Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	-0		+70	ºC	See derating curves
Storage Temperature	-40		+85	ºC	
Cooling		0		CFM	Convection-cooled
Operating Humidity			95	% RH	Non- condensing
Operating Altitude			3000	m	
Shock			30	Gpk	Half sine 6 axis
Vibration			2	G	5-500 Hz 3 axis

Electromagnetic Compatibility & Immunity

Standard	Test Level	Criteria	Notes & Conditions
Emissions	EN55032	Class B Conducted	
	EN55032	Class A Radiated	
	EN60601-1-2	Class B Conducted	
Harmonic Currents	EN61000-3-2		
Voltage Flicker	EN61000-3-3		
ESD Immunity	EN61000-4-2	level 2, performance criteria A	
Radiated Immunity	EN61000-4-3	10 V/m, performance criteria A	
EFT/Burst	EN61000-4-4	level 2, performance criteria A	
Surge	EN61000-4-5	level 3, performance criteria A	
Conducted Immunity	EN61000-4-6	10 Vrms, performance criteria A	
Dips & Interruptions	EN61000-4-11	70% U^T : performance criteria A	For 10 ms, 100% load
		40% U^T : performance criteria B	For 100 ms, 100% load
		0% U^T : performance criteria B	For 5000 ms, 100% load
Dips & Interruptions	EN61000-4-11 (Medical)	70% Ut, performance criteria A	For 500 ms, Medical, 100% load
		40% Ut, performance criteria A	For 100 ms, Medical, 60% load
		0% Ut, performance criteria A	For 10 ms, Medical, 100% load
		0% Ut, performance criteria B	For 5000 ms, Medical, 100% load

Safety Approvals

Safety Agency	Safety Standard	Category
CB Report	IEC60950-1:2005 Ed 2 / IEC62368-1:2014	Information Technology
UL	UL 62368-1 & CAN/CSA C22.2 No. 62368-1-14	Information Technology
TUV	EN62368-1:2014/A11:2017	Information Technology
CE	LVD	

Safety Agency	Safety Standard	Category
CB Report	Certificate #US/18293 & 18269/UL, IEC60601-1 Ed 3 Including Risk Management	Medical
UL	UL File # E146893, ANSI/AAMI ES 60601-1:2005 & CSA C22.2 No. 60601-1:08	Medical
TUV	TUV Certificate # B12 01 57396 125, EN60601-1:2006	Medical

Means of Protection		Category
Primary to Secondary	1 x MOPP (Means of Patient Protection) Contact Sales for 2 x MOPP	IEC60601-1 Ed 3
Primary to Earth	1 x MOPP (Means of Patient Protection)	

Equipment Protection Class	Safety Standard	Notes & Conditions
Class I & Class II	IEC60950-1:2005 Ed 2 / IEC62368-1:2014	See safety agency conditions of acceptability for details

Models & Ratings

Max Power	Outputs						Model Number
	V1	Imin/Imax[3]	V2	Imin/Imax	V3	Imin/Imax	
40 W	5.0 V	0.0 A / 8.0 A					ECM40US05†*
	7.0 V	0.0 A / 5.7 A					ECM40US07
	9.0 V	0.0 A / 4.4 A					ECM40US09*
	12.0 V	0.0 A / 3.5 A					ECM40US12†*
	15.0 V	0.0 A / 2.7 A					ECM40US15†*
	18.0 V	0.0 A / 2.2 A					ECM40US18
	24.0 V	0.0 A / 1.7 A					ECM40US24†*
	33.0 V	0.0 A / 1.2 A					ECM40US33
	48.0 V	0.0 A / 0.9 A					ECM40US48†*
	+5.0 V	0.5 A / 6.0 A	+12.0 V	0.1 A / 2.0 A			ECM40UD21
	+5.0 V	0.5 A / 6.0 A	+15.0 V	0.1 A / 1.5 A			ECM40UD22
	+5.0 V	0.5 A / 6.0 A	+12.0 V	0.1 A / 2.0 A	-12.0 V	0.0 A / 0.5 A	ECM40UT31†*
	+5.0 V	0.5 A / 6.0 A	+24.0 V	0.1 A / 1.0 A	-12.0 V	0.0 A / 0.5 A	ECM40UT32†
	+5.0 V	0.5 A / 6.0 A	+15.0 V	0.1 A / 1.5 A	-15.0 V	0.0 A / 0.5 A	ECM40UT33†*
	+3.3 V	0.5 A / 6.0 A	+5.0 V	0.1 A / 1.5 A	+12.0 V	0.0 A / 0.5 A	ECM40UT34†*
	+5.0 V	0.5 A / 6.0 A	+3.3 V	0.1 A / 1.5 A	+12.0 V	0.0 A / 0.5 A	ECM40UT35†

Max Power	Outputs						Model Number
	V1	Imin/Imax[3]	V2	Imin/Imax	V3	Imin/Imax	
60 W	5.0 V	0.0 A / 12.00 A					ECM60US05†*
	7.0 V	0.0 A / 8.60 A					ECM60US07
	9.0 V	0.0 A / 6.70 A					ECM60US09*
	12.0 V	0.0 A / 5.00 A					ECM60US12†*
	15.0 V	0.0 A / 4.00 A					ECM60US15†*
	18.0 V	0.0 A / 3.30 A					ECM60US18
	20.0 V	0.0 A / 3.00 A					ECM60US20
	24.0 V	0.0 A / 2.50 A					ECM60US24†*
	28.0 V	0.0 A / 2.14 A					ECM60US28
	33.0 V	0.0 A / 1.80 A					ECM60US33
	48.0 V	0.0 A / 1.25 A					ECM60US48†*
	+5.0 V	0.5 A / 8.00 A	+12.0 V	0.1 A / 3.0 A			ECM60UD21
	+5.0 V	0.5 A / 8.00 A	+15.0 V	0.1 A / 2.5 A			ECM60UD22
	+5.0 V	0.5 A / 8.00 A	+12.0 V	0.1 A / 3.0 A	-12.0 V	0.0 A / 0.5 A	ECM60UT31†*
	+5.0 V	0.5 A / 8.00 A	+24.0 V	0.1 A / 1.5 A	-12.0 V	0.0 A / 0.5 A	ECM60UT32†
	+5.0 V	0.5 A / 8.00 A	+15.0 V	0.1 A / 2.5 A	-15.0 V	0.0 A / 0.5 A	ECM60UT33†*
	+3.3 V	0.5 A / 8.00 A	+5.0 V	0.1 A / 1.5 A	+12.0 V	0.0 A / 0.5 A	ECM60UT34†*
	+5.0 V	0.5 A / 8.00 A	+3.3 V	0.1 A / 1.5 A	+12.0 V	0.0 A / 0.5 A	ECM60UT35†

Notes

1. V2 will track a change in V1 by the same percentage change in voltage as V1 is trimmed.

2. To receive unit with cover fitted, add suffix '-C' to model number. For Class I operation only.

3. A 120% peak load can be taken for up to 100 ms with a 25% duty cycle. Average load not to exceed maximum power rating.

† Available from Farnell InOne.

*Available from Newark InOne.