational current Ie	250A
	Rated operational voltage Ue	12~1000 VDC
	Min. load	1A12VDC
	Main contact type	1SH (SPST NO DM)
	Nominal resistance of main circuit	0.2mΩ (@250A)
	Main contact mounting	M8 external thread
	Connecting torque	10~12 N·m
Auxiliary contact	Max. switching current (more than one cycle)	2500A320VDC
	Max. current	30VDC 2A; 125VAC 3A
	Min. current	8VDC 100mA
	Contact resistance	< 0.15Ω

Electrical characteristics

Dielectric withstand voltage	DC3110V, AC2200V
Insulation resistance	≥1000MΩ@1000VDC
Nominal insulation voltage Ui	1000V

Life

Mechanical life	300,000 cycles
Resistive load life (L/R≤1ms)	see next page
Capacitive load life (RC=1ms, only connected)	450A 50,000 cycles

Note: For capacitive load life, When the contactor is used to control the main circuit of charge and discharge, the pre-charge circuit should be added.If there is no pre-charging path, a transient large current will be generated when the contactor closes, which may cause the contactor to stick

Coil parameter

Rated voltage Us	12/24VDC
Operational voltage Range	8~36 VDC
Pick up voltage	7~8 VDC
Release voltage	5~6 VDC
Coil power	keeping: 2W
Inrush current	3A (0.1s) (@12v)
Holding current	0.17A@12V; 0.085A@24V
Close time (@Us)	≤45ms
Release time (@Us)	≤10ms
Bounce time (@Us)	≤5ms

Environmental characteristics

Shock	Stability test	196m/s ² (20G)
	Strength test	490m/s ² (50G)
Resistance to vibration		10~2000Hz, 20G
Operating ambient Temperature		-40℃ ~ +85℃
Operating ambient humidity		5% ~ 85% RH
IP grade		IP67 (inner space)
Altitude		≤4000m

Other

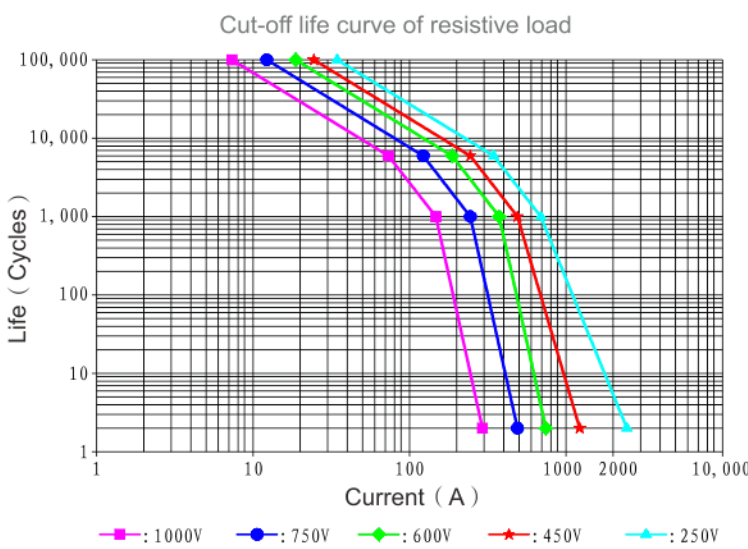
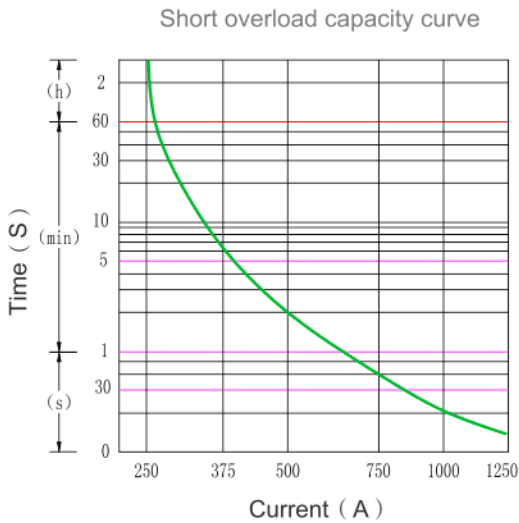
Weight	≈425g; with auxiliary ≈430g
The cross-sectional area of an external conductor	≥75mm ²

Note: The above parameters are normal temperature rating, if other parameters need, manufacturers can customize.

DC Contactor

Ordering

	GDCR	7	-250	B	H	-P	W	/XXX
DC Contactor								
Design No.								
Rated current (250: 250A)								
Rated operational voltage (B: 12VDC~200VDC; Nil: 12VDC~1000VDC)								
Auxiliary contact type (H: with normally open; C: with normally closed; Z: with convert; Nil: without)								
Coil type (P: Us=12/24VDC)								
Mounting type (Nil: Vertical mounting; W: Horizontal mounting)								
Customer No. (Customized code when customer has special requirements)								



Note: Except for special notes, the ambient temperature of electrical durability test is 23℃, and the on-breakratiois: 1s: 9s;

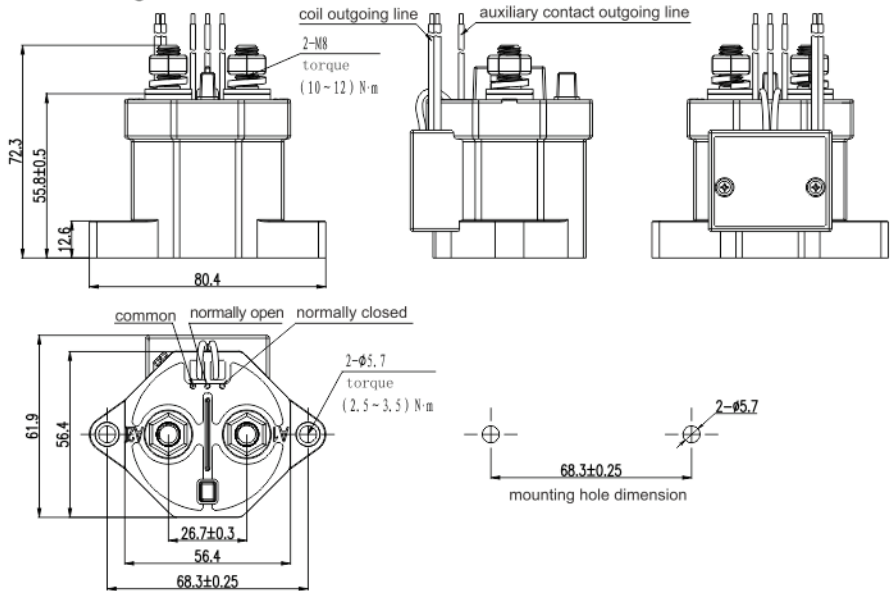
DC Contactor

P/N GDCR7-250

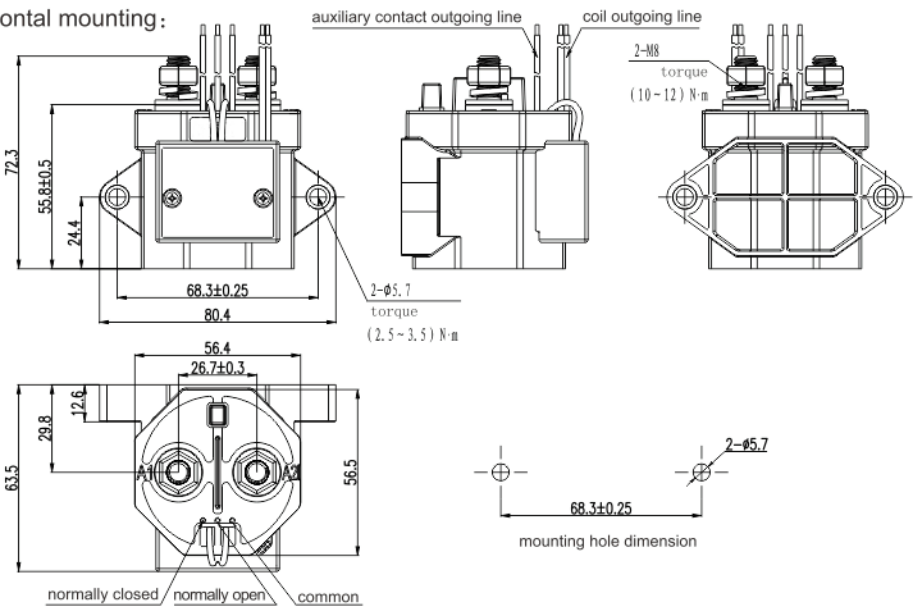


Unit: mm

Vertical mounting:



Horizontal mounting:



Notes: outgoing line length: 300mm±20mm;
product without tolerance, when≤10mm, tolerance ±0.3mm;
when dimension between (10~50) mm, tolerance ±0.5mm;
when dimension ≥50mm, tolerance ±0.8mm.

DC Contactor

P/N GDCR7-300-P



Characteristic

- Strong control load capacity: rated operational voltage 12VDC~1000VDC, rated operational current 300A
- Safe: Fully sealed with epoxy resin, contact and coil will not be oxidized, product performance is not affected by external environment, no arc outbursts, can be worked in explosive and harmful environment
- Reliable: Adopt DC high voltage non - polarity design, the breaking capacity is higher and more reliable, convenient and reliable installation/wiring
- Energy conservation: Using PWM control technology, effectively control the coil power and action characteristics, more energy saving
- ROHS: All components meet the latest EU RoHS environmental requirements

Contact parameter

Main contact	Rated operational current Ie	300A
	Rated operational voltage Ue	12 ~ 1000 VDC
	Min. load	1A12VDC
	Main contact type	1SH (SPST NO DM)
	Nominal resistance of main circuit	0.2mΩ (@300A)
	Main contact mounting	M8 external thread
	Connecting torque	10 ~ 12 N·m
	Max. switching current (more than one cycle)	2500A320VDC
Auxiliary contact	Max. current	30VDC 2A, 125VAC 3A
	Min. current	8VDC 100mA
	Contact resistance	< 0.15Ω

Coil parameter

Rated voltage Us	12/24VDC
Operational voltage Range	8 ~ 36 VDC
Pick up voltage	7 ~ 8 VDC
Release voltage	5 ~ 6 VDC
Coil power	keeping: 2W
Inrush current	3A (0.1s) (@12v)
Holding current	0.17A@12V; 0.085A@24V
Close time (@Us)	≤45ms
Release time (@Us)	≤10ms
Bounce time (@Us)	≤5ms

Electrical characteristics

Dielectric withstand voltage	DC3110V, AC2200V
Insulation resistance	≥1000MΩ@1000VDC
Nominal insulation voltage Ui	1000V

Life

Mechanical life	300,000 cycles
Resistive load life (L/R ≤ 1ms)	see next page
Capacitive load life (RC=1ms, only connected)	450A 50,000 cycles

Note: For capacitive load life, When the contactor is used to control the main circuit of charge and discharge, the pre-charge circuit should be added. If there is no pre-charging path, a transient large current will be generated when the contactor closes, which may cause the contactor to stick

Environmental characteristics

Shock	Stability test	196m/s ² (20G)
	Strength test	490m/s ² (50G)
Resistance to vibration		10 ~ 2000Hz, 20G
Operating ambient Temperature		-40℃ ~ +85℃
Operating ambient humidity		5% ~ 85% RH
IP grade		IP67 (inner space)
Altitude		≤4000m

Other

Weight	≈425g; with auxiliary ≈430g
The cross-sectional area of an external conductor	≥95mm ²

Note: The above parameters are normal temperature rating, if other parameters need, manufacturers can customize.

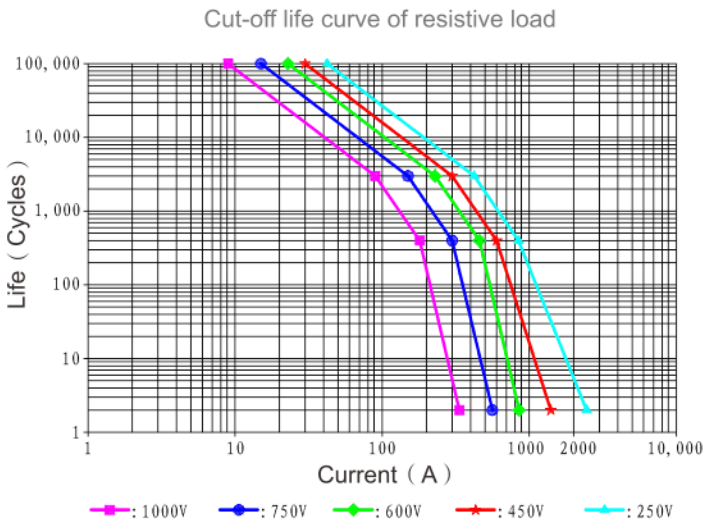
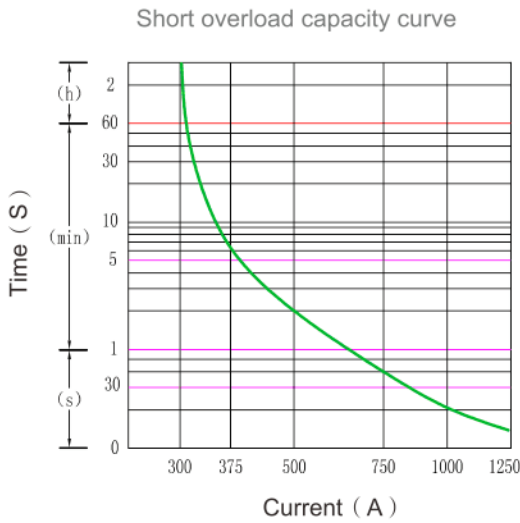
DC Contactor

P/N GDCR7-300-P



Ordering

	GDCR	7	-300	B	H	-P	W	/XXX
DC Contactor								
Design No.								
Rated current			(300: 300A)					
Rated operational voltage			(B: 12VDC~200VDC; Nil: 12VDC~1000VDC)					
Auxiliary contact type			(H: with normally open; C: with normally closed; Z: with convert; Nil: without)					
Coil type			(P: Us=12/24VDC)					
Mounting type			(Nil: Vertical mounting; W: Horizontal mounting)					
Customer No.			(Customized code when customer has special requirements)					



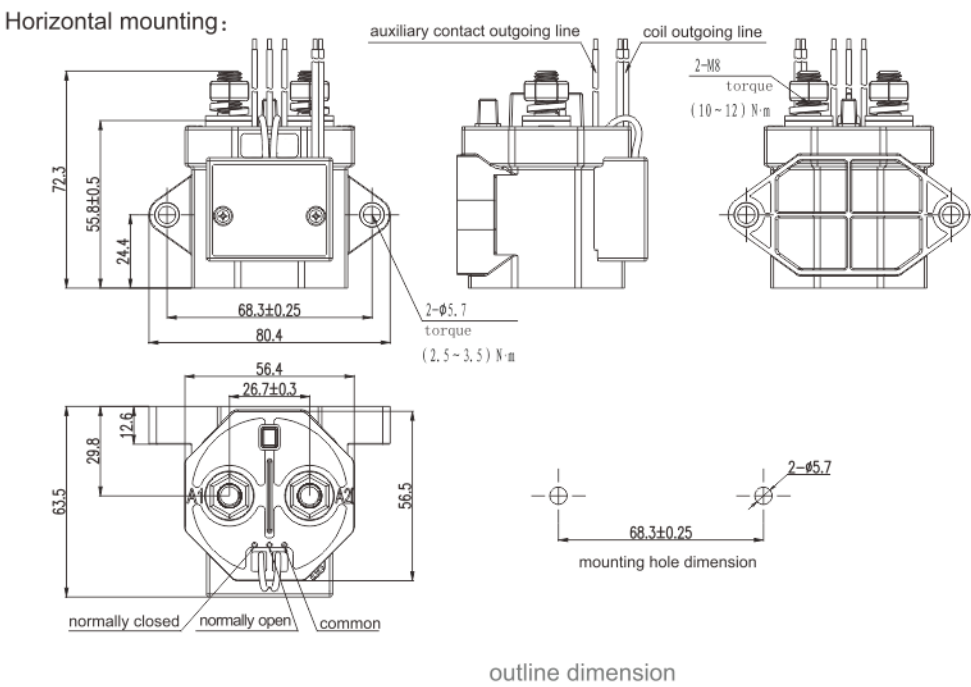
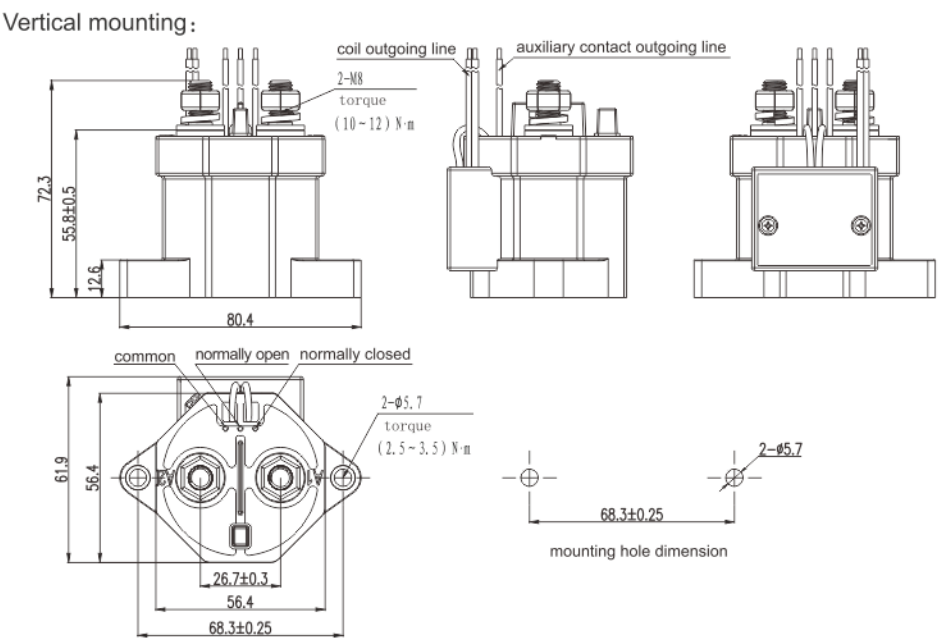
Note: Except for special notes, the ambient temperature of electrical durability test is 23℃, and the on-breakratiois: 1s: 9s;

DC Contactor

P/N GDCR7-300-P



Unit: mm



Notes: outgoing line length: 300mm±20mm;
product without tolerance, when≤10mm, tolerance ±0.3mm;
when dimension between (10~50) mm, tolerance ±0.5mm;
when dimension ≥50mm, tolerance ±0.8mm.

DC Contactor

P/N GDCR7-350-P



Characteristic

- Strong control load capacity: rated operational voltage12VDC~1000VDC, rated operational current350A
- Safe: Fully sealed with epoxy resin, contact and coil will not be oxidized, product performance is not affected by external environment, no arc outbursts, can be worked in explosive and harmful environment
- Reliable: Adopt DC high voltage non - polarity design, the breaking capacity is higher and more reliable, convenient and reliable installation/wiring
- Energy conservation: Using PWM control technology, effectively control the coil power and action characteristics, more energy saving
- ROHS: All components meet the latest EU RoHS environmental requirements

Contact parameter

Main contact	Rated operational current Ie	350A
	Rated operational voltage Ue	12 ~ 1000 VDC
	Min. load	1A12VDC
	Main contact type	1SH (SPST NO DM)
	Nominal resistance of main circuit	0.2mΩ (@350A)
	Main contact mounting	M8 external thread
	Connecting torque	10 ~ 12 N·m
	Max. switching current (more than one cycle)	2500A320VDC
Auxiliary contact	Max. current	30VDC 2A, 125VAC 3A
	Min. current	8VDC 100mA
	Contact resistance	< 0.15Ω

Electrical characteristics

Dielectric withstand voltage	DC3110V, AC2200V
Insulation resistance	≥1000MΩ@1000VDC
Nominal insulation voltage Ui	1000V

Life

Mechanical life	300,000 cycles
Resistive load life (L/R≤1ms)	see next page
Capacitive load life (RC=1ms, only connected)	450A 50,000 cycles

Note: For capacitive load life, When the contactor is used to control the main circuit of charge and discharge, the pre-charge circuit should be added.If there is no pre-charging path, a transient large current will be generated when the contactor closes, which may cause the contactor to stick

Coil parameter

Rated voltage Us	12/24VDC
Operational voltage Range	8 ~ 36 VDC
Pick up voltage	7 ~ 8 VDC
Release voltage	5 ~ 6 VDC
Coil power	keeping: 2W
Inrush current	3A (0.1s) (@12v)
Holding current	0.17A@12V; 0.085A@24V
Close time (@Us)	≤45ms
Release time (@Us)	≤10ms
Bounce time (@Us)	≤5ms

Environmental characteristics

Shock	Stability test	196m/s ² (20G)
	Strength test	490m/s ² (50G)
Resistance to vibration		10 ~ 2000Hz, 20G
Operating ambient Temperature		-40℃ ~ +85℃
Operating ambient humidity		5% ~ 85% RH
IP grade		IP67 (inner space)
Altitude		≤4000m

Other

Weight	≈ 425g; with auxiliary ≈ 430g
The cross-sectional area of an external conductor	≥120mm ²

Note: The above parameters are normal temperature rating, if other parameters need, manufacturers can customize.

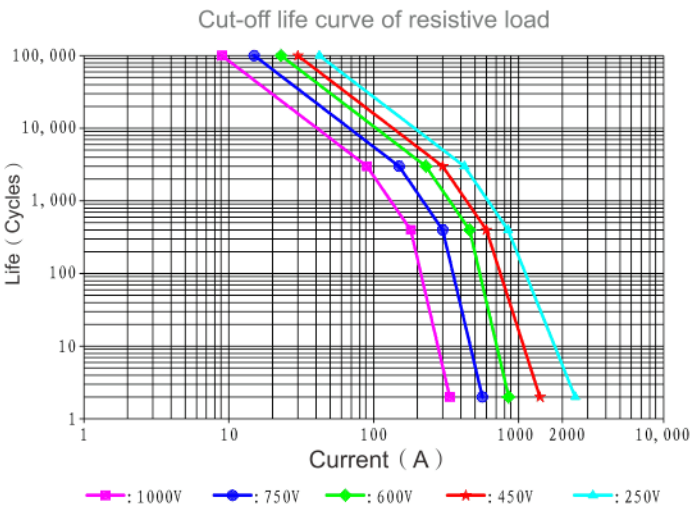
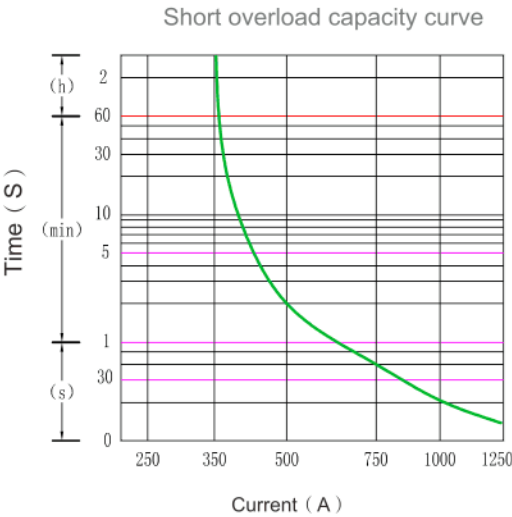
DC Contactor

P/N GDCR7-350-P



Ordering

	GDCR	7	-350	B	H	-P	W	/XXX
DC Contactor								
Design No.								
Rated current		(350; 350A)						
Rated operational voltage		(B: 12VDC~200VDC; Nil: 12VDC~1000VDC)						
Auxiliary contact type		(H: with normally open; C: with normally closed; Z: with convert; Nil: without)						
Coil type		(P: Us=12/24VDC)						
Mounting type		(Nil: Vertical mounting; W: Horizontal mounting)						
Customer No.		(Customized code when customer has special requirements)						

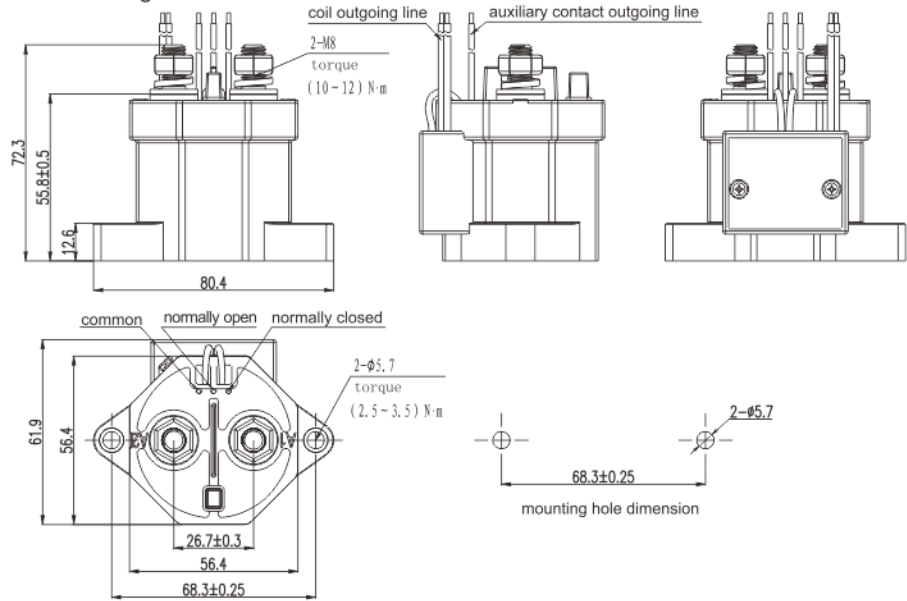


Note: Except for special notes, the ambient temperature of electrical durability test is 23℃, and the on-breakratiois: 1s: 9s;

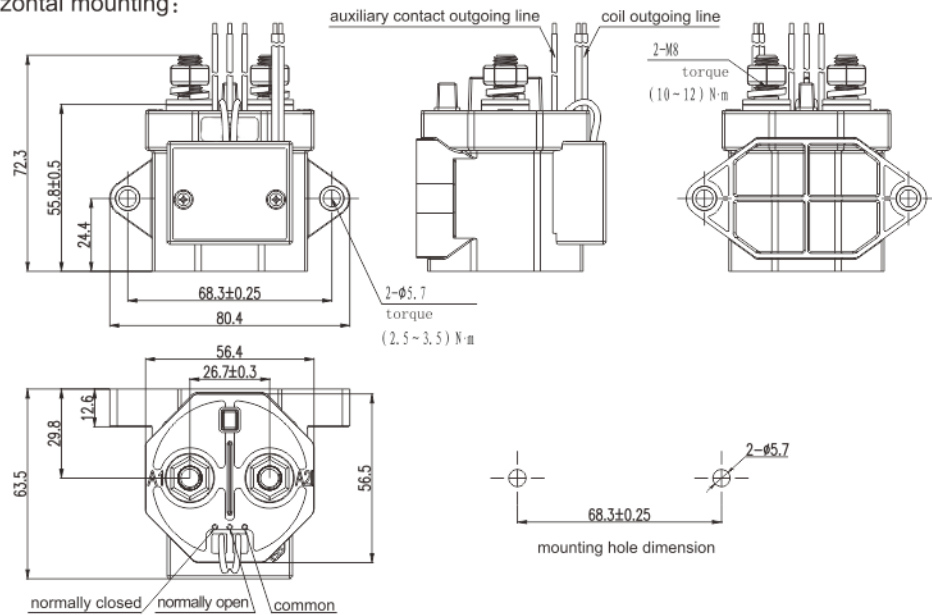
DC Contactor

Unit: mm

Vertical mounting:



Horizontal mounting:



Notes: outgoing line length: 300mm±20mm;
product without tolerance, when≤10mm, tolerance ±0.3mm;
when dimension between (10~50) mm, tolerance ±0.5mm;
when dimension ≥50mm, tolerance ±0.8mm.

DC Contactor



Characteristic

- Strong control load capacity: rated operational voltage 12VDC~1000VDC, rated operational current 400A
- Safe: Fully sealed with epoxy resin, contact and coil will not be oxidized, product performance is not affected by external environment, no arc outbursts, can be worked in explosive and harmful environment
- Reliable: Adopt DC high voltage non - polarity design, the breaking capacity is higher and more reliable, convenient and reliable installation/wiring
- Energy conservation: Using PWM control technology, effectively control the coil power and action characteristics, more energy saving
- ROHS: All components meet the latest EU RoHS environmental requirements

Contact parameter

Main contact	Rated operational current Ie	400A
	Rated operational voltage Ue	12 ~ 1000 VDC
	Min. load	1A12VDC
	Main contact type	1SH (SPST NO DM)
	Nominal resistance of main circuit	MAX 30mV (@100A)
	Main contact mounting	M8 external thread
	Connecting torque	10 ~ 12 N·m
Auxiliary contact	Max. switching current (more than one cycle)	2500A300VDC
	Max. current	30VDC 2A; 125VAC 3A
	Min. current	8VDC 100mA
	Contact resistance	< 0.15Ω

Coil parameter

Rated voltage Us	12/24VDC
Operational voltage Range	9 ~ 36 VDC
Pick up voltage	8 ~ 9 VDC
Release voltage	6 ~ 7 VDC
Coil power	keeping: 3.2W
Inrush current	3.8A (0.1s) (@12v)
Holding current	0.267A@12V; 0.133A@24V
Close time (@Us)	≤45ms
Release time (@Us)	≤10ms
Bounce time (@Us)	≤5ms

Electrical characteristics

Dielectric withstand voltage	DC3110V, AC2200V
Insulation resistance	≥1000MΩ@1000VDC
Nominal insulation voltage Ui	1000V

Environmental characteristics

Shock	Stability test	196m/s ² (20G)
	Strength test	490m/s ² (50G)
Resistance to vibration		10 ~ 2000Hz, 20G
Operating ambient Temperature		-40℃ ~ +85℃
Operating ambient humidity		5% ~ 85% RH
IP grade		IP67 (inner space)
Altitude		≤4000m

Life

Mechanical life	300,000 cycles
Resistive load life (L/R ≤ 1ms)	see next page
Capacitive load life (RC=1ms, only connected)	500A 30,000 cycles

Note: For capacitive load life, When the contactor is used to control the main circuit of charge and discharge, the pre-charge circuit should be added. If there is no pre-charging path, a transient large current will be generated when the contactor closes, which may cause the contactor to stick

Other

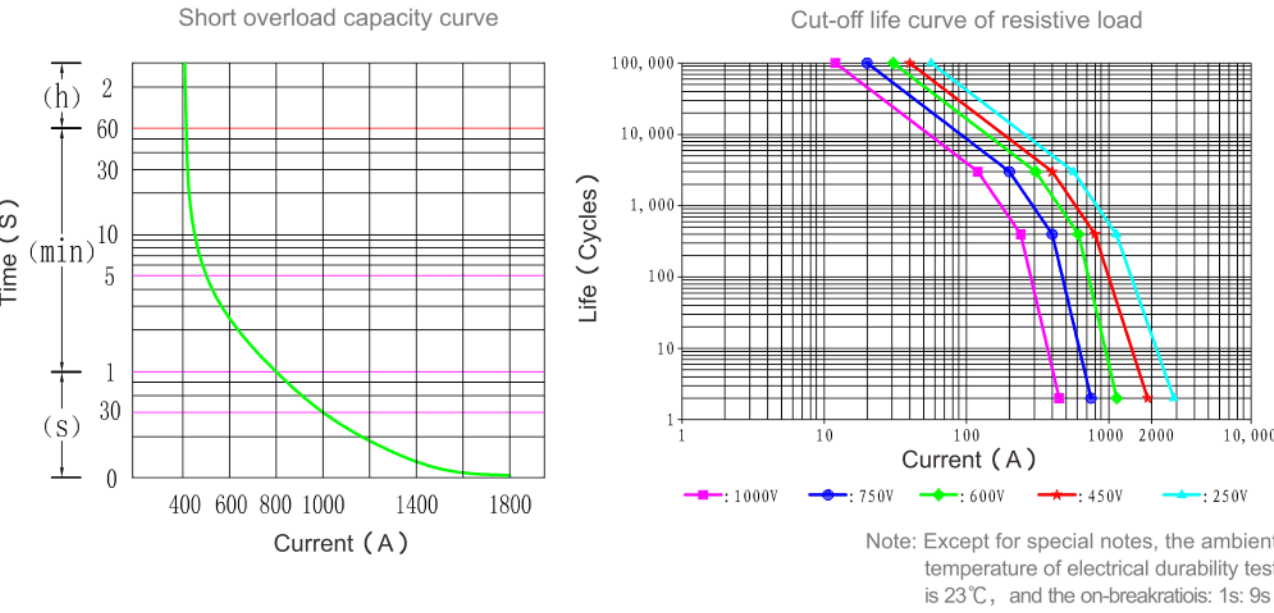
Weight	≈660g; with auxiliary ≈665g
The cross-sectional area of an external conductor	≥120mm ²

Note: The above parameters are normal temperature rating, if other parameters need, manufacturers can customize.

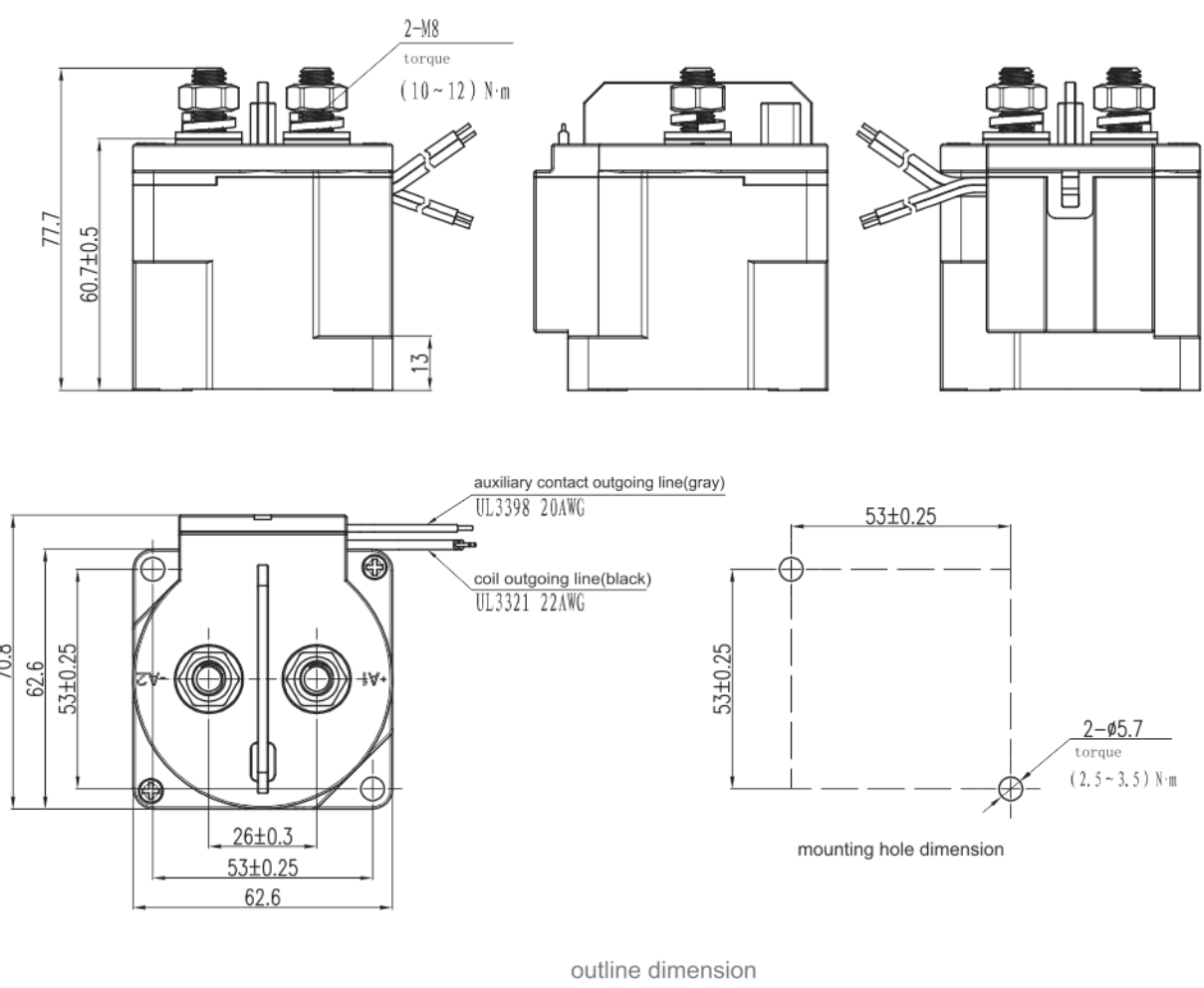
DC Contactor

Ordering

	GDCR	7	-400	B	H	-P	Y	/XXX
DC Contactor								
Design No.								
Rated current		(400; 400A)						
Rated operational voltage		(B: 12VDC~200VDC; Nil: 12VDC~1000VDC)						
Auxiliary contact type		(H: with normally open; C: with normally closed; Z: with convert; Nil: without)						
Coil type		(P: Us=12/24VDC)						
Polarity		(Nil: Contact/Coil has no polarity; Y: contact has polarity/Coil has no polarity)						
Customer No.		(Customized code when customer has special requirements)						



Unit: mm



Notes: outgoing line length: 300mm±20mm;
product without tolerance, when≤10mm, tolerance ±0.3mm;
when dimension between (10~50) mm, tolerance ±0.5mm;
when dimension ≥50mm, tolerance ±0.8mm.

P/N GDCR7-400



Characteristic

- Strong control load capacity: rated operational voltage12VDC~1000VDC, rated operational current 500A.
- Safe: Fully sealed with epoxy resin, contact and coil will not be oxidized, product performance is not affected by external environment, no arc outbursts, can be worked in explosive and harmful environment
- Reliable: Adopt DC high voltage non - polarity design, the breaking capacity is higher and more reliable, convenient and reliable installation/wiring
- Energy conservation: Using PWM control technology, effectively control the coil power and action characteristics, more energy saving
- ROHS: All components meet the latest EU RoHS environmental requirements

Contact parameter

Main contact	Rated operational current Ie	500A
	Rated operational voltage Ue	12 ~ 1000 VDC
	Min. load	1A12VDC
	Main contact type	1SH (SPST NO DM)
	Nominal resistance of main circuit	MAX 30mV (@100A)
	Main contact mounting	M8 external thread
	Connecting torque	10 ~ 12 N·m
	Max. switching current (above one cycle)	2500A300VDC
Auxiliary contact	Max. current	30VDC 2A; 125VAC 3A
	Min. current	8VDC 100mA
	Contact resistance	< 0.15Ω

Electrical characteristics

Dielectric withstand voltage	DC3110V, AC2200V
Insulation resistance	≥1000MΩ@1000VDC
Nominal insulation voltage Ui	1000V

Life

Mechanical life	300,000 cycles
Resistive load life (L/R≤1ms)	see next page
Capacitive load life (RC=1ms, only connected)	600A 30,000 cycles

Note: For capacitive load life, When the contactor is used to control the main circuit of charge and discharge, the pre-charge circuit should be added.If there is no pre-charging path, a transient large current will be generated when the contactor closes, which may cause the contactor to stick

Coil parameter

Rated voltage Us	12/24VDC
Operational voltage Range	9 ~ 36 VDC
Pick up voltage	8 ~ 9 VDC
Release voltage	6 ~ 7 VDC
Coil power	keeping: 3.2W
Inrush current	3.8A (0.1s) (@12v)
Holding current	0.267A@12V; 0.133A@24V
Close time (@Us)	≤45ms
Release time (@Us)	≤10ms
Bounce time (@Us)	≤5ms

Environmental characteristics

Shock	Stability test	196m/s ² (20G)
	Strength test	490m/s ² (50G)
Resistance to vibration		10 ~ 2000Hz, 20G
Operating ambient Temperature		-40℃ ~ +85℃
Operating ambient humidity		5% ~ 85% RH
IP grade		LP 67 (inner space)
Altitude		≤4000m

Other

Weight	≈660g; with auxiliary ≈665g
The cross-sectional area of an external conductor	≥185mm ²

Note: The above parameters are normal temperature rating, if other parameters need, manufacturers can customize.

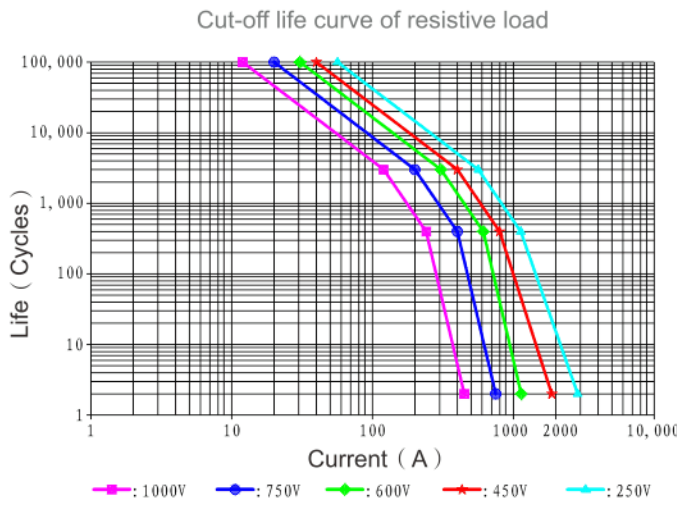
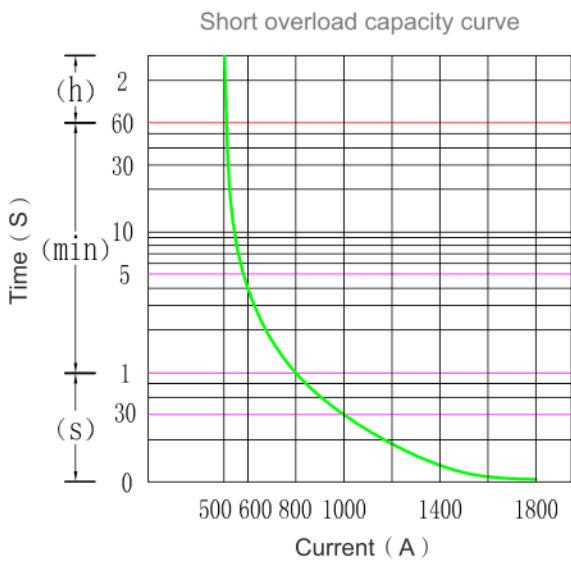
DC Contactor

P/N GDCR7-500



Ordering

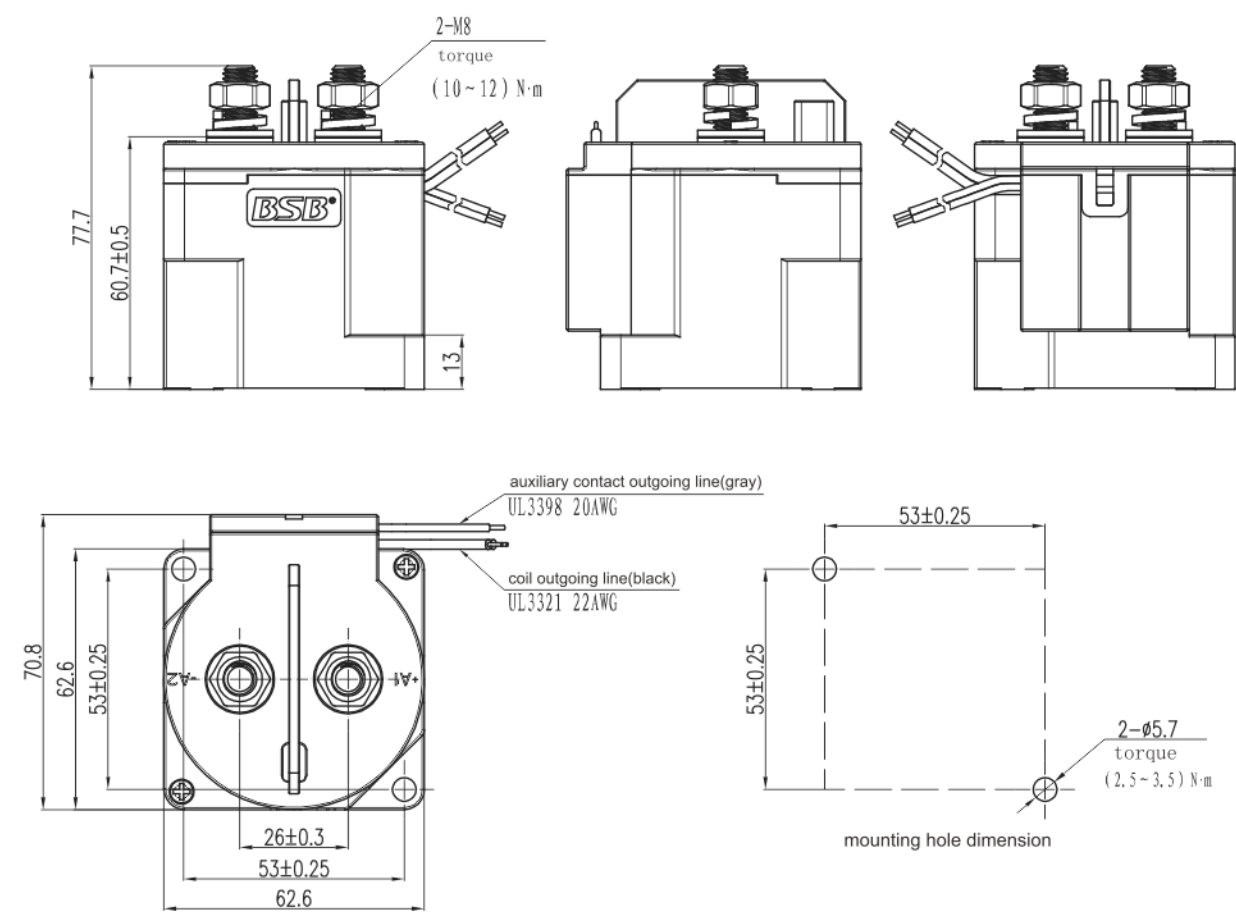
	GDCR	7	-500	B	H	-P	Y	/XXX
DC Contactor								
Design No.								
Rated current		(500; 500A)						
Rated operational voltage		(B: 12VDC~200VDC; Nil: 12VDC~1000VDC)						
Auxiliary contact type		(H: with normally open; C: with normally closed; Z: with convert; Nil: without)						
Coil type		(P: Us=12/24VDC)						
Polarity		(Nil: Contact/Coil has no polarity; Y: contact has polarity/Coil has no polarity)						
Customer No.		(Customized code when customer has special requirements)						



Note: Except for special notes, the ambient temperature of electrical durability test is 23℃, and the on-breakratiois: 1s: 9s;

DC Contactor

Unit: mm



Notes: outgoing line length: 300mm±20mm;
product without tolerance, when≤10mm, tolerance ±0.3mm;
when dimension between (10~50) mm, tolerance ±0.5mm;
when dimension ≥50mm, tolerance ±0.8mm.

DC Contactor

Notice

1. Using spring washers to prevent loose screws when installing contactors.
2. The torque of tightening screws should be within the specified range. Exceeding the maximum torque may lead to product breakage.
3. The main contact and control coil lead polarity requirements, can be customized.
4. The specification products with energy saving boards are equipped with a reverse surge absorption circuit, so there is no need to use surge protector any more. We suggest that the specification products without energy saving boards should be installed with varistors as surge protector, and the use of diodes should be avoided, because this will reduce the cutting ability of the products.
5. Do not use products that have been dropped.
6. Avoid placing the product near a strong magnetic field (near a transformer or magnet) or near an object with thermal radiation.
7. Electrical life
This contactor is a high-voltage dc switch. In its final breakdown mode, it may lose its proper cutting function, so it should not be used beyond its switching capacity and life parameters (please treat this contactor as a product with specified life, and replace it if necessary) . Once the contactor loses its disconnection ability, it may not work properly, so design the circuit diagram to ensure that the power can be cut off within one second.
8. Diffusion life of internal gas
This contactor adopts sealed bin contact, and the bin is filled with gas. The diffusion life of the gas is determined by the temperature in the contact bin (ambient temperature + temperature rise generated by contact electrification) , so the ambient temperature should be -40℃ to +85℃.
9. If the coil and contact of the contactor are continuously passed at the rated voltage (or current) , the power was cut off and switched on immediately. At this time, as the temperature of the coil increases, the resistance of the coil will increase, which will increase the product's closed voltage, may cause excess of rated closed voltage. In this case, the following measures should be taken: Reduce the load current, limit the duration of continuous power or use coil voltage higher than the rated suction voltage.
10. For resistive load, the rated main contact rating shall apply, and for inductive load (L load) with L/R> for 1 millisecond, an inrush current protection device shall be connected to the inductive load in parallel.
11. The drive circuit power of the product coil must be greater than that of the product coil, otherwise the cutting ability of the product will be reduced.
12. Be careful not to let sundries and grease on the main lead out end, and the external wiring terminal should be in reliable contact with the main lead out end of the product, or it may cause the lead out end heat.
13. For the specification products with energy saving plate, after being connected, the coil will start to switch automatically after about 0.1 seconds. Do not repeatedly turn off at that position, which may damage the contactor.

GDCR8 DC Relay

P/N GDCR8-150



Characteristic

- Ceramic brazing sealing technology, to achieve the contact part of airtight packaging, no risk of arc leakage, ensure no fire, no burst
- In the airtight package structure, the hydrogen-dominated gas is filled to effectively prevent the oxidation and burning of contact points, and the contact resistance is low and stable
- 150A 85°C long time current carrying capacity
- In response to abnormal conditions, it can break 10 times of over current
- Insulation resistance up to 1000MΩ (1000VDC) , dielectric withstand voltage meet IEC60664-1 requirement

Contact parameter

Contact type	1H
Contact resistance	≤0.5mΩ (at 20A)
Contact rated current	150A
Max. switching voltage	750VDC
Max. breaking current	1500A (300VDC) , more than 1 cycle
Max. switching power	450V: 67.5kW
	750V: 112.5kW
Current carrying capacity	150A: keeping
	180A: 2h
	225A: 15min
	320A: 2min
	400A: 60s
	600A: 20s
	900A: 8s

Note: Current carrying capacity data is tested at ambient temperature of 85°C, cross section≥50mm², more detail, please see curve.

Coil parameter

Rated voltage VDC	Operational voltage VDC	Release voltage VDC	Coil power W
12	≤9	≥1	6
24	≤18	≥2	6

Note: The operational voltage and release voltage are conservative values in the full temperature range (-40°C ~ +85°C) .

Environmental characteristics

Shock	Stability	196m/s²
	Strength	490m/s²
Vibration		10Hz ~ 500Hz 49m/s²
Humidity		5% ~ 85%RH
Ambient temperature		-40°C ~ +85°C
IP grade		IP67 (contact)

Life

Mechanical endurance		3×10 ⁵ cycles	
		450V	750V
Electricity endurance	Capacitive load	connect: 2.5×10 ⁴ (22.5VDC, τ=1ms)	connect: 2×10 ⁴ (37.5VDC, τ=1ms)
		impact 400A, keep 150A	impact 400A, keep 150A
	Resistive load	switch: 3×10 ³ cycles (450VDC, 150A)	switch: 500 cycles (750VDC, 150A)
		switch: 500 cycles (450VDC, -150A)	switch: 100 cycles (750VDC, -150A)
breaking capacity: 1 cycle (300VDC, 1500A)		breaking capacity: 1 cycle (300VDC, 1500A)	

Note 1 : Except for special notes, the ambient temperature of electrical durability test is 23°C and the on-break ratio is 0.6s:5.4s.
Note 2 : When the relay is used to control the main circuit of charge and discharge, the pre-charge circuit should be added. If there is no pre-charging path, a transient large current will be generated when the relay closes, which may cause the relay to stick.

Electrical characteristics

Insulation resistance		1000MΩ (1000VDC)
Dielectric withstand voltage	between contact and coil	4000VAC 1min
	between open contacts	3000VAC 1min
Operate time (at nomi. volt.)		≤30ms
Release time (at nomi. volt.)		≤10ms

Note: The data shown above are initial values.

Other

Terminal	M6 internal thread
Mounting torque at load end	M6 5~6N · m
Relay mounting torque	M5 3~4N · m
Weight	≈350g
Outline dimension	76.5mm×39.0mm×70.0mm

DC Relay

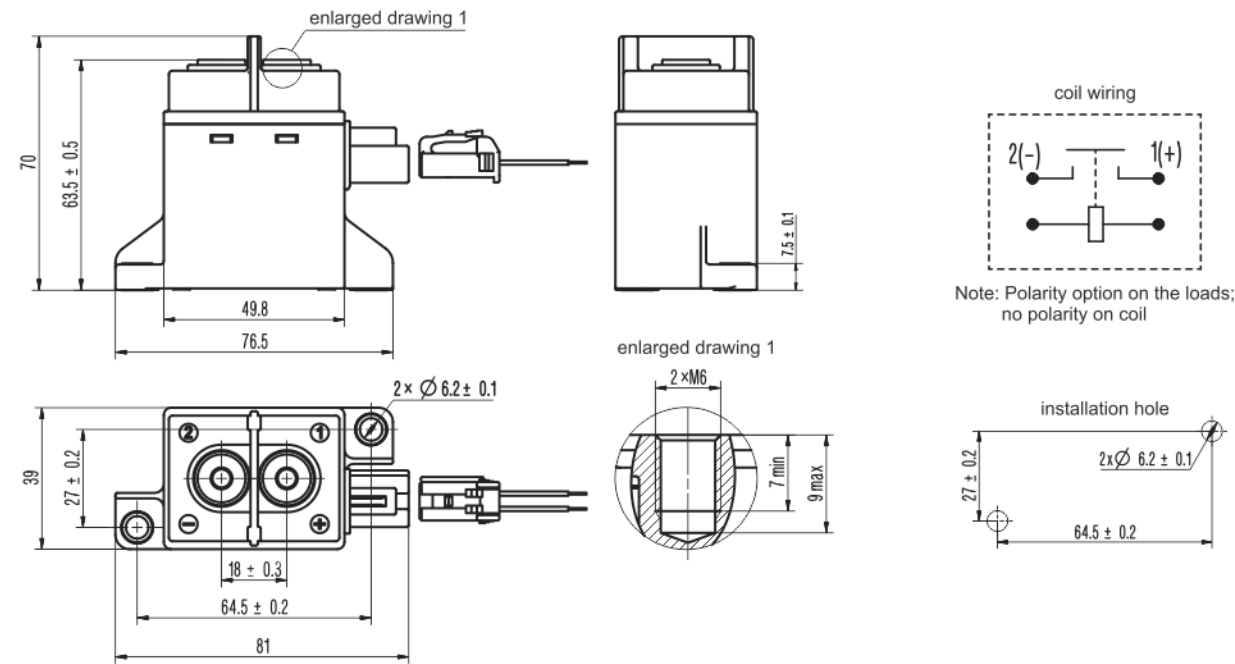
Ordering

		GDCR8	V	-150	/750	-12	-H	C	5	W	XXX
Application	V: EV										
Load current	150:150A										
Load voltage	Nil: 450VDC 750:750VDC										
Coil voltage	12: 12VDC 24: 24VDC										
Contact type	H: With normally open										
Coil input terminal	C: Connector										
Load input terminal	5: internal thread										
Mounting type	Nil: Vertical mounting W: Horizontal mounting										
Customer No.	XXX: Customer requirement Nil: Standard										

Note: The customer special requirement express as customer No. after evaluating between each party.

Outline, coil wiring , installation hole

Unit: mm

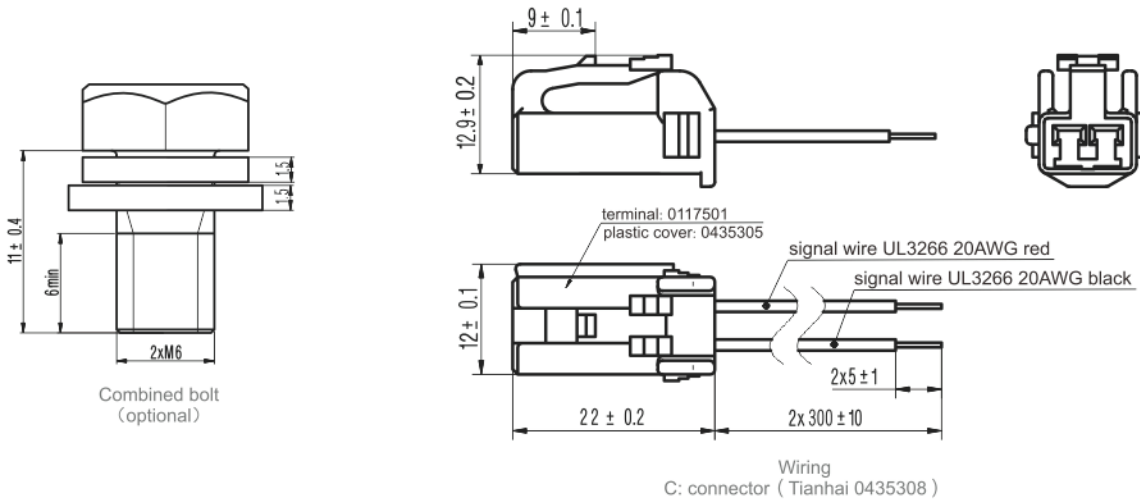


Remark: In case of no tolerance shown in outline dimension: outline dimensions≤10mm, tolerance should be ±0.3mm; outline dimension is between (10~50) mm, tolerance should be ±0.5mm; outline dimension ≥50mm, tolerance should be ±0.8mm.

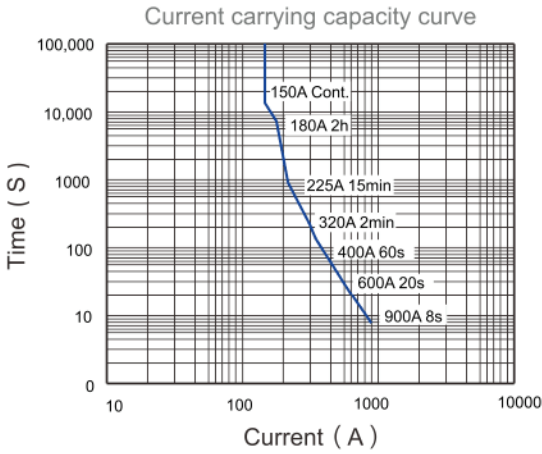
DC Relay

Combined bolt, connector

Unit: mm



Characteristic curve



Note: The data above is measured at the environment 85°C, with cross section area of wire≥50mm². The data is only for reference and please do not use it for fuse selection.

Cautions

1. In case of loosening, please use washer when install the relay with M5 screw, and the torque within 3N·m~4N·m; the torque of fixing screw at terminals shall be within 5N·m~6N·m. The torque beyond the range may cause damage.

Installation for terminal with load				Relay installation	
Installation way	Torque	Hole diameter of copper bar	Thickness of copper bar	Installation way	Torque
M6 bolt	5N·m~6N·m	Ø6~Ø6.5	2mm~3mm	M5 bolt	3N·m~4N·m

2. Please do not adhere foreign materials like oil on the terminals and please use the wire with cross section area 50mm² min, otherwise the terminal parts may have abnormal heating.
3. Cautions of relay installation: when use M5 screw, the thickness and strength of the washer needs to be guaranteed or it may deform and burst the cover.

DC Relay



Characteristic

- Ceramic brazing sealing technology, to achieve the contact part of airtight packaging, no risk of arc leakage, ensure no fire, no burst
- In the airtight package structure, the hydrogen-dominated gas is filled to effectively prevent the oxidation and burning of contact points, and the contact resistance is low and stable
- 200A 85°C long time current carrying capacity
- In response to abnormal conditions, it can break 10 times of over current
- Insulation resistance up to 1000MΩ (1000VDC) , dielectric withstand voltage meet IEC60664-1 requirement

Contact parameter

contact type	1H
Contact resistance	≤0.5mΩ (at 20A)
Contact rated current	200A
Max. switching voltage	750VDC
Max. breaking current	2000A (300VDC) , more than 1 cycle
Max. switching power	450V: 90kW
	750V: 150kW
Current carrying capacity	200A: keeping
	250A: 15min
	320A: 5min
	600A: 30s
	900A: 10s

Note: Current carrying capacity data is tested at ambient temperature of 85°C, cross section≥60mm², more detail, please see curve.

Coil parameter

Rated voltage VDC	Operational voltage VDC	Release voltage VDC	Coil power W
12	≤9	≥1	6
24	≤18	≥2	6

Note: The operational voltage and release voltage are conservative values in the full temperature range (-40°C ~ +85°C) .

Environmental characteristics

Shock	Stability	196m/s²
	Strength	490m/s²
Vibration		10Hz ~ 500Hz 49m/s²
Humidity		5% ~ 85%RH
Ambient temperature		-40°C ~ +85°C
IP grade		IP67 (contact)

Life

Mechanical endurance		2×10 ⁵ ops	
		450V	750V
Electricity endurance	Capacitive load	connect: 2×10 ⁴ (22.5VDC, τ=1ms) impact 400A, keep 200A	connect: 2×10 ⁴ (37.5VDC, τ=1ms) impact 400A, keep 200A
		switch: 1×10 ³ ops (450VDC, 200A)	switch: 500 ops (750VDC, 200A)
	Resistive load	switch: 500 ops (450VDC, -200A)	switch: 100 ops (750VDC, -200A)
		breaking capacity: 1 ops (300VDC, 2000A)	breaking capacity: 1 ops (300VDC, 2000A)

Note 1: Except for special notes, the ambient temperature of electrical durability test is 23°C and the on-break ratio is 0.6s:5.4s.
Note 2: When the relay is used to control the main circuit of charge and discharge, the pre-charge circuit should be added. If there is no pre-charging path, a transient large current will be generated when the relay closes, which may cause the relay to stick.

Electrical characteristics

Insulation resistance		1000MΩ (1000VDC)
Dielectric withstand voltage	between contact and coil	4000VAC 1min
	between open contacts	3000VAC 1min
Operate time (at nomi. volt.)		≤30ms
Release time (at nomi. volt.)		≤10ms

Note: The data shown above are initial values.

Other

Terminal	M6 internal thread
Mounting torque at load end	M6 5~6N · m
Relay mounting torque	M5 3~4N · m
Weight	≈350g
Outline dimension	76.5mm×39.0mm×70.0mm

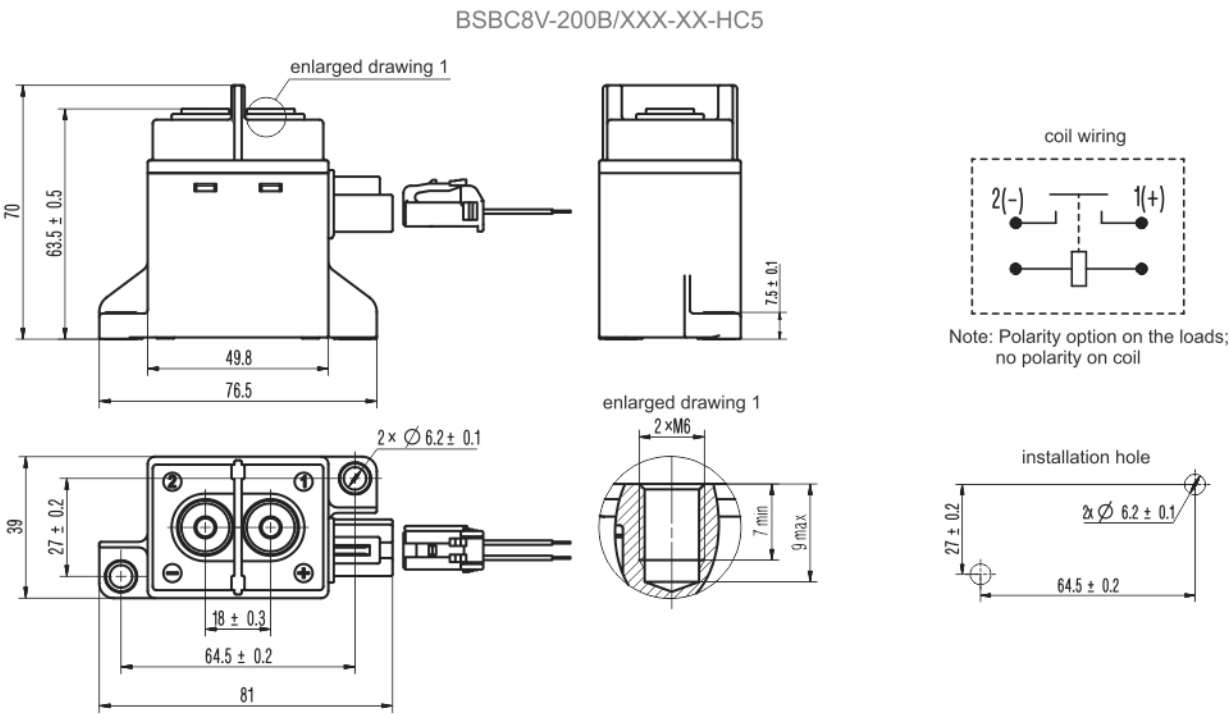
Ordering

	GDCR8	V	-200	B	/750	-12	-H	C	5	W	XXX
Application	V: EV										
Load current	200:200A										
Series	B: B Series										
Load voltage	Nil: 450VDC 750: 750VDC										
Coil voltage	12: 12VDC 24: 24VDC										
Contact type	H: With normally open										
Coil input terminal	C: Connector										
Load input terminal	5: Internal thread										
Mounting type	Nil: Vertical mounting W: Horizontal mounting										
Customer No.	XXX: Customer requirement Nil: Standard										

Note: The customer special requirement express as customer No. after evaluating between each party.

Outline, coil wiring , installation hole

Unit: mm



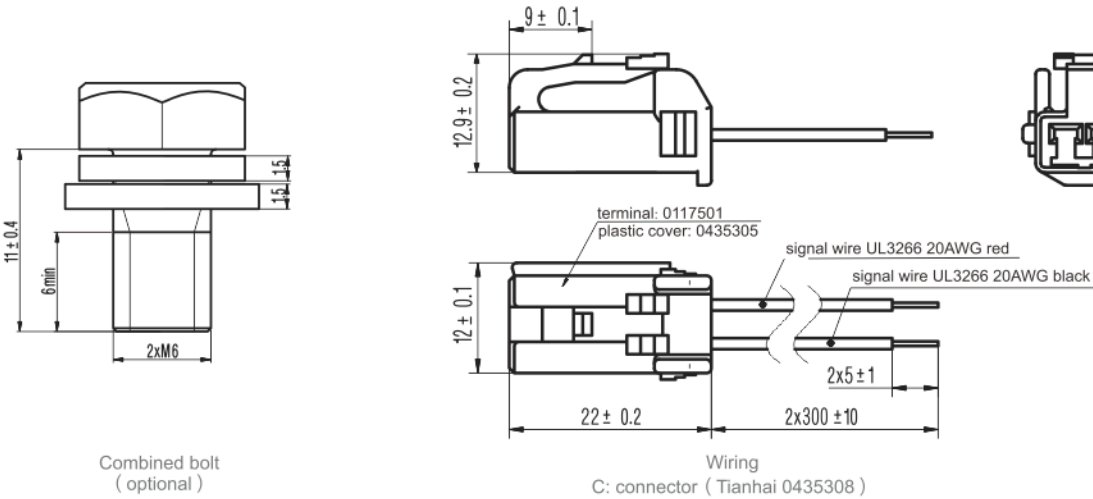
Remark: In case of no tolerance shown in outline dimension: outline dimensions≤10mm, tolerance should be ±0.3mm; outline dimension is between (10~50) mm, tolerance should be ±0.5mm; outline dimension ≥50mm, tolerance should be ±0.8mm.

P/N GDCR8-200B

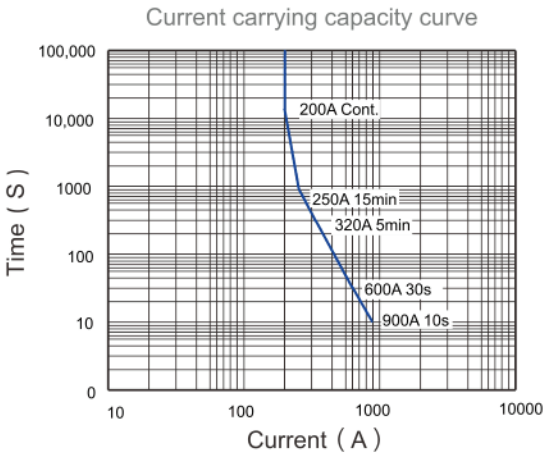


Combined bolt, connector

Unit: mm



Characteristic curve



Note: The data above is measured at the environment 85°C, with cross section area of wire ≥60mm². The data is only for reference and please do not use it for fuse selection.

Cautions

1. In case of loosening, please use washer when install the relay with M5 screw, and the torque within 3N · m~4N · m; The torque of fixing screw at terminals shall be within 5N·m~6N·m. The torque beyond the range may cause damage.

Installation for terminal with load				Relay installation	
Installation way	Torque	Hole diameter of copper bar	Thickness of copper bar	Installation way	Torque
M6 bolt	5N · m~6N · m	∅6~∅6.5	2mm~3mm	M5 bolt	3N · m~4N · m

2. Please do not adhere foreign materials like oil on the terminals and please use the wire with cross section area 60mm² min, otherwise the terminal parts may have abnormal heating.
3. Cautions of relay installation: when use M5 screw, the thickness and strength of the washer needs to be guaranteed or it may deform and burst the cover.

DC Relay

P/N GDCR8-200



Characteristic

- Ceramic brazing sealing technology, to achieve the contact part of airtight packaging, no risk of arc leakage, ensure no fire, no burst
- In the airtight package structure, the hydrogen-dominated gas is filled to effectively prevent the oxidation and burning of contact points, and the contact resistance is low and stable
- 200A 85°C long time current carrying capacity
- In response to abnormal conditions, it can break 10 times of over current
- Insulation resistance up to 1000MΩ (1000VDC) , dielectric withstand voltage meet IEC60664-1 requirement

Contact parameter

Contact type	1H
Contact resistance	≤0.3mΩ (at 20A)
Contact rated current	200A
Max. switching voltage	750VDC
Max. breaking current	2000A (450VDC) ,more than 1 cycle
Max. switching power	450V: 90kW 750V: 150kW
Current carrying capacity	200A: keeping
	300A: 15min
	400A: 240s
	800A: 30s
	2000A: 0.6s

Note: Current carrying capacity data is tested at ambient temperature of 85°C, cross section ≥60mm², more detail, please see curve.

Coil parameter

Rated voltage VDC	Operational voltage VDC	Release voltage VDC	Coil power W
12	≤9	≥1	6
24	≤18	≥2	6

Note: The operational voltage and release voltage are conservative values in the normal temperature.

Environmental characteristics

Shock	Stability	switch off: 98m/s², switch on: 196m/s²
	Strength	490m/s²
Vibration		10Hz ~ 500Hz 49m/s²
Humidity		5% ~ 85%RH
Ambient temperature		-40°C ~ +85°C
IP grade		IP67 (contact)

Life

Mechanical endurance		2×10⁵ ops	
		450V	750V
Electricity endurance	Capacitive load	connect: 2.5×10⁴ (22.5VDC, τ=1ms) impact 400A, keep 200A	connect: 2.5×10⁴ (37.5VDC, τ=1ms) impact 400A, keep 200A
		switch: 3×10³ ops (450VDC,200A)	switch: 500 ops (750VDC,200A)
	Resistive load	switch: 100 ops (450VDC,-200A)	switch: 10 ops (750VDC,-200A)
		breaking capacity: 1 ops (450VDC,2000A)	breaking capacity: 1 ops (450VDC,2000A)

Note 1: Except for special notes, the ambient temperature of electrical durability test is 23°C and the on-break ratio is 0.6s:5.4s.
Note 2: When the relay is used to control the main circuit of charge and discharge, the pre-charge circuit should be added. If there is no pre-charging path, a transient large current will be generated when the relay closes, which may cause the relay to stick.

Electrical characteristics

Insulation resistance		1000MΩ (1000VDC)
Dielectric withstand voltage	between contact and coil	4000VAC 1min
	between open contacts	3000VAC 1min
Operate time (at nomi. volt.)		≤50ms
Release time (at nomi. volt.)		≤30ms

Note: The data shown above are initial values.

Other

Terminal	M6 internal thread
Mounting torque at load end	M6 9~11N · m
Relay mounting torque	M5 3~4N · m
Weight	≈570g
Outline dimension	95.0mm×45.0mm×85.0mm

DC Relay

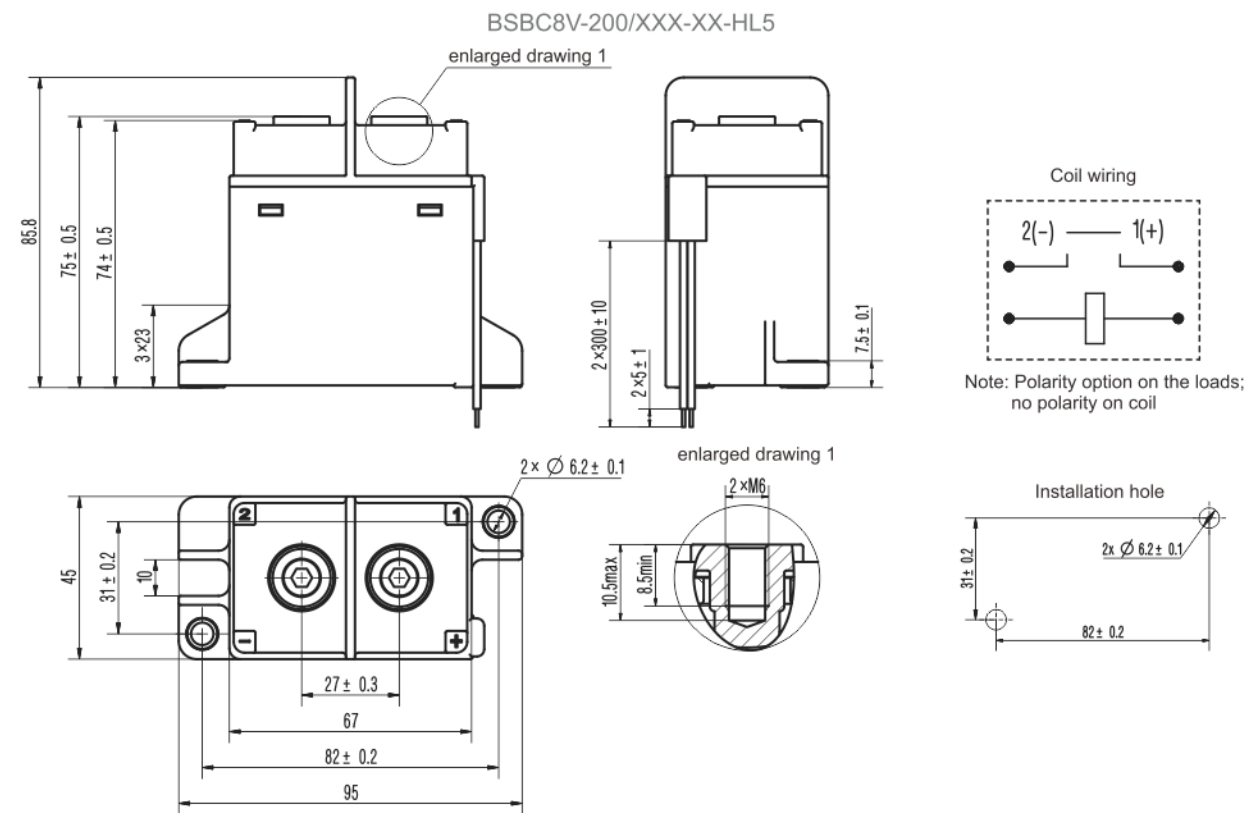
Ordering

		GDCR8	V	-200	/750	-12	-H	L	5	W	XXX
Application	V: EV										
Load current	200:200A										
Load voltage	Nil: 450VDC 750: 750VDC										
Coil voltage	12: 12VDC 24: 24VDC										
Contact type	H: With normally open										
Coil input terminal	L: Input wire; B: Input wire +connector										
Load input terminal	5: Internal thread										
Mounting type	Nil: Vertical mounting W: Horizontal mounting										
Customer No.	XXX: Customer requirement Nil: Standard										

Note: The customer special requirement express as customer No. after evaluating between each party.

Outline, coil wiring , installation hole

Unit: mm

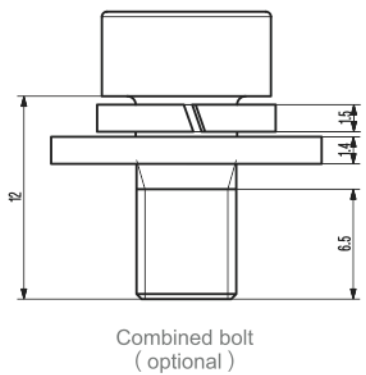


Remark: In case of no tolerance shown in outline dimension: outline dimension≤10mm, tolerance should be±0.3mm; outline dimension is between (10~50) mm, tolerance should be±0.5mm; outline dimension≥50mm, tolerance should be±0.8mm.

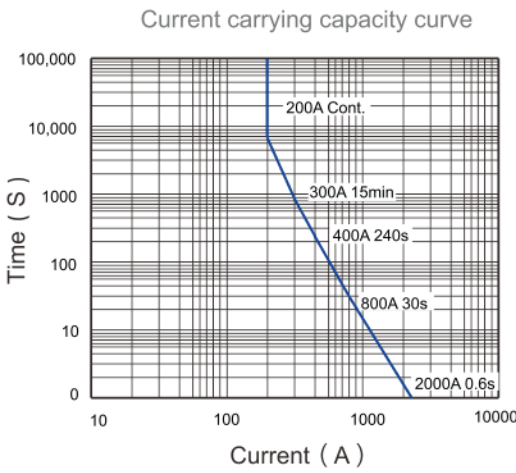
DC Relay

Combined bolt

Unit: mm



Characteristic curve



Note: The data above is measured at the environment 85℃, with cross section area of wire≥60mm². The data is only for reference and please do not use it for fuse selection.

Cautions

- In case of loosening, please use washer when install the relay with M5 screw, and the torque within3N · m~4N · m. The torque of fixing screw at terminals shall be within 9N · m~11N · m. The torque beyond the range may cause damage.
- Please do not adhere foreign materials like oil on the terminals and please use the wire with cross section area 60mm² min, otherwise the terminal parts may have abnormal heating.
- Cautions of relay installation: when use M5 screw, the thickness and strength of the washer needs to be guaranteed or it may deform and burst the cover.

DC Relay

P/N GDCR8-250



Characteristic

- Ceramic brazing sealing technology, to achieve the contact part of airtight packaging, no risk of arc leakage, ensure no fire, no burst
- In the airtight package structure, the hydrogen-dominated gas is filled to effectively prevent the oxidation and burning of contact points, and the contact resistance is low and stable
- 250A 85°C long time current carrying capacity
- In response to abnormal conditions, it can break 10 times of over current
- Insulation resistance up to 1000MΩ (1000VDC) , dielectric withstand voltage meet IEC60664-1 requirement

Contact parameter

Contact type	1H
Contact resistance	≤0.3mΩ (at 20A)
Contact rated current	250A
Max. switching voltage	750VDC
Max. breaking current	2000A (450VDC) , more than 1 cycle
Max. switching power	450V: 112.5kW 750V: 187.5kW
Current carrying capacity	250A: keep
	375A: 10min
	500A: 120s
	1000A: 30s
	2500A: 0.6s

Note: Current carrying capacity data is tested at ambient temperature of 85°C, cross section≥100mm², more detail, please see curve.

Coil parameter

Rated voltage VDC	Operational voltage VDC	Release voltage VDC	Coil power W
12	≤9	≥1	6
24	≤18	≥2	6

Note: The operational voltage and release voltage are conservative values in the normal temperature.

Environmental characteristics

Shock	Stability	switch off: 98m/s² switch on: 196m/s²
	Strength	490m/s²
Vibration		10Hz ~ 500Hz 49m/s²
Humidity		5% ~ 85%RH
Ambient temperature		-40℃ ~ +85℃
IP grade		IP67 (contact)

Life

Mechanical endurance		2×10 ⁵ ops	
		450V	750V
Electricity endurance	Capacitive load	connect: 2.5×10 ⁴ ops (22.5VDC, τ=1ms) impact 400A, keep 250A	connect: 2.5×10 ⁴ ops (37.5VDC, τ=1ms) impact 400A, keep 250A
		switch: 3×10 ³ ops (450VDC, 250A)	switch: 500 ops (750VDC, 250A)
	Resistive load	switch: 100 ops (450VDC, -250A)	switch: 10 ops (750VDC, -250A)
		breaking capacity: 1 ops (450VDC, 2000A)	breaking capacity: 1 ops (450VDC, 2000A)

Note 1: Except for special notes, the ambient temperature of electrical durability test is 23°C and the on-break ratio is 0.6s:5.4s.
Note 2: When the relay is used to control the main circuit of charge and discharge, the pre-charge circuit should be added. If there is no pre-charging path, a transient large current will be generated when the relay closes, which may cause the relay to stick.

Electrical characteristics

Insulation resistance		1000MΩ (1000VDC)
Dielectric withstand voltage	between contact and coil	4000VAC 1min
	between open contacts	3000VAC 1min
Operate time (at nomi. volt.)		≤50ms
Release time (at nomi. volt.)		≤30ms

Note: The data shown above are initial values.

Other

Terminal	M6 internal thread
Mounting torque at load end	M6 9~11N · m
Relay mounting torque	M5 3~4N · m
Weight	≈570g
Outline dimension	95.0mm×45.0mm×85.0mm

DC Relay

P/N GDCR8-250



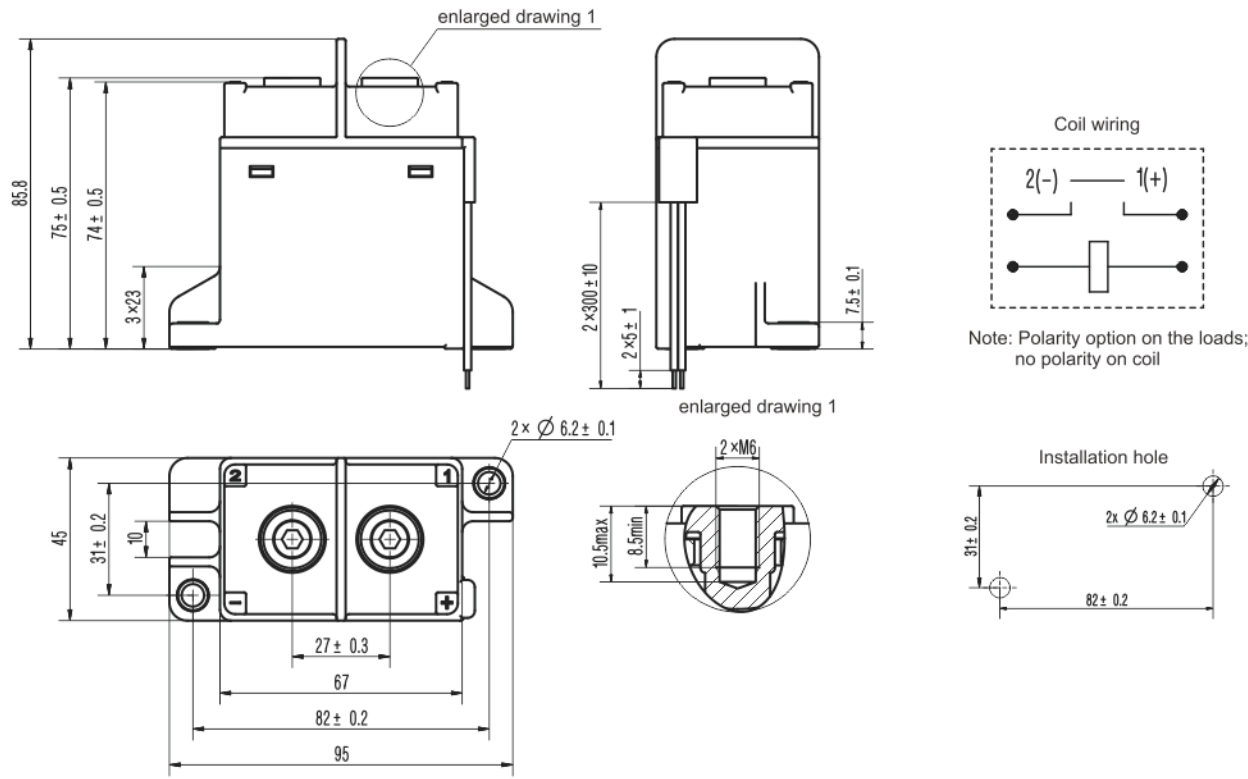
Ordering

	GDCR8 V	-250	/750	-12	-H	L	5	W	XXX
Application	V: EV								
Load current	250:250A								
Load voltage	Nil: 450VDC 750: 750VDC								
Coil voltage	12: 12VDC 24: 24VDC								
Contact type	H: With normally open								
Coil input terminal	L: Input wire, B: Input wire +connector								
Load input terminal	5: Internal thread								
Mounting type	Nil: Vertical mounting W: Horizontal mounting								
Customer No.	XXX: Customer requirement Nil: Standard								

Note: The customer special requirement express as customer No. after evaluating between each party.

Outline, coil wiring , installation hole

Unit: mm

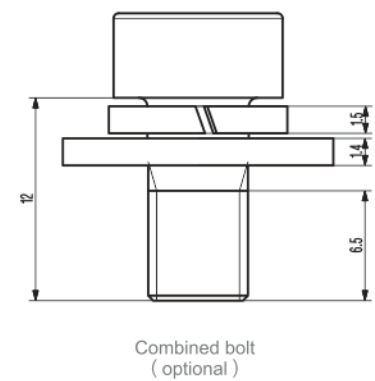


Remark: In case of no tolerance shown in outline dimension: outline dimensions≤10mm, tolerance should be±0.3mm; outline dimension is between (10 ~ 50) mm, tolerance should be ±0.5mm, outline dimension≥50mm, tolerance should be±0.8mm.

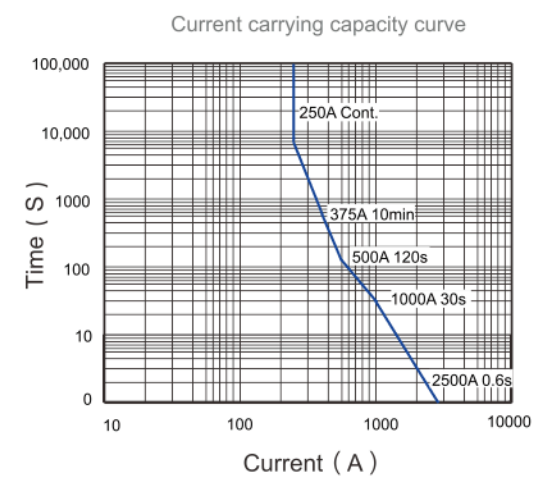
DC Relay

Combined bolt

Unit: mm



Characteristic curve



Note: The data above is measured at the environment 85℃, with cross section area of wire≥100mm². The data is only for reference and please do not use it for fuse selection.

Cautions

1. In case of loosening, please use washer when install the relay with M5 screw, and the torque within 3N·m~4N·m, The torque of fixing screw at terminals shall be within 9N·m~11N·m. The torque beyond the range may cause damage.

Installation for terminal with load				Relay installation	
Installation way	Torque	Hole diameter of copper bar	Thickness of copper bar	Installation way	Torque
M6 bolt	9N·m~11N·m	∅6~∅6.5	2mm~3mm	M5 bolt	3N·m~4N·m

2. Please do not adhere foreign materials like oil on the terminals and please use the wire with cross section area 100mm² min, otherwise the terminal parts may have abnormal heating.
3. Cautions of relay installation: when use M5 screw, the thickness and strength of the washer needs to be guaranteed or it may deform and burst the cover.

P/N GDCR9-20



Characteristic

- EV precharge relay
- 20A 85°C long time current carrying capacity
- Electrical safety meets IEC 60664-1 requirements
- Small size

Contact parameter

Contact type	1H
Contact resistance	≤10mΩ (at 1A)
Contact rated current	20A
Max. switching voltage	450VDC
Max. breaking current	30A (450VDC) ,more than 1 cycle
Max. switching power	9kW
Current carrying capacity	20A: keep
	30A: 1h
	40A: 20min
	80A: 30s
	120A: 10s
	200A: 0.6s

Note: Current carrying capacity data is tested at ambient temperature of 85°C, cross section≥4mm², more detail, please see curve.

Coil parameter

Rated voltage VDC	Operational voltage VDC	Release voltage VDC	Coil power W
12	≤9	≥1	3
24	≤18	≥2	3

Note: The operational voltage and release voltage are conservative values in the full temperature range (-40℃ ~ +85℃) .

Environmental characteristics

Shock	Stability	196m/s²
	Strength	490m/s²
Vibration		10Hz ~ 500Hz 49m/s²
Humidity		5%~85%RH
Ambient temperature		-40℃ ~ +85℃

Life

Mechanical endurance	2×10⁵ ops	
Electricity endurance	Resistive load	connect: 7.5×10⁴ ops (450VDC,20A)
		connect: 7.5×10⁴ ops (750VDC,6A)
		connect: 3×10³ ops (450VDC,20A)
		connect: 1×10⁴ ops (450VDC,10A)

Note 1: Except for special notes, the ambient temperature of electrical durability test is 23°C and the on-break ratio is 0.6s:5.4s.

Electrical characteristics

Insulation resistance		1000MΩ (500VDC)
Dielectric withstand voltage	between contact and coil	3000VAC 1min
	between open contacts	2500VAC 1min
Operate time (at nomi. volt.)		≤30ms
Release time (at nomi. volt.)		≤10ms

Note: The data shown above are initial values.

Other

Terminal	QC (ISO) 、PCB
Weight	≈50g
Outline dimension	30.0mm×30.0mm×29.2mm

DC Relay

P/N GDCR9-20



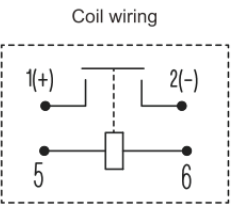
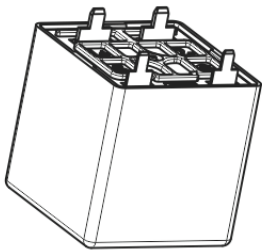
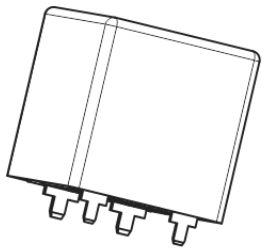
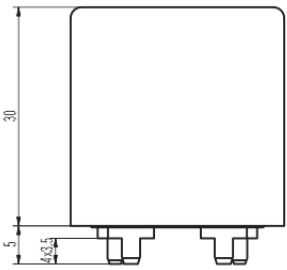
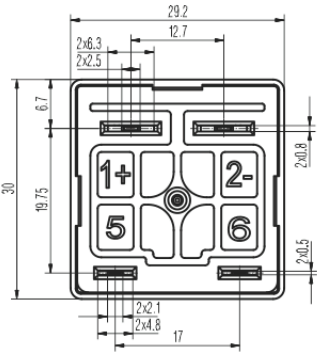
Ordering

GDCR9 V -20 /450 -12 -H T P 2 A XXX	
Application	V: EV
Load current	20: 20A
Load voltage	450: 450VDC
Coil voltage	12: 12VDC 24: 24VDC
Contact type	H: With normally open
Raw material of contact	T: Silver alloy
Coil input terminal	P: PCB Q: QC
Load iinput terminal	Nil: PCB 2: QC
Installing hole	Nil: without installing hole A: with installing hole
Customer No.	XXX: Customer requirement Nil: Standard

Note: The customer special requirement express as customer No. after evaluating between each party.

Outline, coil wiring , installation hole

Unit: mm



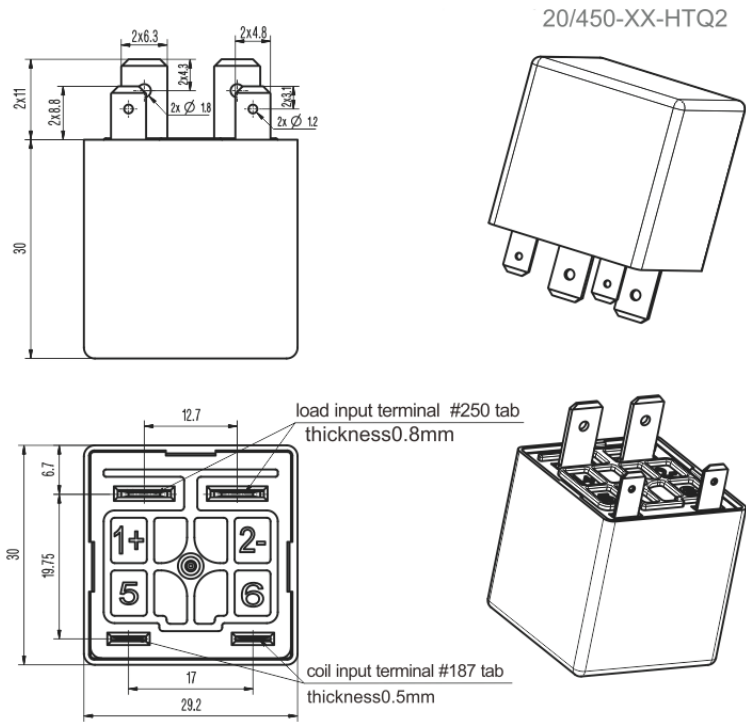
DC Relay

P/N GDCR9-20

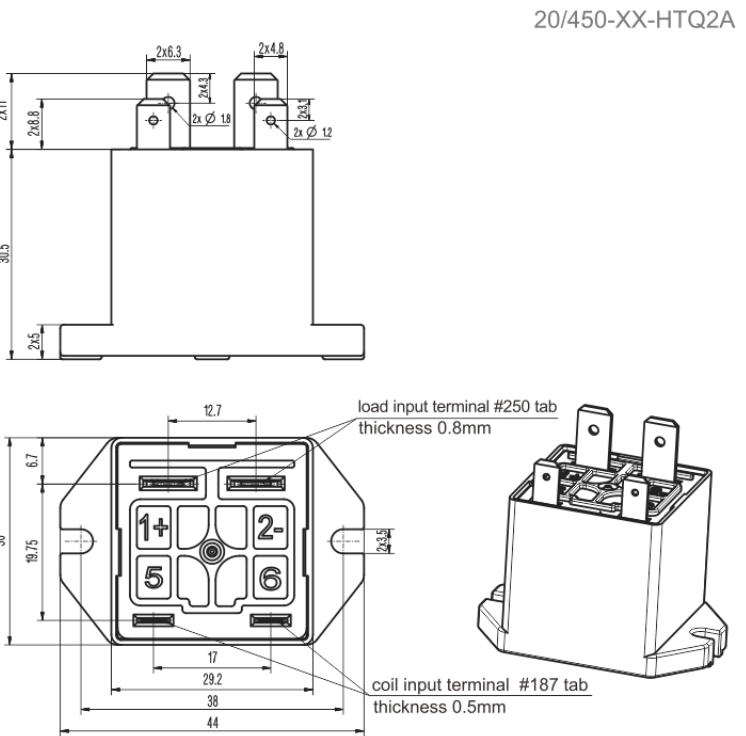
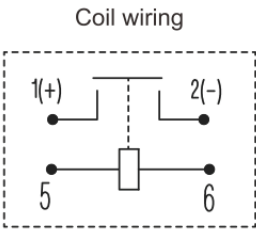


Outline, coil wiring , installation hole

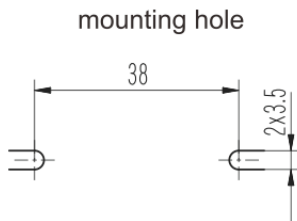
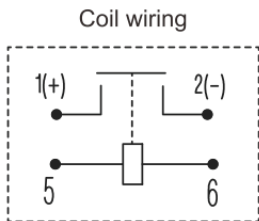
Unit: mm



20/450-XX-HTQ2



20/450-XX-HTQ2A



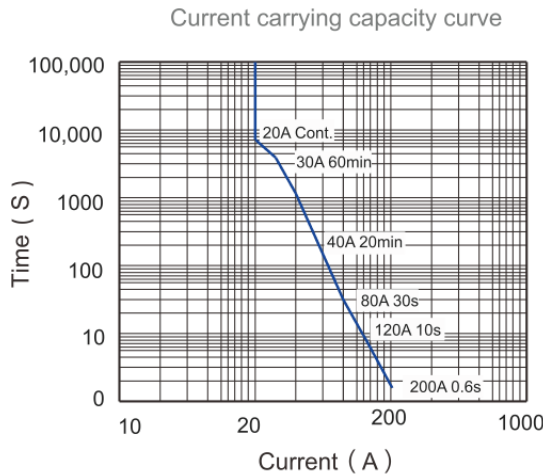
Remark: In case of no tolerance shown in outline dimension: outline dimensions≤10mm, tolerance should be ±0.3mm; outline dimension between (10~50) mm, tolerance should be ±0.5mm; when outline dimension≥50mm, tolerance should be ±0.8mm.

DC Relay

P/N GDCR9-20



Characteristic curve



Note: The data above is measured at the environment 85℃, with cross section area of wire≥4mm². The data is only for reference and please do not use it for fuse selection.

Cautions

1. In case of loosening, please use washer when install the relay. Use M3 bolt for HTQ2A, the torque within 1.4N · m ~ 2.2N · m; Insertion and Extraction Force of input terminal are : (1) load terminal: 49N, (2) coil terminal : 49N. The torque beyond the range may cause damage.
2. When install HTP, the data of welding PCB board: manual welding (380±20) ℃, time is (3 ~ 5) s, wave-welding (260±5) ℃, time is (3 ~ 5) s.
3. Please do not adhere foreign materials like oil on the terminals and please use the wire with cross section area 4mm² min, otherwise the terminal parts may have abnormal heating.

DC Relay

P/N GDCR9-20



Characteristic

- EV precharge relay
- 40A 85°C long time current carrying capacity
- Electrical safety meets IEC 60664-1 requirements
- Small size

Contact parameter

Contact type	1H
Contact resistance	≤10mΩ (at 1A)
Contact rated current	40A
Max. switching voltage	450VDC
Max. breaking current	50A(450VDC) ,more than 1 cycle
Max. switching power	22.5kW
Current carrying capacity	40A: keep
	60A: 1h
	80A: 20min
	160A: 30s
	240A: 10s
	400A: 0.6s

Note: Current carrying capacity data is tested at ambient temperature of 85°C, cross section≥10mm², more detail, please see curve.

Coil parameter

Rated voltage VDC	Operational voltage VDC	Release voltage VDC	Coil power W
12	≤9	≥1	3
24	≤18	≥2	3

Note: The operational voltage and release voltage are conservative values in the full temperature range (-40℃ ~ +85℃) .

Environmental characteristics

Shock	Stability	196m/s²
	Strength	490m/s²
Vibration		10Hz ~ 500Hz 49m/s²
Humidity		5%~85%RH
Ambient temperature		-40℃ ~ +85℃

Life

Mechanical endurance	2×10 ⁶ ops	
Electricity endurance	Resistive load	connect: 7.5×10 ⁴ ops (450VDC,35A)
		connect: 1×10 ³ ops (450VDC,40A)
		connect: 1×10 ⁴ ops (450VDC,10A)

Note 1: Except for special notes, the ambient temperature of electrical durability test is 23°C and the on-break ratio is 0.6s:5.4s.

Electrical characteristics

Insulation resistance		1000MΩ (500VDC)
Dielectric withstand voltage	between contact and coil	3000VAC 1min
	between open contacts	2000VAC 1min
Operate time (at nomi. volt.)		≤30ms
Release time (at nomi. volt.)		≤10ms

Note: The data shown above are initial values.

Other

Terminal	QC (ISO) 、PCB
Weight	≈50g
Outline dimension	30.0mm×30.0mm×29.2mm

DC Relay

P/N GDCR9-20



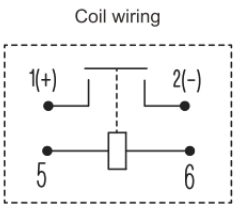
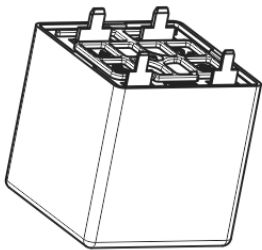
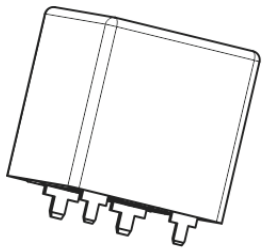
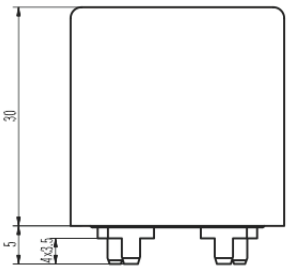
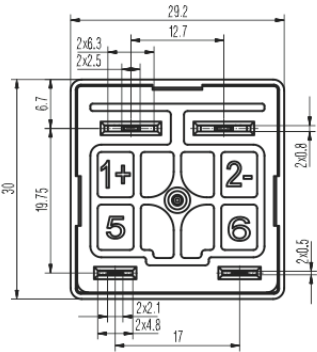
Ordering

GDCR9 V		40	/450	-12	-H	T	P	2	A	XXX
Application	V: EV									
Load current	20: 20A									
Load voltage	450: 450VDC									
Coil voltage	12: 12VDC 24: 24VDC									
Contact type	H: With normally open									
Raw material of contact	T: Silver alloy									
Coil input terminal	P: PCB Q: QC									
Load input terminal	Nil: PCB 2: QC									
Installing hole	Nil: without installing hole A: with installing hole									
Customer No.	XXX: Customer requirement Nil: Standard									

Note: The customer special requirement express as customer No. after evaluating between each party.

Outline, coil wiring , installation hole

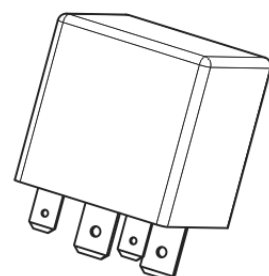
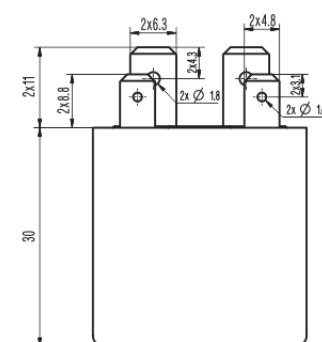
Unit: mm



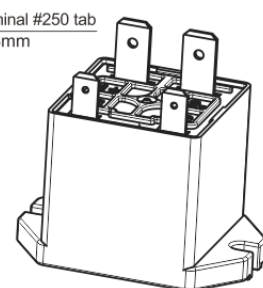
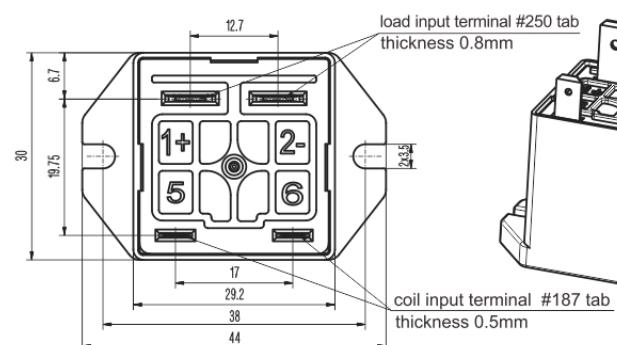
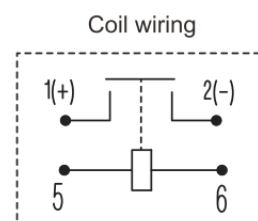
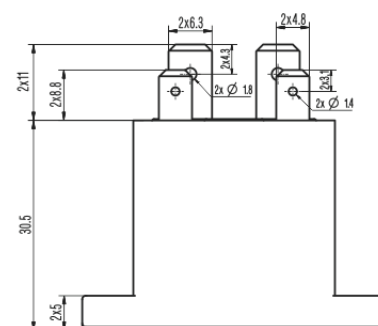
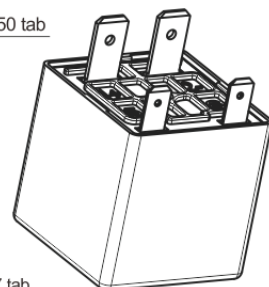
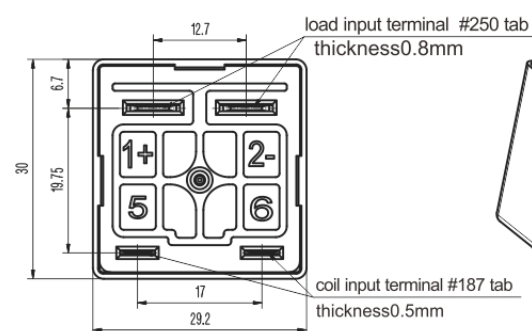
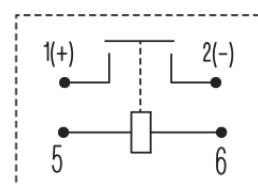
DC Relay

Outline, coil wiring , installation hole

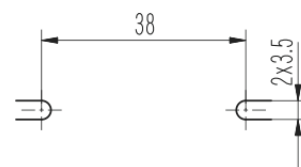
Unit: mm



Coil wiring



mounting hole

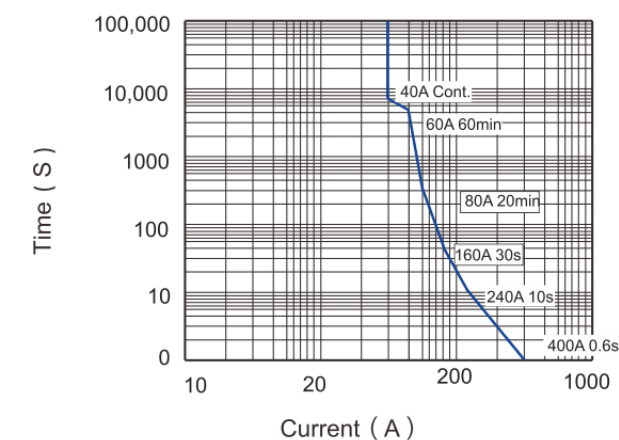


Remark: In case of no tolerance shown in outline dimension: outline dimension $\leq$ 10mm, tolerance should be $\pm 0.3\text{mm}$; outline dimension between (10~50) mm, tolerance should be $\pm 0.5\text{mm}$; when outline dimension $\geq$ 50mm, tolerance should be $\pm 0.8\text{mm}$.

DC Relay

Characteristic curve

Current carrying capacity curve



Note: The data above is measured at the environment 85°C, with cross section area of wire $\geq 10\text{mm}^2$. The data is only for reference and please do not use it for fuse selection.

Cautions

1. In case of loosening, please use washer when install the relay. Use M3 bolt for HTQ2A, the torque within $1.4\text{N} \cdot \text{m} \sim 2.2\text{N} \cdot \text{m}$; Insertion and Extraction Force of input terminal are : (1) load terminal: 49N, (2) coil terminal : 49N. The torque beyond the range may cause damage.
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DC Relay