

## STUA120 SERIES



## 120W U-Bracket Power Supply for I.T. Equipment

- Wide Input Voltage 90 to 260 VAC, 47 to 63 Hz
- Single to Triple Output
- Input Surge Current, Over Voltage and Over Load protection
- Power Fail Detect (Optional)
- Input connector mates with Molex housing 09-50-3051 and Molex 2478 series crimp terminal
- Output connector mates with Molex housing 09-50-3131 and Molex 2478 series crimp terminal
- Size: 3.21"x5"x1.72"
- Class I Insulation

2 Year Warranty

Approvals:    

### Single Output

| Part Number | Output Voltage | Output Current | Total Regulation | Max. Output Power |
|-------------|----------------|----------------|------------------|-------------------|
| STUA120-S01 | 03 ~05 VDC     | 22.00 ~ 20.00A | 5%               | 100W              |
| STUA120-S02 | 05 ~06 VDC     | 22.00 ~ 18.33A | 5%               | 110W              |
| STUA120-S03 | 06 ~09 VDC     | 19.16 ~ 12.77A | 5%               | 115W              |
| STUA120-S04 | 09 ~11 VDC     | 13.33 ~ 10.90A | 4%               | 120W              |
| STUA120-S05 | 11 ~ 13 VDC    | 10.90 ~ 9.23A  | 3%               | 120W              |
| STUA120-S06 | 13 ~ 16 VDC    | 9.23 ~ 7.50A   | 3%               | 120W              |
| STUA120-S07 | 16 ~ 21 VDC    | 7.50 ~ 5.71A   | 3%               | 120W              |
| STUA120-S08 | 21 ~ 27 VDC    | 5.71 ~ 4.44A   | 2%               | 120W              |
| STUA120-S09 | 27 ~ 33 VDC    | 4.44 ~ 3.63A   | 2%               | 120W              |
| STUA120-S10 | 33 ~ 40 VDC    | 3.63 ~ 3.00A   | 2%               | 120W              |
| STUA120-S11 | 40 ~ 50 VDC    | 3.00 ~ 2.40A   | 2%               | 120W              |

### Multi Output

| Part Number   | Output 1 |       |       |        | Output 2 |       |       |        | Output 3 |       |       |        | Max. Output Power |
|---------------|----------|-------|-------|--------|----------|-------|-------|--------|----------|-------|-------|--------|-------------------|
|               | Vonom    | Iomin | Iomax | Regmax | Vonom    | Iomin | Iomax | Regmax | Vonom    | Iomin | Iomax | Regmax |                   |
| STUA120-D00   | +3.3V    | 1.5A  | 15A   | 5%     | +12V     | 0.6A  | 6A    | 5%     |          |       |       |        | 120W              |
| STUA120-D01   | +5V      | 1.5A  | 15A   | 5%     | +12V     | 0.8A  | 6A    | 5%     |          |       |       |        | 120W              |
| STUA120-D02   | +5V      | 1.5A  | 15A   | 5%     | +15V     | 0.6A  | 6A    | 5%     |          |       |       |        | 120W              |
| STUA120-D03   | +5V      | 1.5A  | 15A   | 5%     | +24V     | 0.4A  | 3.5A  | 5%     |          |       |       |        | 120W              |
| STUA120-D04   | +3.3V    | 1.5A  | 15A   | 5%     | +5V      | 0.8A  | 6A    | 5%     |          |       |       |        | 79.5W             |
| STUA120-D15   | +5V      | 1.5A  | 15A   | 5%     |          |       |       |        | -24V     | 0.2A  | 2A    | 5%     | 120W              |
| STUA120-D19   | +28V     | 0.4A  | 3.92A | 5%     |          |       |       |        | +5V      | 0A    | 2A    | 5%     | 120W              |
| STUA120-T00   | +3.3V    | 1.5A  | 15A   | 5%     | +12V     | 0.6A  | 6A    | 5%     | -12V     | 0A    | 0.8A  | 5%     | 120W              |
| STUA120-T00-1 | +3.3V    | 1.5A  | 15A   | 5%     | +12V     | 0.6A  | 6A    | 5%     | +12V     | 0A    | 0.8A  | 5%     | 120W              |
| STUA120-T01   | +5V      | 1.5A  | 15A   | 5%     | +12V     | 0.8A  | 6A    | 5%     | -5V      | 0A    | 0.8A  | 5%     | 120W              |
| STUA120-T01-1 | +5V      | 1.5A  | 15A   | 5%     | +12V     | 0.8A  | 6A    | 5%     | +5V      | 0A    | 0.8A  | 5%     | 120W              |
| STUA120-T02   | +5V      | 1.5A  | 15A   | 5%     | +12V     | 0.8A  | 6A    | 5%     | -12V     | 0A    | 0.8A  | 5%     | 120W              |
| STUA120-T02-1 | +5V      | 1.5A  | 15A   | 5%     | +12V     | 0.8A  | 6A    | 5%     | +12V     | 0A    | 0.8A  | 5%     | 120W              |
| STUA120-T03   | +5V      | 1.5A  | 15A   | 5%     | +15V     | 1.0A  | 6A    | 5%     | -15V     | 0A    | 0.8A  | 5%     | 120W              |
| STUA120-T03-1 | +5V      | 1.5A  | 15A   | 5%     | +15V     | 1.0A  | 6A    | 5%     | +15V     | 0A    | 0.8A  | 5%     | 120W              |
| STUA120-T04   | +5V      | 1.5A  | 15A   | 5%     | +24V     | 0.45A | 3.5A  | 5%     | -24V     | 0.25A | 0.8A  | 5%     | 120W              |
| STUA120-T04-1 | +5V      | 1.5A  | 15A   | 5%     | +24V     | 0.45A | 3.5A  | 5%     | +24V     | 0.25A | 0.8A  | 5%     | 120W              |
| STUA120-T05   | +5V      | 1.5A  | 15A   | 5%     | +24V     | 0.4A  | 3.5A  | 5%     | -12V     | 0A    | 0.8A  | 5%     | 120W              |
| STUA120-T05-1 | +5V      | 1.5A  | 15A   | 5%     | +24V     | 0.4A  | 3.5A  | 5%     | +12V     | 0A    | 0.8A  | 5%     | 120W              |
| STUA120-T06   | +3.3V    | 1.5A  | 15A   | 5%     | +12V     | 0.8A  | 6A    | 5%     | -5V      | 0A    | 0.8A  | 5%     | 120W              |
| STUA120-T06-1 | +3.3V    | 1.5A  | 15A   | 5%     | +12V     | 0.8A  | 6A    | 5%     | +5V      | 0A    | 0.8A  | 5%     | 120W              |
| STUA120-T07   | +5V      | 1.5A  | 15A   | 5%     | +10V     | 0.6A  | 6A    | 5%     | -10V     | 0A    | 1.0A  | 5%     | 120W              |
| STUA120-T07-1 | +5V      | 1.5A  | 15A   | 5%     | +10V     | 0.6A  | 6A    | 5%     | +10V     | 0A    | 1.0A  | 5%     | 120W              |
| STUA120-T08   | +3.3V    | 1.5A  | 15A   | 5%     | +5V      | 0.8A  | 6A    | 5%     | -12V     | 0A    | 1.0A  | 5%     | 91.5W             |
| STUA120-T08-1 | +3.3V    | 1.5A  | 15A   | 5%     | +5V      | 0.8A  | 6A    | 5%     | +12V     | 0A    | 1.0A  | 5%     | 91.5W             |

## Electrical Characteristics

| Parameter                       | Test Conditions                            | Min.  | Typ. | Max. | Unit |
|---------------------------------|--------------------------------------------|-------|------|------|------|
| Input Voltage                   | Operating Voltage                          | 90    |      | 260  | VAC  |
| Input Frequency                 |                                            | 47    |      | 63   | Hz   |
| Power Factor Correction         | Io=Full load, Vin=90~260VAC                | 0.95  | 0.97 | 1.0  |      |
| Output Power Range              | Vin=90 to 264 VAC                          | 0     |      | 120  | W    |
| Input Current (Low Line)        | Io=Full load, Vin=115VAC                   |       |      | 1.7  | A    |
| Input Current (High Line)       | Io=Full load, Vin=230VAC                   |       |      | 1.0  | A    |
| Low Line Inrush Current         | Io=Full load, 25°C, Cool start, Vin=115VAC |       | 16   | 20   | A    |
| High Line Inrush Current        | Io=Full load, 25°C, Cool start, Vin=230VAC |       | 46   | 51   | A    |
| Efficiency                      | Io=Full load, Vin=230VAC                   | 70    | 80   | 88   | %    |
| Line Regulation                 | Io=Full load                               |       | 0.5  | 1    | %    |
| Load Regulation                 | Vin=230VAC                                 |       | 3    | 5    | %    |
| Over Voltage Protection         |                                            | 112   |      | 132  | %    |
| Over Current Protection         |                                            | 110   |      | 150  | %    |
| Transient Response              | Io=Full load to Half Load, Vin=500VAC      |       |      | 4    | mS   |
| Hold-Up Time                    | Io=Full load, Vin=150VAC                   | 16    |      |      | mS   |
| Start Up Time                   | Io=Full load, Vin=500VAC                   | 0.3   | 1    | 2    | S    |
| * Ripple & Noise (Peak to Peak) | Full load, Vin=90VAC                       |       | 0.5  | 1    | %    |
| Safety Ground Leakage Current   | Io=Full load, Vin=240VAC                   |       | 0.4  | 0.75 | mA   |
| Temperature Coefficient         | All output                                 | -0.04 |      | 0.04 | %/°C |

\* Note: The Ripple & Noise which is under 3.3VDC at 2% max

## Conditions

| Parameter                                                   | Test Conditions | Min. | Typ. | Max. | Unit |
|-------------------------------------------------------------|-----------------|------|------|------|------|
| Operating Temperature                                       |                 | 0    | 50   | 70   | °C   |
| Storage Temperature                                         |                 | -40  |      | 85   | °C   |
| Relative Humidity                                           |                 | 5    |      | 95   | %    |
| Operating Temperature at 25°C, Calculated per MIL-HDBK-217F |                 | 0.1M |      |      | Hrs  |
| De-rate linearly from 100% load at 50°C to 50% load at 70°C |                 |      |      |      |      |

## Approvals and Compliances

| Parameter                                                | Test Conditions      | Min. | Unit  |
|----------------------------------------------------------|----------------------|------|-------|
| Dielectric Withstanding Voltage for Primary to secondary | Primary to secondary | 4242 | VDC   |
| Dielectric Withstanding Voltage for Primary to Ground    | Primary to ground    | 2121 | VDC   |
| Isolation Resistance                                     | Test Voltage=500VDC  | 50   | MΩ    |
| EMI requirements for CISPR-22                            | Vin=220VAC           | B    | CLASS |
| EMI requirements for FCC PART-15                         | Vin=110VAC           | B    | CLASS |

## Mechanical and PIN Out

### PIN CHART

| MODEL \ PIN       | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13 (Optional) |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|
| STUA120-SXX-13PIN | OUT | OUT | OUT | OUT | OUT | OUT | RTN | RTN | RTN | RTN | RTN | RTN | PFD           |
| STUA120-D19-13PIN | N/C | N/C | Vo1 | Vo1 | Vo1 | Vo1 | COM | COM | COM | Vo3 | COM | COM | PFD           |
| STUA120-D15-13PIN | N/C | N/C | Vo1 | Vo1 | Vo1 | Vo1 | COM | COM | COM | Vo3 | COM | COM | PFD           |
| STUA120-DXX-13PIN | Vo2 | Vo2 | Vo1 | Vo1 | Vo1 | Vo1 | COM | COM | COM | N/C | COM | COM | PFD           |
| STUA120-TXX-13PIN | Vo2 | Vo2 | Vo1 | Vo1 | Vo1 | Vo1 | COM | COM | COM | Vo3 | COM | COM | PFD           |

Note: Vo1:Output#1 Vo2:Output#2 Vo3:Output#3

### Note:

1. Dimensions are shown in mm.
2. Weight: 476~582gs approx.
3. Input connector mates with Molex housing 09-50-3051 and Molex 2478 series crimp terminal.
4. Output connector mates with Molex housing 09-50-3131 and Molex 2478 series crimp terminal.

