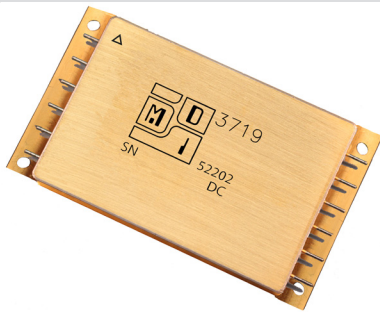


# Series 3719

## 120 Watt DC – DC Converters



### 16 - 50 Volts DC Input

#### Features

- Specifically designed for demanding military and aerospace applications where best value is critical.
- High efficiency
- No external components required
- Fully isolated design
- Magnetic feedback - no optocouplers used
- Input ripple current inductor
- Output common mode spike filter
- "Inhibit-not" function
- Power on soft start
- Short circuit protection
- Sync In and Sync Out
- Remote Sense (Single Outputs)

#### Specifications

**INPUT:** 28 VDC nominal  
 Range: 16 to 50 VDC continuous  
 16 to 50 VDC full power  
 Survives 80 V transients

#### ISOLATION:

Input to case: 500 VDC  
 Input to output: 500 VDC  
 Output to case: 100 VDC  
 10MOhms minimum at 500 VDC input to output and input to case.

#### ENVIRONMENT:

Storage temperature: -55°C to +150°C  
 Shock: 50 G's  
 Acceleration: 500 G's  
 Vibration: 30 G's

#### Grades: Industrial:

Full Power Output at  $T_{case} = +85^{\circ}C$   
 Lineary derates to zero at  $T_{case} = +115^{\circ}C$

#### Grades M:

Full Power Output at  $T_{case} = +85^{\circ}C$   
 Lineary derates to zero at  $T_{case} = +115^{\circ}C$

#### Grades E:

Full Power Output at  $T_{case} = +125^{\circ}C$   
 Lineary derates to zero at  $T_{case} = +135^{\circ}C$

**WEIGHT:** 120 grams typical

SINGLE OUTPUT DEVICES		3719-S3.3 (66W)			3719-S05 (100W)			3719-S12 (120W)			3719-S15 (120W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	—	+3.2	+3.3	+3.4	+4.9	+5.0	+5.1	+11.8	+12.0	+12.2	+14.7	+15.0	+15.3
Output current	$V_{in\ min} - V_{in\ max}$	—	—	20A	—	—	20A	—	—	10A	—	—	8A
Efficiency	$P_{out} = \text{max rated load}$	78 %	84%	—	79%	86%	—	79%	86%	—	82%	88%	—
Line regulation	$P_{out} = \text{max rated load}$ $V_{in\ min} - V_{in\ max}$	—	33mV	66mV	—	50mV	100mV	—	120mV	240mV	—	150mV	300mV
Load regulation	$P_{out} = 10\% \text{ to F.L.}$	—	70mV	132mV	—	60mV	150mV	—	240mV	360mV	—	180mV	450mV
Output ripple	F.L. BW 2 MHz $mV_{pp}$	—	50	100	—	50	100	—	120	240	—	150	300

SINGLE OUTPUT DEVICES		3719-S28 (120W)		
PARAMETER	CONDITION	MIN	TYP	MAX
Output voltage	—	+27.4	+28.0	+28.6
Output current	$V_{in\ min} - V_{in\ max}$	—	—	4.3A
Efficiency	$P_{out} = \text{max rated load}$	81%	87%	—
Line regulation	$P_{out} = \text{max rated load}$ $V_{in\ min} - V_{in\ max}$	—	280mV	560mV
Load regulation	$P_{out} = 10\% \text{ to F.L.}$	—	132mV	340mV
Output ripple	F.L. BW 2 MHz $mV_{pp}$	—	50	600

DUAL OUTPUT DEVICES		3719-D05 (100W)			3719-D12 (120W)			3719-D15 (120W)		
PARAMETER	CONDITION	MIN	TYP	MAX	MIN	TYP	MAX	MIN	TYP	MAX
Output voltage	—	+4.9	+5.0	+5.1	+11.8	+12.0	+12.2	+14.7	+15.0	+15.3
Output current*	$V_{in\ min} - V_{in\ max}$	—	—	±10A	—	—	±5A	—	—	±4A
Efficiency	$P_{out} = \text{max rated load}$	77%	84%	—	77%	84%	—	78%	86%	—
Line regulation	$P_{out} = \text{max rated load}$ $V_{in\ min} - V_{in\ max}$	—	±50mV	±100mV	—	±120mV	±240mV	—	±150mV	±300mV
Load regulation†	$P_{out} = 10\% \text{ to F.L.}$	—	±60mV	±150mV	—	±240mV	±360mV	—	±180mV	±450mV
Output ripple	F.L. BW 2 MHz $mV_{pp}$	—	50	100	—	120	240	—	150	300

Notes: \*Up to 90% full power available from either output if rated output power is not exceeded; †balanced load conditions.

#### Pin Outs

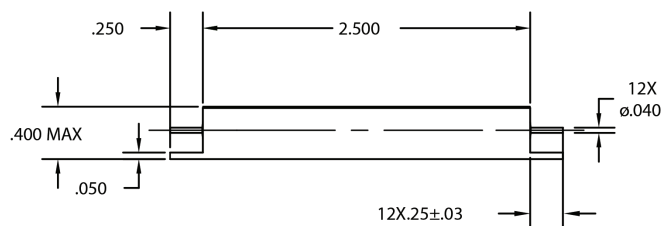
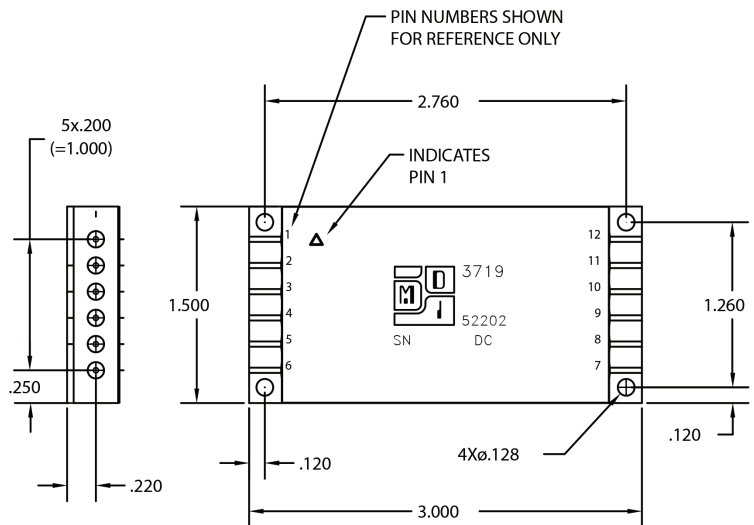
##### 3719-SXX

Pin 1	+28V Input
Pin 2	Input Return
Pin 3	Output Adjust
Pin 4	Inhibit Not
Pin 5	Sync Out
Pin 6	Sync In
Pin 7	+V Output
Pin 8	Output Return
Pin 9	Sense Return
Pin 10	+ Sense
Pin 11	N/C
Pin 12	N/C

##### Case ground via mounting flange

##### 3719-DXX

Pin 1	+28V Input
Pin 2	Input Return
Pin 3	Case Gnd
Pin 4	Inhibit Not
Pin 5	Sync Out
Pin 6	Sync In
Pin 7	+V Output
Pin 8	Output Return
Pin 9	-V Output
Pin 10	Output Adjust
Pin 11	N/C
Pin 12	N/C



**Modular Devices, Inc.**  
 Power Conversion for Space and Military/Aerospace

One Roned Road • Shirley, NY 11967 • E-mail sales@mdipower.com • Fax: 631.345.3106 • Tel 631.345.3100

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