

Compact, 10 Watt, High Voltage Modules

0 to + or - 100 through 0 to + or - 12,000 VDC @ 10 Watts
F Series



The F Series is a broad line of versatile, robust, DC to HV DC converters providing 100 VDC to 12,000 VDC (positive or negative polarity) at 10 Watts continuous output power.*¹ The output is proportional to the input voltage and features a low 0.7 typical turn-on voltage. Nineteen models are available covering the range of 0 to 100 through 0 to 12,000 volts, positive or negative. These modules exhibit very low EMI/RFI, noise and ripple by means of a

quasi-sinewave oscillator, a fully enclosed transformer, input and output filtering, and a five sided metal enclosure. The isolated output allows for user selectable output polarity. Options include two mounting holes and an output center-tap option which, when grounded, provides both positive and negative outputs from one compact, low cost module. Contact our Applications Department for immediate technical assistance.

FEATURES

- Metal Case and Shielded Transformer result in:
- Low EMI/RFI
- Low Ripple
- Short Circuit Protection
- Compact Package
- PCB Mountable
- Input/Output Isolation
- Input/Output Filtering
- Proven Reliability
- No external components required
- MTBF:>810k hours per Bellcore TR-332

OPTIONS

- Mounting Holes**, F01 – F60 add H to model number (e.g. F10H)
- RoHS** (-R' suffix denotes the product is designed to meet RoHS requirements (e.g. F10R)
- Output Center Tap**, See CT Series
- Epoxy**: Low Outgassing (NASA approved per ASTM E-959-93)
UL 94 V0 flammability rating
- Extended Operating & Storage Temperature: Contact Factory

APPLICATIONS

- Capacitor Charging
- Spectrometry
- Piezo Devices
- Lamp Ignition
- Lamp Drive
- Q Switches
- Ion Pumps
- Electrostatic Field Generation
- Grid Bias
- Electrophoresis
- Lasers
- Electrostatic Chucks

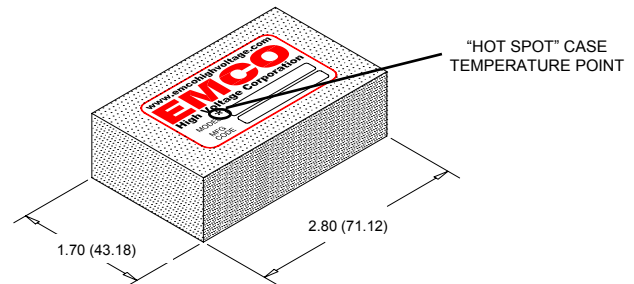
PHYSICAL CHARACTERISTICS

- F01-F60: 2.8 x 1.7 x 0.85 (71 x 43 x 21) see Dwg on Sheet 2
- F70-F121: 2.8 x 1.7 x 0.95 (71 x 43 x 24) see Dwg on Sheet 2
- WEIGHT: <5 Ounces (142 grams)
- PACKAGING: Epoxy Encapsulated
- CASE MATERIAL: Black Anodized Aluminum

ELECTRICAL SPECIFICATIONS*³

- INPUT VOLTAGE: See Table
- INPUT CURRENT*¹: (NO LOAD) < 500mA
- (FULL LOAD) < 1.5A
- TYPICAL TURN-ON VOLTAGE: 0.7 Volts
- ISOLATION: 3,500 Volts + Vout
- F70 – F121: 500V + Vout
- EFFICIENCY: >70% Typical
- OPERATING TEMP: -10° to +50°C
- STORAGE TEMP: -25 to +90°C
- MAXIMUM CASE TEMP: +85°C (measured at point indicated)
- F70 – F121: +70°C (measured at point indicated)

SEE SHEET 2
FOR
MECHANICAL
DETAILS



Dimensions are in inches
Dimensional Tolerances: ± .03 (.76mm)
(Metric equivalents in parenthesis)

4722AM

We reserve the right to make changes without notification

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www.emcohighvoltage.com

EMCO
High Voltage Corporation

F01-F60

MTG HOLE (OPTIONAL)
#4/M3 CLEARANCE
2 HOLES.

.031 (.79) DIA P.C. PIN
5 PLACES.

Table:

PIN #	FUNCTION
1	(+) Input
2	(-) Input
3	(+) Output
4	(-) Output
5	Center tap (optional)

Dimensions are in Inches
Dimensional Tolerances: ± 0.03 (± 0.76)
(Metric equivalents in parenthesis)

Note: Case is internally connected to (-) input.

F70-F121

OUTPUT LEADS
#22 AWG, 30KV
SILICONE
6.00" (152.40MM)
MINIMUM LENGTH
0.215" O.D.

P.C. PIN
.040 (1.02) DIA
3 PLACES

Table:

PIN #	FUNCTION
1	(+) Input
2	(-) Input
3*	(+) Output
4*	(-) Output
5	Center tap (optional)

Dimensions are in Inches
Dimensional Tolerances: ± 0.03 (± 0.76)
(Metric equivalents in parenthesis)

*Output Leads

Note: Case is internally connected to (-) input.