

# MDS (12 V, 18 V, 24 V, 48 V)



- Universal AC input voltage range
- Safety approvals for medical and IT applications
- Compliant with IEC 60601-1-2 Ed. 4 requirements
- Class B Conducted and Radiated EMI
- Suitable for type BF medical product
- 2 × MOPP isolation
- Power Good signal

## Applications



Dental



Dialysis



IVD



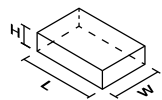
Patient Bed



Respiratory

Output		MDS-200ADB12 AA	MDS-250ADB12 A□	MDS-300ADB12 AA	MDS-400ADB12 AA	MDS-300ADB18 A□
Output Voltage		12 V	12 V	12 V	12 V	18 V
Output Current (Max)		9.17 A (Convection) 16.67 A (with 8.5 CFM Forced Air)	11.25 A (Convection) 20.84 A (with 10 CFM Forced Air)	15.83 A (Convection) 25.0A (with 10CFM Forced Air)	33.33 A (with 20 CFM Forced Air)	10.55 A (Convection) 16.66 A (with 10 CFM Forced Air)
Output Power		110 W (Convection) 200 W (with 8.5 CFM Forced Air)	135 W (Convection) 250 W (with 10 CFM Forced Air)	190 W (Convection) 300 W (with 10CFM Forced Air)	400 W (with 20CFM Forced Air)	190 W (Convection) 300W (with 10 CFM Forced Air)
Load Regulation		± 1%				
Ripple & Noise		1% typ. pk-pk Vrated @ full load			150 mV pk-pk Vrated @ full load	1% typ. pk-pk Vrated @ full load
Input						
Input Voltage Range		90-264 V <sub>AC</sub>				
Input Frequency		47-63Hz				
Efficiency	115V <sub>AC</sub> (60 Hz)	91.0% typ.	89.45% typ	91.3% typ.	89.5% typ.	92.5% typ.
	230V <sub>AC</sub> (50 Hz)	93.0% typ.	90.5% typ.	92.6% typ.	91.5% typ.	93.5% typ.
Leakage Current <sup>1)</sup>	264 V <sub>AC</sub>	Input-PE: < 0.1mA @ NC, < 0.3 mA @ SFC Output-PE: < 0.1mA @ NC, < 0.5 mA @ SFC				
Mechanical						
Dimensions (L × W × H)	mm	113.9 × 64.7 × 44.7	140 × 88.9 × 44.4	140 × 88.9 × 44.4	140 × 88.9 × 44.4	140 × 88.9 × 44.4
	inch	4.48 × 2.55 × 1.76	5.51 × 3.50 × 1.75	5.51 × 3.50 × 1.75	5.51 × 3.50 × 1.75	5.51 × 3.50 × 1.75
Unit Weight	kg	0.35	0.61	0.61	0.61	0.61
	lb	0.76	1.35	1.35	1.35	1.35
MTBF <sup>2)</sup>		800,000 hrs	500,000 hrs	800,000 hrs	500,000 hrs	800,000 hrs
EMC & Emissions		EN 55011/EN 55032, FCC Title 47: Class B				
Environment						
Operating Temperature <sup>3)</sup>		-10°C to +70°C				
Storage Temperature		-40°C to +85°C				
Operating Humidity		5 to 95% RH (Non-Condensing)				
Operating Altitude		0 to 5,000 m (0 to 16,400 ft)				
Medical Rating						
Float Rating		BF				
MOPP		2 × MOPP				

### Dimensions Reference



### Notes

- 1) NC: normal condition, SFC: single fault condition.
- 2) MTBF as per Telcordia SR-332 (I/P: 115 V<sub>AC</sub>, O/P: 100% load, Ta: 35°C).  
For MDS-400ADB12 A□, MTBF as per Telcordia SR-332 (I/P: 115 V<sub>AC</sub>, O/P: 100% load with 20 CFM Forced Air, Ta: 35°C).  
For MDS-400ADB24 A□, MTBF as per Telcordia SR-332 (I/P: 115 V<sub>AC</sub>, O/P: 100% load with 10CFM Forced Air, Ta: 35°C).
- 3) Refer power de-rating in the product datasheet.

MDS-200ADB24 AA	MDS-250ADB24 AA	MDS-300ADB24 A□	MDS-400ADB24 A□	MDS-300ADB48 A□
24 V	24 V	24 V	24 V	48 V
5.0 A (Convection) 8.33 A (with 5.5 CFM Forced Air)	5.62 A (Convection) 10.41 A (with 10 CFM Forced Air)	8.75 A (Convection) 12.5 A (with 10 CFM Forced Air)	16.67 A (with 16 CFM Forced Air)	4.375 A (Convection) 6.25 A (with 10 CFM Forced Air)
120 W (Convection) 200 W (with 5.5 CFM Forced Air)	135 W (Convection) 250 W (with 10 CFM Forced Air)	210 W (Convection) 300 W (with 10 CFM Forced Air)	400 W (with 16 CFM Forced Air)	210 W (Convection) 300 W (with 10 CFM Forced Air)
± 1%				
1% typ. pk-pk Vrated @ full load				
90-264 V <sub>AC</sub>				
47-63 Hz				
92.0% typ.	91.85% typ.	93.0% typ.	92.0% typ.	92.5% typ.
93.0% typ.	92.98% typ.	94.0% typ.	93.0% typ.	93.5% typ.
Input-PE: < 0.1 mA @ NC, < 0.3 mA @ SFC Output-PE: < 0.1 mA @ NC, < 0.5 mA @ SFC				
113.9 × 64.7 × 44.7	140 × 88.9 × 44.4	140 × 88.9 × 44.4	140 × 88.9 × 44.4	140 × 88.9 × 44.4
4.48 × 2.55 × 1.76	5.51 × 3.50 × 1.75	5.51 × 3.50 × 1.75	5.51 × 3.50 × 1.75	5.51 × 3.50 × 1.75
0.35	0.61	0.61	0.61	0.61
0.76	1.35	1.35	1.35	1.35
800,000 hrs	500,000 hrs	800,000 hrs	500,000 hrs	800,000 hrs
EN 55011/EN 55032, FCC Title 47: Class B				
-10°C to +70°C				
-40°C to +85°C				
5 to 95% RH (Non-Condensing)				
0 to 5,000 m (0 to 16,400 ft)				
BF				
2 × MOPP				