



Mercury 2U modules with HOT-SWAP shelf



The Astrodyne TDI 3.8kW Mercury-Flex is the perfect rectifier solution for applications that require a flexible digitally controlled industrial power supply with a universal 90 to 264VAC 50/60Hz single phase input, and a wide choice of DC output voltage ranges: 28V, 56V, 85V, 125V, 400V.

Using digital CAN-Bus commands, Mercury-Flex can be field programmed to operate in a constant voltage, constant current, or constant power mode. The digital readback feature provides output voltage and current values, operating temperature, and protection alarm status.

For higher power applications, Mercury-Flex rectifiers can be easily connected in parallel current sharing groups with the aid of a four module shelf assembly, enabling designs of upwards to 228kW in a single universal 19" rack (30U).

## BENEFITS

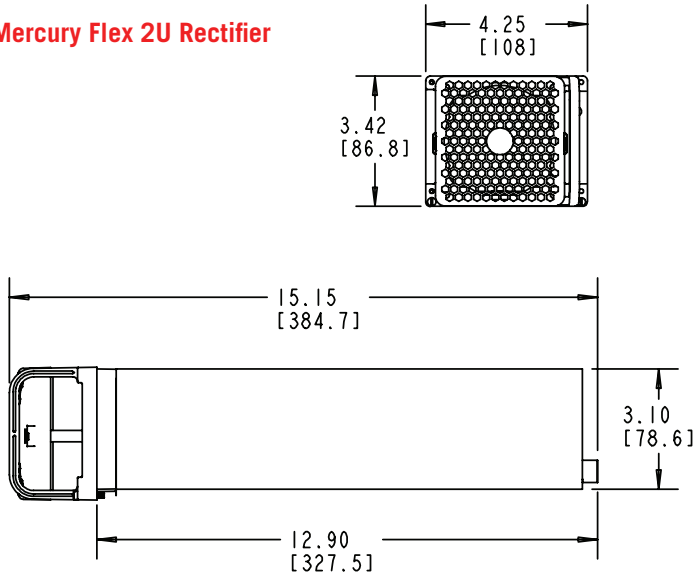
- **Fewer power supplies to satisfy many applications** = Saves time and money
- **Hot-Swap and N+1 redundancy capability** = Maximum uptime and easy maintenance
- **Scalability** = easy to configure systems for a wide range of power requirements
- **Proprietary Highly Accelerated Stress Screening (HASS)** = High Reliability

## FEATURES

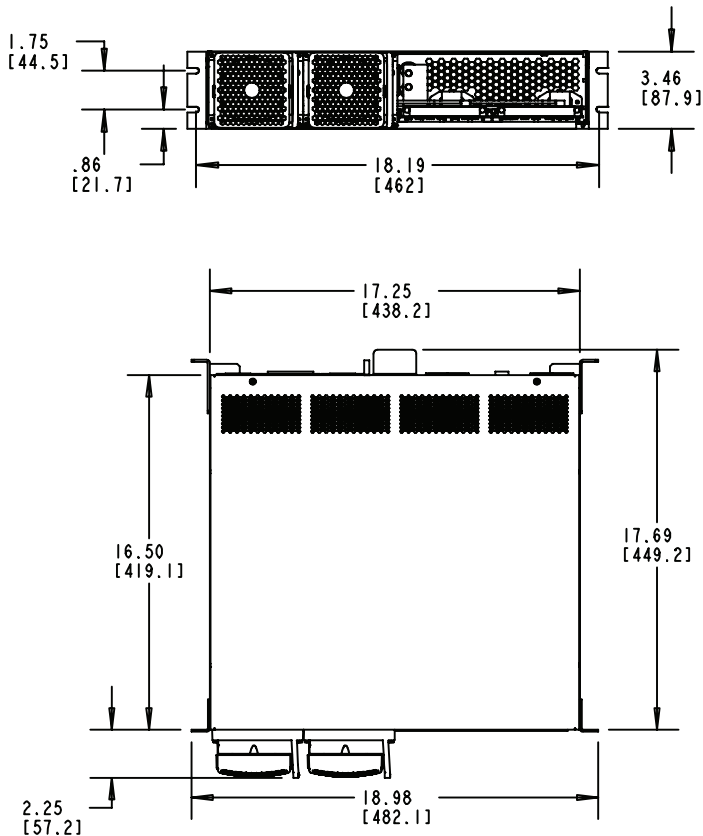
- **Wide Output Range Control**  
Power: up to 3.8KW  
Adjustable Voltage VDC: Standard Models  
**28V** (5V-28V)  
**56V** (5V-56V)  
**85V** (7.5V-85V)  
**125V** (10V-125V)  
**400V** (25V-400V)  
Current: up to 170ADC  
Fixed Auxiliary Output: 14VDC @ 100ma max
- **Digital Control & Status/Parameter Readback**  
CAN Bus 2.0B
- **Hot Swap Operation**  
Hot-Swap mounting shelf (4 per) provides proper voltage removal & application sequencing
- **Browser Based Interface**  
Easy control and status readback
- **Easily Paralleled for High Power Applications**  
Automatic current sharing  
Built-in output fault isolation "smart-switch"
- **Universal AC Input**  
90VAC – 264VAC
- **High Efficiency**  
Up to 93%
- **High MTBF**  
>1M hours
- **Status, Protection & Alarm Features**  
AC OK, Output OK, Operating Temp, Output Enabled, Over-Voltage, Over-Current
- **SEMI F47 Compliance**  
Hold-Up and Brown-Out
- **Variable Speed Fan Control**  
Minimizes noise & maximizes fan life

# MERCURY-FLEX

## Mercury Flex 2U Rectifier



## 2U Shelf Assembly



Notes: Shelf capacity = four Mercury-Flex rectifiers, two shown installed. Inches (mm)

Parameter	Mercury-Flex
<b>Input AC</b>	90 - 176 or 176-300VAC auto range
<b>AC Frequency</b>	47-63Hz
<b>Max Input Current</b>	27A RMS, 50A Peak Inrush
<b>Power Factor</b>	>0.97 Typical
<b>Outputs, DC</b>	Main Output: (Five standard models) <b>28V</b> (5V-28V), <b>56V</b> (5V-56V), <b>85V</b> (7.5V-85V), <b>125V</b> (10V-125V), <b>400V</b> (25V-400V) Aux Output: 14.2VDC±0.5V (0.1A max)
<b>Output Power</b>	3,800W Max (Vin 176VAC-264VAC)
<b>Efficiency</b>	91% to 93% (depends on Vout model)
<b>Ripple/Noise</b>	<1% p-p of Vout max
<b>Load Regulation</b>	2% of Vout max, from no load to full load (Current share V-Droop)
<b>Electronic Alarms</b>	AC OK, Output OK, Inhibit, Protect Status
<b>Visual Indicators</b>	Front Panel LED (OK/Fault)
<b>Digital Command / Status</b>	CAN-Bus 2.0B
<b>Protection Features</b>	Input UV, Input OV(MOV), Input OI(fuse), Output OV, Output CL, OverTemp
<b>Operating Temperature</b>	-30 to +55°C (full rated)
<b>Storage/Transportation</b>	-40 to +85°C
<b>Humidity</b>	0% to 95%RH, non condensing
<b>Isolation</b>	In to Out: 3000 VAC RMS In to GND: 1500 VAC RMS Out to GND: up to 1000 VAC RMS
<b>Regulatory/Safety</b> <b>C = Conducted</b> <b>R = Radiated</b> <b>includes shelf or supply</b>	CE: Low voltage directive Safety: IEC/UL 60950-1; EN60950-1: 2001 EMI (C): FCC Part 15, Sub Part J, Class A EN55022, class AEMI (R): EN55022, class A
<b>EMC</b>	EN 61000-3-2 EMC EN 61000-6-1 (Immunity, light industry) EN 61000-6-2 (Immunity, industry) EN 61000-6-3 (Emissions, light industry) EN 61000-6-4 (Emissions, industry)
<b>Dimensions (inches)</b>	Module: 4.25 x 3.42 x 15.15" Shelf : 18.19 x 3.46 x 16.5"
<b>AC Line Sag/Interruption</b>	SEMI F47-0706
<b>Connections</b>	Input/Output: FCI 51939-005; (mating FCI 51915-011) Control CAN: RJ11 (back of shelf)
<b>Cooling</b>	Internal Variable Speed Fan, front air input
<b>Warranty</b>	2 Years

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Now you have power.

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