

# RHU/RHN Series Thermal Overload Relays

## Features

- \*Reduce power consumption for energy saving and reduction of carbon emissions
- \*Comply with IEC, and China GB standard motor
- \*Certified: CSA, UL
- \*Comply with RoHS, CE
- \*Phase failure protection



RP-10

| Catalogue number               |             |              | RHU-5/□                     | RHU-10/□1                  | RHU-10/□2  | RHU-80/□□1                | RHU-80/□□2 | RHU-80/□□3                |                                |
|--------------------------------|-------------|--------------|-----------------------------|----------------------------|------------|---------------------------|------------|---------------------------|--------------------------------|
| Frame Size (mm)                |             |              | 45                          |                            |            | 56                        |            |                           |                                |
| Rated Insulation Voltage (Ui)  |             |              | UL 600V, IEC 690V           |                            |            |                           |            |                           |                                |
| Setting Current Range (A)      |             |              | 0.1~0.16                    | 0.1~0.16                   | 33~38      | 9~12.5                    | 17~25      | 24.5~36                   |                                |
|                                |             |              | 0.16~0.25                   | 0.16~0.25                  |            | 11.3~16                   | 24.5~36    |                           |                                |
|                                |             |              | 0.25~0.4                    | 0.25~0.4                   |            | 15~20                     | 35~47      |                           |                                |
|                                |             |              | 0.35~0.5                    | 0.35~0.5                   |            | 17.5~21.5                 |            |                           |                                |
|                                |             |              | 0.45~0.63                   | 0.45~0.63                  |            | 21~25                     |            |                           |                                |
|                                |             |              | 0.55~0.8                    | 0.55~0.8                   |            | 24.5~30                   |            |                           |                                |
|                                |             |              | 0.75~1                      | 0.75~1                     |            | 29~36                     |            |                           |                                |
|                                |             |              | 0.9~1.3                     | 0.9~1.3                    |            | 33~38                     |            |                           |                                |
|                                |             |              | 1.1~1.6                     | 1.1~1.6                    |            |                           |            |                           |                                |
|                                |             |              | 1.4~2                       | 1.4~2                      |            |                           |            |                           |                                |
|                                |             |              | 1.8~2.5                     | 1.8~2.5                    |            |                           |            |                           |                                |
|                                |             |              | 2.3~3.2                     | 2.3~3.2                    |            |                           |            |                           |                                |
|                                |             |              | 2.9~4                       | 2.9~4                      |            |                           |            |                           |                                |
|                                |             |              | 3.5~4.8                     | 3.5~4.8                    |            |                           |            |                           |                                |
|                                |             |              | 4.5~6.3                     | 4.5~6.3                    |            |                           |            |                           |                                |
|                                |             |              | 5.5~7.5                     | 5.5~7.5                    |            |                           |            |                           |                                |
|                                |             |              | 7.2~10                      | 7.2~10                     |            |                           |            |                           |                                |
|                                |             |              | 9~12.5                      | 9~12.5                     |            |                           |            |                           |                                |
|                                |             |              | For Use With Contactors     |                            |            | CN-5(K)/<br>CN-6(K)       |            |                           | CU-9/11/12/16/<br>17/18/22/32R |
| Type of Terminal               | Source Side | Pin          |                             |                            |            | Pin                       | Pin        | Terminal                  | Terminal                       |
|                                |             |              | Load Side                   | Screw (M4)                 | Screw (M5) | Screw (M5)                | Screw      | Screw                     | Screw                          |
| Reset Mode                     |             |              | —                           | —                          | —          | Automatic, Manual         |            |                           |                                |
| Contacts Configuration         |             |              | 1a+1b                       |                            |            |                           |            |                           |                                |
| Temperature Compensation Range |             |              | —5℃ ~ +40℃                  |                            |            |                           |            |                           |                                |
| Trip Class                     |             |              | —                           |                            |            | 10A                       |            |                           |                                |
| Contact Capacities (A)         | AC 15       | 120V         | 6                           |                            |            | 6                         |            |                           |                                |
|                                |             | 240V         | 3                           |                            |            | 3                         |            |                           |                                |
|                                |             | 380V         | 1.9                         |                            |            | 1.9                       |            |                           |                                |
|                                |             | 480V         | 1.5                         |                            |            | 1.5                       |            |                           |                                |
|                                |             | 500V         | 1.4                         |                            |            | 1.4                       |            |                           |                                |
|                                |             | 600V         | 1.2                         |                            |            | 1.2                       |            |                           |                                |
|                                | DC 13       | 125V         | —                           |                            |            | 0.55                      |            |                           |                                |
|                                |             | 250V         | —                           |                            |            | 0.27                      |            |                           |                                |
|                                | Ith         | N.C. Contact | 10                          | 6                          |            |                           | 10         |                           |                                |
| N.C. Contact                   |             | 10           | 6                           |                            |            | 10                        |            |                           |                                |
| Applicable adapter             |             |              | —                           | RP-10                      | —          | —                         |            | —                         |                                |
| Maximum wire size in AWG       |             |              | AWG10 (5.3mm <sup>2</sup> ) | AWG8 (8.4mm <sup>2</sup> ) |            | AWG4 (22mm <sup>2</sup> ) |            | AWG3 (38mm <sup>2</sup> ) |                                |

## RHU/RHN Series Thermal Overload Relays



| Catalogue number               |             |              | RHU-80/□□4                | RHU-80/□□5                | RHU-80/□□P                  | RHN-180/□□1  | RHN-180/□□2                  | RHN-180/□□3 |
|--------------------------------|-------------|--------------|---------------------------|---------------------------|-----------------------------|--------------|------------------------------|-------------|
| Frame Size (mm)                |             |              | 56                        |                           |                             | 100          |                              |             |
| Rated Insulation Voltage (Ui)  |             |              | UL 600V, IEC 690V         |                           |                             |              |                              |             |
| Setting Current Range (A)      |             |              | 17~25                     | 58~75                     | 17~25                       | 65~95        | 65~95                        | 65~95       |
|                                |             |              | 24.5~36                   | 72~90                     | 24.5~36                     | 85~125       | 85~125                       | 85~125      |
|                                |             |              | 35~47                     | 77~97                     | 35~47                       | 110~160      | 110~160                      | 110~160     |
|                                |             |              |                           |                           | 45~60                       |              |                              | 125~185     |
|                                |             |              |                           |                           | 58~75                       |              |                              |             |
|                                |             |              |                           | 72~90                     |                             |              |                              |             |
|                                |             |              |                           | 77~97                     |                             |              |                              |             |
| For Use With Contactors        |             |              | CU-27/32/38               | CN-100R                   | With adapter                | CN-100R/125R | CN-150                       | CN-180      |
| Type of Terminal               | Source Side | Terminal     |                           |                           | Terminal<br>Ø8.4 Bolt Hole) |              | Terminal<br>Ø10.5 Bolt Hole) |             |
|                                | Load Side   | Screw        |                           |                           | Screw                       |              | Screw                        |             |
| Reset Mode                     |             |              | Automatic, Manual         |                           |                             |              |                              |             |
| Contacts Configuration         |             |              | 1a+1b                     |                           |                             |              |                              |             |
| Temperature Compensation Range |             |              | —5℃ ~ +40℃                |                           |                             |              |                              |             |
| Trip Class                     |             |              | 10A                       |                           |                             |              |                              |             |
| Contact Capacities (A)         | AC 15       | 120V         | 6                         |                           |                             |              |                              |             |
|                                |             | 240V         | 3                         |                           |                             |              |                              |             |
|                                |             | 380V         | 1.9                       |                           |                             |              |                              |             |
|                                |             | 480V         | 1.5                       |                           |                             |              |                              |             |
|                                |             | 500V         | 1.4                       |                           |                             |              |                              |             |
|                                |             | 600V         | 1.2                       |                           |                             |              |                              |             |
|                                | DC 13       | 125V         | 0.55                      |                           |                             |              |                              |             |
|                                |             | 250V         | 0.27                      |                           |                             |              |                              |             |
|                                | Ith         | N.C. Contact | 10                        |                           |                             |              |                              |             |
| N.C. Contact                   |             | 10           |                           |                           |                             |              |                              |             |
| Applicable adapter             |             |              | —                         |                           |                             |              |                              |             |
| Maximum wire size in AWG       |             |              | AWG4 (22mm <sup>2</sup> ) | AWG4 (22mm <sup>2</sup> ) | AWG3 (38mm <sup>2</sup> )   | —            |                              |             |

## RHU/RHN Series Thermal Overload Relays

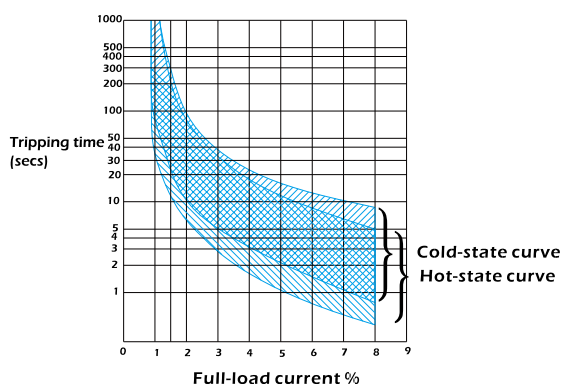


| Catalogue number               |             |              | RHN-180/□□4                | RHN-180/□□P | RHN-300/□□ | RHN-300/□□P |  |
|--------------------------------|-------------|--------------|----------------------------|-------------|------------|-------------|--|
| Frame Size (mm)                |             |              | 100                        | 100         | 150        |             |  |
| Rated Insulation Voltage (Ui)  |             |              | UL 600V, IEC 690V          |             |            |             |  |
| Setting Current Range (A)      |             |              | 65~95                      | 65~95       | 145~200    | 145~200     |  |
|                                |             |              | 85~125                     | 85~125      | 175~240    | 175~240     |  |
|                                |             |              | 110~160                    | 110~160     | 203~280    | 203~280     |  |
|                                |             |              | 125~185                    | 125~185     | 245~336    | 245~336     |  |
|                                |             |              |                            |             |            |             |  |
| For Use With Contactors        |             |              | CN-220/300                 | —           | CN-220/300 | —           |  |
| Type of Terminal               | Source Side |              | Terminal<br>Ø11 Bolt Hole) | Screw       | Terminal   | Screw       |  |
|                                | Load Side   |              | Screw                      | Screw       | Screw      | Screw       |  |
| Reset Mode                     |             |              | Automatic, Manual          |             |            |             |  |
| Contacts Configuration         |             |              | 1a+1b                      |             |            |             |  |
| Temperature Compensation Range |             |              | —5℃ ~ +40℃                 |             |            |             |  |
| Trip Class                     |             |              | 10A                        |             |            |             |  |
| Contact Capacities (A)         | AC 15       | 120V         | 6                          |             |            |             |  |
|                                |             | 240V         | 3                          |             |            |             |  |
|                                |             | 380V         | 1.9                        |             |            |             |  |
|                                |             | 480V         | 1.5                        |             |            |             |  |
|                                |             | 500V         | 1.4                        |             |            |             |  |
|                                |             | 600V         | 1.2                        |             |            |             |  |
|                                | DC 13       | 125V         | 0.55                       |             |            |             |  |
|                                |             | 250V         | 0.27                       |             |            |             |  |
|                                | Ith         | N.C. Contact | 10                         |             |            |             |  |
| N.C. Contact                   |             | 10           |                            |             |            |             |  |
| Applicable adapter             |             |              | —                          |             |            |             |  |
| Maximum wire size in AWG       |             |              | —                          |             |            |             |  |

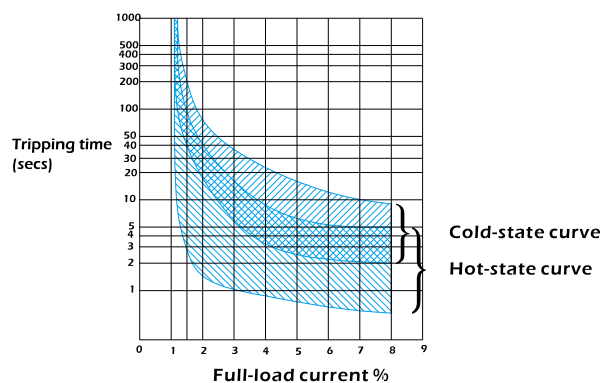
## RHU/RHN Series Tripping Curves of Thermal Overload Relays

RHU-5/10 FLC range 0.16~38A

Single-phase protection characteristics

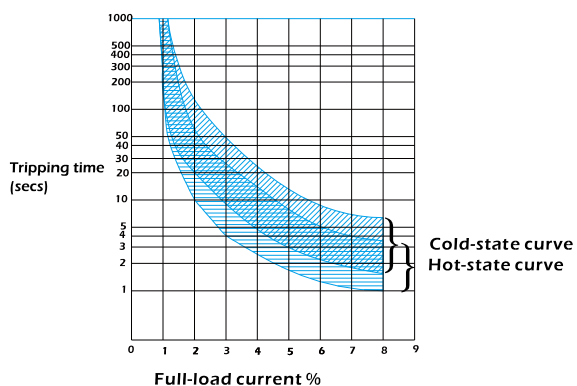


Three-phase protection characteristics

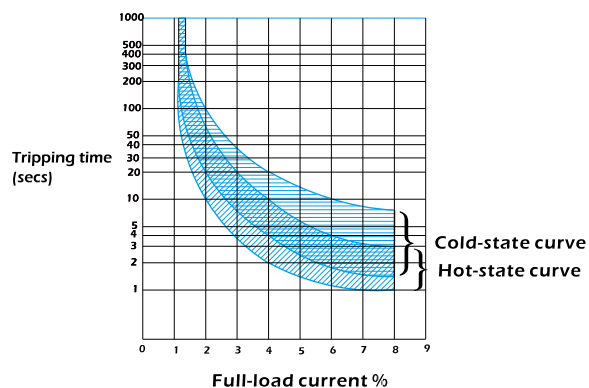


RHU-80/□1,2,3,4,P FLC range 25~97A

Single-phase protection characteristics

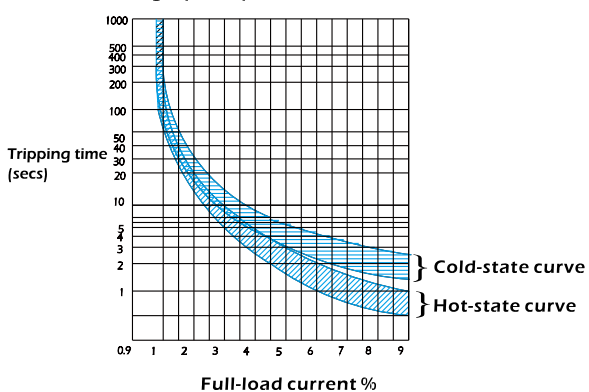


Three-phase protection characteristics

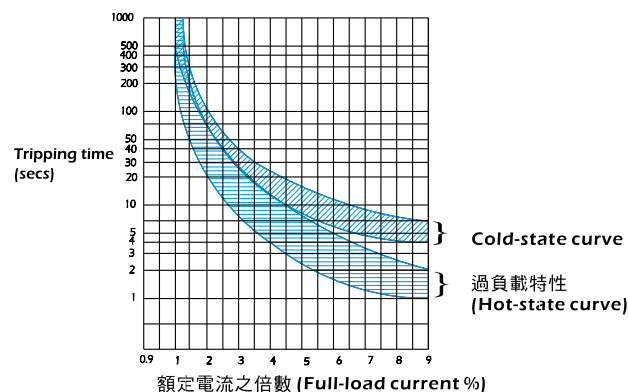


RHN-180/□1,2,P FLC range 95~125A

Single-phase protection characteristics



Three-phase protection characteristics

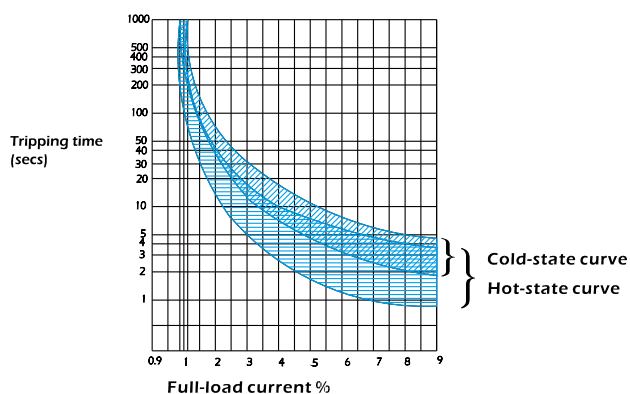


## RHU/RHN Series Tripping Curves of Thermal Overload Relays

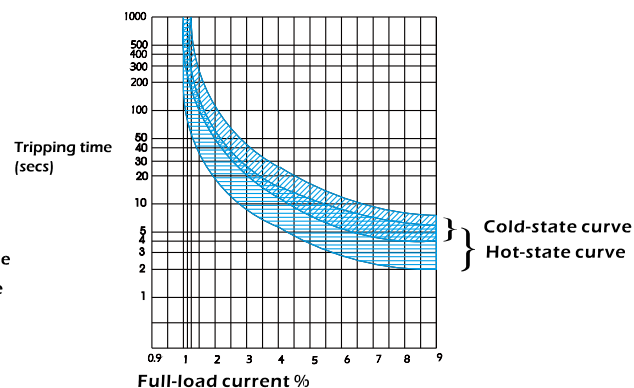
RHN-180 □ 3,4,P

FLC range 160~185A

Single-phase protection characteristics



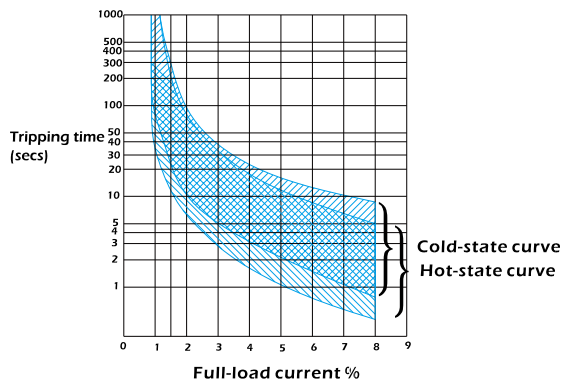
Three-phase protection characteristics



RHU-300/ □ ,P

FLC range 200~336A

Single-phase protection characteristics



Three-phase protection characteristics

