

# AC Front End

## FE175D480x033FP-00



### Overview

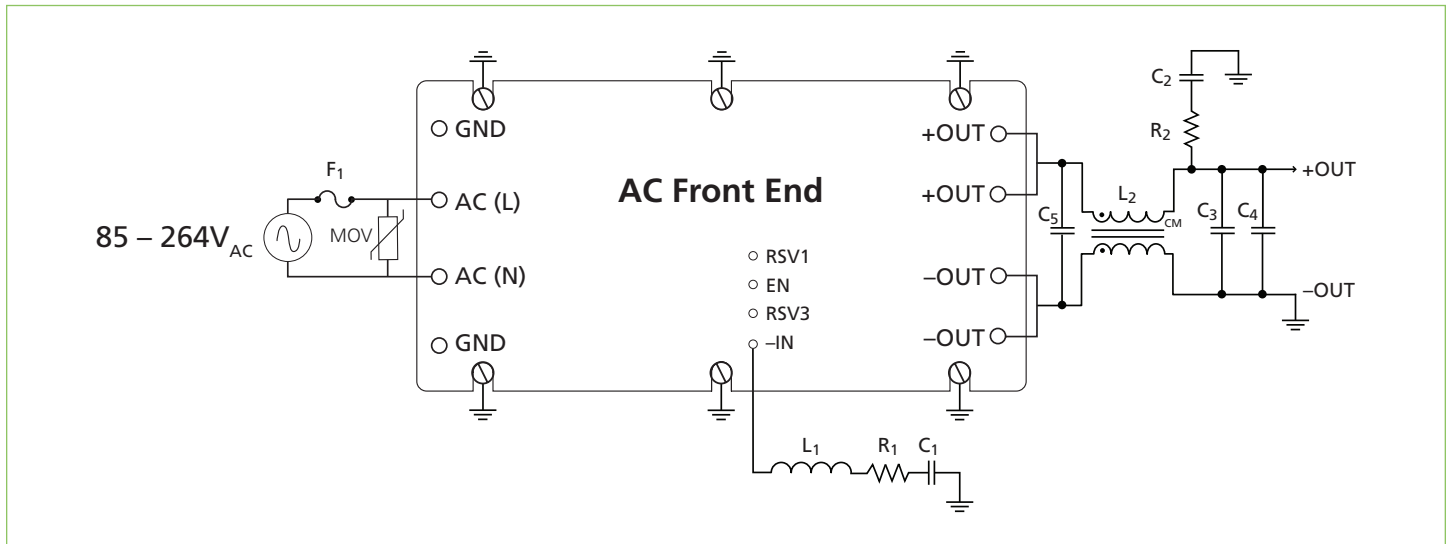
- Universal Input: 85 – 264V<sub>AC</sub>
- Output: 48V<sub>DC</sub> - isolated, regulated (SELV)
- Power: 330W - over entire input voltage range
- Isolated AC-DC converter with active Power Factor Correction (PFC)
- Integrated rectification, filtering and transient protection
- Peak efficiency: >92%
- EN55022, Class B EMI conducted emissions with a few components
- EN61000-3-2 harmonic limits
- –40 to 100°C baseplate operation.



### Features & Benefits

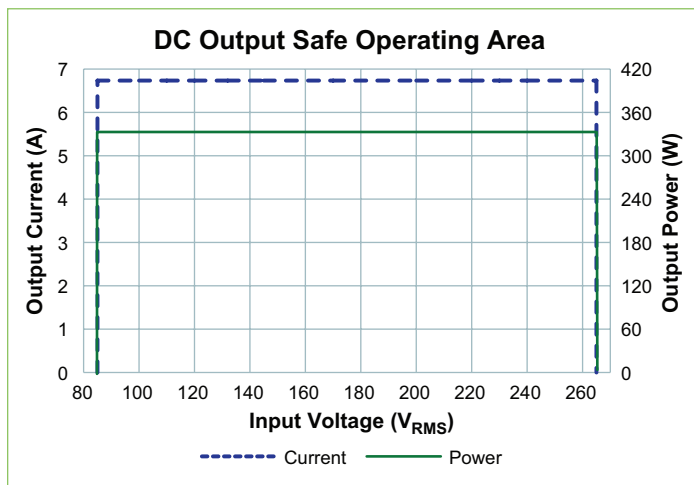
- Compact and robust package
  - Low profile, 9.55mm height above board
  - Small footprint
  - Flanged aluminum package for secure mounting and thermal management
- Consistent high efficiency across the worldwide mains (flat efficiency curve)
- Integrated solution streamlines design, reduces time to market
  - Module includes PFC, regulation, isolated 48V output (SELV), filtering, rectification, transient protection, agency approvals, simplified thermal management
  - Simple design, requires few external components
- Full-feature module with high power density
  - Module power density, 121W/in<sup>3</sup>
  - Complete solution including hold-up capacitors, 54W/in<sup>3</sup>

### Typical Application

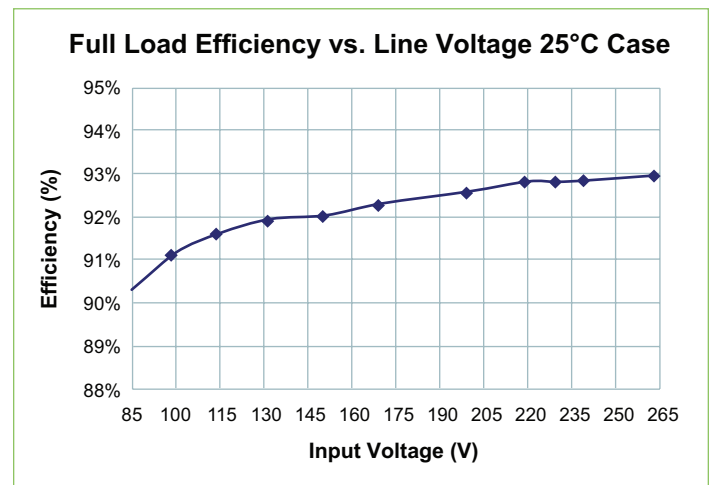


Part Number	Input Voltage	Output Voltage	Output Power	Operating Temperature
FE175D480C033FP-00	85 – 264V <sub>AC</sub>	48V <sub>DC</sub>	330W	–20 to 100
FE175D480T033FP-00				–40 to 100

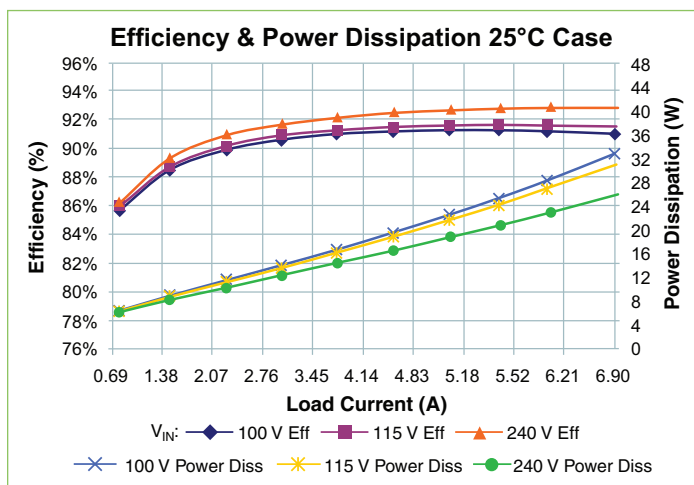
## Performance



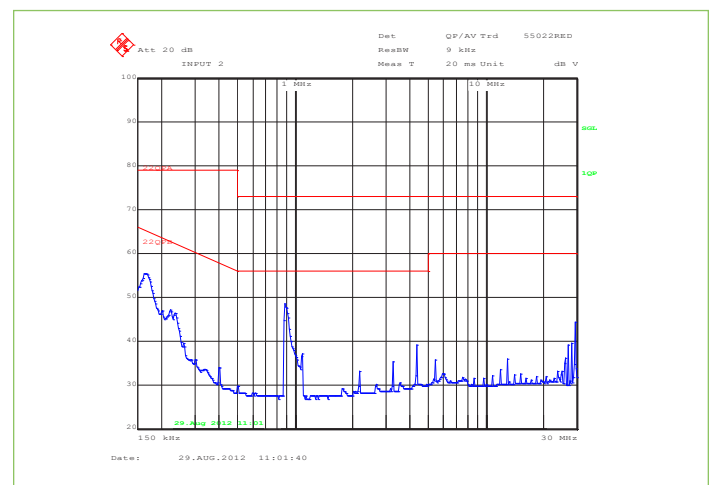
DC output safe operating area



Full-load efficiency vs. line voltage,  $T_{CASE} = 25^{\circ}C$

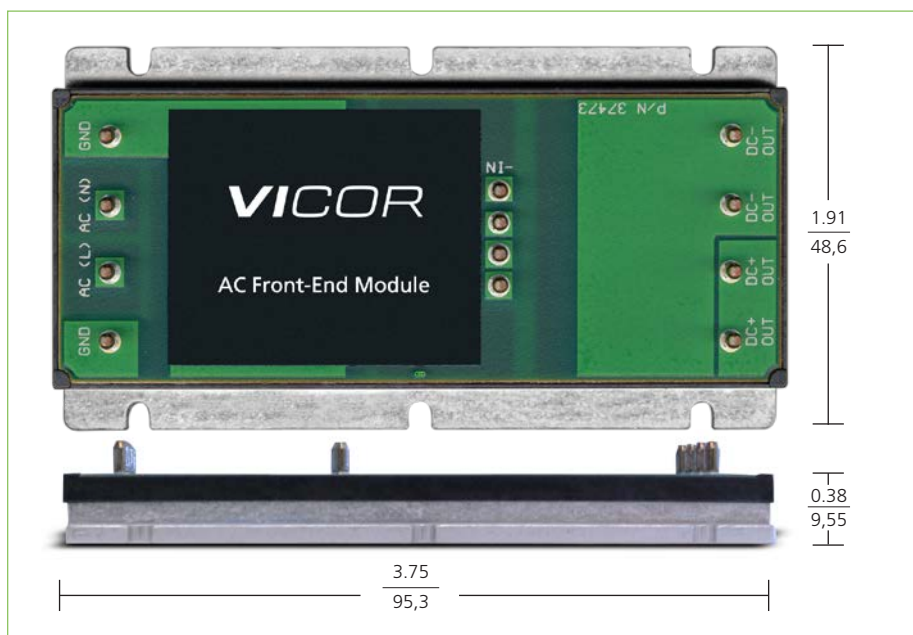


$V_{IN}$  to  $V_{OUT}$  efficiency and power dissipation vs.  $V_{IN}$  and  $I_{OUT}$ ,  $T_{CASE} = 25^{\circ}C$



Typical EMI spectrum, quasi-peak scan, 90% load,  $V_{IN} = 230V$ ,  $C_{OUT} = 6800\mu F$

## Product Dimensions



## Accessories

- Common-Mode Inductor  
P/N: 37052-601
- Low-profile (10 x 50mm) capacitors  
P/N: 34837-108
- ThermMate Pad  
P/N: 36967
- Longitudinal Heat Sink (31.7mm)  
P/N: 38145
- Transverse Heat Sink (31.7mm)  
P/N: 38146
- Longitudinal Heat Sink (17.7mm)  
P/N: 39068
- Transverse Heat Sink (17.7mm)  
P/N: 39069
- Standoffs:  
See website for part numbers

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