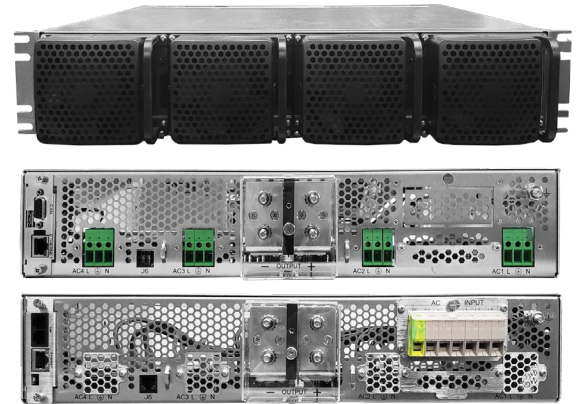


MERCURYFLEX

MERCURY 2U PROGRAMMABLE POWER SUPPLY MODULE 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 programmable, 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 readback 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. Now available in single-phase and 3-phase input options.



FEATURES

UNIVERSAL AC INPUT

90VAC – 264VAC, Single-phase with full power factor control
342VAC – 528VAC, 3-Phase 4 wire

WIDE RANGE OUTPUTS

3V -28V, 0-160A
5V -56V, 0-70A
10V -125V, 0-34.5A
10V -180V, 0-24A
10V -250V, 0-17.5A
15V -450V, 0-10.2A

Up to 3.8KW power per module
Up to 160A current per module (28V model)

ISOLATED AUXILIARY OUTPUT: 12VDC @ .15A

DIGITAL REMOTE CONTROL

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

PARALLEL AND REDUNDANT OPERATION

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

INPUT VOLTAGE TRANSIENT IMMUNITY

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

HIGH MTBF

1-Phase > 1M hours
3-Phase > 250k hours

VARIABLE SPEED FAN CONTROL

Minimizes audible noise and maximizes fan life

MAIN CHARACTERISTICS:

- ✓ Modular / scalable product
- ✓ Blind-mate / hot 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.

MERCURYFLEX

MERCURY 2U PROGRAMMABLE POWER SUPPLY MODULE WITH HOT-SWAP SHELF

PARAMETERS

1Ø MERCURY-FLEX

3Ø MERCURY-FLEX

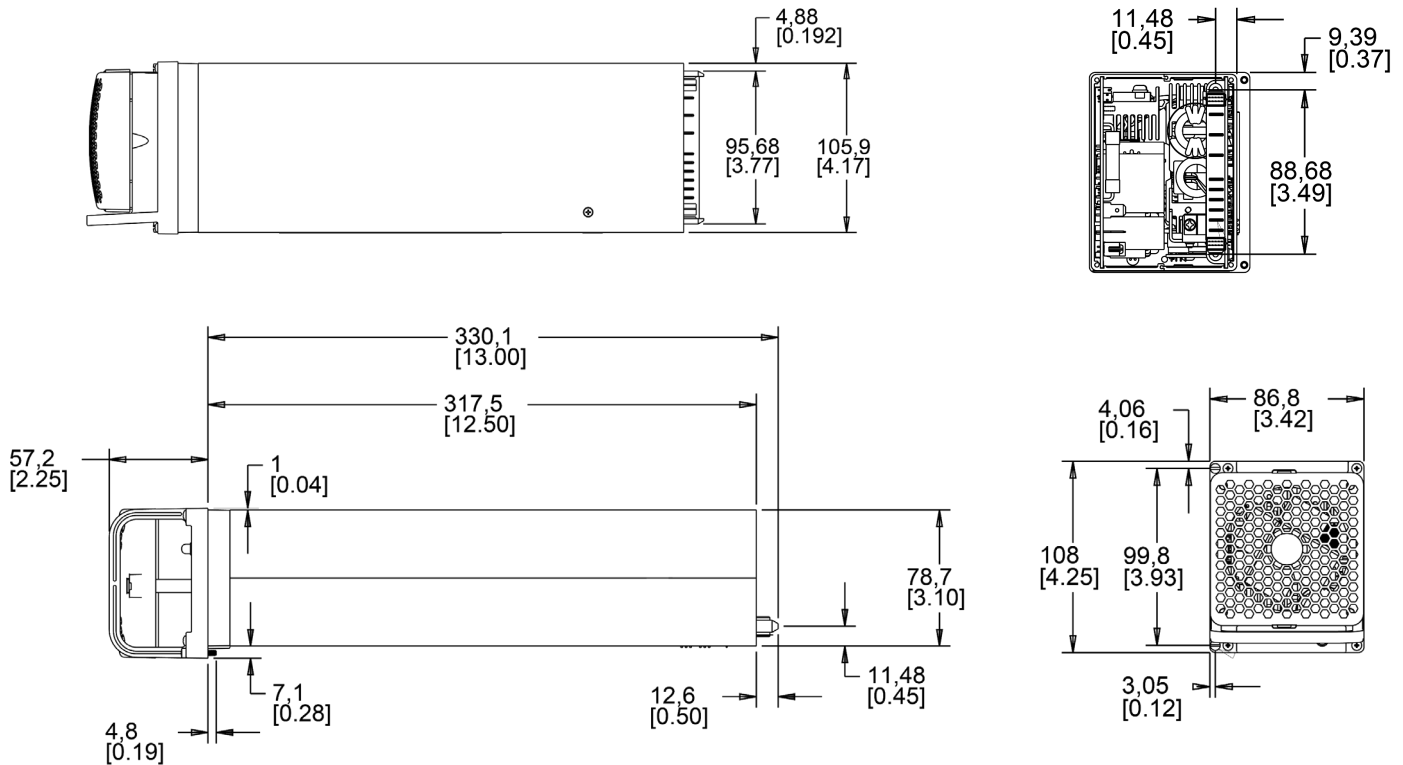
Input AC	90-176 or 176-260VAC auto range	342VAC – 528VAC 3-Phase 4 wire
AC Frequency	47-63Hz	
Max Input Current	27A RMS, 50A	7.1A RMS, 60A
Power Factor	>.97	>.90
Outputs, DC	Main Output: (Five standard models) 28V (3V-28V), 56V (5V-56V), 125V (10V-125V), 180 (10V-180V), 250V (10V-250V), 450V (15V-450V)	
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	The unit provides digital alarm signals and controls via CAN interface (250 k-bits/second)	
Visual Indicators	Output OK: A front panel Green "Output OK" LED will be lit if the unit main output is within the acceptable range	
Digital Command/Status	CAN Address is set by two digital bits (high or low-impedance resistors) externally provided to the module main connector	
Protection Features	Input UV, Input OV(MOV), Input OI(fuse), Output OV, Output CL, Over Temperature	
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 VAC RMS	In to Out: 4243 VAC or 6KVDC for 28 & 56V 2830VAC or 4KVDC for the rest models In to Signals: 4243 Vac or 6KVdc Out to GND: N/A for 28V and 56V model 2830 Vac or 4KVdc for the rest models In to GND: 2830 VAC RMS or 4000VDC Out to GND: Up to 2830 VAC or 4000VDC
Regulatory/Safety C = Conducted	UL 62368-1: 2 nd Edition, EN 62368-1 /A11:2014, IEC 62368-1: 2 nd Edition CE Marked (LVD), ROHS3, WEEE: EN50419: 2005 Directive 2002-96/EC Annex IV(OJ(L)37/38,13.02.03	
EMC	EMI (C): FCC Part 15, Sub Part J, Class A EN55022, class	
Harmonics	Compliant to EN61000-3-2	
Semi	Compliant to SEMI F47-0706	
Dimensions (inches)	Module: 4.25" x 3.42" x 15.15" Shelf :18.19" x 3.46" x 16.5"	Module: 4.25" x 3.42" x 15.20" Shelf :18.98" x 3.46" x 21.70"
Cooling	Internal Variable Speed Fan, front air input	
Warranty	2 Years	



MERCURYFLEX

MERCURY 2U PROGRAMMABLE POWER SUPPLY MODULE WITH HOT-SWAP SHELF

1Ø MERCURY FLEX 2U RECTIFIER



PART NUMBER

DESCRIPTION

RECOMMENDED SHELF

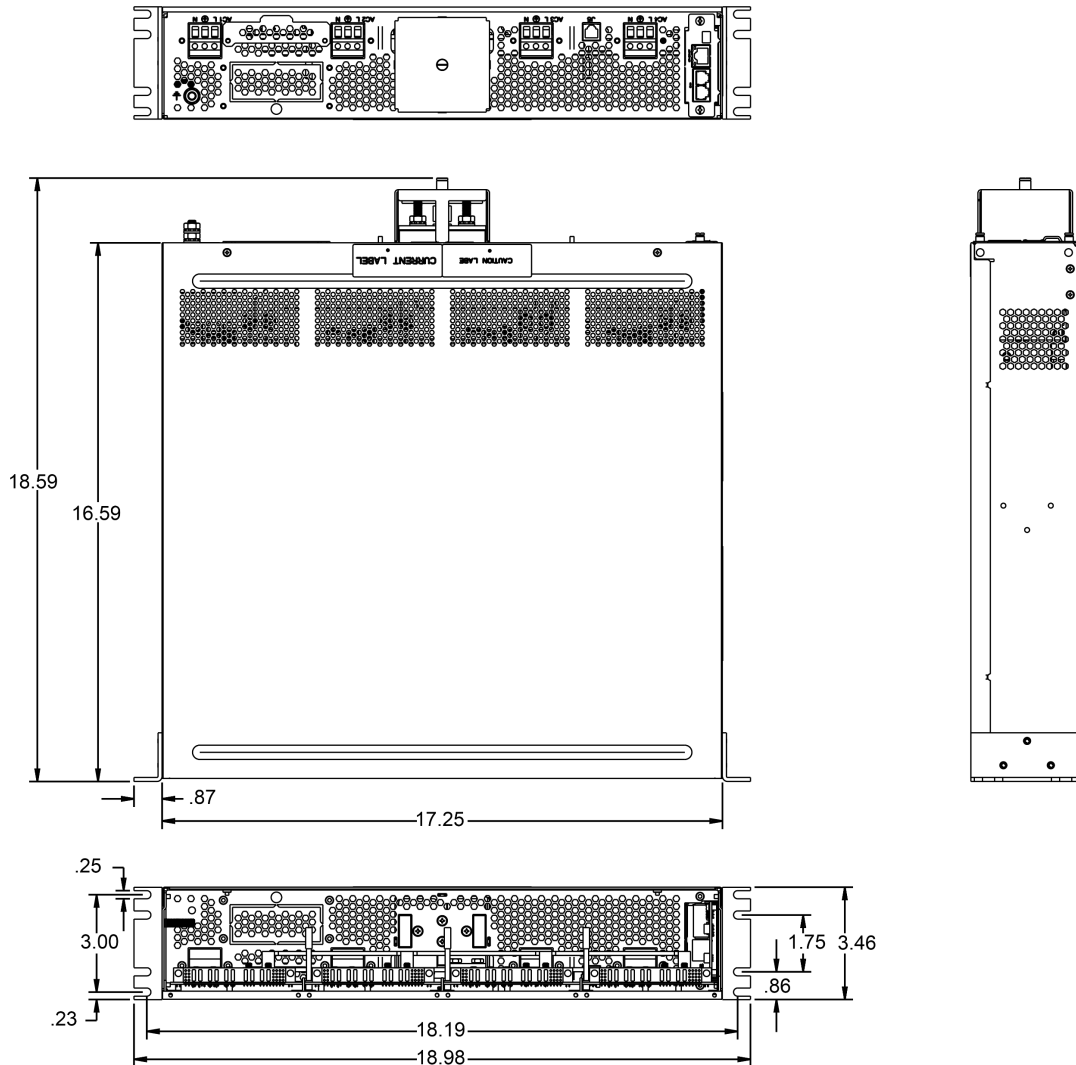
T100106170-F028D00LF	Rectifier, 3.8KW 2U 0-28V, 0-160A, Droop ROHS	T100106667-FLVD01ALF T100106667-FLVD01BLF
T100106170-F056D00LF	Rectifier, 3.8KW 2U 0-56V, 70A Droop ROHS	T100106667-FMVD01ALF T100106667-FMVD01BLF
T100106170-F125D00LF	Rectifier, 3.8KW 2U 0-125V, 34.5A Droop ROHS	T100106667-FHVD01ALF T100106667-FHVD01BLF
T100106170-F180D00LF	Rectifier, 3.8KW 2U 0-180V, 24A Droop ROHS	T100106667-FHVD01ALF T100106667-FHVD01BLF
T100106170-F250D00LF	Rectifier, 3.8KW 2U 0-250V, 17.5A Droop ROHS	T100106667-FHVD01ALF T100106667-FHVD01BLF
T100106170-F450D00LF	Rectifier, 3.8KW 2U 0-450V, 10.2A Droop ROHS	T100106667-FHVD01ALF T100106667-FHVD01BLF



MERCURYFLEX

MERCURY 2U PROGRAMMABLE POWER SUPPLY MODULE WITH HOT-SWAP SHELF

1Ø 2U SHELF ASSEMBLY



PART NUMBER

DESCRIPTION

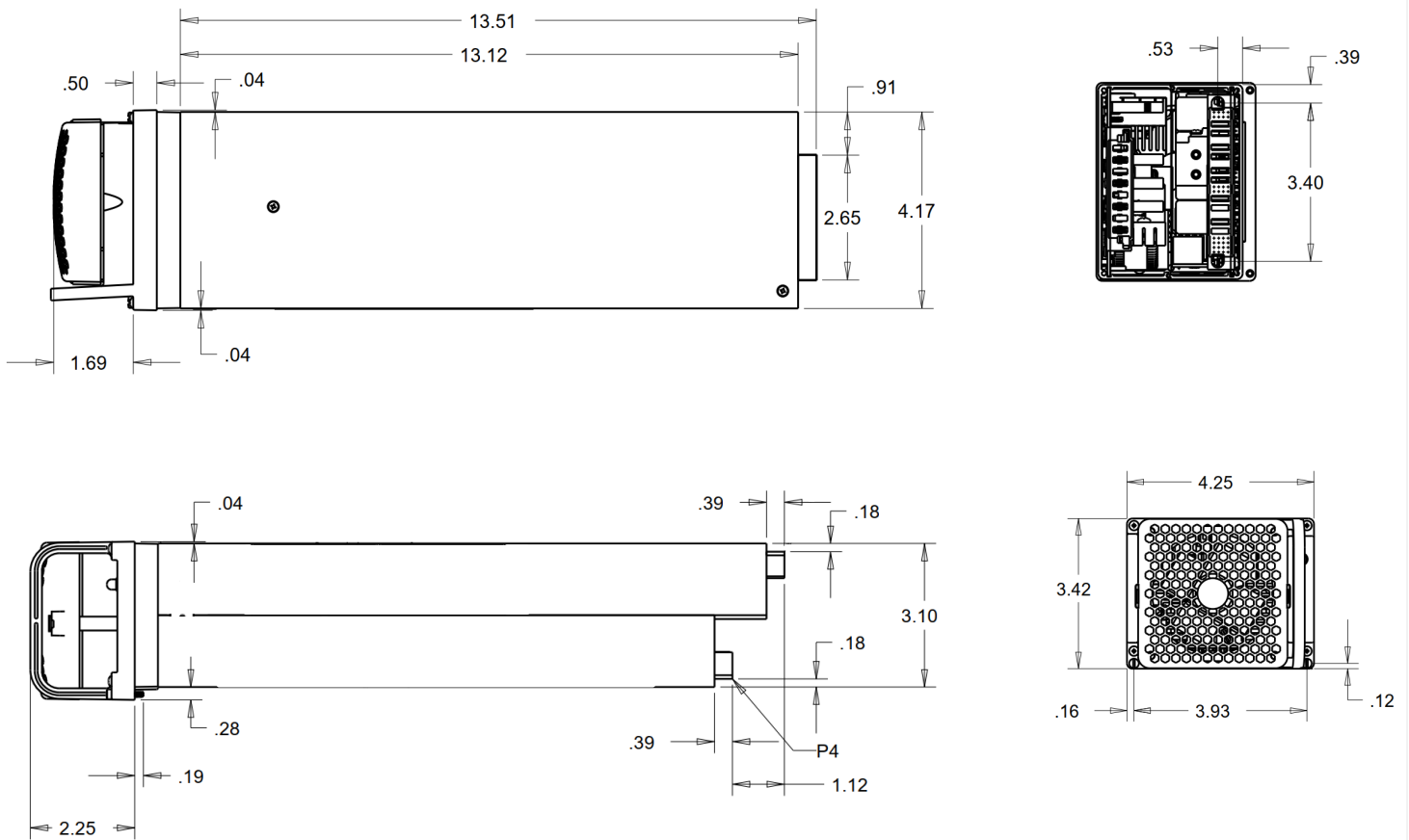
T100106667-FHVD01ALF	Shelf, MercuryFlex High Voltage, 2U, 4 Terminal Blocks M-Controller (125V,180V,250V,450V)
T100106667-FHVD01BLF	Shelf, MercuryFlex High Voltage, 2U, 1 Terminal Blocks M-controller (125V180V,250V,450V)
T100106667-FMVD01ALF	Shelf, MercuryFlex Medium Voltage, 2U, 4 Terminal Blocks M-controller (56V)
T100106667-FMVD01BLF	Shelf, MercuryFlex Medium Voltage, 2U, 1 Terminal Blocks M-controller (56V)
T100106667-FLVD01ALF	Shelf, MercuryFlex Low Voltage, 2U, 4 Terminal Blocks M-controller (28V)
T100106667-FLVD01BLF	Shelf, MercuryFlex Low Voltage, 2U, 1 Terminal Blocks M-controller (28V)



MERCURYFLEX

MERCURY 2U PROGRAMMABLE POWER SUPPLY MODULE WITH HOT-SWAP SHELF

3Ø MERCURY FLEX 2U RECTIFIER



PART NUMBER	DESCRIPTION	RECOMMENDED SHELF
T100122899-F028D00LF*	3Ø Rectifier, 3.8KW 2U 0-28V, 160A Droop ROHS	T100123163-FLVD02BLF
T100122899-F056D00LF*	3Ø Rectifier, 3.8KW 2U 0-56V, 70A Droop ROHS	T100123163-FMVD02BLF
T100122899-F125D00LF	3Ø Rectifier, 3.8KW 2U 0-125V, 34.5A Droop ROHS	T100123163-FHVD02BLF
T100122899-F180D00LF	3Ø Rectifier, 3.8KW 2U 0-180V, 24A Droop ROHS	T100123163-FHVD02BLF
T100122899-F250D00LF	3Ø Rectifier, 3.8KW 2U 0-250V, 17.5A Droop ROHS	T100123163-FHVD02BLF
T100122899-F450D00LF*	3Ø Rectifier, 3.8KW 2U 0-450V, 10.2A Droop ROHS	T100123163-FHVD02BLF

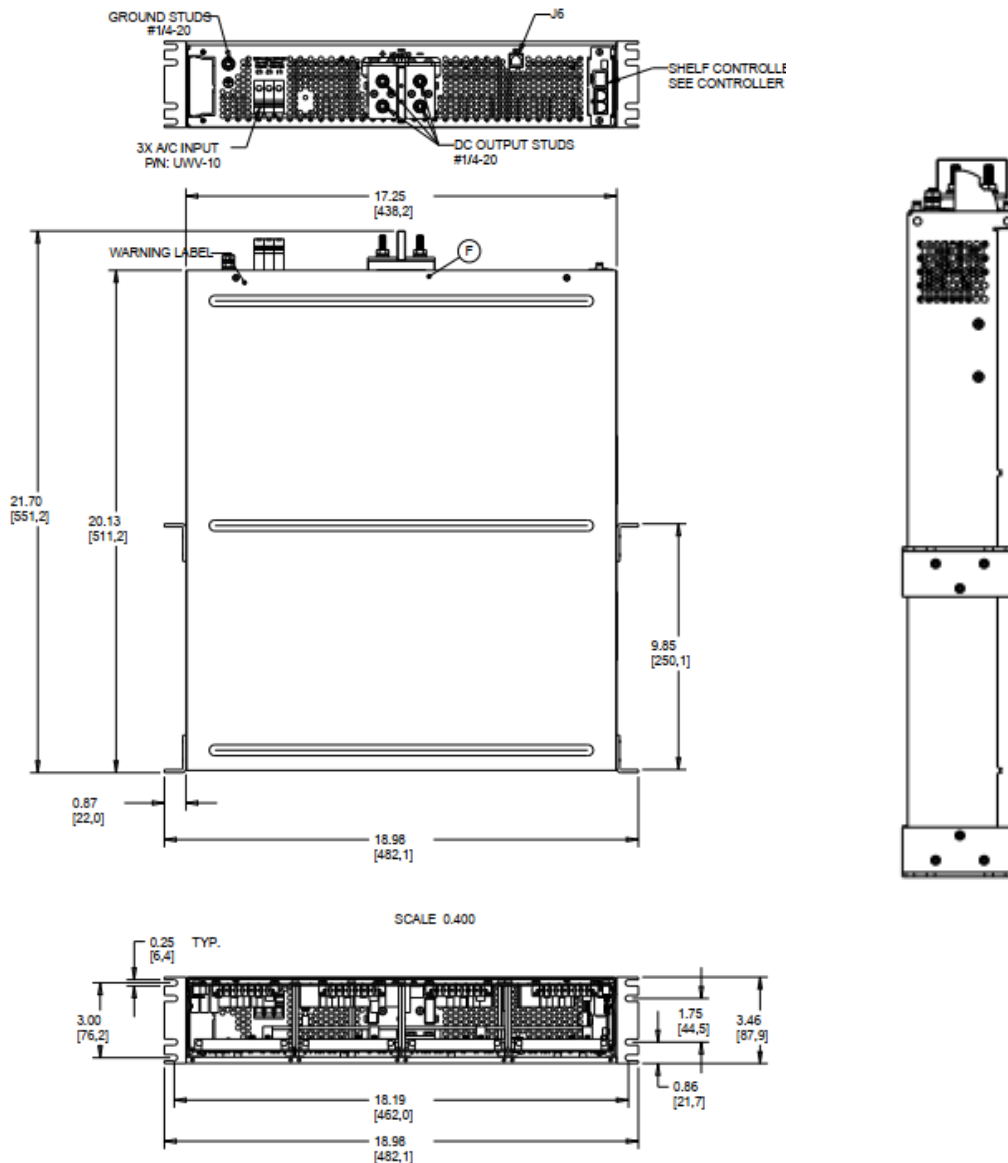
*Coming soon! Please contact the factory.



MERCURYFLEX

MERCURY 2U PROGRAMMABLE POWER SUPPLY MODULE WITH HOT-SWAP SHELF

3Ø 2U SHELF ASSEMBLY



PART NUMBER

DESCRIPTION

T100123163-FLVD02BLF	3Ø Shelf, MercuryFlex High Voltage, 2U, 4 Terminal Blocks M-Controller (125V,180V,250V,450V)
T100123163-FMVD02BLF	3Ø Shelf, MercuryFlex Medium Voltage, 2U, 4 Terminal Blocks M-Controller (56V)
T100123163-FHVD02BLF	3Ø Shelf, MercuryFlex Low Voltage, 2U, 4 Terminal Blocks M-Controller (28V)