Adjustable Overloads For GH15 Series Contactors

The RTD series adjustable motor overload relays are designed for use with the GH15 Series 45 mm, 60 mm, 79 mm, 110 mm, and 145 mm contactors.

By combining the contactor with an overload relay, you have a reliable motor starter solution.

RTD32 overload relays for 45mm contactors

- 16 sizes for motor currents from 0.4 to 32 amps
- Units come with (1) N.O. and (1) N.C. auxiliary contacts
- Mount directly to 45 mm contactors
- Class 10A trip class
- cULus listed, CE

RTD65 overload relays for 60 mm contactors

- Four sizes for motor currents from 20 to 65 amps
- Units come with (1) N.O. and (1) N.C. auxiliary contacts
- Mount directly to 60 mm contactors
- Class 10A trip class
- cULus listed, CE

RTD180 overload relays for 79 mm and 110 mm contactors

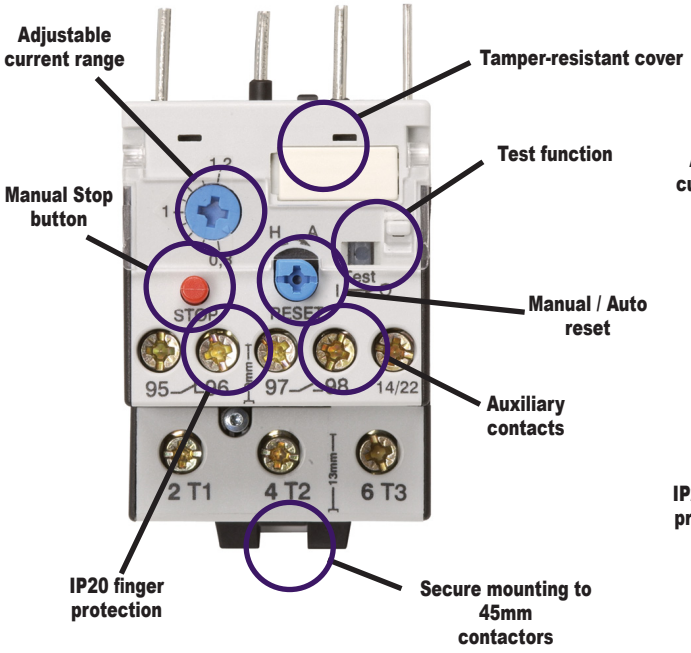
- 3 sizes for motor currents from 60 to 180 amps
- Units come with (1) N.O. and (1) N.C. auxiliary contacts
- Mount directly to 110 mm contactors with connection links (included)
- Hard-wire connection to 79 mm contactors (No connection links available)
- Class 10A trip class
- cULus listed, CE

RTD320 overload relays for 145 mm contactors

- 2 sizes for motor currents from 144 to 320 amps
- Units come with (1) N.O. and (1) N.C. auxiliary contacts
- Mount directly to 145 mm contactors with connection links (included)
- Class 10A trip class
- cULus listed, CE

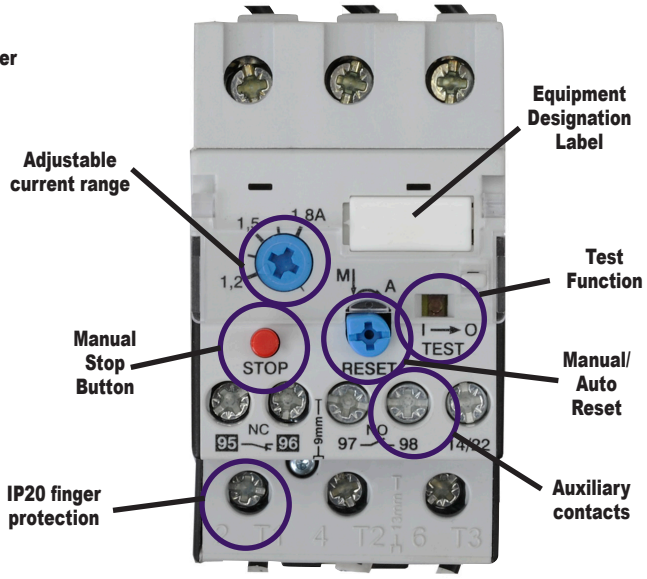
GH15 Series Adjustable Overload Relay Features

RTD32
for 45 mm Contactors



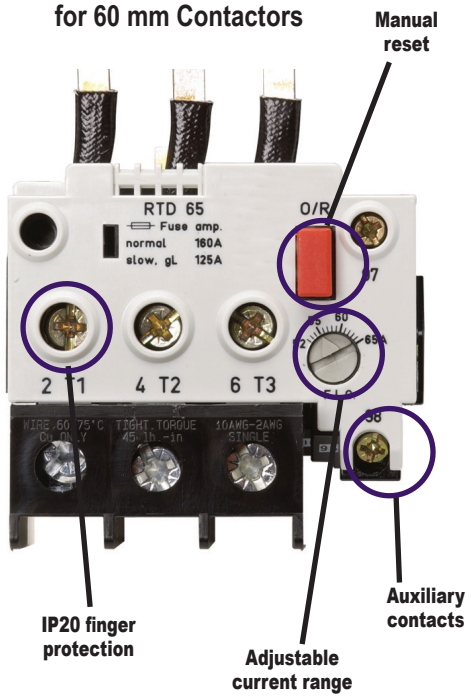
Note: Scale is 1:1 on dial.

RTD180 for 79 mm and 110 mm Contactors



Note: The secondary current for the dial adjustment of the relay is 100x the dial current. For example, for a rated load current of 120A, the relay setting should be 1.2A.

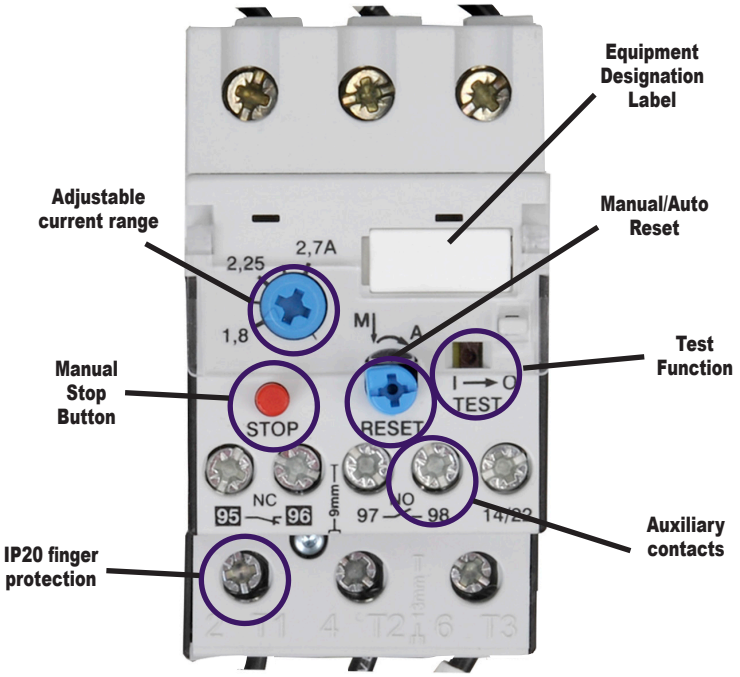
RTD65
for 60 mm Contactors



Note: Scale is 1:1 on dial.

Note: Additional Black Loadside Terminal Block is available on RTD65-5200 and RTD65-6500 only.

RTD320
for 145 mm Contactors



Note: The secondary current for the dial adjustment of the relay is 80x the dial current. For example, for a rated load current of 216A, the relay setting should be 2.7A.

GH15 Series Overload Relay Selection Guide

Step 1 Determine the motor FLA and service factor listed on the motor name plate. Next, calculate the size overload protection required based on 2005 NEC 430.32. Select your motor's FLA (Full Load Amperage) from Column A. Tripping current occurs at 125% of FLA in column A.

Step 2 Follow across to Column B to find your contactor size. Check the maximum amperage rating for that contactor. Ranges overlap and you may have to go to the next larger size.

Step 3 After selecting your contactor, follow across to Column C to find your overload relay model number.

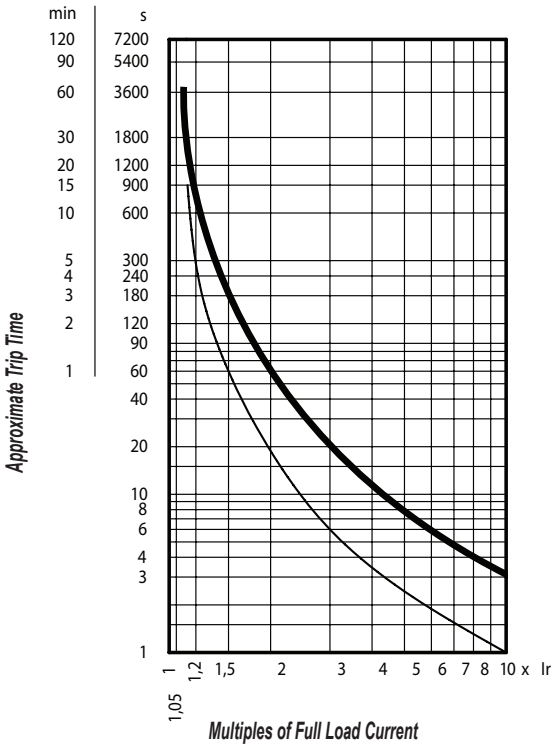
Step 4 Order the contactor and overload relay, any desired auxiliary contacts, then assemble and install your motor starter.

Motor Contactor and Overload Relay Selection Guide (When Motor FLA is Known)				
A	***B***	***C***	***Price***	***IEC Contactor Frame Size***
Current Range Motor FLA	***Contactor Model***	***Overload Relay***		
0.4 to 0.6A	GH15BN up to maximum FLA of 9A	RTD32-60		45mm
0.6 to 0.9A		RTD32-90		
0.8 to 1.2A		RTD32-120		
1.2 to 1.8A		RTD32-180		
1.8 to 2.7A		RTD32-270		
2.7 to 4.0A		RTD32-400		
4.0 to 6.0A		RTD32-600		
6.0 to 9.0A		RTD32-900		
8.0 to 11.0A	GH15CN up to 12A FLA	RTD32-1100		
10.0 to 14.0A		RTD32-1400		
10.0 to 14.0A	GH15DN up to 16A FLA	RTD32-1400		
13.0 to 18.0A		RTD32-1800		
13.0 to 18.0A	GH15ET up to 25A FLA	RTD32-1800		
17.0 to 24.0A		RTD32-2400		
22.0 to 32.0A		RTD32-3200		
22.0 to 32.0A	GH15FT up to 32A FLA	RTD32-3200		
20.0 to 28.0A	GH15GT up to 40A FLA	RTD65-2800		60mm
28.0 to 42.0A		RTD65-4200		
28.0 to 42.0A	GH15HT up to 50A FLA	RTD65-4200		
40.0 to 52.0A		RTD65-5200		
40.0 to 52.0A	GH15JT up to 63A FLA	RTD65-5200		
52.0 to 65.0A		RTD65-6500		
60.0 to 90.0A	GH15KT up to 80A FLA	RTD180-9000		79mm
60.0 to 90.0A	GH15LT up to 95A FLA	RTD180-9000		
80.0 to 120.0A	GH15MT up to 110A FLA	RTD180-12000		
120.0 to 180.0A	GH15NT up to 150A FLA	RTD180-18000		110mm
120.0 to 180.0A	GH15PT up to 175A FLA	RTD180-18000		
144.0 to 216.0A	GH15RT up to 210A FLA	RTD320-21600		145mm
144.0 to 216.0A	GH15ST up to 260A FLA	RTD320-21600		
216.0 to 320.0A		RTD320-32000		
144.0 to 216.0A	GH15TT up to 315A FLA	RTD320-21600		
216.0 to 320.0A		RTD320-32000		

GH15 Series Contactors Overload Technical Characteristics

Typical Trip Curves

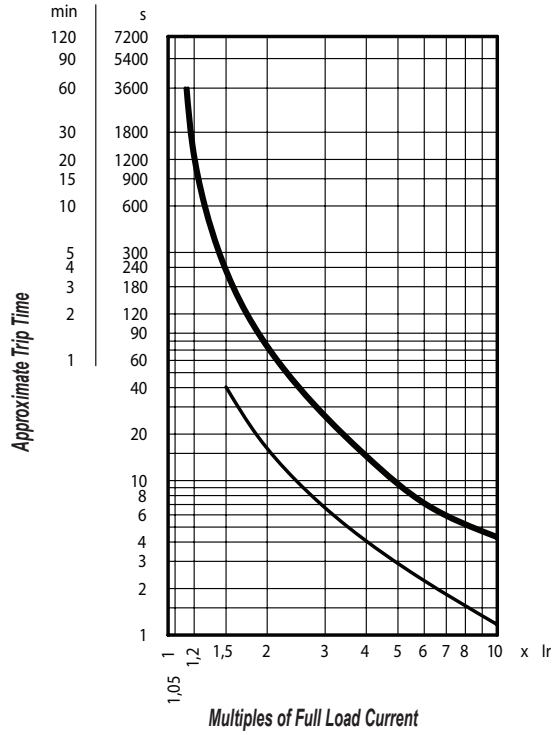
45mm and 60mm Overloads



Note: Curves show tripping time (average value) versus multiples of setting current Ir.

Tripping starting from cold
Tripping starting from hot

79mm,110 mm, and 145mm Overloads

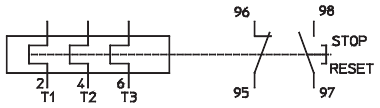


GH15 Series Contactors Overload Technical Characteristics

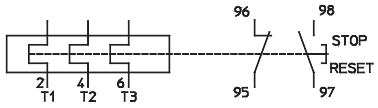
Thermal Overload Relays Specifications					
	rtd32	***rtd65***	***rtd180***	***rtd180-18000***	***rtd320***
Storage temperature	-40 to +70°C (-40°F to 158°F)				
Operating temperature	-25 to +55°C (-13°F to 131°F)				
Tripping class IEC 60947-4-1	10A				
Phase loss sensitive	Yes				
Connection to contactor	Built-in links		Pass through wire	Links for direct	Links for direct
Frequency limits	0-400 Hz		50-60 Hz		
Power dissipation per phase	2.3 Watts	3.7 Watts (52-65 A) setting range: 4.5 W	3 Watts		5 Watts
Short circuit current rating 600V	5kA rms				
Aux contacts wire range	14-10 AWG				
Aux contacts tightening torque	8.1 lb·in				

Overload Aux Contact Ratings					
Contact Rating Code Designation	***Thermal Continuous Current (Amps)***	***Maximum Current (Amps)***			
		120 Volt	***240 Volt***	***480 Volt***	***600 Volt***
		Make / Break	***Make / Break***	***Make / Break***	***Make / Break***
95-96 (NC) B600	5	30 / 3	15 / 1.5	7.5 / 0.75	6 / 0.6
97-98 (NO) C600	2.5	15 / 1.5	7.5 / 0.75	3.75 / 0.375	3 / 0.3

IEC Terminal Designations



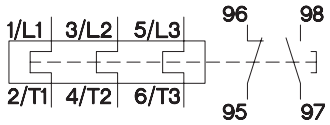
RTD32 (Manual - Auto Reset)



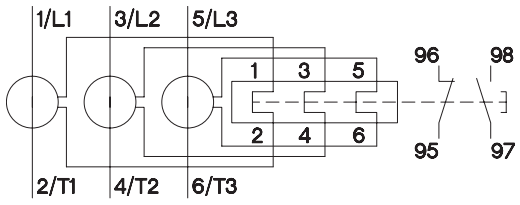
RTD65 (Manual - Auto Reset)

Wiring Diagrams

RTD32 / RTD65

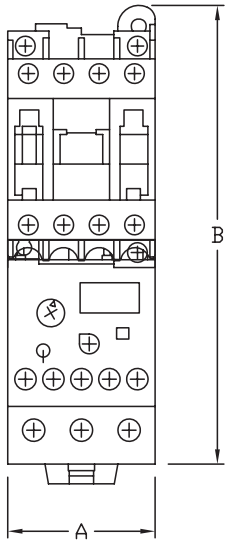


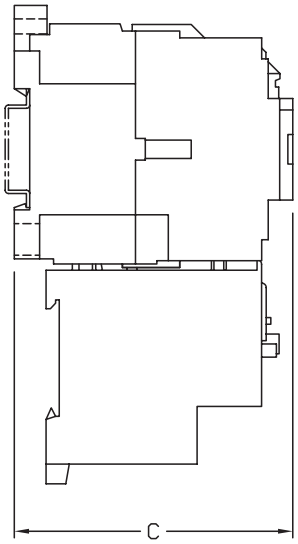
RTD180 / RTD320

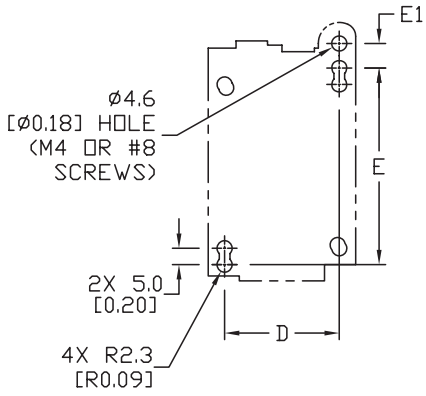


GH15 Series Overload Relay Dimensions

45mm Contactor and Overload Dimensions





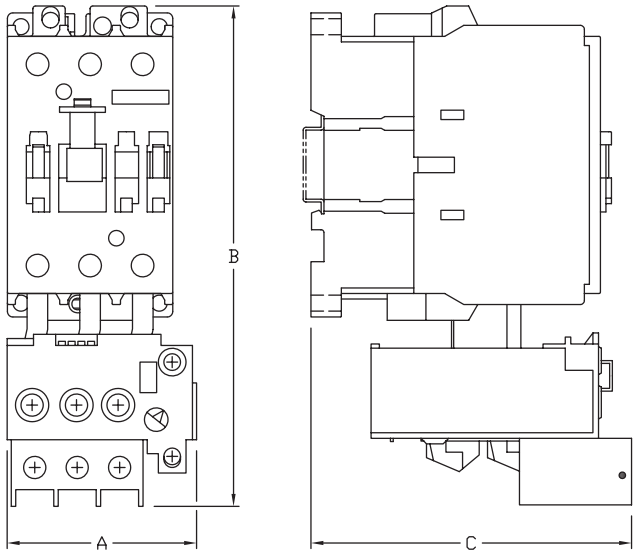


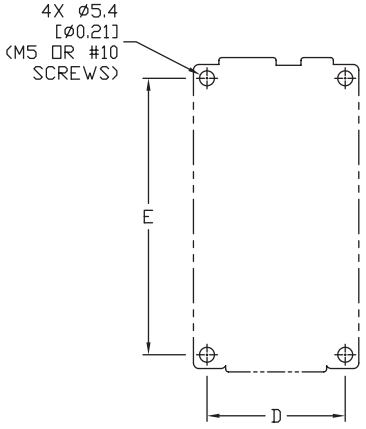
GH15BN, -CN, -DN, -ET, -FT + RTD32

Overload Dimensions mm [inches]													
Contactor Model	*Overload Model*	*Width*	*Height*			*Depth*	*D*	*E*	*E1*	*F*	*G*	*H*	*I*
		A	*B*	*B1*	*B2*	*C*							
GH15BN	RTD32	45.0 [1.77]	146.0 [5.75]	–	–	85.0 [3.35]	35.0 [1.38]	60.0 [2.36]	7.5 [0.30]	–	–	–	–
GH15CN													
GH15DN													
GH15ET													
GH15FT													
GH15GT	RTD65	68.5 [2.70]	169.0 [6.65]	–	–	109.0 [4.29]	50.0 [1.97]	100.0 [3.94]	–	–	–	–	–
GH15HT													
GH15JT													
GH15KT	RTD180	128.0 [5.04]	contactor and overloads do not have a link connector	137.0 [5.39]	81.0 [3.19]	130.0 [5.12]	70.0 [2.76]	100.0 [3.94]	–	–	68.0 [2.68]	40.0 [1.57]	–
GH15LT													
GH15MT				162.0 [6.38]	81.0 [3.19]								
GH15NT	RTD180-18000		290.0 [11.42]	–	–	145.0 [5.71]	100.0 [3.94]	130.0 [5.12]	–	42.5 [1.67]	68.0 [2.68]	40.0 [1.57]	–
GH15PT													
GH15RT	RTD320	145.0 [5.71]	361.0 [14.21]	–		208.0 [8.19]	120.0 [4.72]	160.0 [6.30]	–	80.0 [3.15]	68.0 [2.68]	40.0 [1.57]	96.0 [3.78]
GH15ST													
GH15TT													

GH15 Series Overload Relay Dimensions

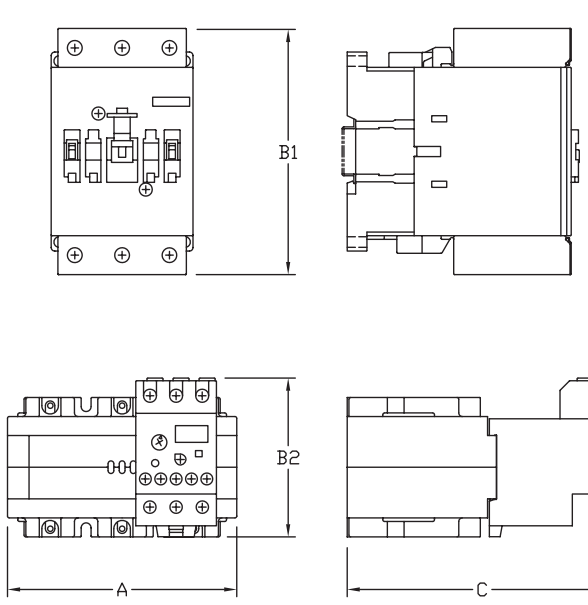
60mm Contactor and Overload Dimensions

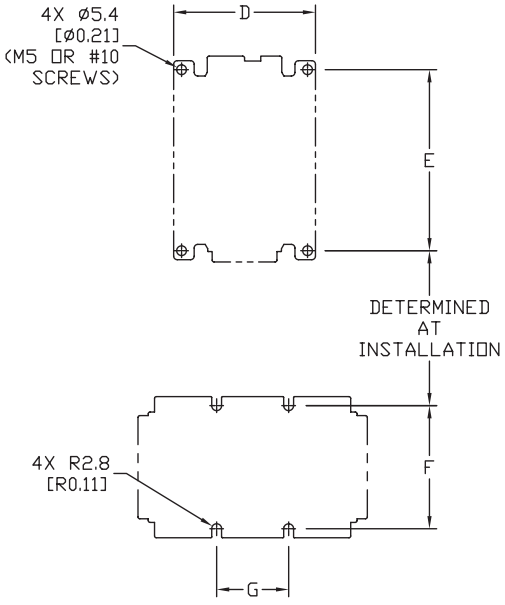




GH15GT, -HT, -JT + RTD65

79mm Contactor and Overload Dimensions



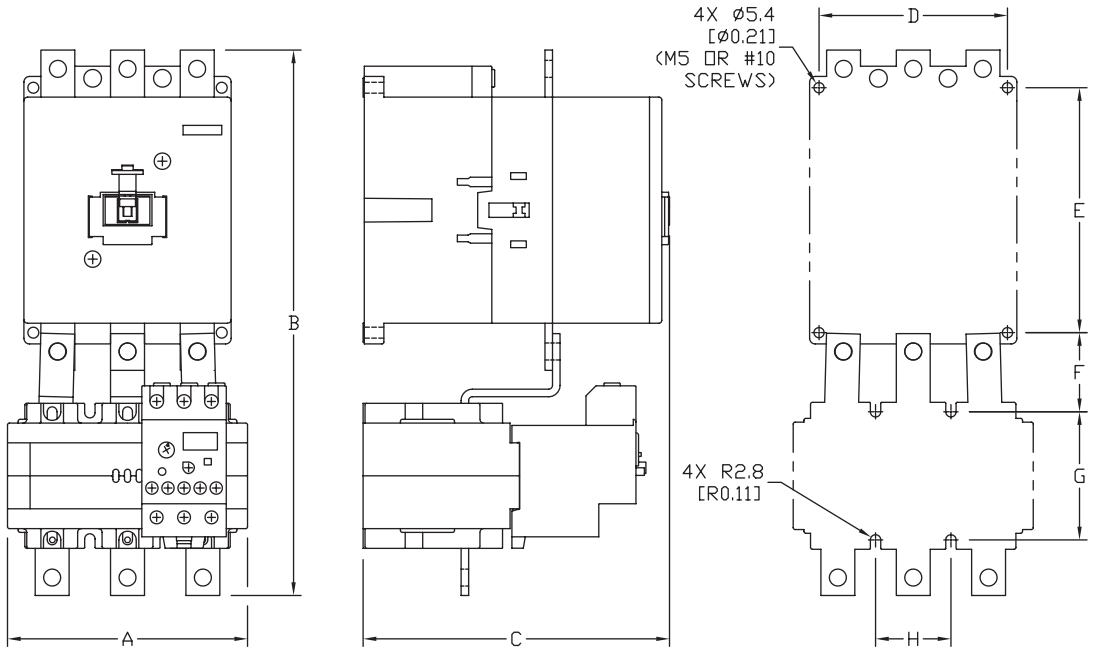


GH15KT, -LT, -MT + RTD180

Note: See our website for complete engineering drawings

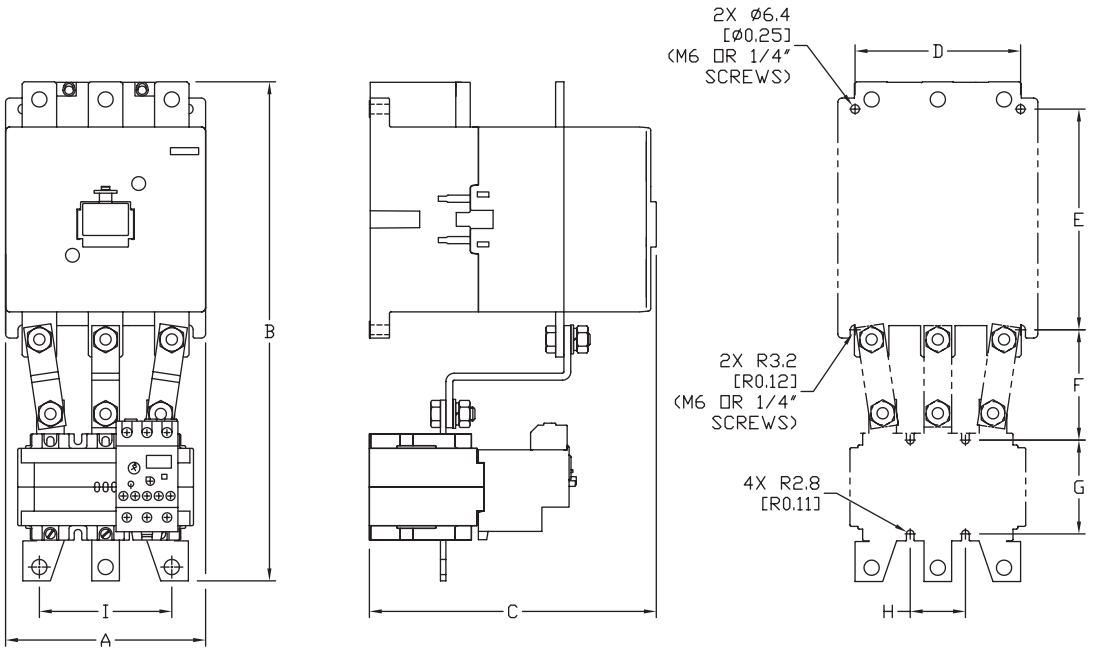
GH15 Series Overload Relay Dimensions

110mm Contactor and Overload Dimensions



GH15NT, -PT + RTD180-18000

145mm Contactor and Overload Dimensions



GH15RT, -ST, -TT + RTD320

Note: See our website for complete engineering drawings