

Military DC-DC Converters



Isolated Regulated 100 Watts, Wide Input Range/200-380 VDC
Fully Regulated, Short Circuit Protected
Parallel Operation Available

Features:

- Dual isolated outputs
- Short circuit protection
- Input voltage protection
- Thermal, over temp. shutdown
- Line regulation
- Load regulation
- No external components required
- Hi density, hi efficiency design
- Remote shutdown
- Trim capabilities
- Fixed frequency-100 Khtz

Typical Characteristics:

Frequency: 100 Khtz
Base plate: Max. +85° C
Operating temperature: See thermal chart: -40° C to +85° C base plate, -55° C to +85° C base plate.
Test conditions: 25° C ambient
Isolation Base Input: 2121 VDC
Isolation Input Output: 4242 VDC
Isolation Output to Base: 1000 VDC
Storage temperature: -55° C to +105° C

- 54 Standard Models

For all variations, call factory.
For Parallel Operation: Add suffix "P", (i.e. FD/MD5SP)
Consult factory to optimize for your application.

Series FD : (-40° C to +85° C Operating Temperature) Series MD : (-55° C to +85° C Operating Temperature)	
Surge	Meets MIL STD 704
Vibration	Meets MIL STD 202 Method 204 Cond. D
Humidity	Meets MIL STD 202 Method 106
Shock	Meets MIL STD 202 Method 213 Cond. I
Altitude	Meets MIL STD 202 Method 105 Cond. D
Selected MIL STD 883 Options also Available	
Stabilization Bake	MIL STD 883 Method 1008 24 Hrs TA=125° C
Burn In	MIL STD 883 Method 1015 160 Hrs at 90° C
Temperature Cycle	MIL STD 883, -55°C to +105°C, Method 1010 Cond. B

The PICO FD and MD Series of high power DC-DC Converters, allow a wide input voltage of 200-380 VDC, while maintaining a regulated output. They are fully safeguarded for over voltage, over temperature and continuous short circuit protection.

The availability of Dual Isolated outputs, small size, and the capability of parallel operation as standard features should reduce your design and component costs, while the fixed frequency operation helps parallel connections for higher power requirements.

This high density unit is assembled in the USA with PICO quality and component selection, allowing it to meet the most stringent commercial requirements.

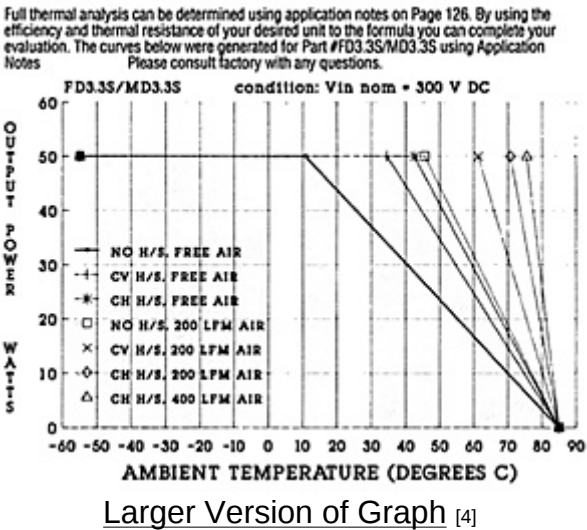
Series FD/MD Single * 100 Watts * Input 200-380 VDC													
Input Volt. Range (V DC)	Outp. Volt. (V DC)	Max. Output Power * (W)	EFF. Full Load Typical ** (%)	Max. Load Regulation (%)**		Max. Line Regulation At Full Load (%)		Output Voltage Ripple (Full Load) 1-1MHz BW (MV P-P)	Outp. Volt. Toler. ** (± %)	Series FD Single (-40° C to +85° C)		Series MD Single (-55° C to +85° C)	
				10-50%	50-100%	200-300V	300-380V			Pico Part Number	Price (US \$)	Pico Part Number	Price (US \$)
200-380	3.3	50	76	1.50	1.50	1.25	1.25	50	2.0	FD3.3S	288.15	MD3.3S	392.93

200-380	5	75	78	1.25	1.25	1.00	1.00	50	1.5	FD5S	288.15	MD5S	392.93
200-380	5.2	75	78	1.25	1.25	1.00	1.00	50	1.5	FD5.2S	288.15	MD5.2S	392.93
200-380	9	100	84	1.25	1.25	1.00	1.00	50	1.0	FD9S	288.15	MD9S	392.93
200-380	12	100	85	1.00	1.00	0.75	0.75	50	1.0	FD12S	288.15	MD12S	392.93
200-380	15	100	86	1.00	1.00	0.75	0.75	50	1.0	FD15S	288.15	MD15S	392.93
200-380	24	100	87	0.75	0.75	0.50	0.50	50	0.5	FD24S	288.15	MD24S	392.93
200-380	28	100	87	0.50	0.50	0.50	0.50	50	0.5	FD28S	288.15	MD28S	392.93
200-380	48	100	88	0.50	0.50	0.20	0.20	50	0.5	FD48S	288.15	MD48S	392.93
200-380	100	100	88	0.50	0.50	0.20	0.20	50	0.5	FD100S	432.22	MD100S	589.39
10% Minimum load required at all times. * Using proper thermal management, maximum temp. of +85° C (case) ** Reading taken at nominal 300 VDC input													

Series FD/MD Dual * 100 Watts * Input 200-380 VDC													
Input Volt. Range (V DC)	Outp. Volt. (V DC)	Max. Output Power * (W)	EFF. Full Load Typical ** (%)	Max. Load Regulation (%)**		Max. Line Regulation At Full Load (%)		Output Voltage Ripple (Full Load) 1-1MHz BW (MV P-P)	Outp. Volt. Toler. ** (± %)	Series FD Dual (-40° C to +85° C)		Series MD Dual (-55° C to +85° C)	
				10-50%	50-100%	200-300V	300-380V			Pico Part Number	Price (US \$)	Pico Part Number	Price (US \$)
200-380	5	37.5/37.5	78	1.25	1.25	1.00	1.00	50	1.5	FD5D	412.83	MD5D	562.95
200-380	9	50/50	84	1.25	1.25	1.00	1.00	50	1.0	FD9D	412.83	MD9D	562.95
200-380	12	50/50	85	1.00	1.00	0.75	0.75	50	1.0	FD12D	412.83	MD12D	562.95
200-380	15	50/50	86	1.00	1.00	0.75	0.75	50	1.0	FD15D	412.83	MD15D	562.95
200-380	24	50/50	87	0.75	0.75	0.50	0.50	50	0.5	FD24D	412.83	MD24D	562.95
200-380	28	50/50	87	0.50	0.50	0.50	0.50	50	0.5	FD28D	412.83	MD28D	562.95
200-380	48	50/50	88	0.50	0.50	0.50	0.50	50	0.5	FD48D	412.83	MD48D	562.95
10% Minimum load required at all times. * Using proper thermal management, maximum temp. of +85° C (case) ** Reading taken at nominal 300 VDC input													

*****HIGH VOLTAGE SERIES FD/MD TO 350 VDC - 100 WATTS - INPUT 200-380 VDC													
INPUT VOLTAGE RANGE (VDC)	OUTPUT VOLTAGE (VDC)	MAX. OUTPUT POWER (W)*	EFF. @ FULL LOAD TYPICAL (%)**	MAX. LOAD REGULATION (%)**		MAX. LINE REGULATION AT FULL LOAD (%)		OUTPUT VOLTAGE RIPPLE FULL LOAD 1-1MHz BW (%)	OUTPUT VOLTAGE Tolerance (±%)*	SERIES FD SINGLE (-40°C to +85°C)		SERIES MD SINGLE (-55° to +85°C)	
				20-50%	50-100%	200-300V	300-380V			PICO PART NUMBER	PRICE (US \$)	PICO PART NUMBER	PRICE (US \$)
200-380	125	100	85	0.5	0.5	0.3	0.3	1	0.5	FD125S	420.43	MD125S	589.39
200-380	150	100	85	0.5	0.5	0.3	0.3	1	0.5	FD150S	420.43	MD150S	589.39
200-380	175	100	85	0.5	0.5	0.3	0.3	1	0.5	FD175S	420.43	MD175S	589.39

200-380	200	100	85	0.5	0.5	0.3	0.3	1	0.5	FD200S	560.58	MD200S	785.86
200-380	225	100	85	0.5	0.5	0.3	0.3	1	0.5	FD225S	560.58	MD225S	785.86
200-380	250	100	85	0.5	0.5	0.3	0.3	1	0.5	FD250S	560.58	MD250S	785.86
200-380	275	100	85	0.5	0.5	0.3	0.3	1	0.5	FD275S	560.58	MD275S	785.86
200-380	300	100	85	0.5	0.5	0.3	0.3	1	0.5	FD300S	700.72	MD300S	982.32
200-380	325	100	85	0.5	0.5	0.3	0.3	1	0.5	FD325S	700.72	MD325S	982.32
200-380	350	100	85	0.5	0.5	0.3	0.3	1	0.5	FD350S	700.72	MD350S	982.32
10% Minimum load required at all times *Using proper thermal management maximum temp of +85° C (case) **Reading taken at nominal 300 VDC input ****UL approval recognition pending													



For immediate engineering assistance or to place an order: **Call Toll Free: 800-431-1064**

PICO Electronics, Inc.

143 Sparks Ave. Pelham, NY 10803
Tel: 914-738-1400 Fax: 914-738-8225