Product Description

CRB Series is single phase voltage module product, applying phase-shift to control output, and it has DC control options at 4~20mA, 0~5V, 0~10V, and output current at 25A, 50A, 75A.



- Load Current: 25A, 50A, 75A
- SCR Output
- Control Signal: 4~20mA or 0~5V, 4~20mA or 0~10V
- Phase-shift Control Output
- LED Indication
- RoHS Compliant
- Suitable for Inductive Load, Resistive Load

Product Selection

CRB	380	I	25	P	(XXX)	P
CRB Series	Load Voltage 380: 176~440VAC 480: 200~530VAC	Control Mode L: 4~20mA or 0~5VDC H: 4~20mA or 0~10VDC	Load Current 25: 25Amp 50: 50Amp 75: 75Amp	Propotional Output: P: Phase-shift Control	Customer Code	Heat Sink P: KHS-P90 H: KHS-H90 IF24DC: KHS-I93-B24DC

Available Part Numbers

Control Mode	25A	50A	75A
L: 4~20mA或0~5VDC	CRB380L25P-P	CRB380L50P-H	CRB380L75P-IF24DC
	CRB480L25P-P	CRB480L50P-H	CRB480L75P-IF24DC
H: 4~20mA或0~10VDC	CRB380H25P-P	CRB380H50P-H	CRB380H75P-IF24DC
	CRB480H25P-P	CRB480H50P-H	CRB480H75P-IF24DC

Load Voltage Calculation Formula

Control Mode	Load Voltage(1)
4~20mA	$U_{LOAD}^2=U_{AC}^2\times V_{CONTROL}/5$
0~5V	$U_{LOAD}^2=U_{AC}^2\times V_{CONTROL}/10$
0~10V	$U_{LOAD}^2=U_{AC}^2\times (I_{CON}-4)/16$

Note: (1) U_{LOAD} indicates the voltage at both ends of the load, and U_{AC} indicates the power grid voltage, $V_{CONTROL}$ indicates the control voltage, I_{CON} indicates the control current.

Technical Specifications

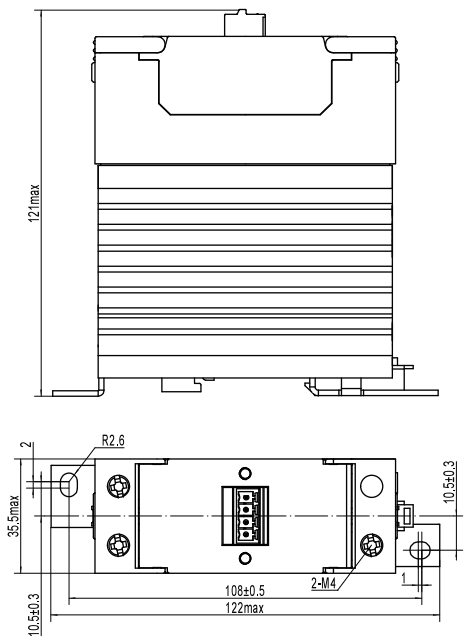
Input Specifications (Ta=25°C)	Condition	Symbol	Model	Min	Typ	Max	Unit
Auxiliary Power Supply Voltage				10	12/24	32	VDC
Voltage Control	**Condition**	**Symbol**	**Model**	**Min**	**Typ**	**Max**	**Unit**
Control Voltage		U_c	L	0		5	VDC
			H	0		10	VDC
Turn-on Voltage		$U_{c\ on}$	L			0.15	VDC
			H			0.25	VDC
Turn-off Voltage		$U_{c\ off}$	L	0.05			VDC
			H	0.1			VDC
Input Impedance			L		30		kΩ
			H		60		kΩ
Current Control(2)	**Condition**	**Symbol**	**Model**	**Min**	**Typ**	**Max**	**Unit**
Control Current		I_c		4		20	mA
Turn-on Current		$I_{c\ on}$				4.8	mA
Turn-off Current		$I_{c\ off}$		3.6			mA
Input Impedance					100		Ω

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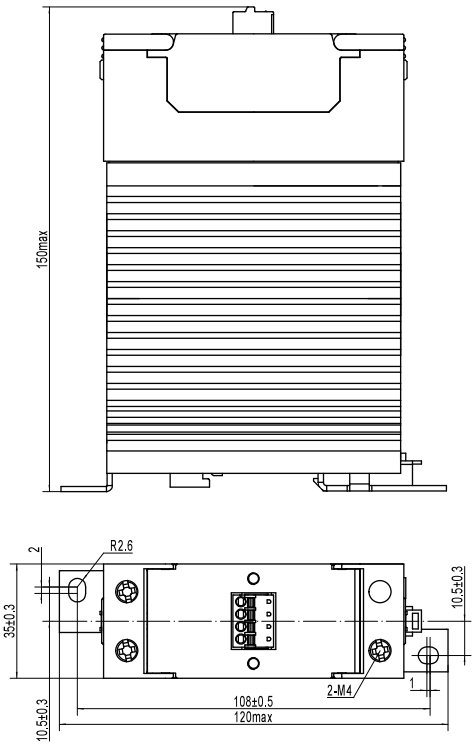
Output Specifications (Ta=25°C)	Condition	Symbol	Model	Min	Typ	Max	Unit
Load Voltage		U_e	380	176		440	VAC
			480	200		530	VAC
Off-State Leakage Current	@220VAC/50Hz	I_{lk}				5	mA
Operational Frequency		f		47		63	Hz
Output Power				0		99	%
Transient Overvoltage		U_P	380		800		Vpk
			480		1200		Vpk
Non-repetitive Surge Current	@10ms	I_{TSM}	25A		250		Apk
			50A		800		Apk
			75A		800		Apk
Maximum I^2t for Fusing	@10ms	I^2t	25A		312		A^2s
			50A		3200		A^2s
			75A		3200		A^2s
Minimum Off-State dv/dt		dv/dt			500		V/μs

General Specifications (Ta=25°C)	Condition	Symbol	Model	Min	Typ	Max	Unit
Dielectric Strength	50/60Hz, Input/Output	V_{ISO}			4000		Vrms
	50/60Hz, Input,Output/Base				2500		Vrms
Insulation Resistance	@500VDC	R_{ISO}			1000		MΩ
Operating Temperature		T_{OPR}		-40		+80	℃
Storage Temperature		T_{SPR}		-40		+100	℃
Weight			25A		308		g
			50A		390		g
			75A		485		g
LED Indication			Red	Applies the auxiliary power supply			
			Green	Connected			

Outline Dimensions

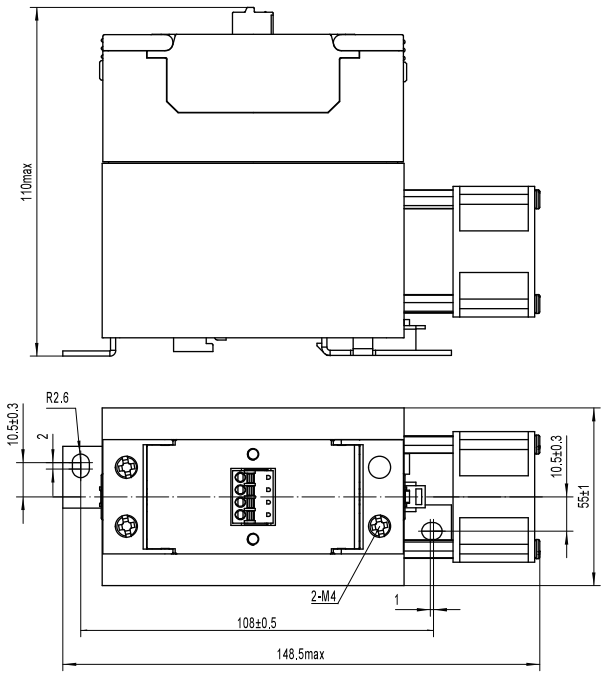


CRB...25...P



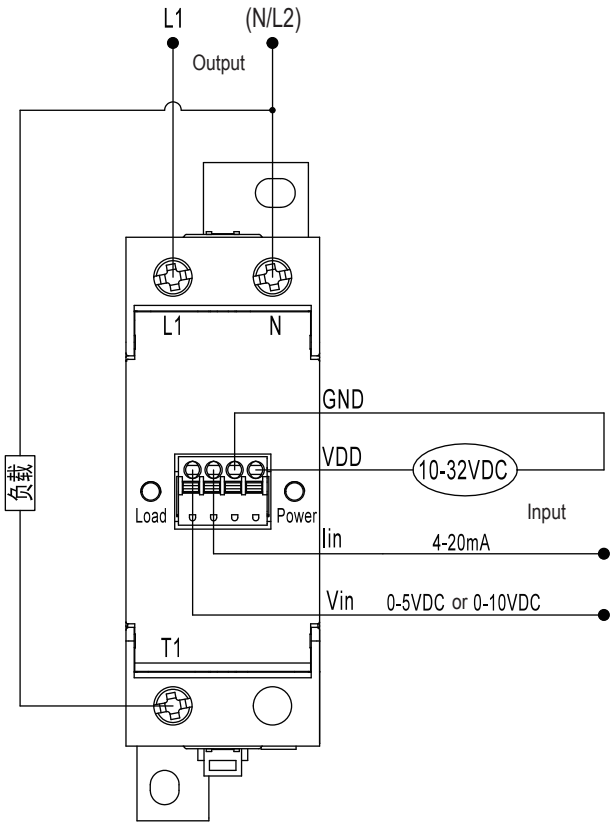
CRB...50...-H

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CRB...75...-IF24DC

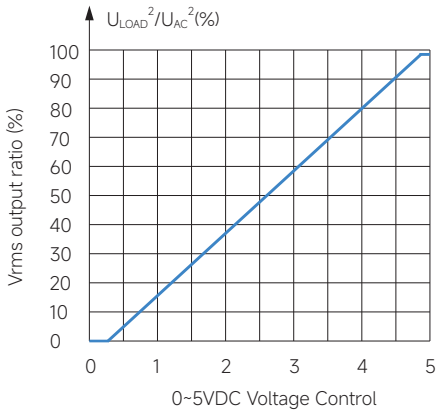
Wiring Diagram

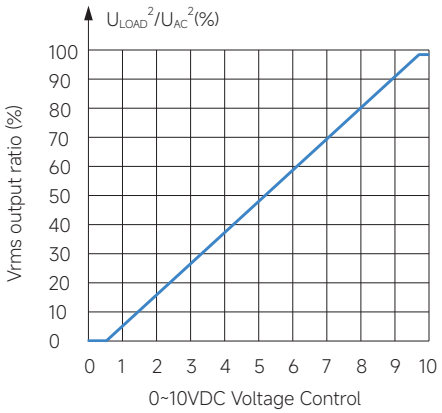


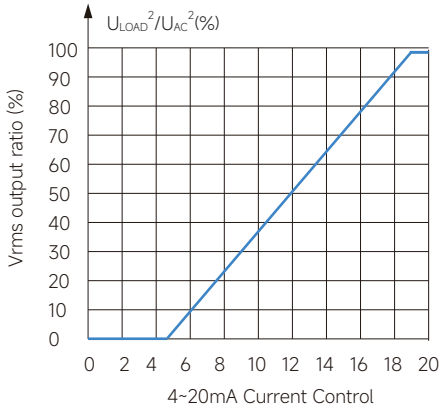
Note: (1) CRB...H...series control mode is 4-20mA or 0-10V; CRB...L...series control mode is 4-20mA or 0-5V;
(2) Whether for the current control or the voltage control, the auxiliary power supply is mandatory for CRB product.
(3) N: When the load power is 220VAC, it should be connected to the zero line; when the load power is 380VAC, it should be connected to another live line.

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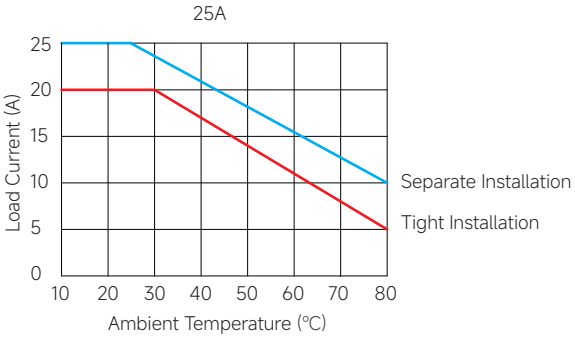
Output / Proportional Control Features

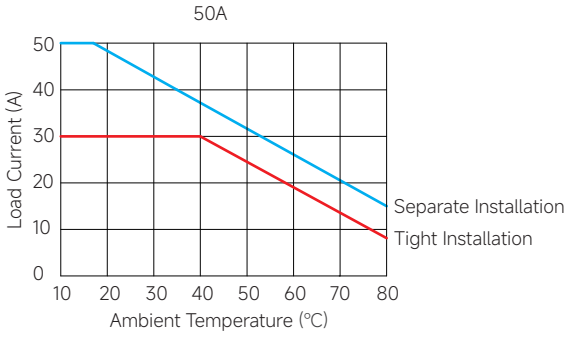


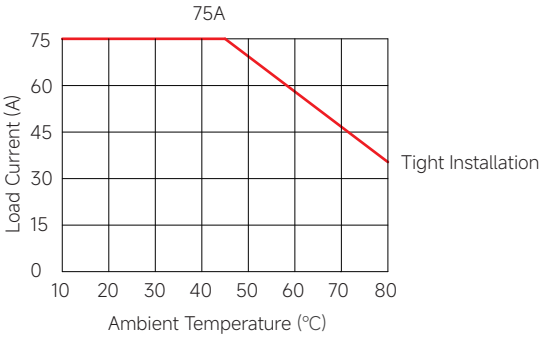




Thermal Derating Curve







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General Notes

1. The relay terminal should ensure reliable connection; Otherwise,it may cause the overheating of relay and lead to the damage.
2. The diameter of the single-core or multi-core wire at the input end should be controlled between 0.2 and 1.5mm^2, and the strip length of the wire core should be controlled between 8 and 10mm. After stripping the wire core, it needs to be stained with tin and then pressed, to avoid disconnection, the recommended installation torque of the output M4 terminal is (0.98~ 1.37) N·m.
3. When the operation temperature is high, please consider the derating as per the thermal curve.

! Warnings

1. The product may be hot, allow the product to cool before touching.
2. Disconnect all power before installing or working with this equipment.
3. Verify all connections and replace all covers before turning on power.

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