

MERCURY-FLEX

Mercury 2U modules with HOT-SWAP shelf



The MercuryFlex is the ideal power solution for high value, mission critical applications in the semiconductor, industrial, and military markets. MercuryFlex provides fully adjustable, wide-range DC output, while operating from universal AC input. With a high-speed CAN-Bus interface providing full control of output voltage, current, and power, along with real-time read back of unit operating input voltage, temperature, alarm status, and output voltage and current, the Mercury Flex provides optimal integrations and optimization opportunities for complex systems.

Main Characteristics:

- Modular / scalable product
- Blind-mate / hot-swap compatible
- Constant Voltage, Constant Current or Constant Power operating modes
- Full Power Factor Correction (Low Input Harmonic Currents)
- SEMI F47 Compliant with 20ms Holdup at Full Power
- On-board CAN bus and Shelf Level Ethernet Controller

BENEFITS

Reduced System Complexity and Time to Market

Wide range of models and fully adjustable outputs. Multiple control modes provide ultimate application flexibility.

High Reliability for Critical Applications

Astrodyne TDI's comprehensive reliability assurance processes, including design to the rigorous requirements of NAVSO P3641A, HALT, DFMEA and our unique Highly Accelerated Stress Screening (HASS) on 100% of production units, assure the ultimate in unit reliability and performance.

High Power Density

Up to 15.2kW power in a 2U high, 19" rack space.

FEATURES

Universal AC Input

90VAC – 264VAC with full power factor control

Wide Range Outputs

28V (3V-28V)

56V (5V-56V)

125V (10V-125V)

180V (10V-180V)

250V (10V-250V)

450V (15V-450V)

Up to 3.8KW power per module

Up to 160A current per module (28V model)

Isolated Auxiliary Output: 12VDC @ .1A

Digital Remote Control

CAN Bus 2.0B provides extensive command and reporting features (Browser based interface available)

Parallel and Redundant Operation

Automatic current sharing, output fault isolation device and hot-swap compatible

Input Voltage Transient Immunity

SEMI 47 Compliant including 20ms holdup time EN61000-4-4 and -5, severity level 4

High MTBF

>1M hours

Variable Speed Fan Control

Minimizes audible noise and maximizes fan life

Astrodyne TDI
Now you have power.

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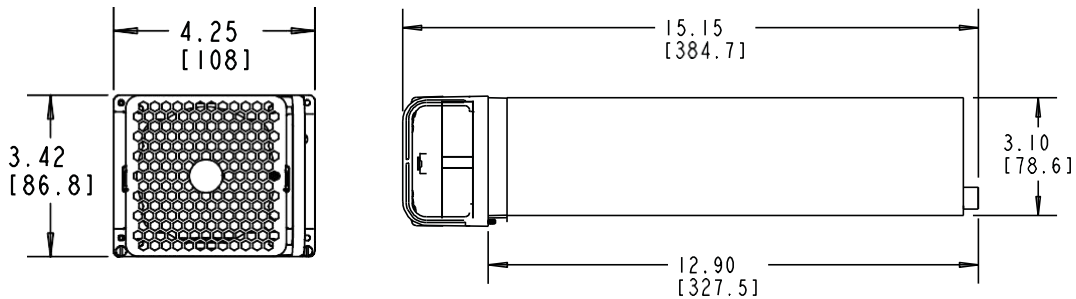
| MODEL NUMBER | PART NUMBER | DESCRIPTION |
|--------------------|----------------------|---|
| MER38WRB-F028D00LF | T100106170-F028D00LF | RECTIFIER, 3.8KW 2U 0-28V 160A DROOP ROHS |
| MER38WRB-F056D00LF | T100106170-F056D00LF | RECTIFIER, 3.8KW 2U 0-56V 70A DROOP ROHS |
| MER38WRB-F125D00LF | T100106170-F125D00LF | RECTIFIER, 3.8KW 2U 0-125V 34.5A DROOP ROHS |
| MER38WRB-F180D00LF | T100106170-F180D00LF | RECTIFIER, 3.8KW 2U 0-180V 24A DROOP ROHS |
| MER38WRB-F250D00LF | T100106170-F250D00LF | RECTIFIER, 3.8KW 2U 0-250V 17.5A DROOP ROHS |
| MER38WRB-F450D00LF | T100106170-F450D00LF | RECTIFIER, 3.8KW 2U 0-450VDC 10.2A DROOP ROHS |

| PARAMETER | MERCURY-FLEX |
|---------------------------------|---|
| Input AC | 90 - 176 or 176-260VAC auto range |
| AC Frequency | 47-63Hz |
| Max Input Current | 27A RMS, 50A Peak Inrush |
| Power Factor | > 0.97 Typical |
| Outputs, DC | Main Output: (Five standard models) 28V (3V-28V), 56V (5V-56V), 125V (10V-125V), 180 (10V-180V) 250V (10V-250V), 450V (15V-450V) |
| Output Power | 3,800W Max (Vin 176VAC-264VAC) |
| Efficiency | > 91% |
| Ripple/Noise | <1% p-p of Vout max |
| Load Regulation | 2% of Vout max, from no load to full load (Current share V-Droop) |
| Electronic Alarms | AC OK, Output OK, Inhibit, Protect Status |
| Visual Indicators | Front Panel LED (OK/Fault) |
| Digital Command / Status | CAN-Bus 2.0B |
| Protection Features | Input UV, Input OV(MOV), Input OI(fuse), Output OV, Output CL, OverTemp |
| Operating Temperature | -30 to +55°C (full rated) |
| Storage/Transportation | -40 to +85°C |
| Humidity | 0% to 95% RH, non condensing |
| Isolation | In to Out: 3000 VAC RMS In to GND: 1625 VAC RMS Out to GND: Up to 1674 VACRMS |
| Regulatory/Safety C = Conducted | CE: Low voltage directive Safety: IEC/UL 60950-1 (Second Edition) ; EN60950-1 EMI (C): FCC Part 15, Sub Part J, Class A EN55022, class |
| Harmonics | Compliant to EN61000-3-2 |
| AC Line Sag | Compliant to SEMIF47-0706 |
| Dimensions (inches) | Module: 4.25" x 3.42" x 15.15" Shelf : 18.19" x 3.46" x 16.5" |
| Cooling | Internal Variable Speed Fan, front airinput |
| Warranty | 1 Year |

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MERCURY FLEX 2U RECTIFIER



2U SHELF ASSEMBLY

