# ME-42 MASSUSE RELAY

**FEATURES**

- 2 Main contact + 1 Auxiliary contact
- Detection of main contact welding makes it possible to construct a safety circuit
- 40A switching capability
- Low coil holding voltage contributes to saving energy of equipment
- Applicable to solar photovoltaic inverter, AC charging station
- Contact gap:3.6mm(Main contact)
  1.0mm(Auxiliary contact)
  Auxiliary contact: Min. 0.5mm(When Main contact welded)
- Insulation system: Class F

**CONTACT DATA**

| Contact arrangement | | 2A | 2A1B |
|---|---|---|---|
| Contact resistance (initial) | Main contact | 10 mΩ(6VDC20A) | |
| | Auxiliary contact | | 100 mΩ(1A 6VDC) |
| Contact rating(Resistive) | Main contact | 40A 277VAC | |
| | Auxiliary contact | | 1A 277VAC 30VDC |
| Max. switching voltage | Main contact | 480VAC | |
| | Auxiliary contact | | 277VAC 30VDC |
| Max. switching current | Main contact | 40A | |
| | Auxiliary contact | | 1A |
| Max. switching power | Main contact | 11080VA | |
| | Auxiliary contact | | 277VA/30W |
| Contact material | Main contact | AgNi,$AgSnO_2$ | |
| | Auxiliary contact | | AgNi |

**CHARACTERISTICS**

| | |
|---|---|
| Insulation resistance | 1000MΩ at 500VDC |
| Dielectric strength | Main contact:<br>5000VAC, 1 min. between coil to contacts<br>2000VAC,1min. between contacts sets<br>2000VAC, 1 min. between open contacts<br>2A1B:<br>2000VAC,1min.between main contact and Auxiliary contact<br>2000VAC,1min. between coil and Auxiliary contacts<br>1000VAC,1min. between open Auxiliary contacts |
| Operate time | Max. 30 ms (nominal voltage) |
| Release time | Max. 10 ms (nominal voltage) |
| Vibration resistance | 10-55Hz, 1.0mm DA |
| Temperature rise | 70K max.(contact load current 40A,rated voltage excitation 60%,at 85℃) |
| Shock resistance | Functional:$98m/s^2$<br>Destructive:$980m/s^2$ |
| Humidity | 5% to 85% RH |
| Ambient temperature | -40℃ ~ 85℃ |
| Life expectancy<br>- Mechanical | $1 \times 10^6$ operations |

**Electrical Endurance**

| | |
|---|---|
| Life expectancy<br>Electrical Endurance | 1 NO: 35A 277VAC,Resistive load, 85℃,1s on 9s off 3 x $10^4$ ops<br>1 NO: 40A 277VAC, Resistive load, 85℃,1s on 9s off 1 x $10^4$ ops<br>2 NO: Making 10A Loading 40A Breaking 10A 277VAC, Resistive load, 85℃, 1s on 9s off 5 x $10^4$ops<br>NC: 1A 277VAC/30VDC, Resistive load, 85℃,1s on 9s off 10 x $10^4$ ops |

**COIL SPECIFICATIONS**

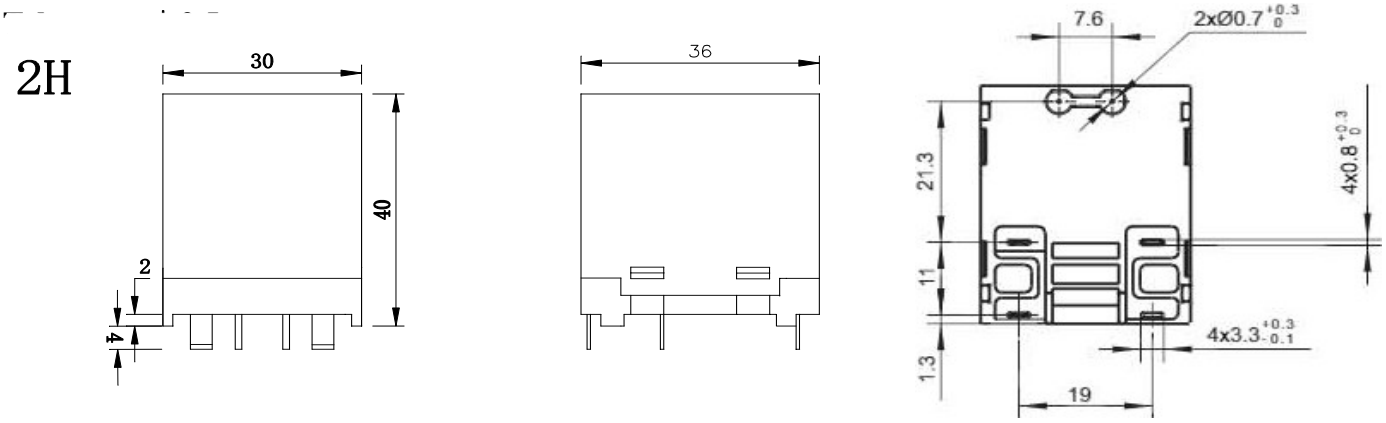
| Nominal voltage (VDC) | Pick-up voltage VDC(Max.) | Drop-out voltage VDC(Min.) | Nominal current (mA±10%) | Coil resistance (Ω±10%) | Power consumption(W) | Max. allowable voltage(VDC) |
|---|---|---|---|---|---|---|
| 6 | 4.5 | 0.3 | 313.3 | 19.1 | 1.88 | 130% of nominal voltage |
| 9 | 6.75 | 0.45 | 208.9 | 43.1 | 1.88 | |
| 12 | 9 | 0.6 | 156.7 | 76.6 | 1.88 | |
| 24 | 18 | 1.2 | 78.3 | 306.4 | 1.88 | |
| 48 | 36 | 2.4 | 39.2 | 1225.5 | 1.88 | |

**ORDERING INFORMATION**

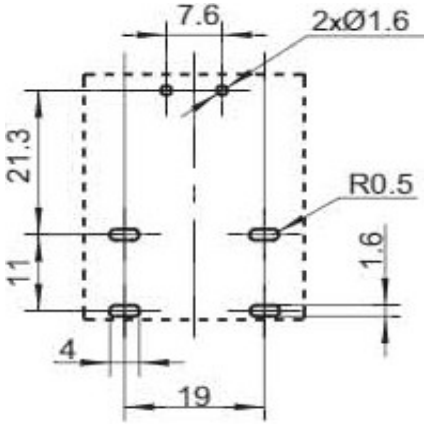
**ME-42 - 012 - 2H 1D T F**

| Model No. | Coil Voltage | Contact Form | Auxiliary contacts arrangement | Contact Material | Insulation System |
|---|---|---|---|---|---|
| ME-42 | 6VDC–48VDC | 2H: 2 A | Nil: Standard<br>1D: 1B | Nil: AgNi<br>T: $AgSnO_2$ | F : Class F |

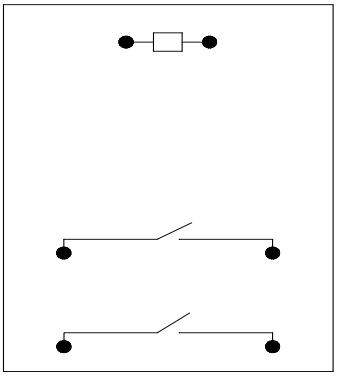
**Dimensions(unit:mm)**



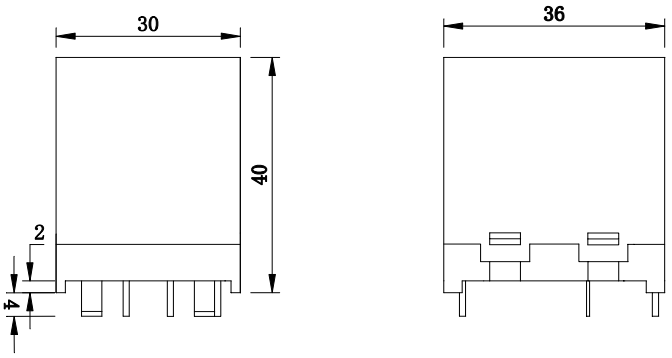
**PCB LAYOUT**

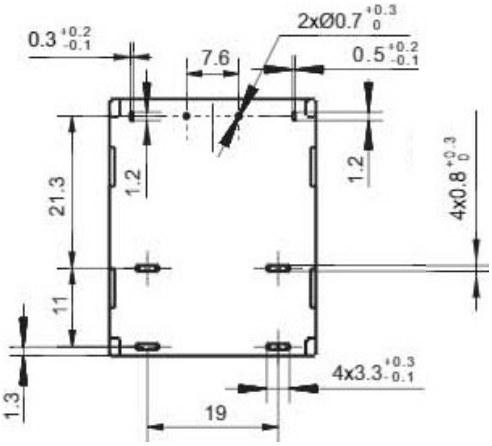



**Wiring Diagram**

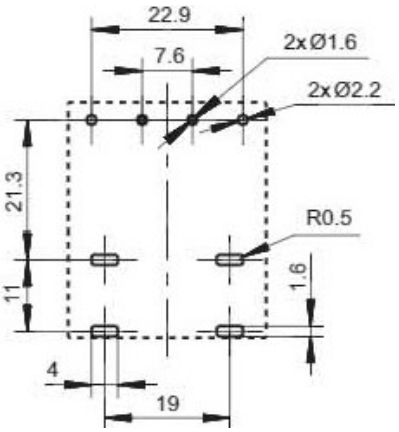


## 2H1D(with Auxiliary contact)

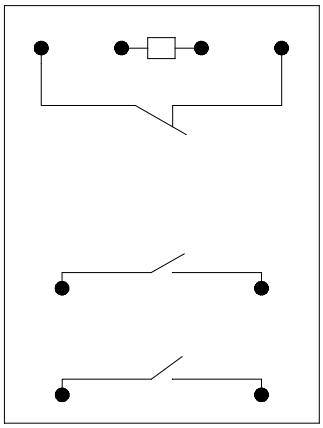



**PCB LAYOUT**




**Wiring Diagram**



**Remark:**

**1) In case of no tolerance shown in outline dimension: outline dimension≤1mm, tolerance should be ±0.2mm; outline dimension** >1mm and ≤5 mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.

**2) The tolerance without indicating for PCB layout is always ±0.1mm.**

**Disclaimer: All the specifications are subject to change without notice.**