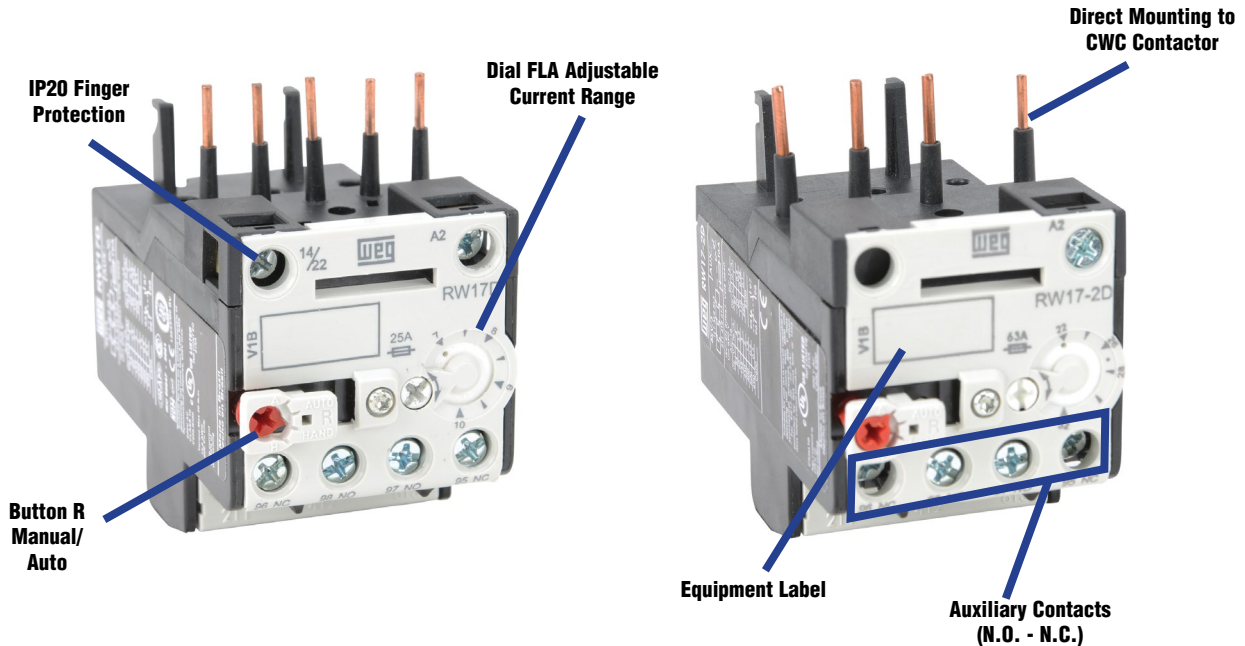


WEG RW Series Overload Relays for CWC Miniature Contactors



Overload Relays Features

RW overload relays are an important part of WEG controls' range of products. As usual in WEG products, an extended operational service life is one of the main features you can find in RW overload relays.

WEG's RW class 10 thermal overload relays are designed for use with, and as perfect complement to, the CWC miniature contactors.

RW relays are available in compact frame sizes from 0.28 A to 32A. Mounting an RW series overload relay directly to a WEG CWC miniature contactor creates an across-the-line starter capable of controlling motors from fractional to 15hp @ 460V.

Standards and Approvals

- IEC 60947 and VDE 0660.
- cULus listed file no. E189202
- CE marked low voltage directive 2006/95/EC
- Marine

Modern Architecture



Previous models of open overloads with "heaters" encounter problems in the field, including:

- Inaccurate trip point, because of uneven screw tightness when installed on individual phases
- Ambient problems, such as dust and other contaminants, because of their open design
- Inability to protect in case of single phase failure
- Nuisance tripping, because no temperature compensation is possible.

The modern design of WEG overload relays solves all of these problems. RW overload relays are fitted with fixed bimetallic elements, which eliminate any need for heater elements for field installation or future upgrading to a more efficient motor. All sizes provide complete motor protection by offering:

- Ambient temperature compensation (-4°F to +140°F)
- Phase loss sensitivity protection
- Current unbalance sensitivity

Dial FLA Setting

The trip-current is set via an adjustable dial designed with the motor's full load current (FLA) in mind.

Temperature Compensation

Because RW overload relays include a fourth bimetallic strip in addition to the three that are directly heated by the motor current, ambient temperature variations in the range of -4°F to +140°F are no obstacle for accurate protection of your motors even in the toughest conditions.

Phase Loss Sensitivity

WEG overload relays include standard phase failure sensitivity protection. This feature ensures fast tripping in case of phase loss, protecting your motor and avoiding expensive repairs.

Multi Function Button "R"

The programmable RESET button can be selected to operate in a Manual or Automatic mode, with or without TEST capabilities of the isolated "trip" N.C. and "alarm" N.O. auxiliary contacts. The "R" multifunction RESET / TEST button can be set in four different positions:

- H (manual RESET only)
- HAND (manual RESET/TEST)
- AUTO (automatic RESET/TEST)
- A (automatic RESET only)

In HAND and AUTO positions, when gray R button is pushed, both N.O. 97-98 and N.C. 95-96 contacts change state.

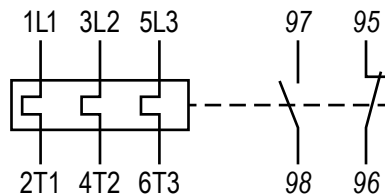
RW Series Thermal Overload Relays for CWC Miniature Contactors

Thermal Overload Relays Features

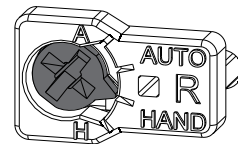
- Adjustable tripping current
- Phase-loss sensitivity (All phases must be connected. See motor wiring diagrams.)
- Tripping class 10
- Auxiliary contacts 1 N.O. + 1 N.C.
- Temperature compensation from -20° to +60°C [-4°F to +140°F]
- Hand/Auto/Reset button
- Equipment Label

Thermal Overload Relay Selection Guide						
Part Number	Price	For use with	Setting range of overload release (A)	*Short-Circuit Protective Device		
				IEC Max Fuse	UL Max Fuse	UL Max Breaker
<i>RW17-1D3-D004</i>	\$14.50	CWC07 CWC09 CWC012 CWC016	0.28-0.4	2	15	15
<i>RW17-1D3-C063</i>	\$14.50		0.4-0.63	2	15	15
<i>RW17-1D3-D008</i>	\$14.50		0.56-0.8	2	15	15
<i>RW17-1D3-D012</i>	\$14.50		0.8-1.2	4	15	15
<i>RW17-1D3-D018</i>	\$14.50		1.2-1.8	6	15	15
<i>RW17-1D3-D028</i>	\$14.50		1.8-2.8	6	15	15
<i>RW17-1D3-U004</i>	\$14.50		2.8-4.0	10	15	15
<i>RW17-1D3-D063</i>	\$16.00		4.0-6.3	16	25	25
<i>RW17-1D3-U008</i>	\$16.00		5.6-8.0	20	30	30
<i>RW17-1D3-U010</i>	\$16.00		7.0-10	25	40	40
<i>RW17-1D3-D125</i>	\$16.00		8.0-12.5	25	50	50
<i>RW17-1D3-U015</i>	\$16.00		10.0-15.0	35	60	60
<i>RW17-1D3-U017</i>	\$16.00		11.0-17.0	35	60	60
<i>RW17-2D3-U010</i>	\$16.00		CWC025	7-10	25	40
<i>RW17-2D3-D125</i>	\$16.00	8-12.5		25	50	50
<i>RW17-2D3-U015</i>	\$16.00	10-15		35	60	60
<i>RW17-2D3-U017</i>	\$16.00	11-17		35	60	60
<i>RW17-2D3-U023</i>	\$16.00	15-23		50	90	90
<i>RW17-2D3-U032</i>	\$16.00	22-32		63	90	125

* Note: Type 2 short-circuit coordination per IEC 60947-4-1. UL fuse type class CC.



Circuit Diagram



Hand/Auto/Reset Button



RW Series Thermal Overload Relays for CWC Miniature Contactors

Thermal Overload Relays Technical Characteristics

RW Series Thermal Overload Relays General Ratings		
Standards	IEC 60947-1 / 60947-4-1, EN 60947-1 / 60947-4-1, UL 508; CSA C.22.2/14; VDE 0660/102	
Number of poles	3	
Tripping class	10	
Phase loss sensitive	Yes	
Temperature compensation	Yes	
Rated insulation voltage IEC 60947-4-1	690V	
Rated insulation voltage UL/CSA	600V	
Rated operation voltage U_e IEC 60947-4-1	690V	
Rated operation voltage U_e UL/CSA	600V	
Rated impulse voltage U_{imp}	6kV	
Current	Direct	Yes
	Alternating	up to 400Hz
Degree of protection - protection against contact acc. VDE 0160 - Part 100		IP20
Ambient Temperature	Storage	-50 to +80°C [-58 to 176°F]
	Operating	-20 to +70°C [-4 to 158°F]
	Ambient temperature compensation	-20 to +60°C [-4 to 140°F]
Pollution degree per IEC 60947-4-1		3
Mounting		Direct on contactor
Current heat loss	Lower value of setting range	0.9 W
	Higher value of setting range	1.4 W
Weight		0.15kg [0.33lb]
Shock resistance IEC 60068-2-27		8g [10ms]
Main terminals capacity (Cross / Slotted Combination)	Fine - stranded with sleeve (ferrule)	1.5–10 mm ²
	Coarse - stranded / solid	1.5–6.0 mm ²
	Stranded / solid (UL / CSA)	14–6 AWG
Tightening torque		1.4–2.3 N·m [12.4–20.4 lb·in]
Short circuit rating 600V		5kA

WEG RW Series Thermal Overload Relays for CWC Miniature Contactors

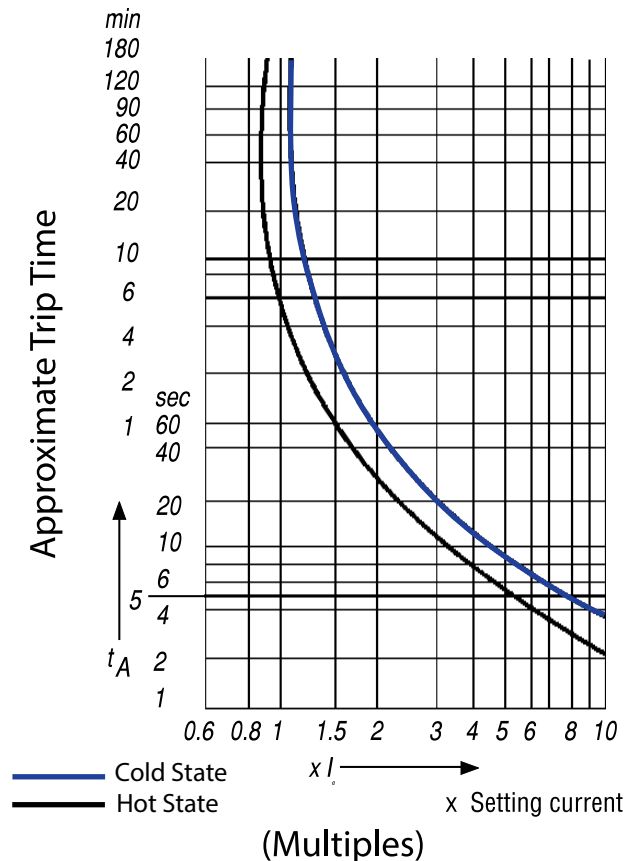
Thermal Overload Relays Technical Characteristics

Auxiliary Contacts General Ratings RW17D			
Front auxiliary contact		1 NO + 1 NC	
Rated auxiliary contacts IEC/EN 60947			
AC-14/15	24V	(A)	4.0
	60V	(A)	3.5
	125V	(A)	3.0
	230V	(A)	2.0
	400V	(A)	1.5
	500V	(A)	0.5
DC-13/14	690V	(A)	0.3
	24V	(A)	1.0
	60V	(A)	0.5
	110V	(A)	0.25
220V	(A)	0.1	
Rated thermal current		(A)	6
Short circuit protection			
Fuses type gL/gG		(A)	6
Auxiliary terminals capacity			
Fine - stranded with ferrule		(mm ²)	1.0 – 2.5
Coarse - stranded/solid		(mm ²)	1.0 – 2.5
Stranded/solid (UL/CSA)		(AWG)	16 – 12
Tightening torque		(N·m)	1.0 – 1.5
		(lb·in)	8.9 – 13.3



RW Overload Relays Tripping Characteristics

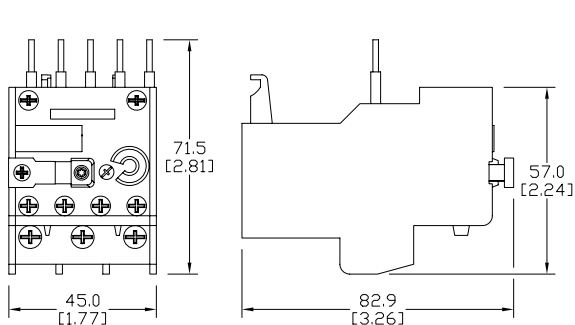
These tripping characteristics show the tripping of RW overload relays in relation to the current. They show the mean values of the tolerance ranges at an ambient temperature of 20°C (68°F), starting from cold state. The tripping time of the overload releases at operational temperature is reduced to approximately 25% of the values shown. Under normal operational conditions, all three phases of the RW relays should be loaded.



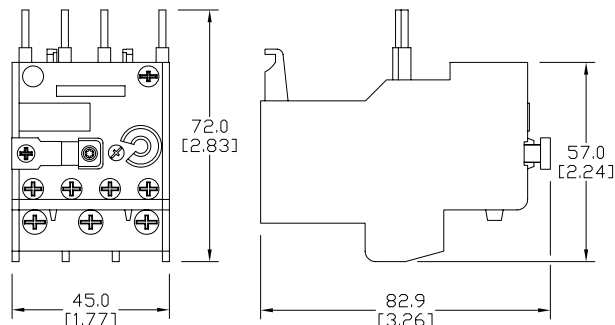
WEG RW Series Overload Relays for CWC Miniature Contactors

Overload Relays Dimensions

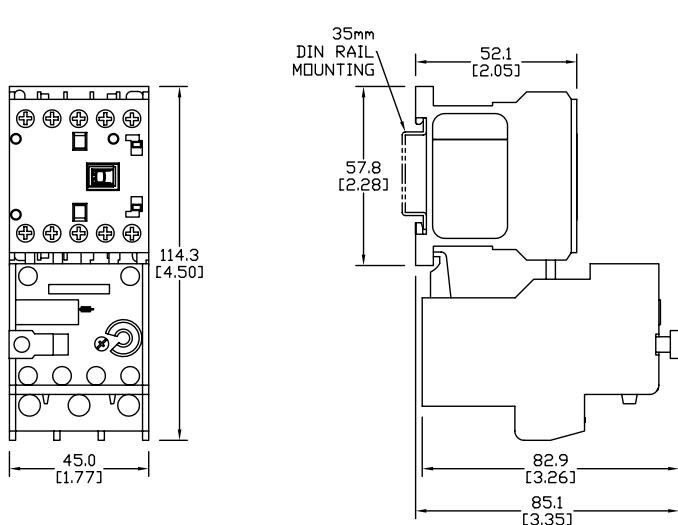
Dimensions mm [inches]



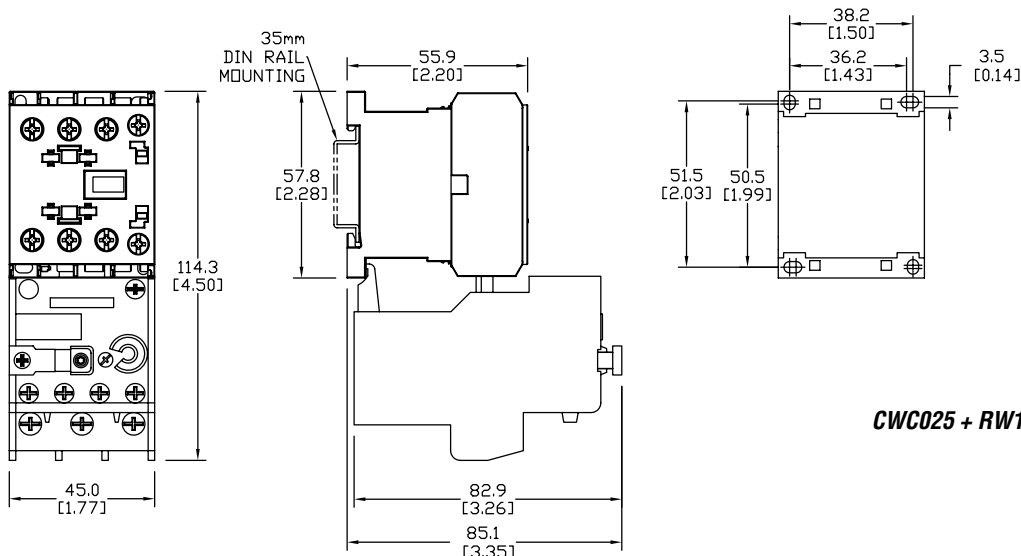
RW17-1D



RW17-2D



CWC07...16 + RW17-1D



CWC025 + RW17-2D