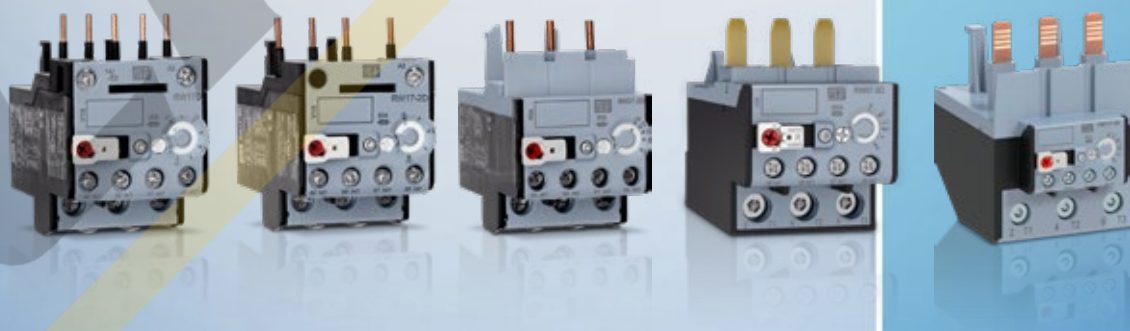


Industrial Motors  
Commercial &  
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**Automation**  
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Systems  
Energy  
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# RW - THERMAL OVERLOAD RELAYS

**High technology**  
and **safety** in electric  
motor protection



Driving efficiency and sustainability



# S U M M A R Y

**RW thermal overload relays**

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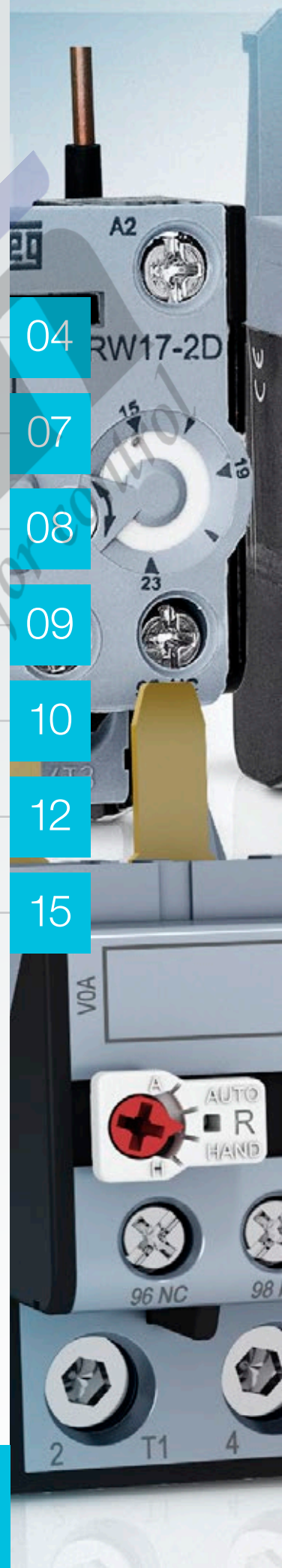
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**Technical data**

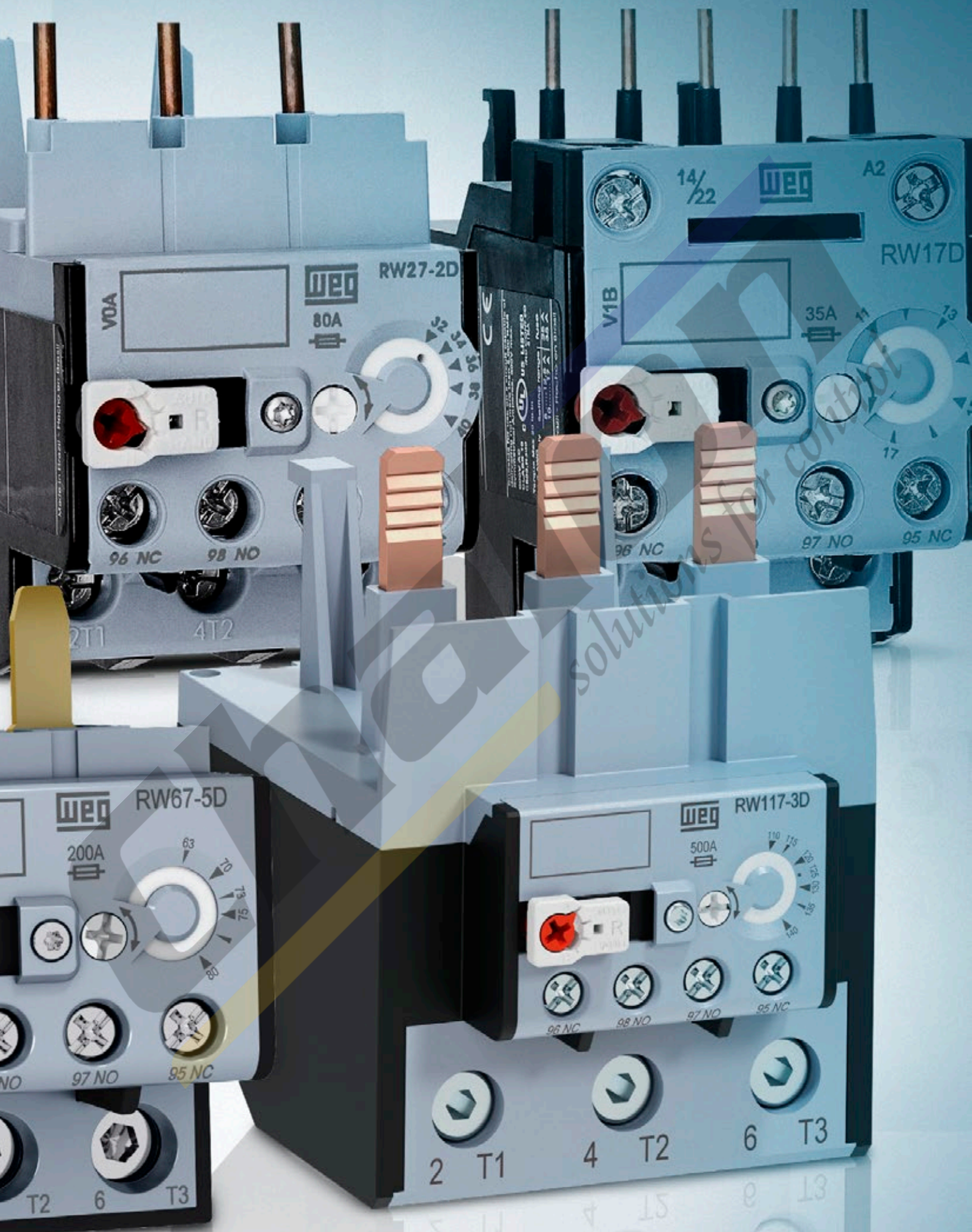
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**Dimensions (mm)**

15

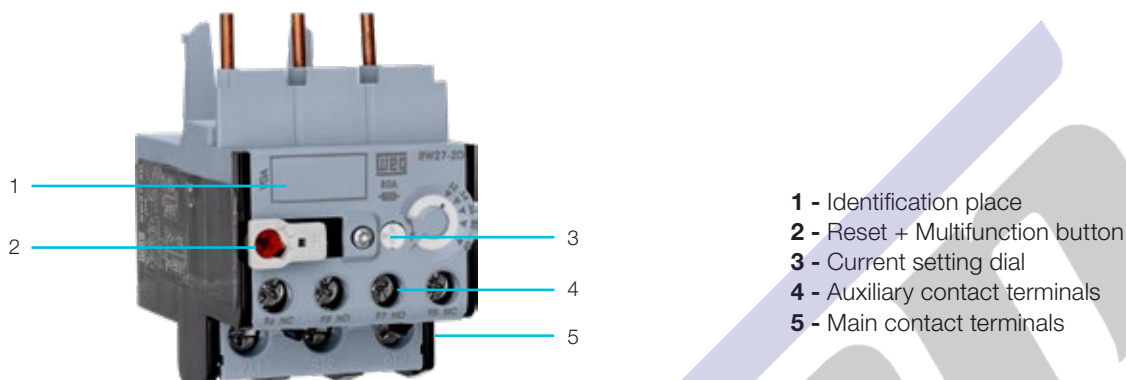






# RW thermal overload relays

## General information



- 1 - Identification place
- 2 - Reset + Multifunction button
- 3 - Current setting dial
- 4 - Auxiliary contact terminals
- 5 - Main contact terminals

## Description

The RW overload relays protect loads against overheating caused by overloads or phase failure. When we have an overload or a phase failure in the circuit, the motor current increases. Such current rise activates the tripping mechanism that will actuate on the auxiliary contacts 95-96 (NC) and 97-98 (NO).

The auxiliary contacts disconnect the load by means of a contactor. The time for disconnection is related to the overload current and the current set on the relay, which is properly represented on the relay tripping curve.

After the trip, it is necessary to wait for the system to reestablish in order to do the reset, which can be done automatic or manually.

## Applications

The RW overload relays were designed to protect three-phase and single-phase AC motors, and DC motors<sup>1)</sup>. If the RW overload relays are used in the protection of single-phase AC loads or DC loads, the wiring diagrams presented in this catalog must be observed.

*Note: 1) RW317 and RW407 models must only be used with AC electric motors.*

## Overload relays in star-delta starters

When overload relays are used in star-delta starters, it should be noted that a current corresponding to  $0.577 (\sqrt{3} / 3) \times I_{n, \text{motor}}$  will pass through the contactor. The overload relay installed on the line contactor must then be set to  $0.577 \times I_{n, \text{motor}}$ .

## Short-circuit protection

Fuses or circuit breakers must be used for short-circuit protection.

## Weather conditions

The RW overload relays are temperature compensated according to IEC 60947-4-1 and DIN VDE 0660 Part 102 standards in the temperature range between -20 °C and +60 °C. For temperatures between +60 °C and +80 °C, a correction factor should be used, according to the table below.

Ambient air temperature	Current correction factor
65 °C	0.94 x I <sub>n</sub>
70 °C	0.87 x I <sub>n</sub>

## Altitude

Up to an altitude of 2,000 m, the relays do not undergo any changes in their specified performance. As the altitude increases, the atmospheric properties vary in terms of dielectric withstand, cooling capacity and pressure. The performance of the relay is therefore subject to a correction factor for proper operation at altitudes above 2,000 m.

Altitude (m)	Current correction factor I <sub>u</sub> (A)	Voltage U <sub>e</sub> (V)
2,000	1 x I <sub>n</sub>	690
3,000	0.96 x I <sub>n</sub>	550
4,000	0.93 x I <sub>n</sub>	480
5,000	0.9 x I <sub>n</sub>	420



# RW thermal overload relays

## Phase failure sensitivity

According to IEC 60947-4-1, when two poles of the relay have overloads of 15%, and one of the poles have zero current, the overload relay must trip/open in less than 2 hours.

For effective protection against phase failure, specific products must be considered for this function, providing actuation in a few seconds.

## Characteristic tripping curve

The characteristic tripping curve is the ratio between time and tripping current in the form of multiples of the rated current for symmetrical three-phase loads operating from the cold state.

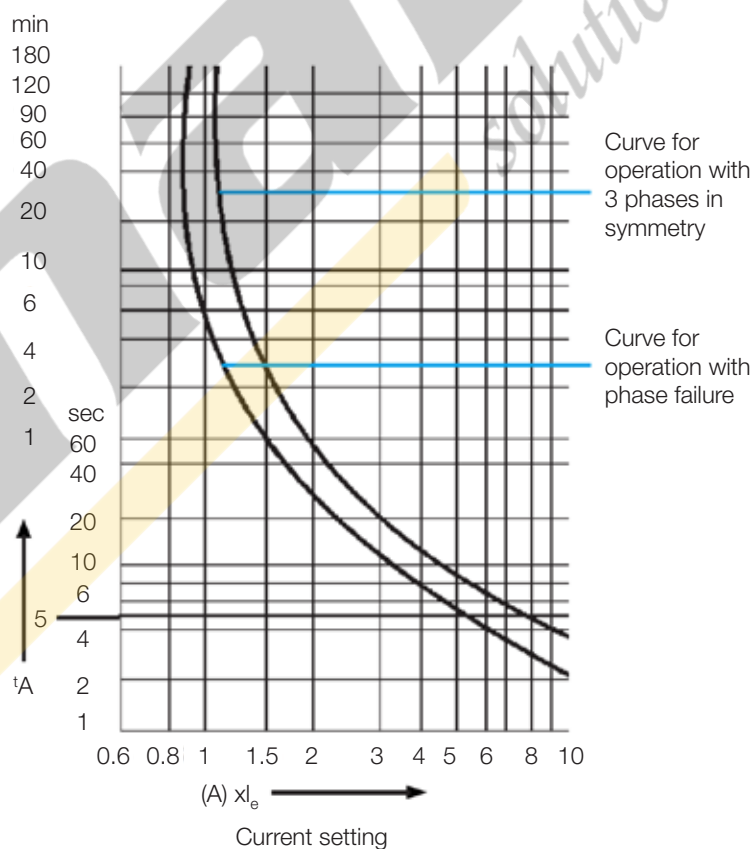
The tripping current limits on the RW bimetallic overload relays for symmetrical three-phase loads are between 105% and 120% of the rated current. The characteristic tripping curve of an RW overload relay is valid when all the three phases are under the same current intensity.

In cases of phase failure, the tripping time tends to be longer or a higher current value will be needed to trip the mechanism. This required higher current value may result in damage to the load if it remains for a long time.

In order to prevent that, the RW overload protection relays have been developed with technology that makes them phase failure sensitive, accelerating the action of the two active phases on the tripping mechanism, thus maintaining the appropriate tripping curve characteristics.

The following graph shows the characteristic tripping curves with the average values of the tolerance range, considering an ambient temperature of 20 °C starting from the cold state. These curves show the tripping time in relation to the rated current in operating conditions with three and two phases.

For a different operating temperature, the thermal relay tripping time is reduced to approximately 25% of that.



## RW thermal overload relays

### Multifunction reset / test button

The relay has a Reset button and on the same button four functions, as follows:

**A** - Automatic reset function only. The *stop/test* function is not allowed.

**AUTO** - Automatic reset function and *stop/test* function.

**HAND** - Manual reset function and *stop/test* function.

**H** - Manual reset function only. The *stop/test* function is not allowed.



Operation description:

In the **H** (manual - reset only) and **A** (automatic - reset only) positions, the *stop/test* functions are blocked, while in the **HAND** (manual) and **AUTO** (automatic) positions, test simulation and tripping by directly pressing the Reset button are possible. In the **H** and **HAND** positions, after the relay trips (relay tripped), it has to be manually reset by pressing the Reset button, while in the **A** and **AUTO** positions, the relay is automatically reset after tripping. The **H**, **HAND**, **AUTO** and **A** functions are set by turning the red button without pressing it, positioning it in the indications of the Reset button. In the change from **HAND** to **AUTO**, the Reset button must be lightly pressed simultaneously with the turning of the red button.

Functions	H	HAND	AUTO	A
Relay reset	Manual <sup>1)</sup>	Manual <sup>1)</sup>	Automatic	Automatic
Auxiliary contact 95-96 (NC) opening test	Function is disabled	Test/stop is allowed	Test/stop is allowed	Function is disabled
Auxiliary contact 97-98 (NO) opening test	Function is disabled	Test/stop is allowed	Test/stop is allowed	Function is disabled

Note: 1) Allow cooling for a short time before resetting the relay.

### Recovery time

The RW overload relays require a certain time for the bimetallic strips to cool down after the trip. Only after this time can the relay be reset.

This time is a function of the tripping curve and the intensity of the tripping current. After the relay trips due to overload, the load cools down during the relay reset time.

### Operation with frequency inverter

The RW17, RW27, RW67 and RW117 overload relays can operate with frequency inverters.

Depending on the inverter frequency of operation, the current must be set above the motor rated current, due to eddy currents and skin effects.

## RW thermal overload relays for minicontactors

- Bimetallic overload relay with trip class 10
- Phase failure sensitivity
- Temperature compensation
- Manual or automatic reset
- Direct mounting to minicontactors
- Adjustable multifunction button with the functions: HAND, AUTO, H or A
- Auxiliary contacts 1NO + 1NC



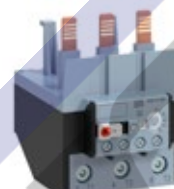
Direct mounting	Current range (A)	Diagram	Maximum fuse (gL/gG) <sup>1)</sup>	Code	Part number	Weight kg
CW07 CWC07...16	0.28...0.4		2	RW17-1D3-D004	12450892	0.155
	0.4...0.63		2	RW17-1D3-C063	12450895	
	0.56...0.8		2	RW17-1D3-D008	12450896	
	0.8...1.2		4	RW17-1D3-D012	12450897	
	1.2...1.8		6	RW17-1D3-D018	12450898	
	1.8...2.8		6	RW17-1D3-D028	12450899	
	2.8...4		10	RW17-1D3-U004	12450900	
	4...6.3		16	RW17-1D3-D063	12450901	
	5.6...8		20	RW17-1D3-U008	12450903	
	7...10		25	RW17-1D3-U010	12450905	
	8...12.5		25	RW17-1D3-D125	12450906	
	10...15		35	RW17-1D3-U015	12450907	
	11...17		40	RW17-1D3-U017	12450908	
CWC025	7...10		25	RW17-2D3-U010	12450909	0.155
	8...12.5		25	RW17-2D3-D125	12450910	
	10...15		35	RW17-2D3-U015	12450911	
	11...17		40	RW17-2D3-U017	12450912	
	15...23		50	RW17-2D3-U023	12450913	
	22...32		63	RW17-2D3-U032	12450914	

Note: 1) Maximum fuse for Type 2 coordination (gL/gG).



# RW thermal overload relays for CWB contactors

- Bimetallic overload relay with trip class 10
- Phase failure sensitivity
- Temperature compensation
- Manual or automatic reset
- Direct mounting on contactors up to 125 A
- Allow individual mounting by means of an accessory
- Adjustable multifunction button with the functions: HAND, AUTO, H or A
- Auxiliary contacts 1NO + 1NC



Direct mounting	Current range (A)	Diagram	Maximum fuse (gL/gG) <sup>1)</sup>	Code	Part Number	Weight kg
CWB9...38	0.28...0.4		2	RW27-2D3-D004	12140441	0.165
	0.43...0.63		2	RW27-2D3-C063	12140442	
	0.56...0.8		2	RW27-2D3-D008	12140443	
	0.8...1.2		4	RW27-2D3-D012	12140444	
	1.2...1.8		6	RW27-2D3-D018	12140445	
	1.8...2.8		6	RW27-2D3-D028	12140446	
	2.8...4		10	RW27-2D3-U004	12140447	
	4...6.3		16	RW27-2D3-D063	12140448	
	5.6...8		20	RW27-2D3-U008	12140449	
	7...10		25	RW27-2D3-U010	12140450	
	8...12.5		25	RW27-2D3-D125	12140451	
	10...15		35	RW27-2D3-U015	12140452	
	11...17		40	RW27-2D3-U017	12140453	
	15...23		50	RW27-2D3-U023	12140454	
	22...32		63	RW27-2D3-U032	12140455	
	32...40		90	RW27-2D3-U040	12140456	
CWB40...80	25...40		80	RW67-5D3-U040	13368960	0.320
	32...50		100	RW67-5D3-U050	13368961	
	40...57		100	RW67-5D3-U057	13368962	
	50...63		100	RW67-5D3-U063	13368963	
	57...70		125	RW67-5D3-U070	13368964	
	63...80		125	RW67-5D3-U080	13368965	
CWB95...125	63...80		200	RW117-3D3-U080	14204758	0.480
	75...97		225	RW117-3D3-U097	14204759	
	90...112		250	RW117-3D3-U112	14204761	
	110...140		315	RW117-3D3-U140	14204762	



Separate mounting or with claws	Current range (A)	Diagram	Maximum fuse (gL/gG) <sup>1)</sup>	Code	Part number	Weight kg
CWB150...225	110...165		315	RW317-5D3-U165	17225764	1.985
	150...230		355	RW317-5D3-U230	17225765	
	200...310		500	RW317-5D3-U310	17312968	
	275...420		710	RW317-5D3-U420	17312971	

Note: 1) Maximum fuse for Type 2 coordination (gL/gG).

# RW thermal overload relays for CWM contactors

- Bimetallic overload relay with trip class 10
- Phase failure sensitivity
- Temperature compensation
- Manual or automatic reset
- Direct mounting to contactors up to 105 A

- Allow individual mounting by means of an accessory
- Adjustable multifunction button with the functions: HAND, AUTO, H or A
- Auxiliary contacts 1NO + 1NC



Direct mounting	Current range (A)	Diagram	Maximum fuse (gL/gG) <sup>1)</sup>	Code	Part number	Weight kg
CWM9...40	0.28...0.4		2	RW27-1D3-D004	10045630	0.165
	0.43...0.63		2	RW27-1D3-C063	10186032	
	0.56...0.8		2	RW27-1D3-D008	10186033	
	0.8...1.2		4	RW27-1D3-D012	10045631	
	1.2...1.8		6	RW27-1D3-D018	10045632	
	1.8...2.8		6	RW27-1D3-D028	10452548	
	2.8...4		10	RW27-1D3-U004	10452213	
	4...6.3		16	RW27-1D3-D063	10045633	
	5.6...8		20	RW27-1D3-U008	10452197	
	7...10		25	RW27-1D3-U010	10045634	
	8...12.5		25	RW27-1D3-D125	10452967	
	10...15		35	RW27-1D3-U015	10452384	
	11...17		40	RW27-1D3-U017	10452204	
	15...23		50	RW27-1D3-U023	10452205	
CWM32/40	25...40		63	RW27-1D3-U032	10452382	0.320
	32...50		80	RW67-1D3-U040	10452216	
CWM50...80	25...40		100	RW67-1D3-U050	10452217	0.320
	32...50		80	RW67-2D3-U040	10844133	
	40...57		100	RW67-2D3-U050	10186035	
	50...63		100	RW67-2D3-U057	10452201	
	57...70		100	RW67-2D3-U063	10452218	
	63...80		125	RW67-2D3-U070	10045635	
CWM95/105	63...80		125	RW67-2D3-U080	10045636	0.490
	75...97		200	RW117-1D3-U080	10186370	
	90...112		225	RW117-1D3-U097	10410002	
			250	RW117-1D3-U112	10410003	




Separate mounting or with claws	Current range (A)	Diagram	Maximum fuse (gL/gG) <sup>1)</sup>	Code	Part number	Weight kg
CWM112	63...80		200	RW117-2D3-U080	11033689	0.750
	75...97		225	RW117-2D3-U097	10045646	
	90...112		250	RW117-2D3-U112	10410004	
CWM112...300, CWM400, CWM450, CWM560	100...150		315	RW317-1D3-U150	10045647	1,985
	140...215		355	RW317-1D3-U215	10410005	
	200...310		500	RW317-1D3-U310	10410006	
	275...420		710	RW317-1D3-U420	10410007	
	400...600		1,000	RW407-1D3-U600	10452250	
CWM450, CWM560, CWM500...800	560...840		1,250	RW407-1D3-U840	10045637	3,435


Note: 1) Maximum fuse for Type 2 coordination (gL/gG).

## Accessories

### Individual mounting base


Illustrative picture	Description	Use with relays	Code	Part number	Weight kg
	It allows overload relays to be mounted directly via screws or on DIN rail 35 mm	RW27-1D	BF27D	10410085	0.050
		RW27-2D	BF27-2D	13598034	
		RW67-1D	BF67-1D	10410086	
		RW67-2D	BF67-2D	10046505	0.095
		RW67-5D	BF67-5D	13369075	
		RW117-1D	BF117D	10045719	0.21
		RW117-3D	BF117-3D	14197548	

### Mounting clamps for direct mounting of overload relay on contactor


Illustrative picture	Use with relays	Construction type	Use with contactors	Code	Part number	Weight kg
	RW67-1D	Busbars	CWM32/40	GA67-1D	10186061	0.03
	RW67-2D		CWM50...80	GA67-2D	10186062	0.03
	RW67-5D <sup>1)</sup>		CWB40...80	GA67-B80	13557165	0.03
	RW117-2D	Cables	CWM112	GA117D	10185899	0.13
	RW317	Busbars	CWB150...225	GA317-5D	17358811	0.05
			CWM112/150	GA317-1D	10185904	0.25
			CWM180/215	GA317-2D	10185900	0.28
			CWM250/300	GA317-3D	10185901	0.47
			CWM400	GA317-10D	10187159	0.48
			CWM450/560	GA317-11D	14313668	0.25
	RW407		CWM450/560	GA407-1D	14313709	0.46

Note: 1) The mounting clamps GA67-B80 are applicable to all RW67 overload relays, making them compatible with CWB40...80 contactors.


### External reset cable

Illustrative picture	Description	Cable length	Code	Part number	Weight kg
	Flexible metal cable for external reset (no need to open the electrical panel), compatible with all RW thermal overload relays. Notes: - Hole for external mounting: Ø6.5...7 mm - Panel plate thickness: 2...4.25 mm	250 mm	ERC250RW	11795102	0.034
		375 mm	ERC375RW	11795097	0.036
		500 mm	ERC500RW	11795105	0.041

### Phase insulator

Illustrative picture	Description	Use with relay	Code	Part number	Weight kg
	Plastic insulator and fixing screws for use where the external connections of the power terminals exceed the side dimension of the connection busbar. It can be applied to both the top and bottom of the relay.	RW317	IBRW317	11558425	0.044

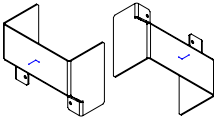
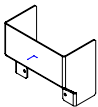
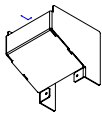
### Button with shaft for external reset

Illustrative picture	Description	Use with relay	Code	Part number	Weight kg
	Blue RESET flush button with shaft. Adjustable length: 250 to 22.5 mm	RW	CSW-BHF437	12471376	0.032
	Blue RESET extended button with shaft. Adjustable length: 250 to 22.5 mm		CSW-BHS437	12471409	0.032



## Accessories

### Power terminal cover protection

Illustrative picture	Description	Number of pieces	Use with	Code	Part number	Weight kg
	Flameproof polycarbonate cover protections the power terminals of the overload relay, providing the frontal part of the overload relay with IP20 protection rating	2	RW317	BMPRW317	13072101	0.18
		1	RW317	BMP1RW317	13072316	0.09
	Flameproof polycarbonate cover protections the power connection between the contactor and overload relay, providing the frontal part with IP20 protection rating	1	CWM400 + RW317 + GA317-10D	BMP1RW317-CWM400	13072317	0.17
		1	CWM450/560 + RW317 + GA317-11D	BMP1RW317-CWM560	14286865	0.17



# Technical data

## Basic data

Models		RW17	RW27	RW67	RW117	RW317	RW407
Compliance with the standards		IEC 60947-1 and UL 60947					
Frequency limits	(Hz)	25...400				50/60	
Use in direct current		Yes				No	
Maximum frequency of operation cycles	(operations/h)	15					
Protection rating (IEC 60529)	Main terminals	IP10				IP00	
	Auxiliary contacts	IP10					
	Other regions	IP20				IP20	
Mounting		Direct to mini-contactors	Directly to contactors or with screws and DIN rail 35 mm (EN 50022) using an accessory			Directly to contactors by means of accessories or with screws	
Resistance to mechanical shocks (IEC 60068-2-27 - 1/2 sine wave)	(g/ms)	10/11					
Ambient temperature	Transport and storage	-50 °C...+80 °C					
	Operation <sup>1)</sup>	-20 °C...+70 °C					
	Temperature compensation	-20 °C...+60 °C					
Maximum operation altitude without modification in the rated values <sup>2)</sup>		2,000 m					

## Main contacts

Models		RW17	RW27	RW67	RW117	RW317	RW407		
Rated insulation voltage $U_i$ (pollution degree 3)	IEC 60947-4-1	(V)		690			1,000		
	UL, CSA	(V)		600					
Rated impulse withstand voltage $_{imp}$ (IEC 60947-1)		(kV)		6			8		
Current settings/maximum fuse (gL / gG)	(A)	0.28...0.4 / 2	0.28...0.4 / 2	25...40 / 80	63...80 / 200	100...150 / 315	320...480 / 800		
		0.43...0.63 / 2	0.43...0.63 / 2	32...50 / 100	75...97 / 225	110...165 / 315	400...600 / 1,000		
		0.56...0.8 / 2	0.56...0.8 / 2	40...57 / 100	90...112 / 250	140...215 / 355	560...840 / 1,250		
		0.8...1.2 / 4	0.8...1.2 / 4	50...63 / 100	110...140 / 315	150...230 / 355			
		1.2...1.8 / 6	1.2...1.8 / 6	57...70 / 125		200...310 / 500			
		1.8...2.8 / 6	1.8...2.8 / 6	63...80 / 125		275...420 / 710			
		2.8...4 / 10	2.8...4 / 10						
		4...6.3 / 16	4...6.3 / 16						
		5.6...8 / 20	5.6...8 / 20						
		7...10 / 25	7...10 / 25						
		8...12.5 / 25	8...12.5 / 25						
		10...15 / 35	10...15 / 35						
		11...17 / 40	11...17 / 40						
		15...23 / 50	15...23 / 50						
		22...32 / 63	22...32 / 63						
		32...40 / 90							
Average power dissipation per pole		(W)		≤3	≤3	≤5.5	≤8 <sup>3)</sup>	≤15	≤20

Notes: 1) For temperatures above 60 °C, see table on page 4.

2) For altitudes above 2,000 m, see table on page 4.





3) Up to 12 W for model with setting range 110...140 A.

## Technical data


## Auxiliary circuit

Models			RW17	RW27	RW67	RW117	RW317	RW407
Compliance with the standards			IEC 60947-4-1 and UL 60947					
Rated insulation voltage $U_i$ (pollution degree 3)	IEC	(V)	690					
	UL, CSA	(V)	600					
Rated operational voltage $U_o$	IEC	(V)	690					
	UL, CSA	(V)	600					
Conventional thermal current $I_{th}$ ( $\theta \leq 55^\circ\text{C}$ )			6					
Rated operational current $I_o$								
AC-14/AC-15 (IEC 60947-5-1)	24 V	(A)	4					
	60 V	(A)	3.5					
	125 V	(A)	3					
	230 V	(A)	2					
	400 V	(A)	1.5					
	500 V	(A)	0.5					
	690 V	(A)	0.3					
UL, CSA			C600					
DC-13/DC-14 (IEC 60947-5-1)	24 V	(A)	1					
	60 V	(A)	0.5					
	110 V	(A)	0.25					
	220 V	(A)	0.1					
UL, CSA			R300					
Short circuit protection with fuse (gL/gG)			6					
Minimum voltage/permissible current (IEC 60947-5-4)			17 V / 5 mA					

## Terminal capacity and tightening torque - power circuit

Models			RW17 and RW27	BF27D	RW67-1D and BF67-1D	RW67-2D, RW67-5D, BF67-2D and BF67-5D	RW117 and BF117D
Mounting system screw type			M4 x 10 Slot / Phillips	M4 x 10 Slot / Phillips	M6 x 16.8 Slot / Phillips	M6 x 16.8 Allen	M10 Allen
Conductor cross-section							
Flexible conductor	(mm <sup>2</sup> )		-	1.5...10	-	-	-
Conductor with terminal/solid wire	(mm <sup>2</sup> )		-	1.5...6.0	-	-	-
AWG cable (UL/CSA)			-	16...8	-	-	-
Torque			-	2.3 Nm / 20 lb-in	-	-	-
Flexible conductor	(mm <sup>2</sup> )		1.5...10	-	-	-	-
Conductor with terminal / solid wire	(mm <sup>2</sup> )		1.5...6.0	-	-	-	-
AWG cable (UL/CSA)			16...8	-	-	-	-
Torque			2.3 Nm / 20 lb-in	-	-	-	-
Conductor connection at the bottom							
Flexible conductor	(mm <sup>2</sup> )		-	-	6.0...35	6.0...35	16...50
Conductor with terminal/solid wire	(mm <sup>2</sup> )		-	-	6.0...35	6.0...35	16...50
Flexible conductor	(mm <sup>2</sup> )		-	-	6.0...35	6.0...35	16...35
AWG cable (UL/CSA)			-	-	10...3	10...3	6...2/0
Torque			-	-	4 Nm / 35 lb-in	4 Nm / 35 lb-in	6 Nm / 53 lb-in
Models			RW317 (100 A a 230 A)		RW317 (200 A a 420 A)		RW407
Mounting system screw type			M8 Hexagonal		M10 Hexagonal		M12 Hexagonal
Cable with terminal	(mm <sup>2</sup> )		35...120		95...150		-
AWG cable (UL/CSA)			3...300 kcmil		3/0...600 kcmil		2 x 600 kcmil
Busbars (mm) - maximum size			2 x (25x5)		2 x (25x5)		2 x (60x10)
Torque			16 Nm / 141 lb-in		26 Nm / 230 lb-in		26 Nm / 230 lb-in

## Terminal capacity and tightening torque - auxiliary contacts

Models		RW17...407	
Mounting system screw type		M3.5 x 10 Fenda / Phillips	
Conductor cross-section			
Wire / conductor with or without terminal (mm <sup>2</sup> )		2 x 1...2.5	
AWG cable (UL/CSA)		16...12	
Torque		1.5 Nm / 13 lb-in	

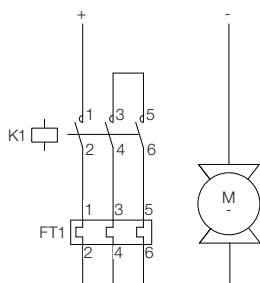


# Technical data

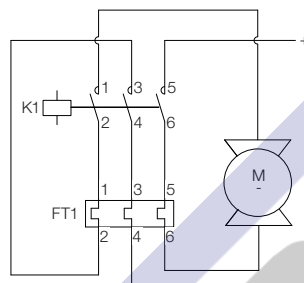
## Wiring diagrams

### Direct current motor protection

#### One-pole

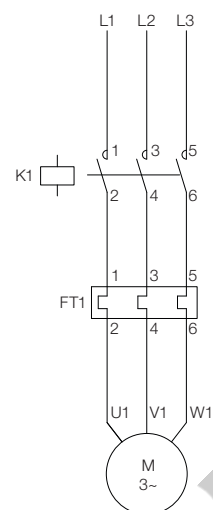


#### Two-pole

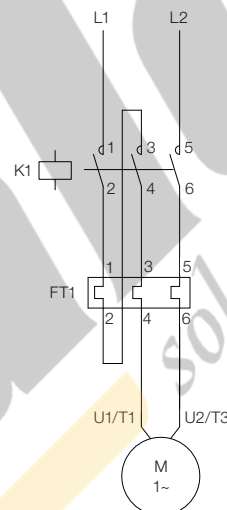


### Alternating current motor protection

#### Three-pole

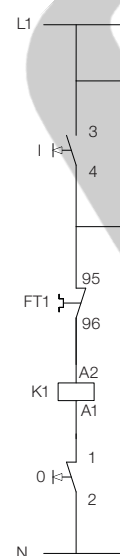


#### Two-pole

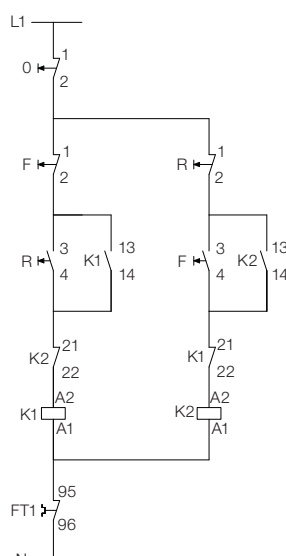


### Suggestion for connecting the control circuit of the overload relay + contactor

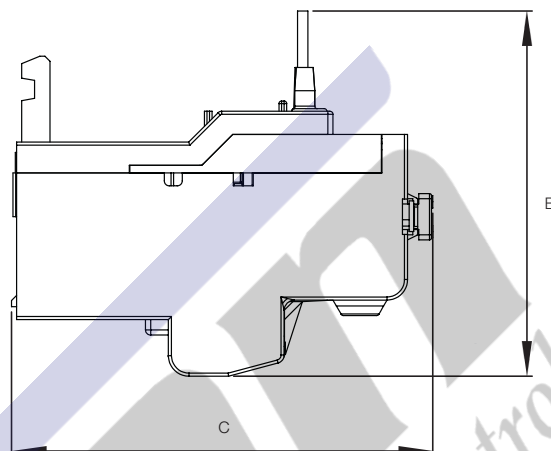
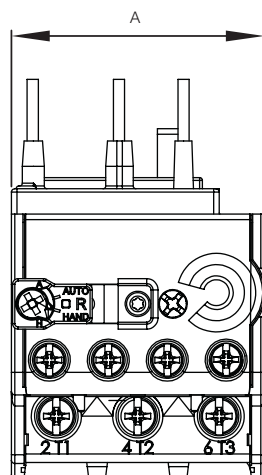
#### Direct online starter (1 direction of rotation)



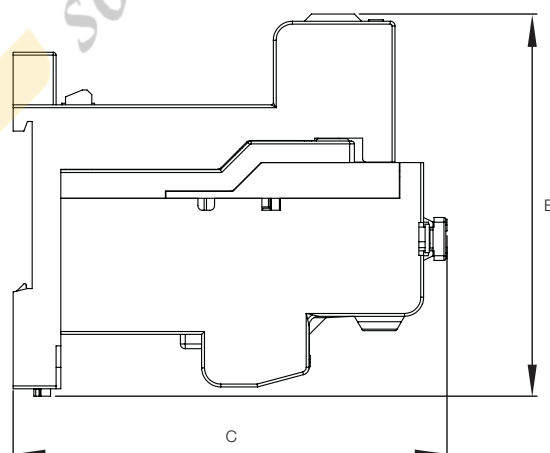
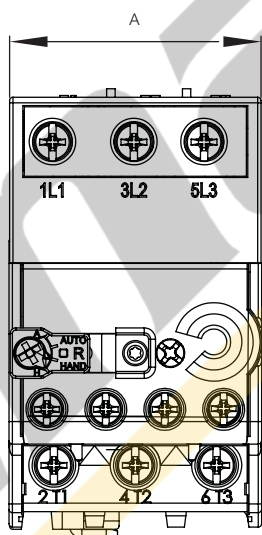
#### Direct online starter (2 directions of rotation)



## Dimensions (mm)

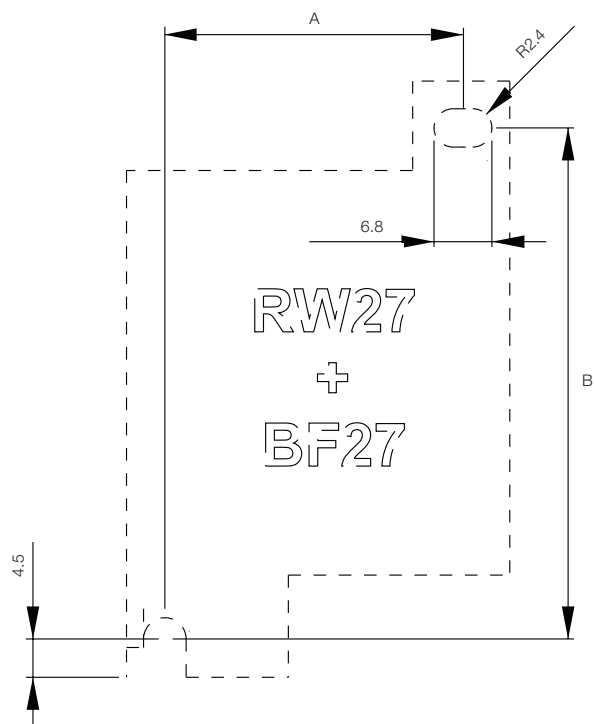


	RW17-1D RW17-2D RW27-1D RW27-2D	RW67-1D	RW67-2D	RW67-5D	RW117-1D RW117-3D
A	45.0	50.0	50.0	50.0	75.0
B	71.5	76.5	81.5	71.5	99.5
C	83.5	106.5	106.5	106.5	98.8

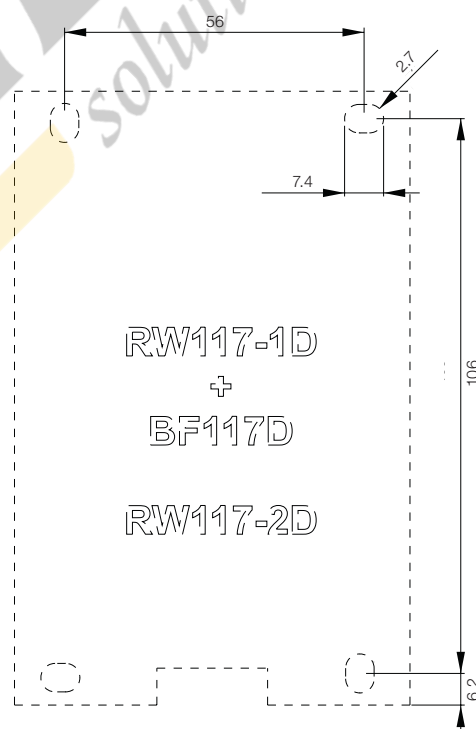
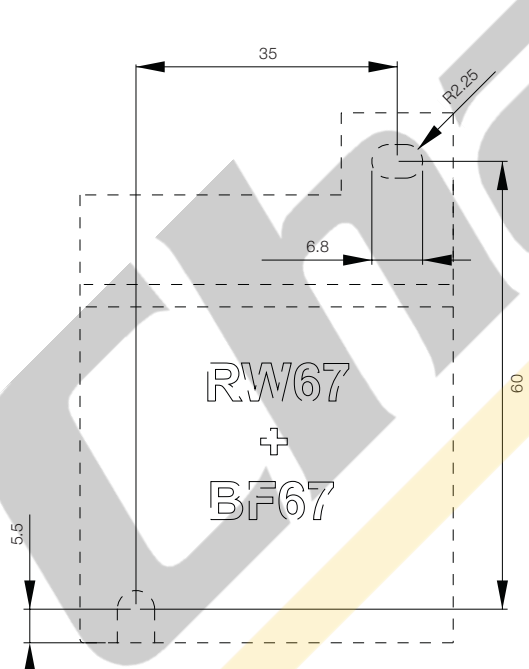


	BF27D + RW27-1D BF27-2D + RW27-2D	BF67-1D + RW67-1D BF67-2D + RW67-2D BF67-5D + RW67-5D	BF117D + RW117-1D RW117-2D BF117-3D + RW117-3D
A	45.0	50.0	75.0
B	80.0	71.0	116.4
C	92.5	106.0	107.0

# Dimensions (mm)



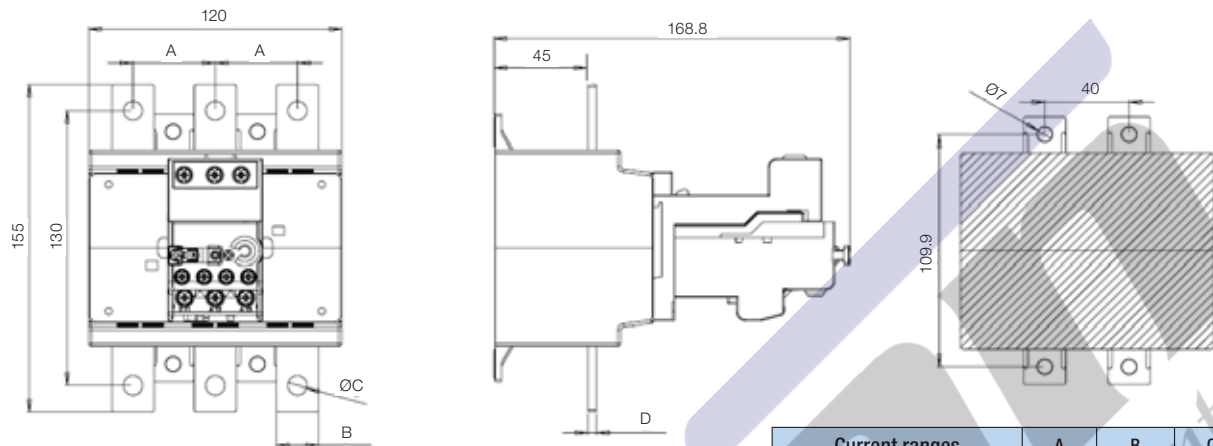
	BF27D	BF27-2D
A	34	34
B	60	65





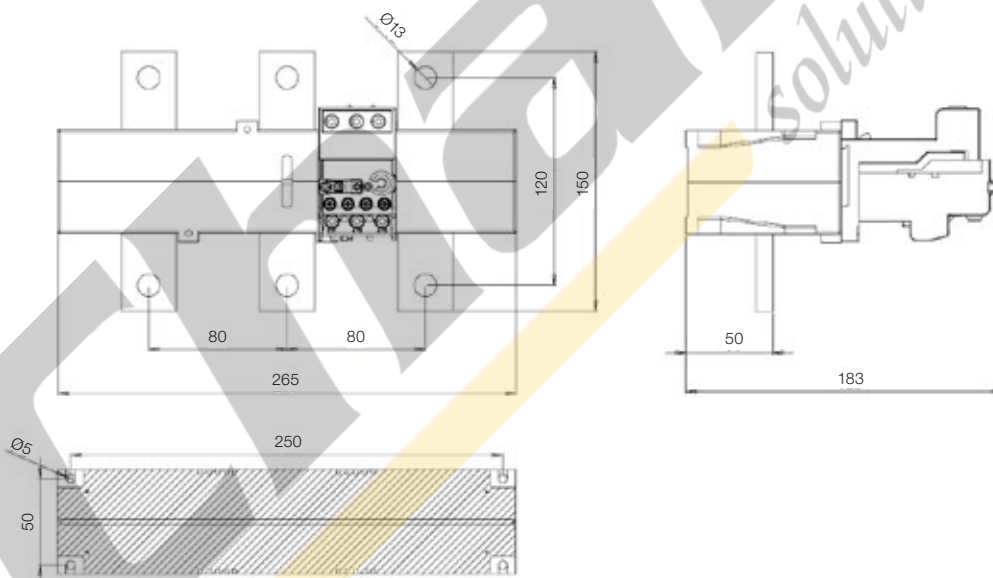
## Dimensions (mm)

### RW317



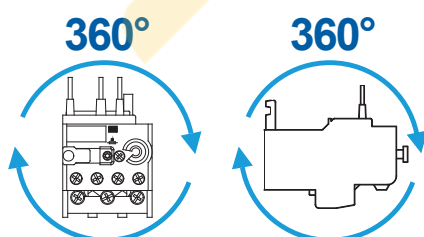
Current ranges	A	B	C	D
100...150 A	39	20	9	4
110...165 A				
140...215 A				
150...230 A				
200...310 A	45	25	11	5
275...420 A				

### RW407



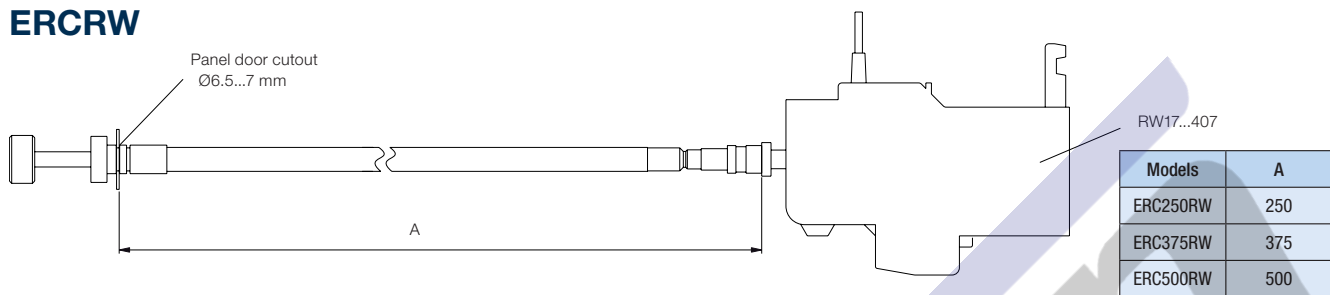
## Mounting position

RW17...407

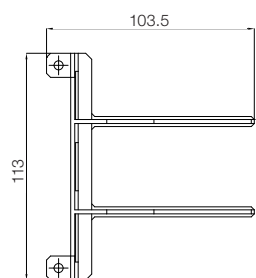


# Dimensions (mm)

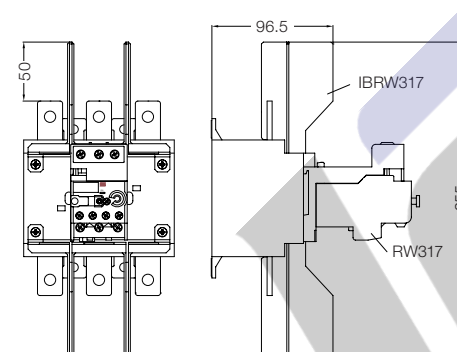
## ERCROW



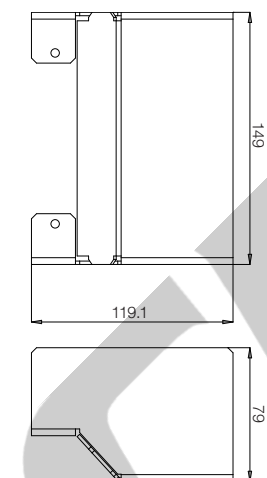
## IBRW317



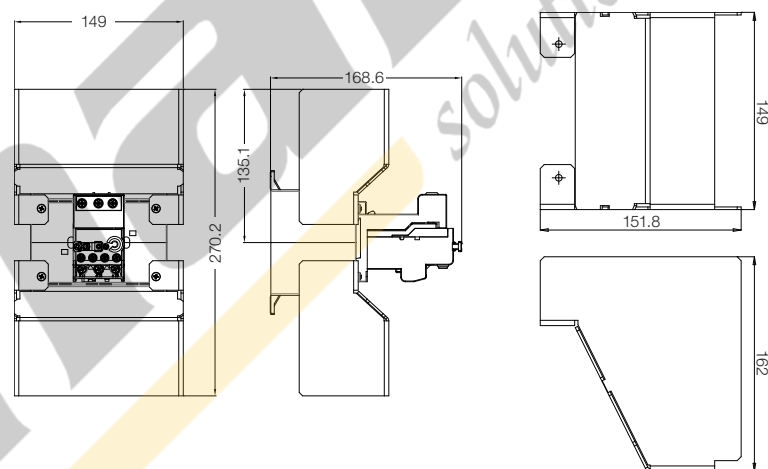
## RW317 + IBRW317



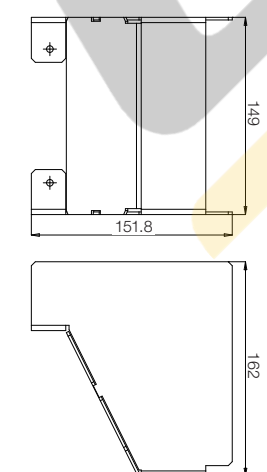
## BMPRW317



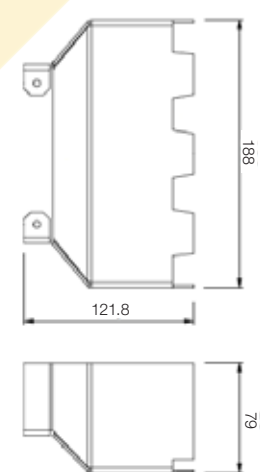
## RW317 + BMPRW317



## BMP1RW317-CWM400

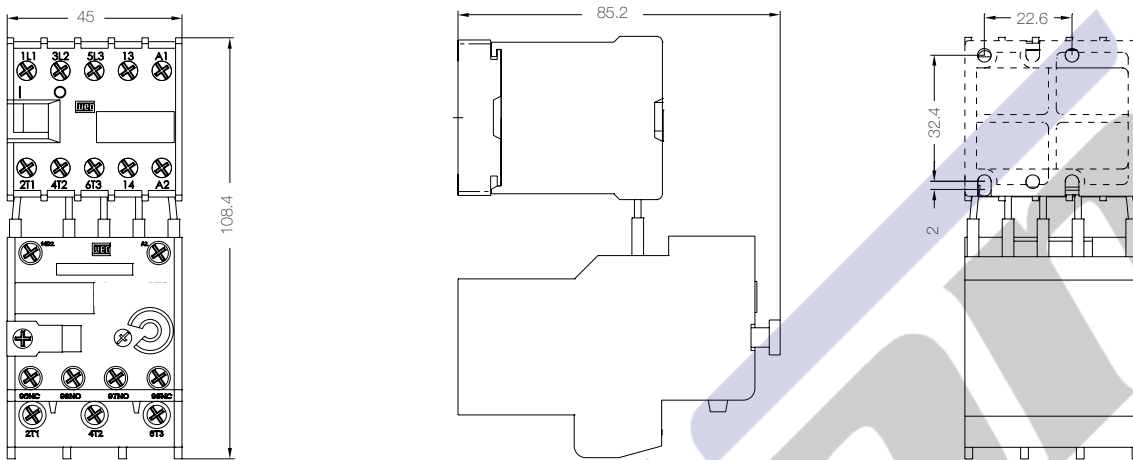


## BMP1RW317-CWM560

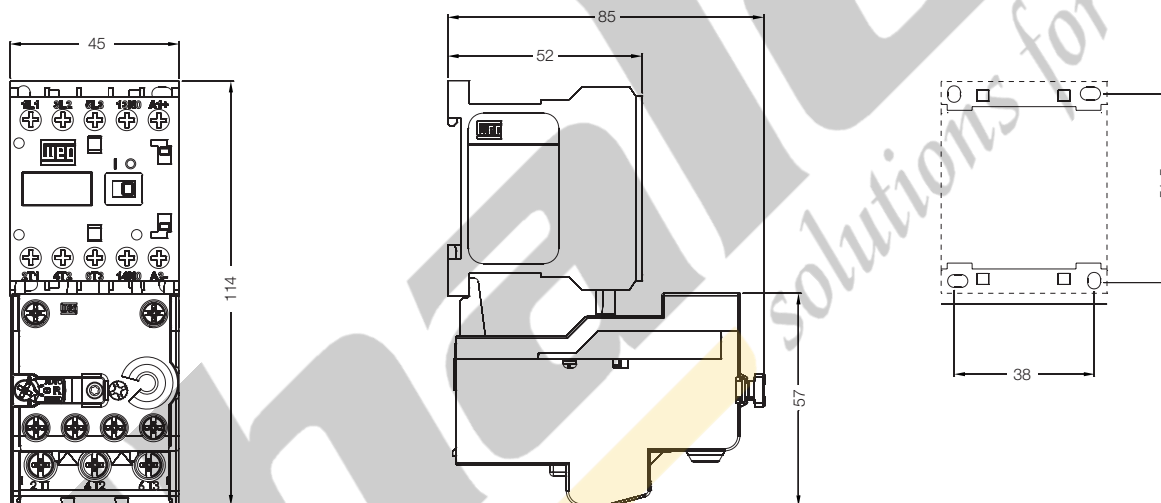


## Dimensions (mm)

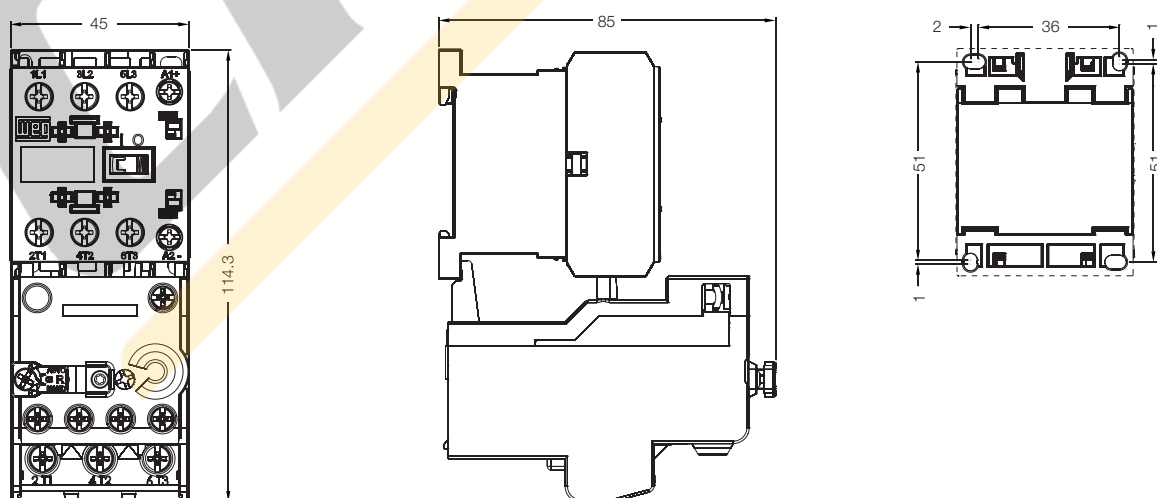
### CW07 + RW17-1D + A17 adapter



### CWC07...16 + RW17-1D

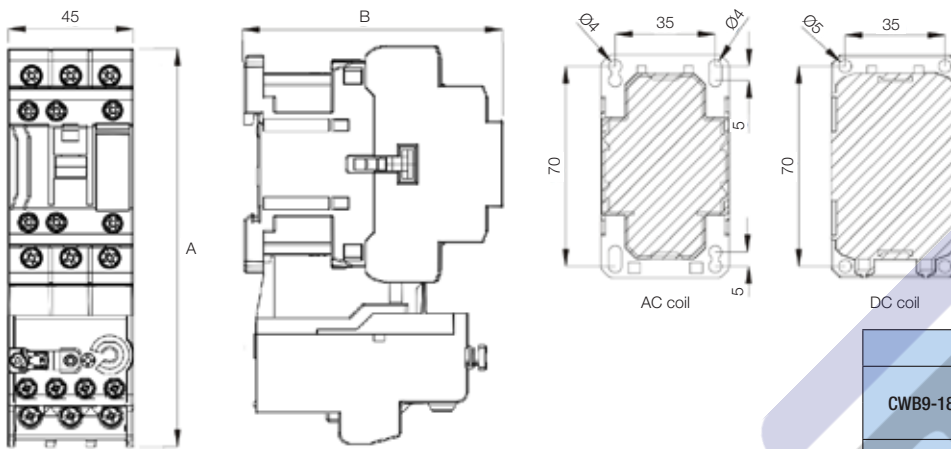


### CWC025 + RW17-2D



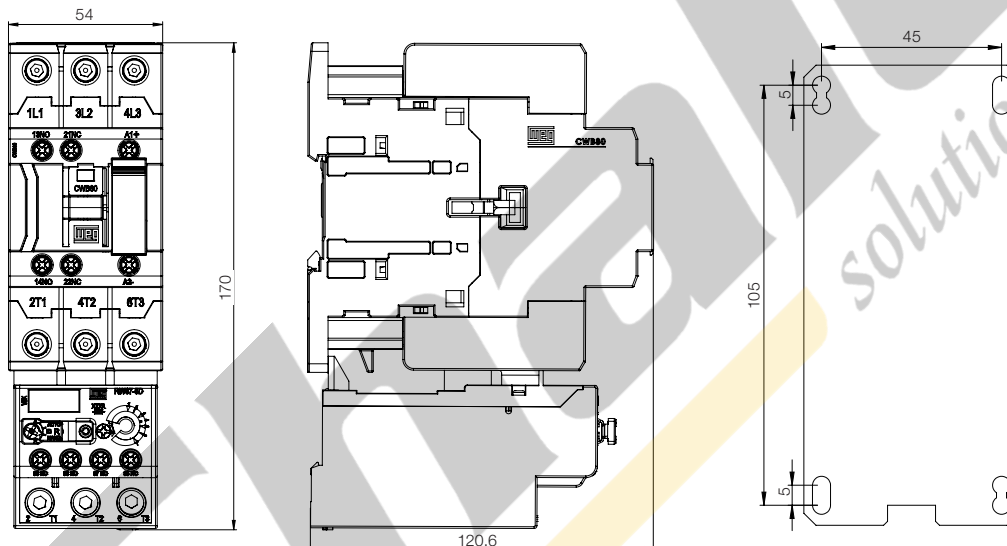
## Dimensions (mm)

### CWB9...38 + RW27-2D

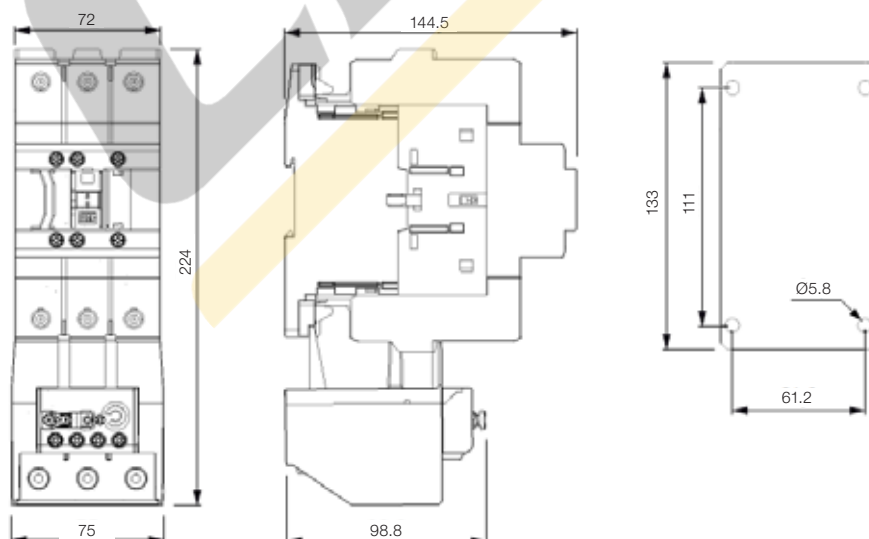


Models		A	B
CWB9-18	AC coil	136.4	89.5
	DC coil	136.4	98.5
CWB25-38	AC coil	143	93
	DC coil	143	102.2

### CWB40...80 + RW67-5D

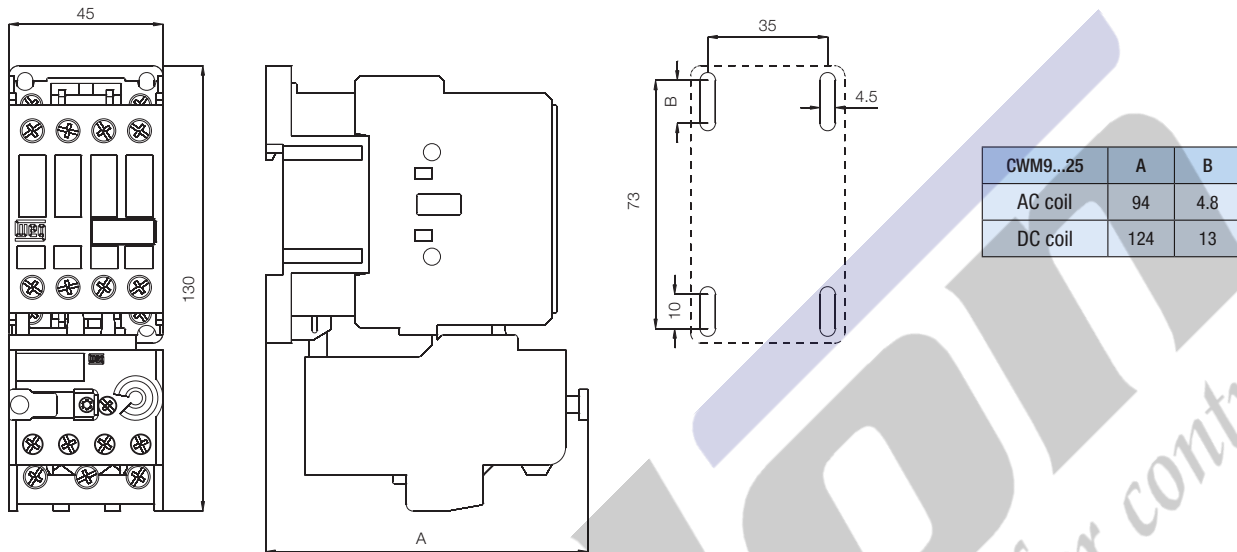


### CWB95...125 + RW117-3D

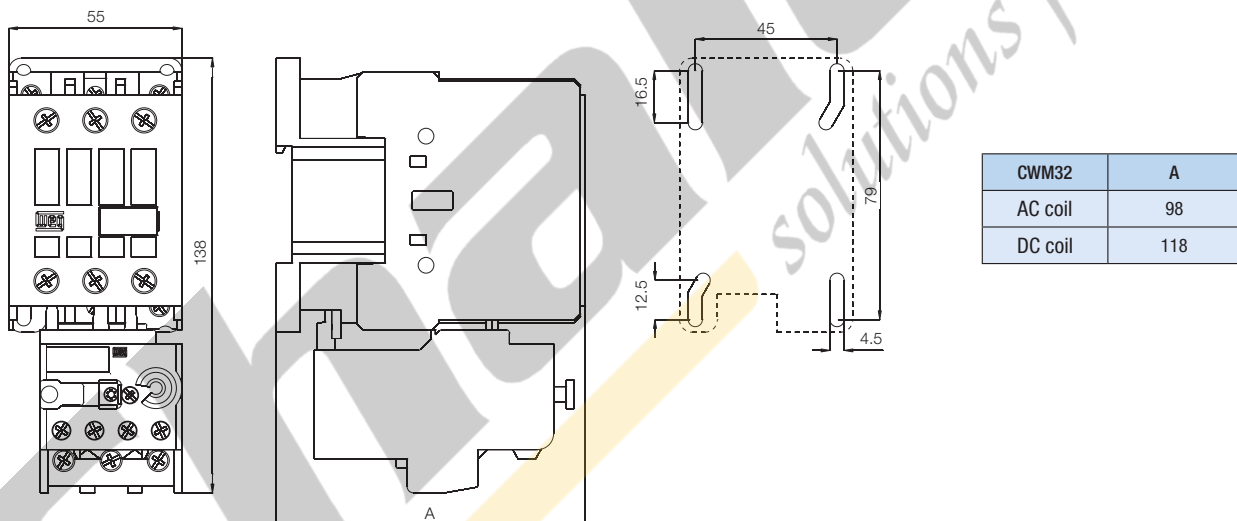


## Dimensions (mm)

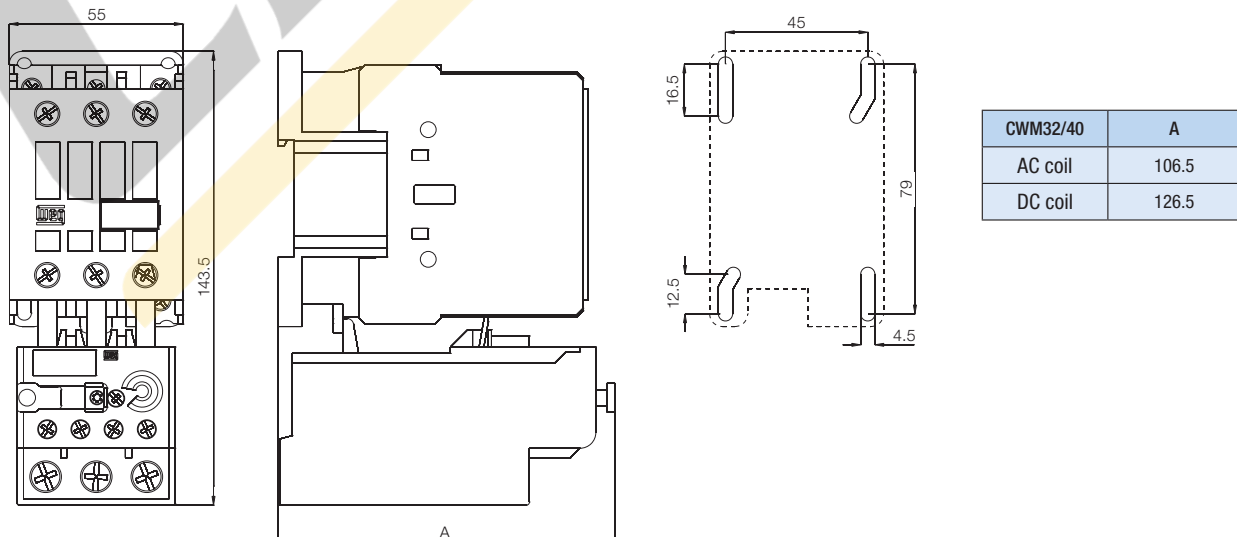
### CWM9...25 + RW27-1D



### CWM32 + RW27-1D



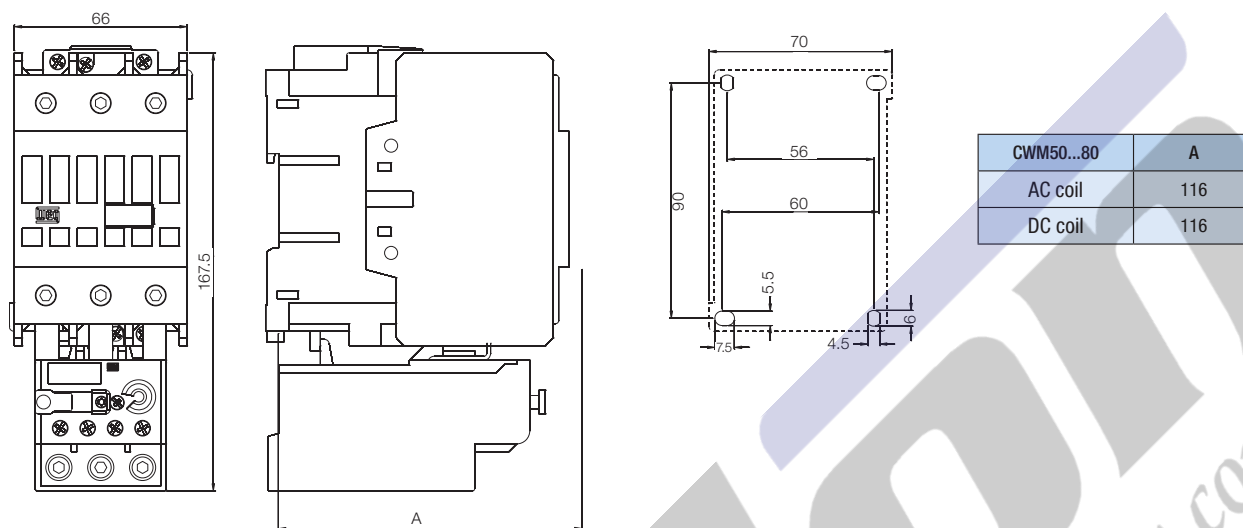
### CWM32/40 + RW67-1D



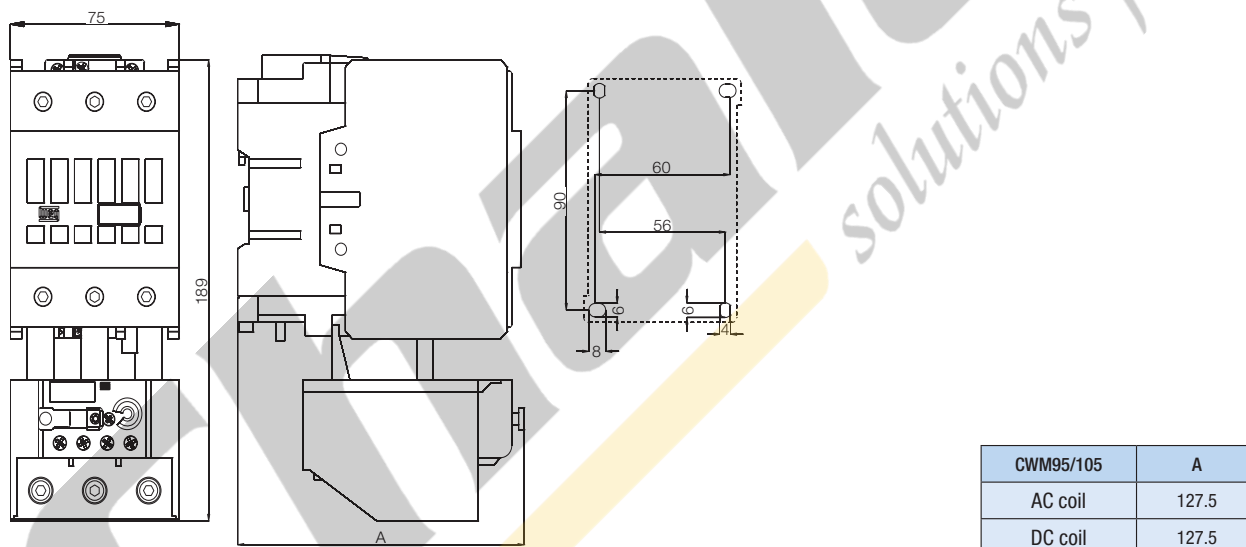


## Dimensions (mm)

### CWM50...80 + RW67-2D

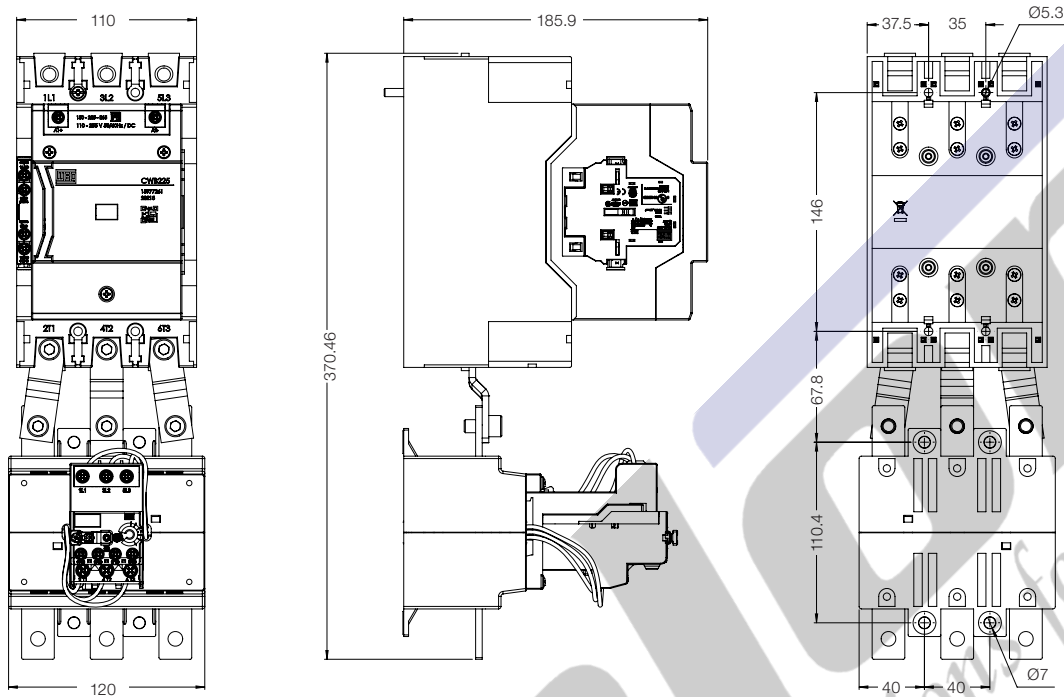


### CWM95/105 + RW117-1D

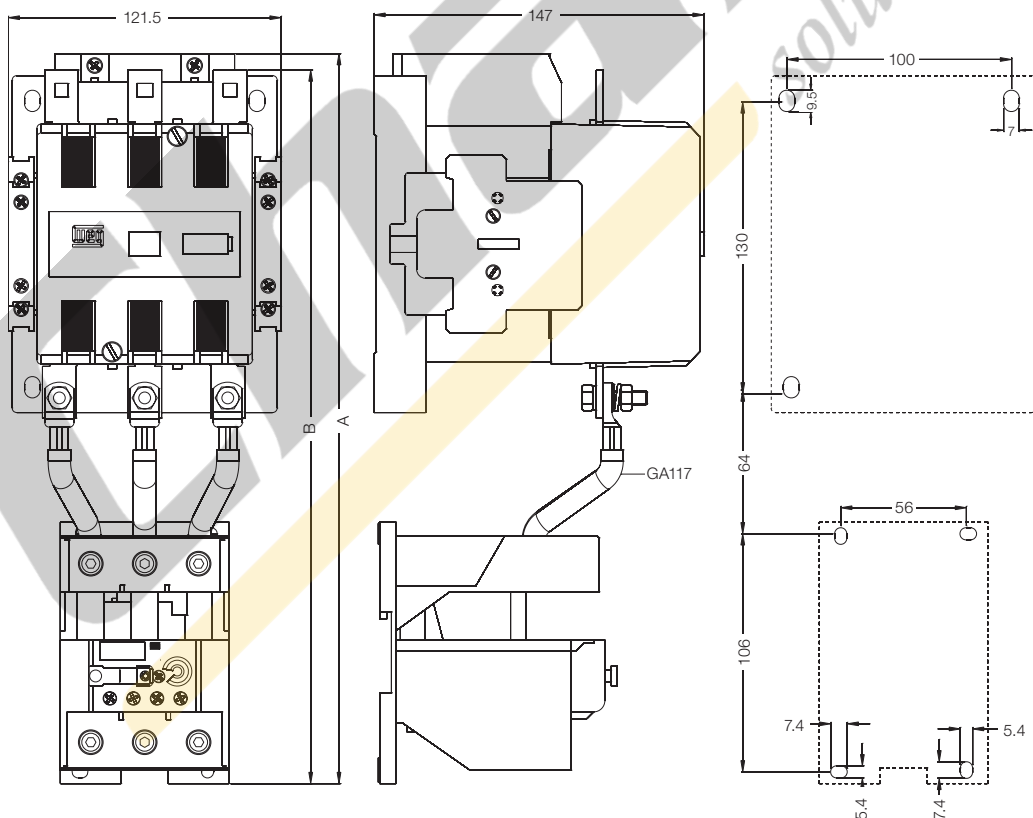


# Dimensions (mm)

## CWB225 + RW317-5D



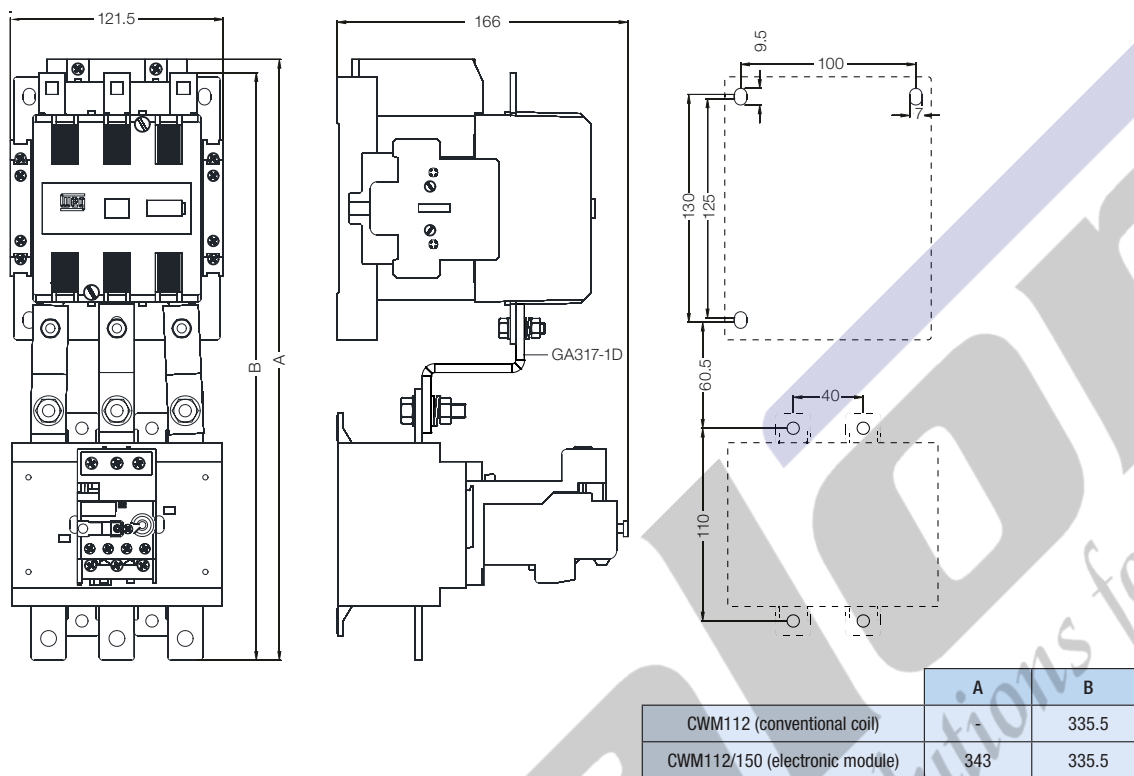
## CWM112 + RW117-2D



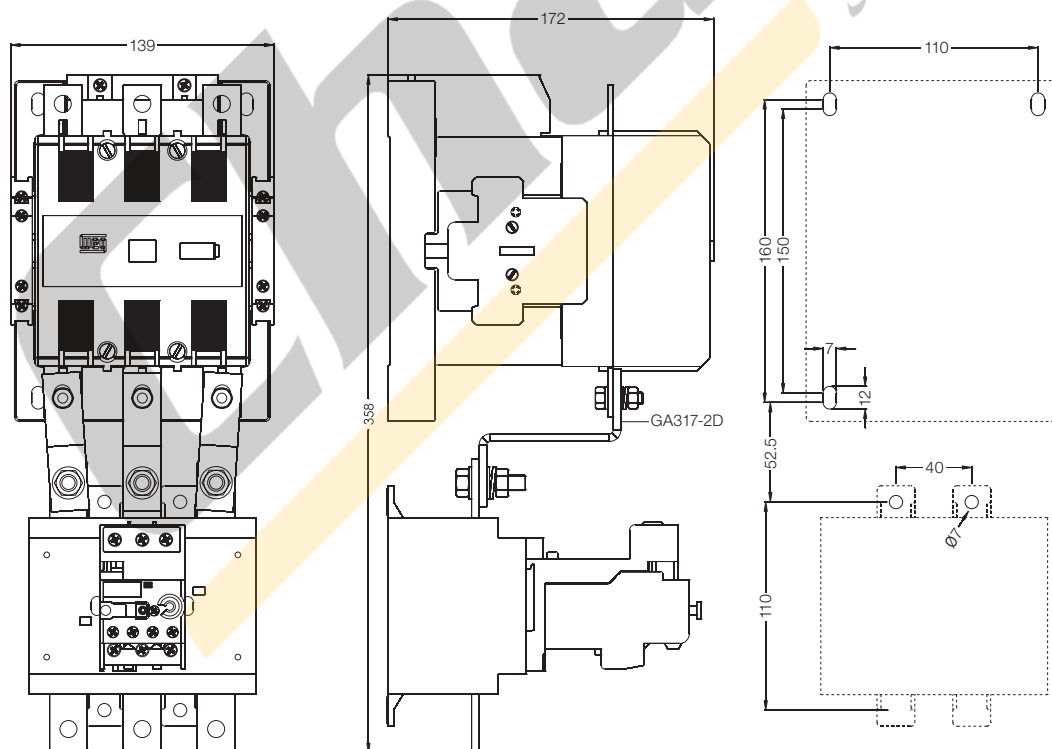
CWM112	A	B
Conventional coil	-	317.7
Electronic module	325	317.7

# Dimensions (mm)

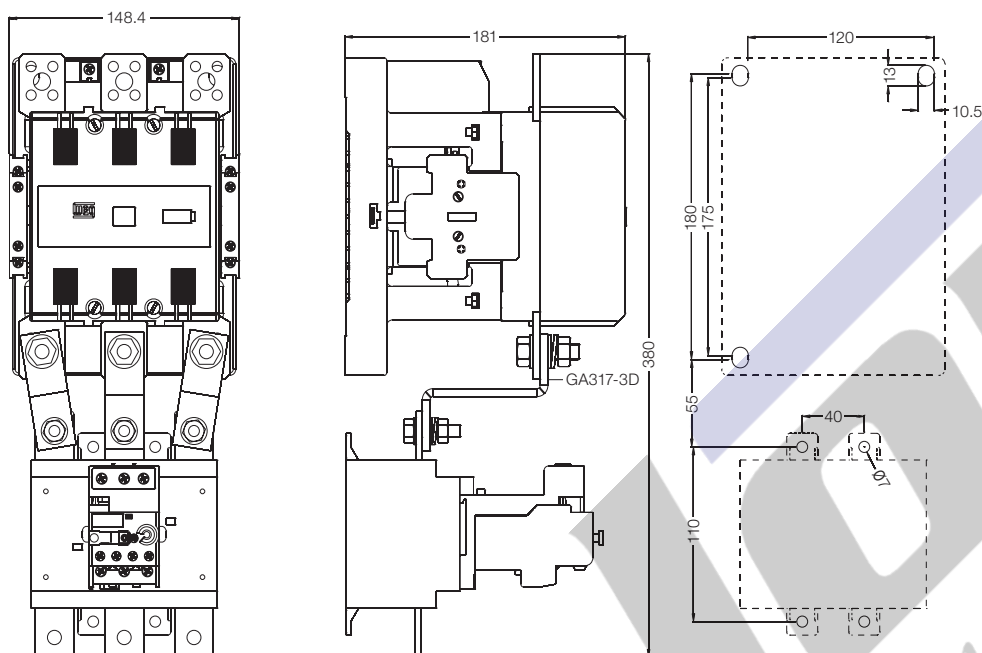
## CWM112/150 + RW317



## CWM180/215 + RW317

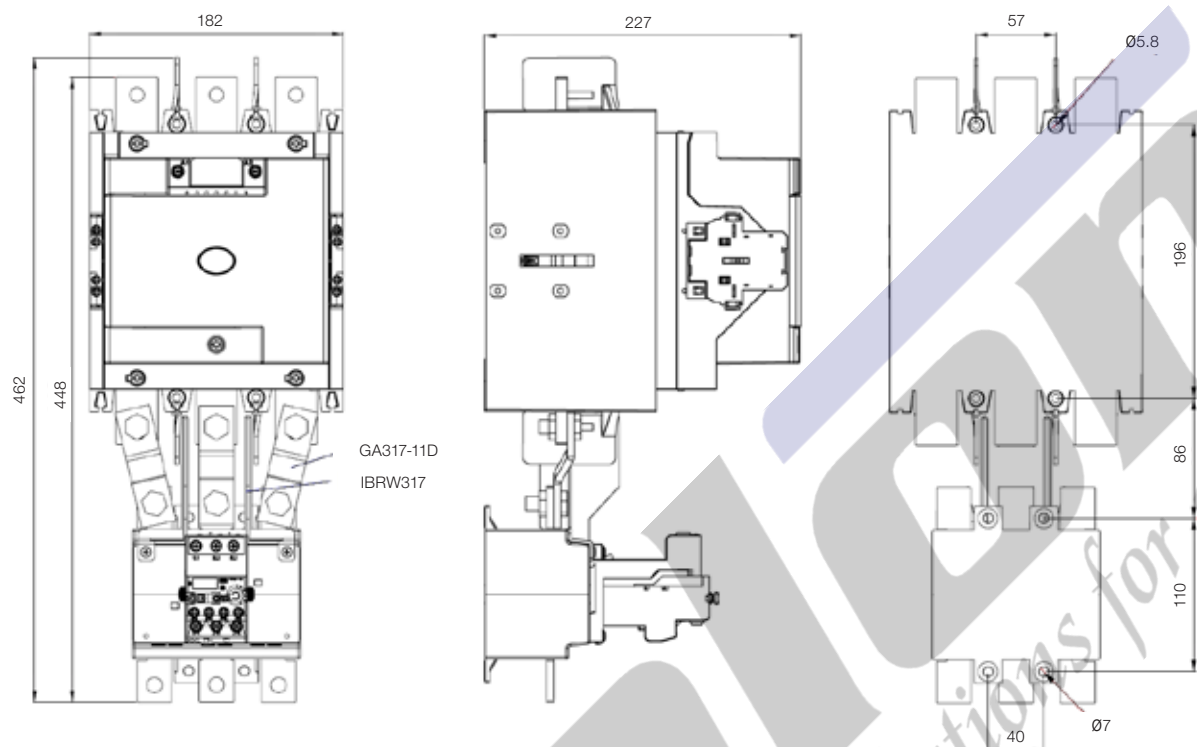


## CWM250/300 + RW317

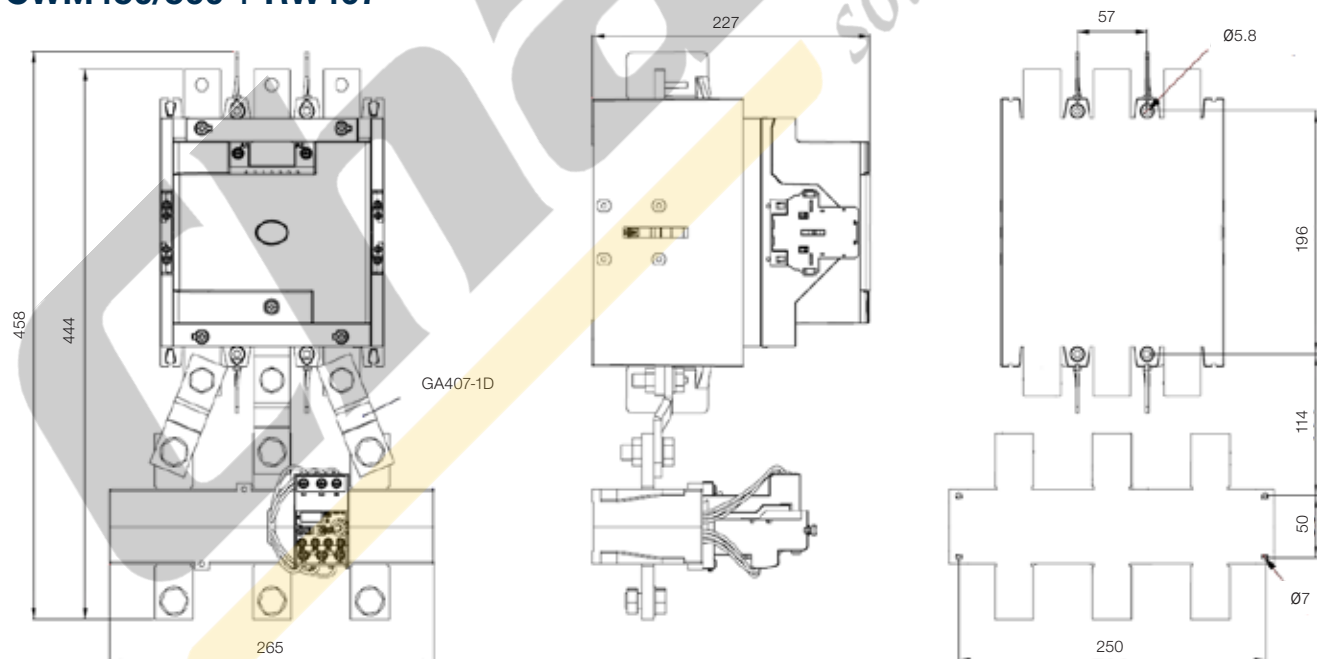


# Dimensions (mm)

## CWM450/560 + RW317



## CWM450/560 + RW407





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