



## Coil Parameter

| DC Coil Parameter |                   |      |                                   |   |   |              |                 |                 |
|-------------------|-------------------|------|-----------------------------------|---|---|--------------|-----------------|-----------------|
| Dash numbers      | Rated voltage VDC |      | Coil resistance $\Omega \pm 10\%$ | Pick up voltage VDC(max) (75% of rated voltage) | Release voltage VDC(min) (10% of rated voltage) | Coil power W | Operate Time ms | Release Time ms |
|                   | Rated             | Max  |                                   |   |   |              |                 |                 |
| 003-900           | 3                 | 3.9  | 10                                | 2.25  | 0.3   | 0.9          | $\leq 15$       | $\leq 10$       |
| 005-900           | 5                 | 6.5  | 28                                | 3.75  | 0.5   |              |                 |                 |
| 006-900           | 6                 | 7.8  | 40                                | 4.50  | 0.6   |              |                 |                 |
| 009-900           | 9                 | 11.7 | 90                                | 6.75  | 0.9   |              |                 |                 |
| 012-900           | 12                | 15.6 | 160                               | 9.00  | 1.2   |              |                 |                 |
| 015-900           | 15                | 19.5 | 250                               | 10.25   | 1.5   |              |                 |                 |
| 018-900           | 18                | 23.4 | 360                               | 13.50   | 1.8   |              |                 |                 |
| 024-900           | 24                | 31.2 | 640                               | 18.00   | 2.4   |              |                 |                 |
| 036-900           | 36                | 46.8 | 1440                              | 27.00   | 3.6   |              |                 |                 |
| 048-900           | 48                | 62.4 | 2560                              | 36.00   | 4.8   |              |                 |                 |
| 110-900           | 110               | 143  | 13445                             | 82.50   | 11.0  |              |                 |                 |
|                   |                   |      |                                   |   |   |              |                 |                 |
| 003-600           | 3                 | 3.9  | 15                                | 2.25  | 0.3   | 0.6          | $\leq 15$       | $\leq 10$       |
| 005-600           | 5                 | 6.5  | 42                                | 3.75  | 0.5   |              |                 |                 |
| 006-600           | 6                 | 7.8  | 60                                | 4.50  | 0.6   |              |                 |                 |
| 009-600           | 9                 | 11.7 | 135                               | 6.75  | 0.9   |              |                 |                 |
| 012-600           | 12                | 15.6 | 240                               | 9.00  | 1.2   |              |                 |                 |
| 015-600           | 15                | 19.5 | 375                               | 10.25   | 1.5   |              |                 |                 |
| 018-600           | 18                | 23.4 | 540                               | 13.50   | 1.8   |              |                 |                 |
| 024-600           | 24                | 31.2 | 960                               | 18.00   | 2.4   |              |                 |                 |
| 048-600           | 48                | 62.4 | 3840                              | 36.00   | 4.8   |              |                 |                 |
| 110-600           | 110               | 143  | 20167                             | 82.50   | 11.0  |              |                 |                 |

**CAUTION:** 1.The use of any coil voltage less than the rated coil voltage will compromise the operation of the relay.  
2.Pickup and release voltage are for test purposes only and are not to be used as design criteria.

## Operation condition

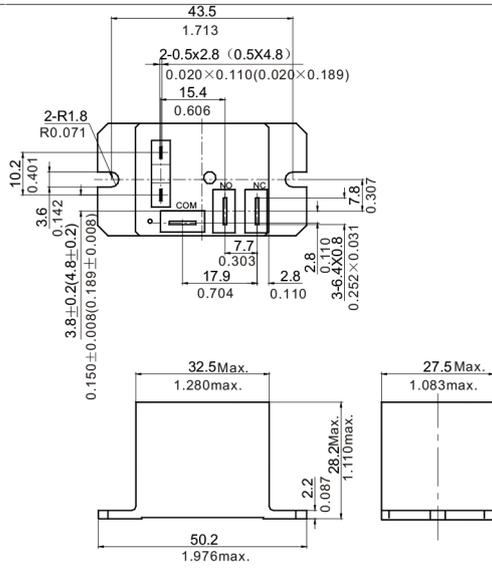
|                          |   |                              |
|--------------------------|---|------------------------------|
| Insulation Resistance    | 1000M $\Omega$ min (at 500VDC)                          | Item 7 of IEC 60255-5        |
| Dielectric Strength      |   |                              |
| Between contacts         | 50Hz 1500V  | Item 6 of IEC 60255-5        |
| Between contact and coil | 50Hz 2500V  | Item 6 of IEC 60255-5        |
| Shock resistance         | 200m/s <sup>2</sup> 11ms                                | IEC 68-2-27 Test Ea          |
| Vibration resistance     | 10Hz~55Hz double amplitude 1.5mm                        | IEC 68-2-6 Test Fc           |
| Terminals strength       | 10N   | IEC 68-2-21 Test Ua2         |
| Solderability            | 260 $^{\circ}$ C $\pm$ 5 $^{\circ}$ C 5s $\pm$ 0.5s     | IEC 68-2-20 Test Ta method 1 |
| Ambient Temperature      | -55 ~100 $^{\circ}$ C -55 $^{\circ}$ C~125 $^{\circ}$ C |                              |
| Relative Humidity        | 85% (at 40 $^{\circ}$ C)                                | IEC 68-2-3 Test Ca           |
| Mass                     | 35g ( Low profile type) 37g                             |                              |

## Safety approvals

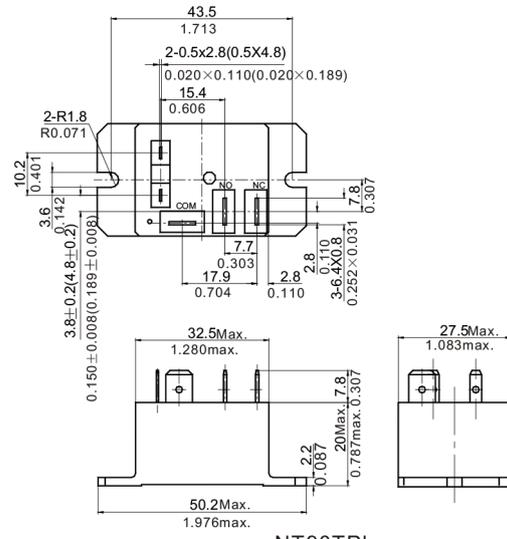
| Safety approval | UL&CUR  | TüV  | CQC                            |
|-----------------|---|--|--------------------------------|
| Load            | NO:40A/240VAC 30A/277VAC<br>NC:30A/240VAC,30VDC 20A/277VAC<br>Ballast:5A/280VAC<br>TV-5<br>HP:NO:2 HP 250VAC<br>A:1HP/16AFLA/120VAC<br>2HP/12AFLA/240VAC<br>NC:1 $\frac{1}{2}$ HP 250VAC<br>B: 30LRA/10AFLA/120VAC<br>30LRA/10AFLA/240VAC | NO:40A/240VAC 14VDC<br>30A/277VAC<br>NC:30A/240VAC 14VDC<br>20A/277VAC | NO:30A/240VAC<br>NC:20A/240VAC |

# Dimensions

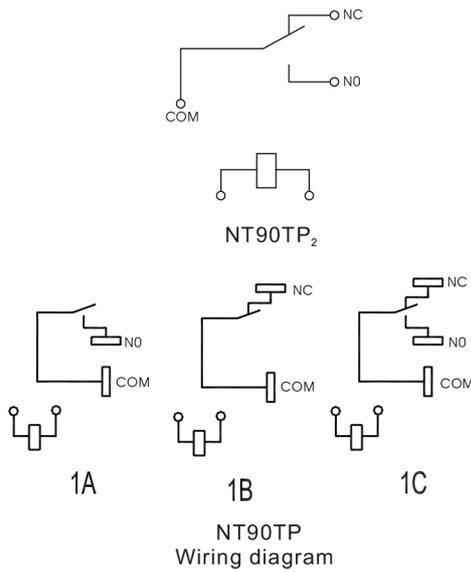
mm /inch



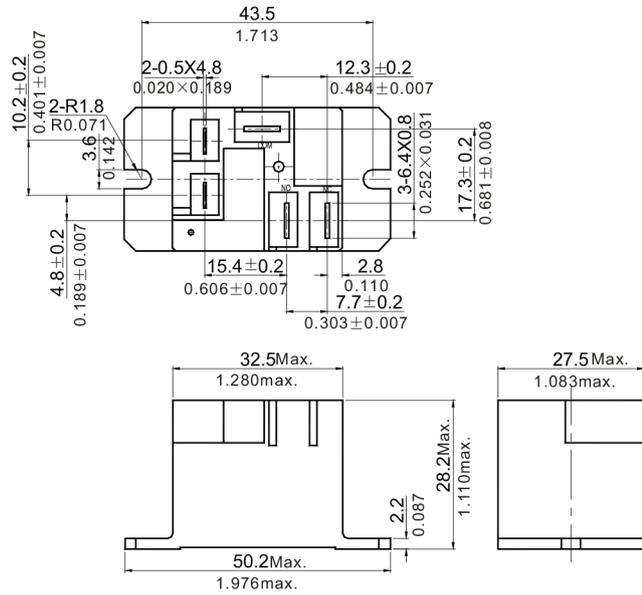
NT90TP



NT90TLP



NT90TP  
Wiring diagram



NT90TP<sub>2</sub>  
Dimensions

NOTES 1). Dimensions are in millimeters.  
2). Inch equivalents are given for general information only.

# Reference Data

