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# TS-400 series

## Power Inverter



INDUSTRIAL CONTROL SYSTEMS

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# 400W True Sine Wave DC-AC Power Inverter TS-400 series



## ■ Features :

- True sine wave output (THD<3%)
- High surge power up to 800W
- High efficiency up to 88.5%
- Thermostatically controlled cooling fan
- Built-in remote ON-OFF control
- Front panel indicator for operation status
- Power ON-OFF switch
- Protections: Bat. low alarm / Bat. low shutdown / Over voltage / Over temp. / Output short / Input reverse polarity / Overload
- Application : Home appliance, power tools, office and portable equipment, vehicle and yacht ...etc.
- 3 years warranty

TPTC004 IEC62368-1 (for 212/224/248 only)

## ■ GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

## SPECIFICATION

| MODEL NO. | | TS-400-112☐ | TS-400-124☐ | TS-400-148☐ | TS-400-212☐ | TS-400-224☐ | TS-400-248☐ |
|---|---|---|---|---|---|---|---|
| | | ☐ = A, E, F | | | ☐= B, C, D | | |
| OUTPUT | RATED POWER | 400W | | | | | |
| | MAXIMUM OUTPUT POWER | 460W for 180 sec. / 600W for 10 sec. / surge power 800W for 30 cycles(typ.) | | | | | |
| | AC VOLTAGE | Factory setting set at 110VAC | | | Factory setting set at 230VAC | | |
| | | 100 / 110 / 115 / 120VAC selectable by setting button S.W | | | 200 / 220 / 230 / 240VAC selectable by setting button S.W | | |
| | FREQUENCY Note.6 | 60±0.1Hz 50/60Hz selectable by setting button | | | 50±0.1Hz 50/60Hz selectable by setting button | | |
| (Unit: r | WAVEFORM Note.2 | True sine wave (THD<3%) | | | | | |
| | AC REGULATION Note.2 | ±3.0% at rated input voltage | | | | | |
| | FRONT PANEL INDICATOR | Operation status ; Green : normal, Orange(flashing) : remote control OFF, Red : abnormal | | | | | |
| INPUT | BAT. VOLTAGE | 12V | 24V | 48V | 12V | 24V | 48V |
| | VOLTAGE RANGE (Typ.) Note.3 | 10.5 ~ 15VDC | 21 ~ 30VDC | 42 ~ 60VDC | 10.5 ~ 15VDC | 21 ~ 30VDC | 42 ~ 60VDC |
| | DC CURRENT (Typ.) | 40A | 20A | 10A | 40A | 20A | 10A |
| | NO LOAD CURRENT DRAW (Typ.) | 1.25A | 0.63A | 0.32A | 1.25A | 0.63A | 0.32A |
| | OFF MODE CURRENT DRAW | ≦1mA | | | | | |
| | EFFICIENCY (Typ.) Note.1 | 84.5% | 86% | 87% | 86% | 87.5% | 88.5% |
| | BATTERY TYPES | Open & sealed Lead Acid | | | | | |
| BATTERY INPUT PROTECTION | FUSE | 40A*2 | 40A*1 | 20A*1 | 40A*2 | 40A*1 | 20A*1 |
| | BAT. LOW ALARM | 11.3±4% | 22.5±4% | 45±4% | 11.3±4% | 22.5±4% | 45±4% |
| | BAT. LOW SHUTDOWN | 10.5±4% | 21±4% | 42±4% | 10.5±4% | 21±4% | 42±4% |
| | BAT. POLARITY | By internal fuse open | | | | | |
| OUTPUT PROTECTION | OVER TEMPERATURE | 85℃ ± 5℃ | 75℃ ± 5℃ | 70℃ ± 5℃ | 85℃ ± 5℃ | 75℃ ± 5℃ | 70℃ ± 5℃ |
| | | Protection type : Shut down o/p voltage, re-power on to recover; by internal RTH1 detect power transistor | | | | | |
| | OUTPUT SHORT | Protection type : Shut down o/p voltage, re-power on to recover | | | | | |
| | OVER LOAD (Typ.) | 105 ~ 115% load for 180 sec., 115% ~ 150% load for 10 sec. | | | | | |
| | | Protection type : Shut down o/p voltage, re-power on to recover | | | | | |
| | GFCI PROCTECTION | Optional (Only type F) | | | None | | |
| FUNCTION | REMOTE CONTROL | Open : Normal work ; Short : Remote off | | | | | |
| ENVIRONMENT | WORKING TEMP. | -10 ~ +40℃ @ 100% load ; +60℃ @ 50% load | | | | | |
| | WORKING HUMIDITY | 20% ~ 90% RH non-condensing | | | | | |
| | STORAGE TEMP., HUMIDITY | -30 ~ +70℃ / -22 ~ +158°F, 10 ~ 95% RH non-condensing | | | | | |
| | VIBRATION | 10 ~ 500Hz, 3G 10min./1cycle, 60min. each along X, Y, Z axes | | | | | |
| SAFETY & EMC | SAFETY STANDARDS | EAC TP TC 004 approved, Design refer to UL458, BS EN/EN62368-1 | | | IEC62368-1 CB, EAC TP TC 004 approved, Design refer to BS EN/EN62368-1 | | |
| | WITHSTAND VOLTAGE | Bat. I/P - AC O/P:3.0KVAC AC O/P - FG:1.5KVAC | | | | | |
| | ISOLATION RESISTANCE | Bat. I/P-AC O/P, Bat. I/P-FG, AC O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH | | | | | |
| | EMC EMISSION | Compliance to FCC class A, EAC TP TC 020 | | | Compliance to BS EN/EN55032 class A, 72/ 245/ CEE, 95/ 54/ CE, E-Mark, EAC TP TC 020 | | |
| | EMC IMMUNITY | Compliance to EAC TP TC 020 | | | Compliance to BS EN/EN61000-4-2,3,8, BS EN/EN55035, EAC TP TC 020 | | |
| OTHERS | MTBF | 865.3K hrs min. Telcordia SR-332 (Bellcore) ; 80.9K hrs min. MIL-HDBK-217F (25℃) | | | | | |
| | DIMENSION | 205*158*67mm (L*W*H) | | | | | |
| | PACKING | 1.73Kg; 6pcs/11.4Kg/1.55CUFT | | | | | |

NOTE

1.Efficiency is tested by 300W, linear load at 13V/26V/52V input voltage.
2.AC regulation and THD are tested by 400W, linear load at 13V/26V/52V input voltage.
3.The tolerance of each voltage value by models is:112/212→±0.5V;124/224→±1V;148/248→±2V.
4.All parameters not specified above are measured at rated load, 25℃ of ambient temperature and set to factory setting.
5.The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).
6.Type F for 60Hz only.
※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

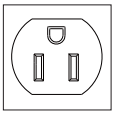
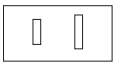
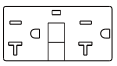
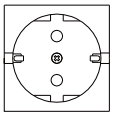
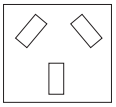
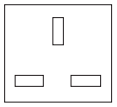
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# 400W True Sine Wave DC-AC Power Inverter — TS-400 series

TS – 400 – 112 A

- TS: True sine wave inverter
- 400: O/P Wattage:400W
- 112: Bat. Voltage: 12:12VDC, 24:24VDC, 48:48VDC; Output: 1:110VAC, 2:230VAC
- A: A :TYPE A OUTLET, B :TYPE B OUTLET, C :TYPE C OUTLET, D :TYPE D OUTLET, E :TYPE E OUTLET, F :TYPE F OUTLET

## ■ AC Output Socket (optional)

| MODEL NO. | TS-400-112☐ | TS-400-124☐ | TS-400-148☐ | TS-400-212☐ | TS-400-224☐ | TS-400-248☐ |
|---|---|---|---|---|---|---|
| Socket type |  |  |  |  |  |  |
| | TYPE-A | TYPE-E | TYPE-F | TYPE-B | TYPE-C | TYPE-D |
| | Standard | Optional | Optional | Standard | Optional | Optional |
| Country | USA | JAPAN | GFCI(60Hz) | EUROPE | AUSTRALIA | U.K |
| Certificate | FC | None | c UL us FC | E13 CE | E13 CE | E13 CE |

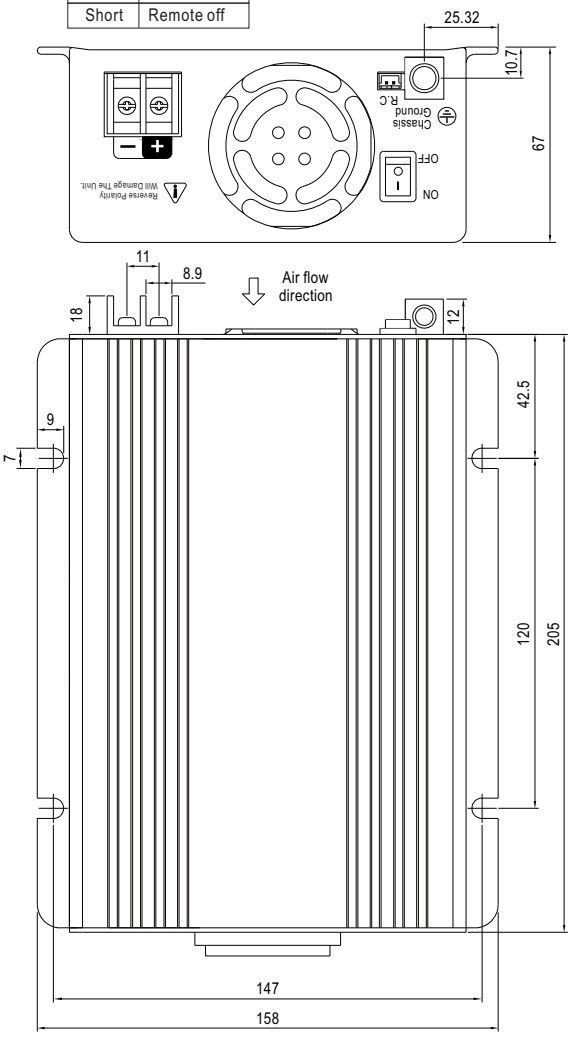
## ■ Mechanical Specification

(Unit: mm , tolerance ± 1mm)

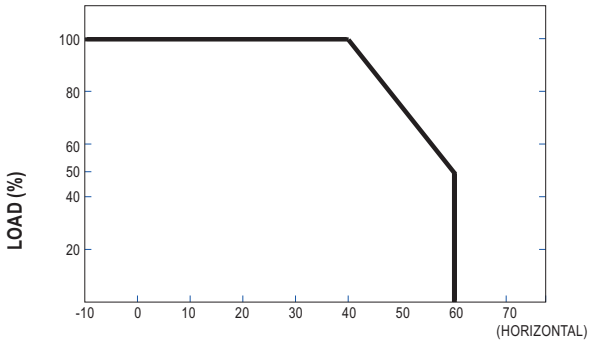
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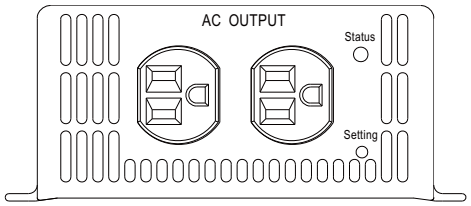
R.C Connector : JST B-XH or equivalent

| | |
|---|---|
| Open | Normal work |
| Short | Remote off |

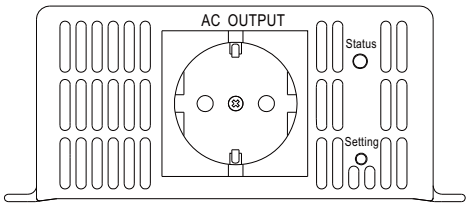



## ■ Derating Curve




Type-A




Type-B