4ManPro

Elements For Manufacturing Processes

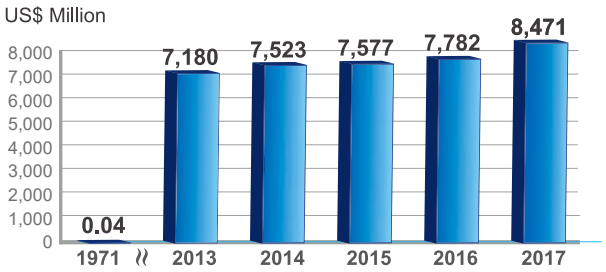
MODULOS DE PODER AC/DC

Brand Promise

Worldwide Revenues

Delta continues to deliver strong and stable financial performance, achieving a compound annual growth rate of 30.5% since 1971. Delta's consolidated worldwide sales revenues in 2017 were US$ 8.471 billion.

CAGR: 30.5%



Milestones

1971
- Delta Electronics, Inc. established

1983
- Mass production of switching power supplies

1988
- Listed on the Taiwan Stock Exchange (code: 2308)
- Mass production of DC brushless fans

1992
- Inauguration of the first plant (Dongguan) in China

2003
- Acquired ASCOM Energy Systems, an organization with expertise in power supplies and a history of over 100 years

2006
- Inaugurated Delta's Tainan Plant, the first green building in Taiwan certified for all nine indices of Taiwan's EEWH rating system (EEWH Diamond)

2007
- Honored with Forbes Asia's Fabulous 50 Award
- Developed the world's first company-wide Green Map with recognition from Green Map System

2008
- Listed as a Global Top 100 Low-Carbon Pioneer by CNBC European Business Magazine

2011
- Inaugurated Shanghai R&D and Operations Center Building in China (LEED Gold)
- Inaugurated Delta Taoyuan Technology Center, Taiwan (LEED/ EEWH Gold)

2012
- Received Taiwan's Industry Innovation Award

2015
- Selected for the Chinese Academy of Social Sciences "Top100 China Corporate Social Responsibility" for 3th consecutive year
- Acquired Eltek, a leading provider in telecom power, industrial and datacenter power solutions
- Inaugurated Delta Americas Headquarters
- Inaugurated Delta Taoyuan Plant 5, Taiwan (EEWH/LEED Gold)

2016
- Acquired Delta Controls and LOYTEC, two leading companies in building automation

2017
- Selected for the Dow Jones Sustainability™ World Index (DJSI World) for the 7th consecutive year
- Named as Climate Change Leadership Level of the 2017 CDP
- Named as a Taiwan Top 20 Global Brand for the 7th consecutive year

Solutions and Applications

Telecom / Networking / Datacenter

Delta is the worldwide leader in power systems technology and manufacturing for DC-DC converters for the telecom, networking and datacenter marketplace. With creative design topology and patented technologies, Delta is committed to design high-density and high-efficiency converters with advanced performance, flexibility and reliability that worldwide telecom, networking and datacenter market requires.

Industrial

Delta's expansive product portfolio provides solution capability to meet the specific requirements of industrial application. Products use Delta's creative design topology and patented technologies to achieve extremely high efficiency, low power dissipation and greater reliability. These modules housed in industry standard footprint and pinout are easy to use and available in a fully encapsulated package for harsh environment applications.

Transportation

Delta provides isolated DC-DC power converters in the transportation industry for all industrial electric-powered vehicles and various railway applications such as drive controls, power controls, safety monitors and communications systems under the European Standard EN 50155. Delta designed these products with ultra wide input range for optimal performance in extensive transportation market. With creative design technology and optimization of component placement, these converters possess outstanding electrical and thermal performance as well as high reliability under extremely harsh operating conditions.

Healthcare

Both AC-DC and DC-DC power supplies are designed to meet specific power requirements for healthcare applications. Such models meet UL60601-1 safety specs.

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PRODUCT SELECTION GUIDE

DC-DC **Isolated** **Single Output** **Vin nominal: 3.3~12V**

Vin Nominal	Vin Range	Series	Max Power	Vo													Page
				1V	1.2V	1.5V	1.8V	2.5V	3.3V	5V	9V	12V	15V	24V	28V	48V	54V	
3.3V	2.97~3.63V	PA01S	1W						▲	▲								46
5V	4.5~5.5V	DA01S	1W							▲	▲	▲	▲					46
		PA01S	1W						▲	▲	▲	▲	▲					46
		PB01S	1W						▲	▲	▲	▲	▲					46
		PD01S	1W						▲	▲	▲	▲	▲					46
		PE01S	1W							▲	▲	▲	▲					46
		PF01S	1W							▲	▲	▲	▲					46
		PI01S	1W							▲		▲	▲					46
		SA01S	1W						▲	▲	▲	▲	▲					46
		SB01S	1W							▲		▲	▲					47
		SH01S	1W						▲	▲	▲	▲	▲					47
		DC02S	2W							▲		▲	▲					47
		DK02S	2W							▲		▲	▲					47
		PC02S	2W						▲	▲		▲	▲					47
		SC02S	2W							▲		▲						47
		SG02S	2W							▲		▲	▲					47
	4.5~9V	PL01S	1W							▲		▲	▲					46
		SK01S	1W							▲		▲	▲					47
		DB02S	2W						▲	▲		▲	▲					47
		PG02S	2W						▲	▲		▲						47
		SD02S	2W						▲	▲		▲	▲					47
		DN03S	2-3W						▲	▲		▲	▲	▲				48
		DM03S	3W							▲		▲		▲				48
12V	9~18V	PL01S	1W							▲		▲	▲					46
		SK01S	1W							▲		▲	▲					47
		DB02S	2W						▲	▲		▲	▲					47
		PG02S	2W						▲	▲		▲						47
		SD02S	2W						▲	▲		▲	▲					47
		DN03S	2-3W						▲	▲		▲	▲	▲				48
		DD03S	3W							▲		▲	▲					48
		DM03S	3W							▲		▲		▲				48
		SE03S	3W						▲	▲		▲	▲					48
		SF05S	5W						▲	▲		▲	▲					48

DC-DC **Isolated** **Single Output** **Vin nominal: 12~24V**

Vin Nominal	Vin Range	Series	Max Power	Vo														Page
				1V	1.2V	1.5V	1.8V	2.5V	3.3V	5V	9V	12V	15V	24V	28V	48V	54V	
12V	9~18V	DH06S	6W						▲	▲		▲	▲	▲				48
		DU06S	6W							▲		▲						48
		DT10S	10W							▲		▲						48
	10.8~13.2V	SE03S	3W						▲	▲		▲	▲					48
		SF05S	5W						▲	▲		▲	▲					48
		DH06S	6W						▲	▲		▲	▲	▲				48
		DU06S	6W							▲		▲						48
		DT10S	10W							▲		▲						48
		DA01S	1W							▲	▲	▲	▲					46
		PA01S	1W							▲	▲	▲	▲					46
		PB01S	1W						▲	▲	▲	▲	▲					46
		PD01S	1W						▲	▲	▲	▲	▲					46
		PE01S	1W							▲	▲	▲	▲					46
		PF01S	1W							▲	▲	▲	▲					46
		PI01S	1W							▲		▲	▲					46
		SA01S	1W						▲	▲	▲	▲	▲					46
		SB01S	1W							▲		▲	▲					47
		SH01S	1W						▲	▲	▲	▲	▲					47
		DC02S	2W							▲		▲	▲					47
		DK02S	2W							▲		▲	▲					47
		PC02S	2W						▲	▲		▲	▲					47
		SC02S	2W							▲		▲						47
		SG02S	2W							▲		▲	▲					47
	4.5~18V	PJ03S	3W						▲	▲		▲	▲					48
15V	13.5~16.5V	PB01S	1W							▲		▲	▲					46
		SH01S	1W									▲	▲					47
24V	18~36V	PL01S	1W							▲		▲	▲					46
		SK01S	1W							▲		▲	▲					47
		DB02S	2W						▲	▲		▲	▲					47
		PG02S	2W						▲	▲		▲						47
		SD02S	2W						▲	▲		▲	▲					47
		DD03S	3W							▲		▲	▲					48
		DN03S	2-3W						▲	▲		▲	▲	▲				48
		DM03S	3W							▲		▲		▲				48

DC-DC **Isolated** **Single Output** **Vin nominal: 24~48V**

Vin Nominal	Vin Range	Series	Max Power	Vo														Page
				1V	1.2V	1.5V	1.8V	2.5V	3.3V	5V	9V	12V	15V	24V	28V	48V	54V	
24V	18~36V	SE03S	3W						▲	▲		▲	▲					48
		SF05S	5W						▲	▲		▲	▲					48
		DH06S	6W						▲	▲		▲	▲	▲				48
		DU06S	6W							▲		▲						48
		DT10S	10W							▲		▲						48
		E24SR	73W						▲	6.5V		▲						21
	21.6~26.4V	DA01S	1W							▲	▲	▲	▲					46
		PA01S	1W							▲	▲	▲	▲					46
		PB01S	1W						▲	▲	▲							46
		PD01S	1W						▲	▲	▲	▲	▲					46
		PE01S	1W							▲	▲	▲	▲					46
		PF01S	1W							▲	▲	▲	▲					46
		SA01S	1W						▲	▲	▲	▲	▲					46
		SB01S	1W							▲		▲	▲					47
		SH01S	1W						▲	▲	▲	▲	▲					47
		DC02S	2W							▲		▲	▲					47
		DK02S	2W							▲		▲	▲					47
		PC02S	2W						▲	▲		▲	▲					47
		SC02S	2W							▲		▲						47
		SG02S	2W							▲		▲	▲					47
	9~36V	PH02S	2W						▲	▲		▲	▲					47
		DL03S	3W						▲	▲		▲	▲					48
		PJ03S	3W						▲	▲		▲	▲					48
		DF04S	4W						▲	▲		▲	▲					48
		DJ06S	6W						▲	▲		▲	▲	▲				48
		S24SE	30W						▲	▲		▲	▲					50
		S24SP	60W							▲		▲	▲	▲				52
		DR24S*	60W							▲		▲	▲	▲				67
		PM24S*	60W							▲		▲	▲	▲				67
		E24SE*	150W							▲		▲		▲		▲		54
		Q24SE*	240W							▲		▲		▲		▲		61
12/24/36/48V	9~53V	T31SN*	100W									▲		▲				76
24/48V	9~60V	E35SE*	120W							▲		▲		▲		▲		55
		H60SB*	3kW														60V	72

* New Product

Vin Nominal	Vin Range	Series	Max Power	Vo													Page
				1V	1.2V	1.5V	1.8V	2.5V	3.3V	5V	9V	12V	15V	24V	28V	48V	54V	
24/36/48V	18~60V	B40SR	300W									12.4V	13.7V					64
	18~75V	PH02S	2W						▲	▲		▲	▲					47
		DL03S	3W						▲	▲		▲	▲					48
		PJ03S	3W						▲	▲		▲	▲					48
		DF04S	4W						▲	▲		▲	▲					48
		DJ06S	6W						▲	▲		▲	▲	▲				48
		S36SE	24W						▲	▲		▲						53
		V36SE	60W						▲	▲		▲						17
		E36SR	75W						▲	▲		▲						23
		E36SC	125W						▲	▲		▲						22
		H36SA	150W														▲	39
		Q36SR	240W									▲						31
48V	36~72V	E48SC	300W												32V	50V		26
	36~75V	PL01S	1W							▲		▲	▲					46
		SK01S	1W							▲		▲	▲					47
		DB02S	2W						▲	▲		▲	▲					47
		PG02S	2W						▲	▲		▲						47
		SD02S	2W						▲	▲		▲	▲					47
		DN03S	2-3W						▲	▲		▲	▲	▲				48
		DD03S	3W							▲		▲	▲					48
		DM03S	3W							▲		▲		▲				48
		SE03S	3W						▲	▲		▲	▲					48
		SF05S	5W						▲	▲		▲	▲					48
		DH06S	6W						▲	▲		▲	▲	▲				48
		DU06S	6W							▲		▲						48
		DT10S	10W							▲		▲						48
		T48SR	25W						▲	▲								16
		S48SP	36W						▲	▲		▲						44
		V48SH	50W	▲	▲		▲		▲	▲								19
		V48SR	66W		▲	▲	▲	▲					▲					20
		Q48SA	81W														▲	32

DC-DC **Isolated** **Single Output** **Vin nominal: 48~600V**

Vin Nominal	Vin Range	Series	Max Power	Vo													Page
				1V	1.2V	1.5V	1.8V	2.5V	3.3V	5V	9V	12V	15V	24V	28V	48V	54V	
48V	36~75V	E48SC	120W						▲	▲		▲						24
		E48SC	360W									▲						25
		V48SC	100W						▲	▲		▲						18
		E48SH	120W	▲	▲	▲	▲	▲	▲	▲		▲						27
		E48SP	240W						▲	▲		▲						28
		Q48SC	300W									▲			32V			33
		Q48SQ	400W									▲						34
		Q48SC	600W									▲						33
		H48SC	700W						▲						▲			41
	38~60V	H48SA	550W									▲			▲	▲	▲	40
54V	40~60V	E54SJ*	480W						▲	▲		▲						30
		Q54SH*	1000W									▲						36
		Q54SJ*	1300W								10.8V	▲						38
		H51SA*	1650W														50V	42
	42~60V	E54SD	300W									▲						29
		Q54SG	600W									▲						35
	48~60V	Q55SH*	1100W									▲						37
24/48/72/96/110	14.4~160V	Q80SV*	150W							▲		▲		▲			▲	56
24/48/72/80V	18~106V	B62SR	360W									12.4V	13.7V	▲				64
24/48/72/96/110	17~138V	H80SV*	200W									▲	▲	▲		▲	▲	58
24/48/72/96/110	17~138V	PM80S*	204W									▲	▲	▲		▲	▲	69
36/48/72/80	32~96V	B70SP*	500W									12.4V	13.7V	24.5V				66
48/72/80V	36~106V	B70SR	300W									12.4V	13.7V	▲				64
110V	53~154V	HA1SV	120W									▲	▲	▲				57
300V	200~400V	FB7SR*	1200W										14V		▲		▲	59
380V	360~400V	QC8SC*	750W									▲						60
600V	400~800V	FG5SR*	1200W										14V		▲		▲	59

* New Product

DC-DC **Isolated** **Dual Outputs** **Vin nominal: 5~15V**

Vin Nominal	Vin Range	Series	Max Power	Vo				Page
				±5V	±9V	±12V	±15V	
5V	4.5~5.5V	PB01D	1W	•	•	•	•	46
		PD01D	1W	•	•	•	•	46
		PE01D	1W	•	•	•	•	46
		PI01D	1W	•		•	•	46
		SA01D	1W	•	•	•	•	46
		SB01D	1W	•		•	•	47
		SH01D	1W	•		•	•	47
		DC02D	2W	•		•	•	47
		DK02D	2W			•	•	47
		PC02D	2W	•		•	•	47
		SC02D	2W	•		•	•	47
		SG02D	2W			•	•	47
	4.5~9V	PL01D	1W			•	•	46
		SK01D	1W			•	•	47
		DB02D	2W	•		•	•	47
		SD02D	2W	•		•	•	47
		DN03D	2-3W	•		•	•	48
		DD03D	3W			•	•	48
		DM03D	3W			•	•	48
12V	10.8~13.2V	PB01D	1W	•	•	•	•	46
		PD01D	1W	•	•	•	•	46
		PE01D	1W	•	•	•	•	46
		PI01D	1W	•		•	•	46
		SA01D	1W	•	•	•	•	46
		SB01D	1W	•		•	•	47
		SH01D	1W	•		•	•	47
		DC02D	2W	•		•	•	47
		DK02D	2W			•	•	47
		PC02D	2W	•		•	•	47
		SC02D	2W			•	•	47
		SG02D	2W			•	•	47
	4.5~18V	PJ03D	3W	•		•	•	48
	9~18V	PL01D	1W			•	•	46
		SK01D	1W			•	•	47
		DB02D	2W	•		•	•	47
		SD02D	2W	•		•	•	47
		DN03D	2-3W	•		•	•	48
		DD03D	3W			•	•	48
		DM03D	3W			•	•	48
		SE03D	3W	•		•	•	48
		SF05D	5W	•		•	•	48
		DH06D	6W	•		•	•	48
		DU06D	6W			•	•	48
		DT10D	10W			•	•	48
15V	13.5~16.5V	PB01D	1W	•		•	•	46

DC-DC **Isolated** **Dual Outputs** **Vin nominal: 24~48V**

Vin Nominal	Vin Range	Series	Max Power	Vo				Page
				±5V	±9V	±12V	±15V	
24V	18~36V	PL01D	1W			•	•	46
		SK01D	1W			•	•	47
		DB02D	2W	•		•	•	47
		SD02D	2W	•		•	•	47
		DN03D	2-3W	•		•	•	48
		DD03D	3W			•	•	48
		DM03D	3W			•	•	48
		SE03D	3W	•		•	•	48
		SF05D	5W	•		•	•	48
		DH06D	6W	•		•	•	48
		DU06D	6W			•	•	48
		DT10D	10W			•	•	48
	21.6~26.4V	PD01D	1W	•	•	•	•	46
		PE01D	1W	•	•	•	•	46
		SA01D	1W	•	•	•	•	46
		SB01D	1W	•		•	•	47
		SH01D	1W	•		•	•	47
		DC02D	2W	•		•	•	47
		DK02D	2W			•	•	47
		PC02D	2W	•		•	•	47
		SC02D	2W			•	•	47
		SG02D	2W			•	•	47
	9~36V	PH02D	2W	•		•	•	47
		DL03D	3W			•	•	48
		PJ03D	3W	•		•	•	48
		DF04D	4W	•		•	•	48
		DJ06D	6W	•		•	•	48
		S24DE	30W			•	•	51
		DR24D*	30W			•	•	67
		PM24D*	30W			•	•	67
48V	18~75V	PH02D	2W	•		•	•	47
		DL03D	3W			•	•	48
		PJ03D	3W	•		•	•	48
		DF04D	4W	•		•	•	48
		DJ06D	6W	•		•	•	48
	36~75V	PL01D	1W			•	•	46
		SK01D	1W			•	•	47
		DB02D	2W	•		•	•	47
		SD02D	2W	•		•	•	47
		DN03D	2-3W	•		•	•	48
		DD03D	3W			•	•	48
		DM03D	3W			•	•	48
		SE03D	3W	•		•	•	48
		SF05D	5W	•		•	•	48
		DH06D	6W	•		•	•	48
		DU06D	6W			•	•	48
		DT10D	10W			•	•	48

* New Product

DC-DC **Non-Isolated** **Output Current: 0.5~80A**

Part Number	Output Current	Vin	Vo	Page
PM05S015A	0.5A	4.75~32V	1.5V	77
PM05S018A		4.75~32V	1.8V	77
PM05S025A		4.75~32V	2.5V	77
PM05S033A		4.75~32V	3.3V	77
PM05S050A		6.5~32V	5V	77
PM05S065A		8~32V	6.5V	77
PM05S090A		11~32V	9V	77
PM05S120A		15~32V	12V	77
PM05S150A		18~32V	15V	77
DNT04S0A	3A	2.4~5.5V	0.75~3.63V	74
NE12S0A		3~13.8V	0.59~5V	79
DNT12S0A		8.3~14V	0.75~5V	74
T31SN240*	4.5A	9~53V	5~30V	76
DNT04S0A	5A	2.4~5.5V	0.75~3.63V	74
DNT12S0A		8.3~14V	0.75~5V	74
DNS04S0A	6A	2.8~5.5V	0.75~3.63V	74
NE12S0A		3~13.8V	0.59~5.1V	79
DNS10S0A		8.3~14V	0.75~5V	74
NC12S0A0		10.2~13.8V	0.9~5V	78
T31SN120*	8A	9~53V	3.3~16.5V	76
DNM04S0A	10A	2.8~5.5V	0.75~3.63V	74
DUS1250E		2.97~13.2V	0.59~5V	79
NE12S0A		3~13.8V	0.59~5.1V	79
DNM10S0A		8.3~14V	0.75~5V	74
DCM04S0A	12A	2.4~5.5V	0.6~3.3V	75
NC12S0A	15A	10.2~13.8V	0.9~5V	78
DNL04S0A	16A	2.8~5.5V	0.75~3.63V	74
DNL10S0A		8.3~14V	0.75~5V	74
D12S05020-1	20A	4.5~13.2V	0.59~5V	79
NE12S0A		4.5~13.8V	0.59~5.1V	79
DCL12S0A		4.5~14V	0.69~5V	75
NC12S0A		10.2~13.8V	0.9~5V	78
DNL10S0A		2.8~5.5V	0.75~3.63V	74
DNK05S0A	30A	4.5~5.5V	0.8~3.63V	74
DCK12S0A		6~14V	0.8~3.3V	75
DNK12S0A		6~14V	0.8~5.5V	74
D12S1R830D		7~13.2V	0.8~1.8V	73
NC12S0A		10.2~13.8V	0.9~5V	78
D12F200	40A	4.5~13.8V	0.6~5V	79
D12S72C		7~13.2V	0.8~1.8V	73
ND12S0A		8~13.8V	0.9~5V	79
NC12S0A		10.2~13.8V	0.9~5V	78
D12S2R550	50A	4.5~13.8V	0.6~5V	79
H60SB0A050		9~60V	0~60V	72
D12S300-1	60A	4.5~13.8V	0.6~5V	79
NC12S0A		11.04~12.6V	0.9~5V	78
D12S400	80A	10.8~13.2V	0.8375~5V	79
D12S1R880D		7~13.2V	0.6~3.3V	73

* New Product

AC-DC Power Moudle Selection Guide

AC-DC Single Output

Series	Max Power	Vin	Vo										Page
			3.3V	5V	8V	9V	12V	14V	15V	24V	28V	36V	48V	
AA04S	4W	85~265VAC	◆	◆		◆	◆		◆	◆				81
AA07S	7W		◆	◆			◆		◆	◆				81
AA10S	10W		◆	◆			◆		◆	◆				81
AA15S	15W			◆			◆		◆	◆			◆	81
AA30S	30W			◆			◆		◆	◆			◆	81
AA60S	60W			◆			◆		◆	◆		◆	◆	81
AB24S	24W			◆		◆	◆		◆	◆				81
AB40S	40W			◆			◆		◆	◆				81
AB60S	60W			◆			◆		◆	◆			◆	81
AC02S	2W				◆			◆		◆				81
PACSR*	500W						◆			◆	◆		◆	82
FACSR*	800W						◆				◆		◆	83

* New Product

AC-DC Dual Outputs

Series	Max Power	Vin	Vo								Page
			3.3/5V	5/12V	12/-12V	15/-15V	8/3.3V	8/5V	14/3.3V	14/5V	
AA04D	4W	85~264VAC	◆	◆	◆	◆					81
AA15D	15W			◆	◆	◆					81
AA30D	30W			◆	◆	◆					81
AB24D	24W				◆	◆					81
AB40D	40W				◆	◆					81
AC02D	2W						◆	◆	◆	◆	81

AC-DC Triple Outputs

Series	Max Power	Vin	Vo			Page
			3.3/5/12V	5/12/-12V	5/15/-15V	
AA15T	15W	85~264VAC		◆	◆	81
AA30T	30W		◆	◆	◆	81

Filter & ATCA Input Module Selection Guide

Filter

Part Number	Input Voltage	Output Current	Common-mode Insertion Loss	Differential-mode Insertion Loss	Page
FL75L05 A	0~75V	5A	43dB	45dB	85
FL75L07 A/B	0~75V	7A	40dB	70dB	85
FL75L10 A	0~75V	10A	30dB	25dB	85
FL75L20 A/B	0~75V	20A	28dB	46dB	85

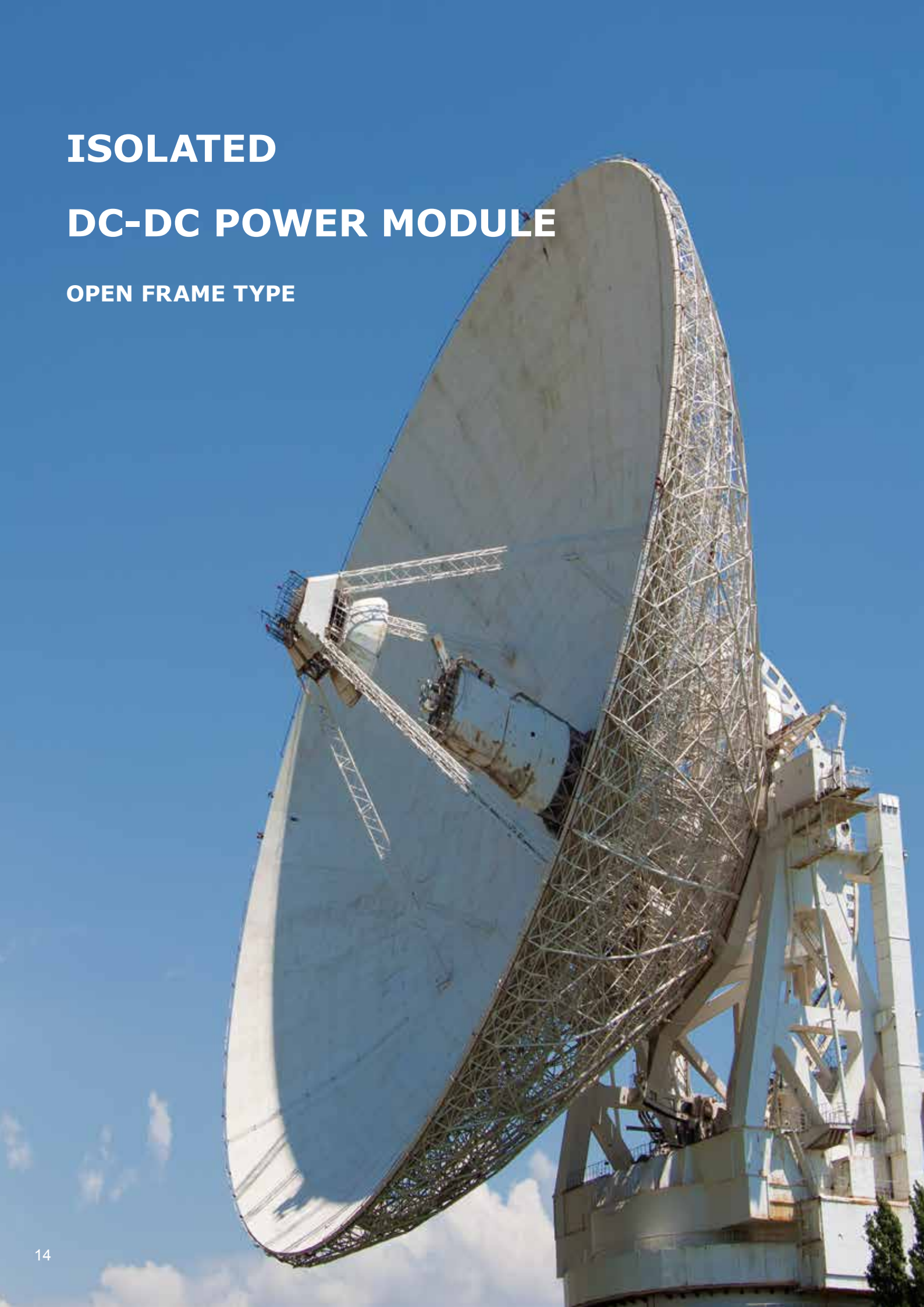
ATCA Input Module

Part Number	Input Voltage	Auxiliary Output 1	Auxiliary Output 2	Output Power	Efficiency	Page
DIM3R3300SFA	-36 ~ -75V	3.3V / 2.4A	-	300W	98%	86
DIM3R3300SFB	-36 ~ -75V	3.3V / 2.4A	5V / 100mA	300W	98%	86
DIM3R3400SFA	-36 ~ -75V	3.3V / 3.6A	5V / 150mA	400W	98.2%	86
DIM3R3500SFA	-36 ~ -75V	3.3V / 3.6A	5V / 150mA	500W	98.30%	86

ISOLATED

DC-DC POWER MODULE

OPEN FRAME TYPE



Product Overview

The isolated open-frame type DC-DC power module is one of the important product portfolios. The power modules range all DOSA-compatible brick converter from 1/32 brick to 1/2 brick with industrial standard footprint and pinout. With 18~75V input voltage range, products output power up to 1300W. Delta provides these high-density and high-efficiency converters with advanced performance, flexibility and reliability, which are widely applied to the telecom, networking and datacenter marketplace. In addition, S36SE and S48SP are two small-size series with low output power for industrial application.

Series	Form Factor	Input Voltage	Output Voltage	Output Power	Digital Control	Page
T48SR	1/32 BRICK	36~75V	3.3V, 5V	25W		16
V36SE	1/16 BRICK	18~75V	3.3V, 5V, 12V	50W		17
V48SC	1/16 BRICK	36~75V	3.3V, 5V, 12V	50~100W		18
V48SH	1/16 BRICK	36~75V	1V, 1.2V, 1.8V, 3.3V	17~50W		19
V48SR	1/16 BRICK	36~75V	1.2V, 1.5V, 1.8V, 2.5V, 15V	30~66W		20
E24SR	1/8 BRICK	18~36V	3.3V, 6.5V, 12V	52~73W		21
E36SC	1/8 BRICK	18~75V	3.3V, 5V, 12V	116~125W		22
E36SR	1/8 BRICK	18~75V	3.3V, 5V	66~75W		23
E48SC	1/8 BRICK	36~75V	3.3V, 5V, 12V	50~120W		24
E48SC	1/8 BRICK	36~75V	12V	240~360W	YES	25
E48SC	1/8 BRICK	36~72V	32V, 50V	160~300W	YES	26
E48SH	1/8 BRICK	36~75V	1V, 1.2V, 1.5V, 1.8V, 2.5V, 3.3V, 5V, 12V	50~120W		27
E48SP	1/8 BRICK	36~75V	3.3V, 5V, 5.8V, 12V	132~240W		28
E54SD	1/8 BRICK	42~60V	12V	300W	YES	29
E54SJ*	1/8 BRICK	40~60V	3.3V, 5V, 12V	165~480W	YES	30
Q36SR	1/4 BRICK	18~75V	12V	204~240W		31
Q48SA	1/4 BRICK	36~75V	54V	81W		32
Q48SC	1/4 BRICK	36~75V	12V, 32V	300~600W	YES	33
Q48SQ	1/4 BRICK	36~75V	12V	216~400W		34
Q54SG	1/4 BRICK	40~60V	12V	400~600W	YES	35
Q54SH*	1/4 BRICK	40~60V	12V	600~1000W	YES	36
Q55SH*	1/4 BRICK	48~60V	11.9V	1100W	YES	37
Q54SJ*	1/4 BRICK	40~60V	10.8V, 12.2V	700~1300W	YES	38
H36SA	1/2 BRICK	18~75V	54V	162W		39
H48SA	1/2 BRICK	36~75V	12V, 28V, 48V, 54V	150~550W		40
H48SC	1/2 BRICK	36~75V	3.3V, 28V	83~450W	YES	41
H51SA*	1/2 BRICK	40~60V	50V	1100W		42
S36SE	1" x 1"	18~75V	3.3V, 5V, 12V	15~24W		43
S48SP	1" x 1"	36~75V	3.3V, 5V, 12V	33~36W		44

* New Product

T48SR Series

FEATURES

Electrical

- High efficiency
- 2:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

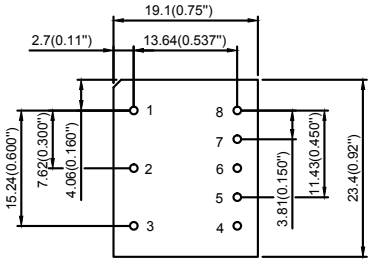
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1

1/32 brick | 2:1 input | cULus

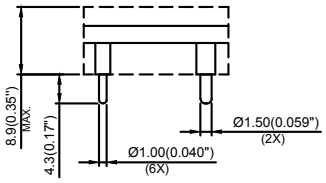
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
T48SR3R307	36~75V	3.3V	2.64~3.63V	7.5A	25W	86%	1500V	19.1 x 23.4 x 8.9 mm
T48SR05005	36~75V	5V	4~5.5V	5A	25W	86%	1500V	19.1 x 23.4 x 8.9 mm

MECHANICAL DRAWING



TOP VIEW



SIDE VIEW

Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

PART NUMBERING SYSTEM

T	48	S	R	050	05	N	N	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
T - 1/32 Brick	48- 36~75V	S - Single	R - Family Name	3R3 - 3.3V 050 - 5V	05 - 5A 07 - 7.5A	N - Negative P - Positive	N - 0.146” R - 0.170”	F - RoHS 6/6 (Lead Free) Space - RoHS5/6	A - Standard Functions

V36SE Series

FEATURES

Electrical

- High efficiency
- Wide 4:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

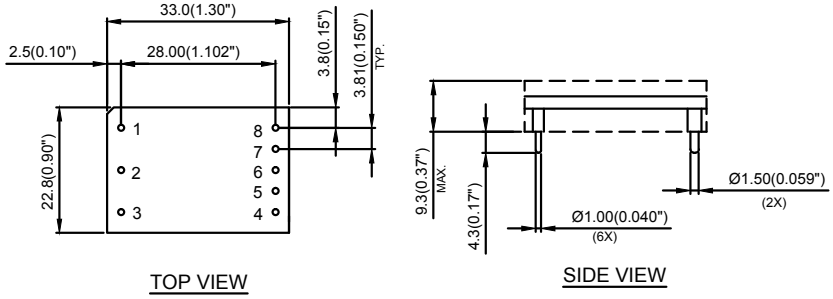
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1
- EN 60950-1

1/16 brick | 4:1 input | cULus

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
V36SE3R315	18~75V	3.3V	2.64~3.63V	15A	50W	90.5%	2250V	33 x 22.8 x 9.3 mm
V36SE05010	18~75V	5V	4~5.5V	10A	50W	91.0%	2250V	33 x 22.8 x 9.3 mm
V36SE12004	18~75V	12V	9.6~13.2V	4.2A	50W	88.0%	2250V	33 x 22.8 x 8.7 mm
V36SE12005	18~75V	12V	9.6~13.2V	5A	60W	88.0%	2250V	33 x 22.8 x 8.7 mm

MECHANICAL DRAWING



Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

PART NUMBERING SYSTEM

V	36	S	E	050	10	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
V - 1/16 Brick	36 - 18~75V	S - Single	E - Family Name	3R3 - 3.3V 050 - 5V 120 - 12V	04 - 4.2A 05 - 5A 10 - 10A 15 - 15A	N - Negative P - Positive	K - 0.110'' N - 0.145" R - 0.170" M - SMD	F - RoHS 6/6 (Lead Free) Space - RoHS 5/6	A - Standard Functions

V48SC Series

FEATURES

Electrical

- High efficiency
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

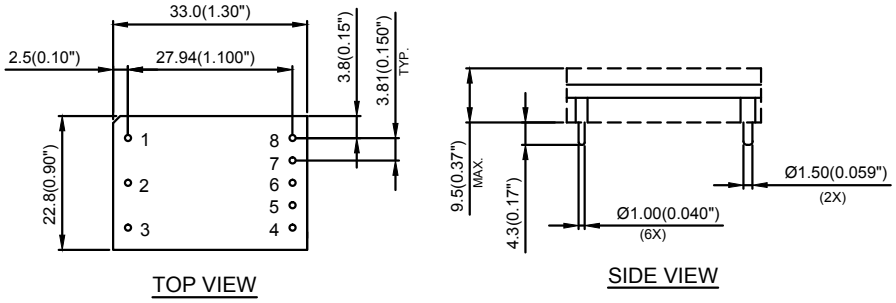
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1

1/16 brick | 2:1 input | cULus

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
V48SC3R315	36~75V	3.3V	2.64~3.63V	15A	49.5W	91.5%	1500V	33 x 22.8 x 9.5 mm
V48SC3R320	36~75V	3.3V	2.64~3.63V	20A	66W	91.0%	1500V	33 x 22.8 x 9.5 mm
V48SC3R325	36~75V	3.3V	2.64~3.63V	25A	82.5W	91.0%	1500V	33 x 22.8 x 9.5 mm
V48SC05013	36~75V	5V	4~5.5V	13A	65W	91.5%	1500V	33 x 22.8 x 9.5 mm
V48SC05017	36~75V	5V	4~5.5V	17A	85W	91.5%	1500V	33 x 22.8 x 9.5 mm
V48SC05020	36~75V	5V	4~5.5V	20A	100W	91.0%	1500V	33 x 22.8 x 9.5 mm
V48SC12007	36~75V	12V	9.6~13.2V	7.5A	90W	92.0%	1500V	33 x 22.8 x 9.5 mm
V48SC12008	36~75V	12V	9.6~13.2V	8.3A	100W	92.0%	1500V	33 x 22.8 x 9.5 mm

MECHANICAL DRAWING



Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

PART NUMBERING SYSTEM

V	48	S	C	050	13	N	N	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
V - 1/16 Brick	48 - 36~75V	S - Single	C - Family Name	3R3 - 3.3V 050 - 5.0V 120 - 12V	07 - 7.5A 08 - 8.3A 10 - 10A 13 - 13A 15 - 15A 17 - 17A 20 - 20A 25 - 25A	N - Negative	K - 0.110” N - 0.145” R - 0.170” M - SMD	F - RoHS 6/6 (Lead Free) Space - RoHS5/6	A - Standard Functions H - With Heatspreader B - no sense and trim pin

V48SH Series

FEATURES

Electrical

- High efficiency
- Fixed frequency operation
- 2:1 input range
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

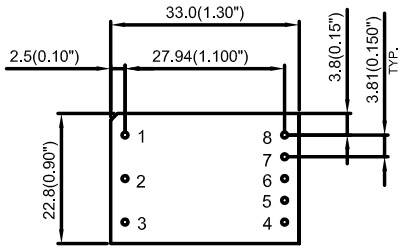
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1

1/16 brick | 2:1 input | cULus

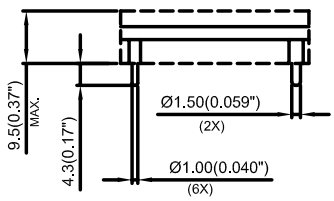
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
V48SH1R035	36~75V	1V	0.8~1.1V	35A	35W	85.0%	1500V	33 x 22.8 x 9.5 mm
V48SH1R050	36~75V	1V	0.8~1.1V	50A	50W	84.0%	1500V	33 x 22.8 x 9.5 mm
V48SH1R235	36~75V	1.2V	0.96~1.32V	35A	42W	87.0%	1500V	33 x 22.8 x 9.5 mm
V48SH1R830	36~75V	1.8V	1.44~1.98V	30A	54W	89.0%	1500V	33 x 22.8 x 9.5 mm
V48SH1R840	36~75V	1.8V	1.44~1.98V	40A	72W	88.5%	1500V	33 x 22.8 x 9.5 mm
V48SH3R325	36~75V	3.3V	2.64~3.63V	25A	82.5W	91.0%	1500V	33 x 22.8 x 9.5 mm
V48SH3R330	36~75V	3.3V	2.64~3.63V	30A	99W	91.0%	1500V	33 x 22.8 x 9.5 mm
V48SH05017	36~75V	5V	4~5.5V	17A	85W	91.5%	1500V	33 x 22.8 x 9.5 mm
V48SH05020	36~75V	5V	4~5.5V	20A	100W	91.5%	1500V	33 x 22.8 x 9.5 mm

MECHANICAL DRAWING



TOP VIEW



SIDE VIEW

(without heat spreader)

Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

PART NUMBERING SYSTEM

V	48	S	H	1R0	50	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
V - 1/16 Brick	48 - 36~75V	S - Single	H - Family Name	1R0 - 1.0V 1R2 - 1.2V 1R8 - 1.8V 3R3 - 3.3V 050 - 5.0V	17 - 17A 25 - 25A 30 - 30A 35 - 35A 40 - 40A 50 - 50A	N - Negative P - Positive	K - 0.110" N - 0.145" R - 0.170" M - SMD	F - RoHS 6/6 (Lead Free) Space - RoHS5/6	A - Standard Functions H - With heat spreader

V48SR Series

FEATURES

Electrical

- High efficiency
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

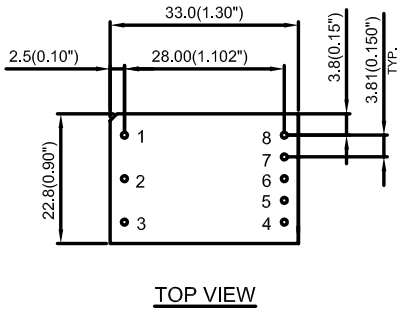
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1
- EN 60950-1

1/16 brick | 2:1 input | cULus

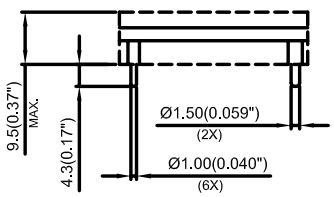
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
V48SR1R225	36~75V	1.2V	0.96~1.32V	25A	30W	84.0%	2250V	33 x 22.8 x 9.5 mm
V48SR1R525	36~75V	1.5V	1.2~1.65V	25A	38W	85.0%	2250V	33 x 22.8 x 9.5 mm
V48SR1R825	36~75V	1.8V	1.44~1.98V	25A	45W	87.0%	2250V	33 x 22.8 x 9.5 mm
V48SR2R520	36~75V	2.5V	2~2.75V	20A	50W	89.0%	2250V	33 x 22.8 x 9.5 mm
V48SR15004	36~75V	15V	12.75~16.5V	4.4A	66W	90.5%	2250V	33 x 22.8 x 9.5 mm

MECHANICAL DRAWING



TOP VIEW



SIDE VIEW

Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

PART NUMBERING SYSTEM

V	48	S	R	1R2	25	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
V - 1/16 brick	48 - 36~75V	S - Single	R - Family Name	1R2 - 1.2V 1R5 - 1.5V 1R8 - 1.8V 2R5 - 2.5V 150 - 15V	04 - 4.4A 20 - 20A 25 - 25A	N - Negative P- Positive	K - 0.110'' N - 0.145" R - 0.170" M - SMD	F - RoHS 6/6 (Lead Free)	A - Standard Functions

E24SR Series

FEATURES

Electrical

- High efficiency
- 2:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

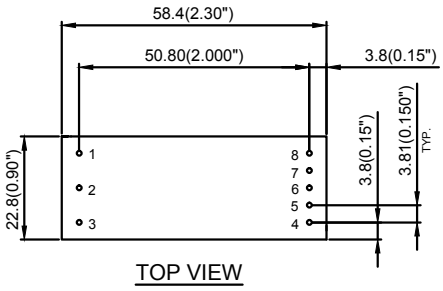
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1

1/8 brick | 2:1 input | cULus

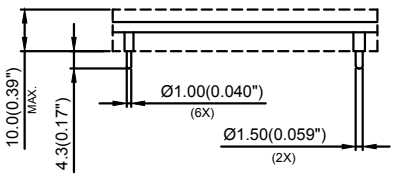
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
E24SR3R320	18~36V	3.3V	2.97~3.63V	20A	72.6W	90.0%	2250V	58.4 x 22.8 x 10 mm
E24SR06508	18~36V	6.5V	5~6.6V	8A	52W	90.5%	2250V	58.4 x 22.8 x 10 mm
E24SR12005	18~36V	12V	10.8~13.2V	5A	60W	90.5%	2250V	58.4 x 22.8 x 10 mm

MECHANICAL DRAWING



TOP VIEW



SIDE VIEW

Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

PART NUMBERING SYSTEM

E	24	S	R	065	08	N	R	F	A
From Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
E - 1/8 Brick	24V - 18~36V	S - Single	R - Family Name	3R3 - 3.3V 065 - 6.5V 120 - 12V	05 - 5A 08 - 8A 20 - 20A	N - Negative P - Positive	K - 0.110'' N - 0.145" R - 0.170" M - SMD	F- RoHS 6/6 (Lead Free)	A - Standard Functions

E36SC Series

FEATURES

Electrical

- High efficiency
- 4:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

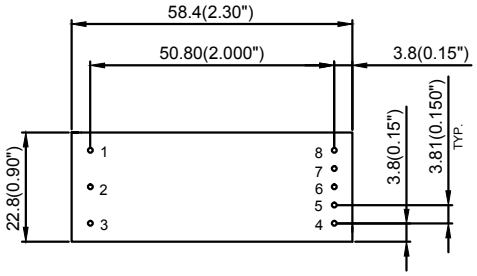
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1
- EN 60950-1

1/8 brick | 4:1 input | c UL us

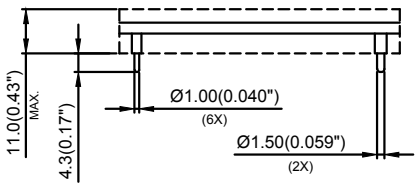
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
E36SC3R335	18~75V	3.3V	2.97~3.63V	35A	116W	91%	1500V	58.4 x 22.8 x 11 mm
E36SC05025	18~75V	5V	4~5.5V	25A	125W	91%	1500V	58.4 x 22.8 x 11 mm
E36SC12009	18~75V	12V	10.8~13.2V	9A	108W	92%	1500V	58.4 x 22.8 x 11 mm
E36SC12010	18~75V	12V	10.8~13.2V	10A	120W	92%	1500V	58.4 x 22.8 x 11 mm

MECHANICAL DRAWING



TOP VIEW



SIDE VIEW

(without heat spreader)

Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

PART NUMBERING SYSTEM

E	36	S	C	050	25	N	K	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
E - 1/8 Brick	36- 18~75V	S – Single	C- Family Name	3R3 - 3.3V 050 - 5.0V 120 - 12V	09 - 9A 10 - 10A 25 - 25A 35 - 35A	N- Negative	K - 0.110'' N - 0.145" R - 0.170" M - SMD	F - RoHS 6/6 (Lead Free) Space - RoHS5/6	A - Standard Functions H - With heat spreader

E36SR Series

FEATURES

Electrical

- High efficiency
- Wide 4:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

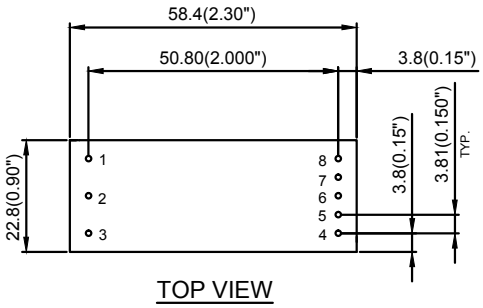
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1
- EN 60950-1

1/8 brick | 4:1 input | cULus

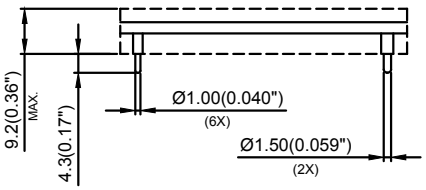
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
E36SR3R320	18~75V	3.3V	2.97~3.63V	20A	66W	88%	2250V	58.4 x 22.8 x 9.2 mm
E36SR05015	18~75V	5V	4.5~5.5V	15A	75W	89%	2250V	58.4 x 22.8 x 9.2 mm

MECHANICAL DRAWING



TOP VIEW



SIDE VIEW

(without heat spreader)

Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

PART NUMBERING SYSTEM

E	36	S	R	3R3	20	N	K	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
E - 1/8 Brick	36 - 18~75V	S - Single	R - Family Name	3R3 - 3.3V 050 - 5.0V	15 - 15A 20 - 20A	N - Negative	K - 0.110'' N - 0.145" R - 0.170" M - SMD	F - RoHS 6/6 (Lead Free) Space - RoHS5/6	A - Standard Functions H - With heat spreader

E48SC Series

FEATURES

Electrical

- High efficiency
- 2:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

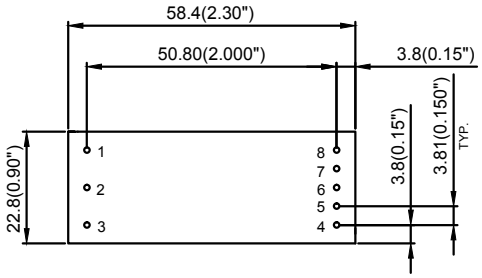
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1

1/8 brick | 2:1 input | c UL us

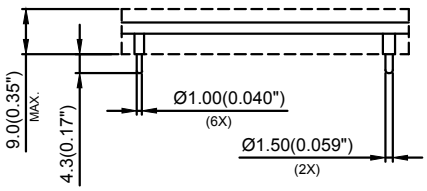
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
E48SC3R315	36~75V	3.3V	2.97~3.63V	15A	50W	91.0%	2250V	58.4 x 22.8 x 9 mm
E48SC3R320	36~75V	3.3V	2.64~3.63V	20A	66W	91.0%	2250V	58.4 x 22.8 x 9 mm
E48SC3R325	36~75V	3.3V	2.97~3.63V	25A	82.5W	91.0%	1500V	58.4 x 22.8 x 9 mm
E48SC05012	36~75V	5V	4.5~5.5V	12A	60W	91.5%	1500V	58.4 x 22.8 x 9 mm
E48SC05015	36~75V	5V	4.5~5.5V	15A	75W	91.0%	1500V	58.4 x 22.8 x 9 mm
E48SC12005	36~75V	12V	9.6~13.2V	5A	60W	92.0%	2250V	58.4 x 22.8 x 8.4 mm
E48SC12008	36~75V	12V	10.8~13.2V	8A	96W	92.0%	2250V	58.4 x 22.8 x 8.4 mm
E48SC12010	36~75V	12V	10.8~13.2V	10A	120W	91.7%	2250V	58.4 x 22.8 x 8.4 mm

MECHANICAL DRAWING



TOP VIEW



SIDE VIEW

(without heat spreader)

Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

PART NUMBERING SYSTEM

E	48	S	C	120	08	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
E - 1/8 Brick	48 - 36~75V	S - Single	C - Family Name	3R3 - 3.3V 050 - 5.0V 120 - 12V	05 - 5A 08 - 8A 10 - 10A 12 - 12A 15 - 15A 20 - 20A 25 - 25A	N - Negative P - Positive	K - 0.110” N - 0.145” R - 0.170” M - SMD	F - RoHS 6/6 (Lead Free) Space - RoHS 5/6	A - Standard Functions H* - with Heat spreader

* only available for E48SC12005, E48SC12008, E48SC12010

E48SC Series - Digital Control

FEATURES

Electrical

- High efficiency
- 2:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- PMBUS function (optional)

Safety & Reliability

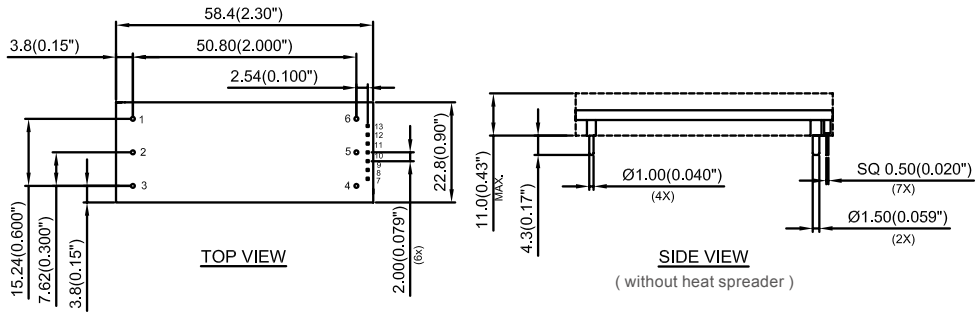
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1

1/8 brick | 2:1 input | digital control

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
E48SC12020	36~75V	12V	8~13.2V	20A	240W	95.2%	1500V	58.4 x 22.8 x 11 mm
E48SC12025	36~75V	12V	8~13.2V	25A	300W	95.0%	1500V	58.4 x 22.8 x 11 mm
E48SC12030	36~75V	12V	8~13.2V	30A	360W	94.5%	1500V	58.4 x 22.8 x 11 mm

MECHANICAL DRAWING



Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	TRIM/C1	Ø1.00
6	VOUT(+)	Ø1.50
7	C2	SQ0.5
8	SIG_GND	SQ0.5
9	DATA	SQ0.5
10	SMBALERT	SQ0.5
11	CLK	SQ0.5
12	ADDR1	SQ0.5
13	ADDR0	SQ0.5

PART NUMBERING SYSTEM

E	48	S	C	120	20	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
E- 1/8 Brick	48 - 36~75V	S - Single	C - Family Name	120 - 12V	20 - 20A 25 - 25A 30 - 30A	N - Negative P - Positive	K - 0.110” N - 0.145” R - 0.170” T - 0.220”	F - RoHS 6/6 (Lead Free)	

	PMBUS Pin (7~13pin)	Trim Pin	Heat Spreader
A	Yes	Yes	No
B	No	Yes	No
C	No	Yes	Yes
D	No	No	No
E	No	No	Yes
H	Yes	Yes	Yes
I	Yes	No	Yes

E48SC Series - Digital Control

FEATURES

Electrical

- High efficiency
- 2:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- PMBUS function (optional)
- Wide Vout trim range -50% ~ +10% (32Vout , 50Vout)
- 2250Vdc isolation (32Vout , 50Vout)

Safety & Reliability

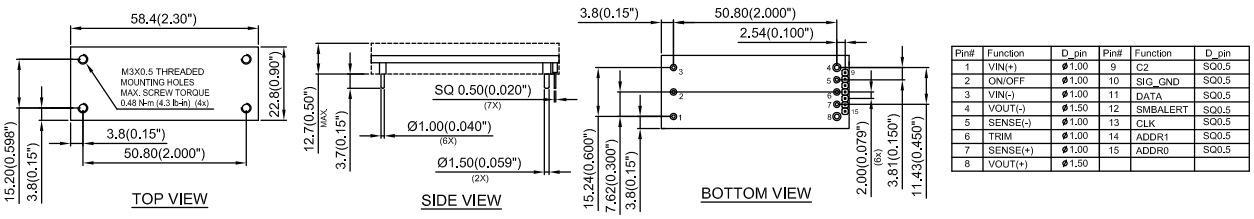
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1

1/8 brick | 2:1 input | digital control

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
E48SC32005	36~72V	32V	16~35V	5A	160W	94.5%	2250V	58.4 x 22.8 x 12.7 mm
E48SC32009	36~72V	32V	16~35V	9A	300W	94.8%	2250V	58.4 x 22.8 x 12.7 mm
E48SC50006	36~72V	50V	25~55V	6A	300W	94.2%	2250V	58.4 x 22.8 x 12.7 mm

MECHANICAL DRAWING



Pin#	Function	D_pin	Pin#	Function	D_pin
1	VIN(+)	Ø1.00	9	C2	SQ0.5
2	ON/OFF	Ø1.00	10	SIG_GND	SQ0.5
3	VIN(-)	Ø1.00	11	DATA	SQ0.5
4	VOUT(-)	Ø1.50	12	SMBALERT	SQ0.5
5	SENSE(-)	Ø1.00	13	CLK	SQ0.5
6	TRIM	Ø1.00	14	ADDR1	SQ0.5
7	SENSE(+)	Ø1.00	15	ADDR0	SQ0.5
8	VOUT(+)	Ø1.50			

PART NUMBERING SYSTEM

E	48	S	C	320	05	N	R	A	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	Pin Assignment	Option Code
E - 1/8 Brick	48 - 36~72V	S - Single	C - Family Name	320 - 32V 500 - 50V	05 - 5A 06 - 6A 09 - 9A	N - Negative P - Positive	C - 0.180” R - 0.170” N - 0.145” K - 0.110”	A - Analog pins D - Digital pins	A - Standard Functions H - with Heat spreader

Note for mechanical pins option:

1. A - Analog pins: without digital pins
2. D - Digital pins: with digital pins(9pin~15pin) and PMBus commutation.

E48SH Series

FEATURES

Electrical

- High efficiency
- 2:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense
- Secondary side control, very fast transient response

1/8 brick | 2:1 input | cULus

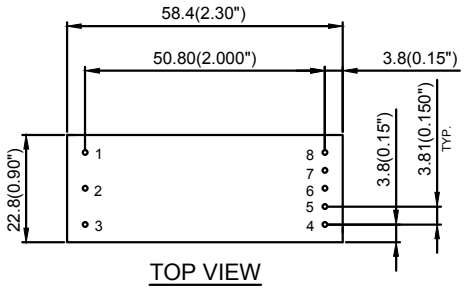
Safety & Reliability

- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1
- EN 60950-1

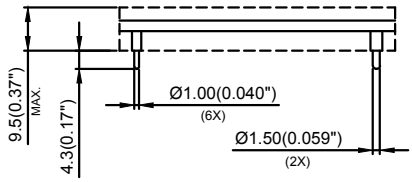
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
E48SH1R050	36~75V	1V	0.8~1.1V	50A	50W	84.5%	2250V	58.4 x 22.8 x 9.5 mm
E48SH1R250	36~75V	1.2V	0.96~1.32V	50A	60W	86.5%	2250V	58.4 x 22.8 x 9.5 mm
E48SH1R540	36~75V	1.5V	1.2~1.65V	40A	60W	89.0%	2250V	58.4 x 22.8 x 9.5 mm
E48SH1R840	36~75V	1.8V	1.44~1.98V	40A	72W	90.0%	2250V	58.4 x 22.8 x 9.5 mm
E48SH2R535	36~75V	2.5V	2~2.75V	35A	88W	89.5%	2250V	58.4 x 22.8 x 9.5 mm
E48SH3R330	36~75V	3.3V	2.64~3.63V	30A	99W	92.0%	2250V	58.4 x 22.8 x 9.5 mm
E48SH05020	36~75V	5V	4~5.5V	20A	100W	90.0%	2250V	58.4 x 22.8 x 9.5 mm
E48SH12010	36~75V	12V	9.6~13.2V	10A	120W	93.0%	2250V	58.4 x 22.8 x 9.5 mm

MECHANICAL DRAWING



TOP VIEW



SIDE VIEW

(without heat spreader)

Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

PART NUMBERING SYSTEM

E	48	S	H	050	20	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
E - 1/8 Brick	48 - 36~75V	S - Single	H - Family Name	1R0 - 1.0V 1R2 - 1.2V 1R5 - 1.5V 1R8 - 1.8V 2R5 - 2.5V 3R3 - 3.3V 050 - 5.0V 120 - 12V	10 - 10A 20 - 20A 30 - 30A 35 - 35A 40 - 40A 50 - 50A	N - Negative P - Positive	K - 0.110” N - 0.145” R - 0.170” M - SMD	F - RoHS 6/6 (Lead Free)	A - Standard functions with output OCL H - With heat spreader with output OCL B* - Standard Functions with output OCP

* only available for 1.2V, 1.8V, 2.5V output

E48SP Series

FEATURES

Electrical

- High efficiency
- 2:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Heat dissipation enhancement pinout (E48SP3R360)

Safety & Reliability

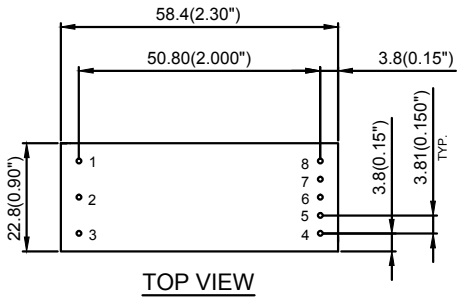
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1
- EN 60950-1

1/8 brick | 2:1 input | c UL us

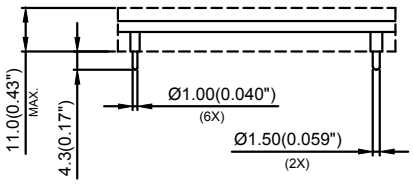
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
E48SP3R340	36~75V	3.3V	2.64~3.63V	40A	132W	93.1%	2250V	58.4 x 22.8 x 11 mm
E48SP3R360	36~75V	3.3V	2.64~3.63V	60A	198W	92.3%	2250V	58.4 x 22.8 x 11 mm
E48SP05040	36~75V	5V	4~5.5V	40A	200W	93.5%	1500V	58.4 x 22.8 x 11 mm
E48SP05825	36~75V	5.8V	4.64~5.8V	25A	145W	93.5%	2250V	58.4 x 22.8 x 11 mm
E48SP12020	36~75V	12V	-	20A	240W	94.5%	2250V	58.4 x 22.8 x 11 mm

MECHANICAL DRAWING



TOP VIEW



SIDE VIEW

(without heat spreader)

Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

PART NUMBERING SYSTEM

(E48SP12020 is without sense pin and trim pin)

E	48	S	P	120	20	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
E - 1/8 Brick	48 - 36~75V	S - Single	P - Family Name	3R3 - 3.3V 050 - 5.0V 058 - 5.8V 120 - 12V	20 - 20A 25 - 25A 40 - 40A 60 - 60A	N - Negative P - Positive	K - 0.110'' N - 0.145" R - 0.170" M - SMD	F - RoHS 6/6 (Lead Free)	A - Standard Functions H - With heat spreader B * - 36~60V Vin

* only for E48SP12020

E54SD Series

FEATURES

Electrical

- High efficiency
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense
- PMBUS function (optional)

Safety & Reliability

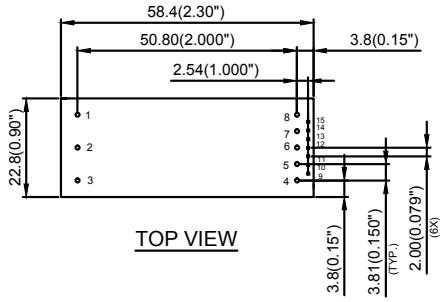
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1
- EN 60950-1

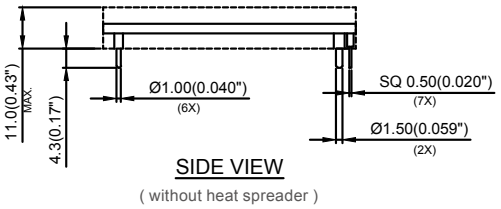
1/8 brick | digital control | cULus

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
E54SD12025	42~60V	12V	8~13.2V	25A	300W	95.2%	1500V	58.4 x 22.8 x 11 mm

MECHANICAL DRAWING





Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50
9	C2	SQ0.5
10	SIG_GND	SQ0.5
11	DATA	SQ0.5
12	SMBALERT	SQ0.5
13	CLK	SQ0.5
14	ADDR1	SQ0.5
15	ADDR0	SQ0.5

PART NUMBERING SYSTEM

E	54	S	D	120	25	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
E - 1/8 Brick	54 - 42~60V	S - Single	D - Family Name	120 - 12V	25 - 25A	N - Negative P - Positive	K - 0.110” N - 0.145” R - 0.170”	F - RoHS 6/6 (Lead Free)	

Option Code	PMBUS Pin (9~15pin)	Heat Spreader
A	Yes	No
B	No	No
C	No	Yes
H	Yes	Yes

E54SJ Series

New

FEATURES

Electrical

- Peak Efficiency up to 97.0%
- Input range: 40~60Vdc
- Over current protection
- Input UVP/OVP,
- Over Temperature Protection
- Remote ON/OFF
- Pre-bias startup
- No minimum load required
- Active Droop Performance
- Parallel Operation with Direct Output Connection
- PMbus Communication
- 707Vdc isolation

1/8 brick | digital control | cULus

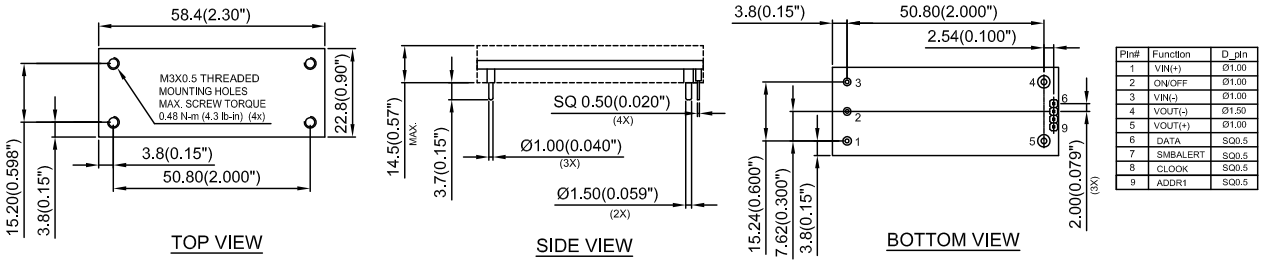
Safety & Reliability

- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
E54SJ3R350	40~60V	3.3V	2.64~3.63	50A	165W	96.7%	707V	58.4x22.8x14.5 mm
E54SJ05040	40~60V	5V	-	40A	200W	96.0%	707V	58.4x22.8x12.2 mm
E54SJ05060	40~60V	5V	-	60A	300W	95.9%	707V	58.4x22.8x14.5 mm
E54SJ12026	40~60V	12V	-	26A	300W	96.8%	707V	58.4x22.8x14.5 mm
E54SJ12033	40~60V	12V	-	33.9A	400W	97.0%	707V	58.4x22.8x14.5 mm
E54SJ12040	40~60V	12V	-	40.7A	480W	96.7%	707V	58.4x22.8x14.5 mm

MECHANICAL DRAWING



PART NUMBERING SYSTEM

(For E54SJ05060NNDH only, please refer to datasheet for the other models)

E	54	S	J	050	40	N	N	D	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	Pin Assignment	Option Code
E - 1/8 Brick	54 - 40~60V	S - Single	J - Family Name	3R3 - 3.3V 050- 5V 120 - 12V	26 - 26A 33 - 33A 40 - 40A 50 - 50A 60 - 60A	N - Negative P - Positive	C - 0.180" K - 0.110'' N - 0.145" R - 0.170"	A - Analog Pins D - Digital Pins & No PIH P - Digital Pins & PIH F - ROHS 6/6 (Lead Free)	A - Standard Functions H - With heat spreader

Q36SR Series

FEATURES

Electrical

- High efficiency
- Wide 4:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

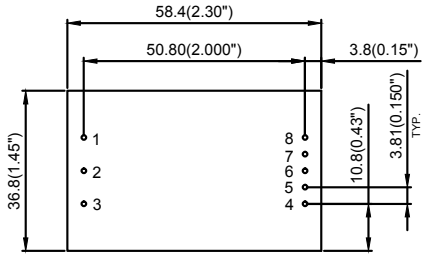
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1
- EN 60950-1

1/4 brick | 4:1 input | cULus

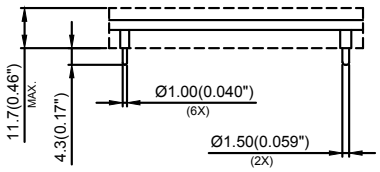
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
Q36SR12017	18~75V	12V	10.8~13.2V	17A	204W	93%	1500V	58.4 x 36.8 x 11.7 mm
Q36SR12019	18~75V	12V	10.8~13.2V	19A	228W	93%	1500V	58.4 x 36.8 x 11.7 mm
Q36SR12020	18~75V	12V	10.8~13.2V	20A	240W	93%	1500V	58.4 x 36.8 x 11.7 mm

MECHANICAL DRAWING



TOP VIEW



SIDE VIEW

(without heat spreader)

Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

PART NUMBERING SYSTEM

Q	36	S	R	120	17	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
Q - 1/4 Brick	36 - 18~75V	S - Single	R - Family Name	120 - 12V	17 - 17A 19 - 19A 20 - 20A	N - Negative P - Positive	K - 0.110” N - 0.145” R - 0.170”	F - RoHS 6/6 (Lead Free) Space - RoHS 5/6	A - Standard Functions H - With heat spreader

Q48SA Series

FEATURES

Electrical

- High efficiency
- Fixed frequency operation
- 2:1 input range
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

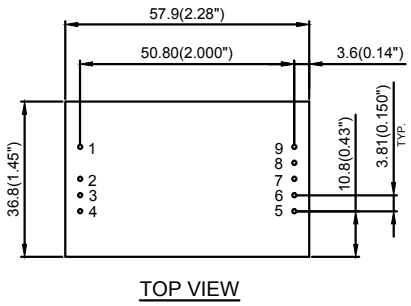
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1
- EN 60950-1

1/4 brick | 2:1 input | cULus

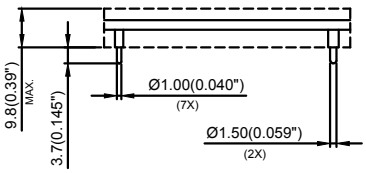
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
Q48SA54001	36~75V	54V	45.9~54V	1.5A	81W	92.0%	1500V	57.9 x 36.8 x 9.8 mm

MECHANICAL DRAWING



TOP VIEW



SIDE VIEW

(without heat spreader)

Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	CASE(OPTIONAL)	Ø1.00
4	VIN(-)	Ø1.00
5	VOUT(-)	Ø1.50
6	SENSE(-)	Ø1.00
7	TRIM	Ø1.00
8	SENSE(+)	Ø1.00
9	VOUT(+)	Ø1.50

PART NUMBERING SYSTEM

Q	48	S	A	540	01	N	N	F	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
Q - 1/4 Brick	48 - 36~75V	S - Single	A - Family Name	540 - 54V	01- 1.5A	N - Negative P - Positive	N - 0.145” R - 0.170”	F- RoHS 6/6 (Lead Free) Space- RoHs 5/6	H - With heat spreader

Q48SC Series

FEATURES

Electrical

- High efficiency
- Fixed frequency operation
- 2:1 input range
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

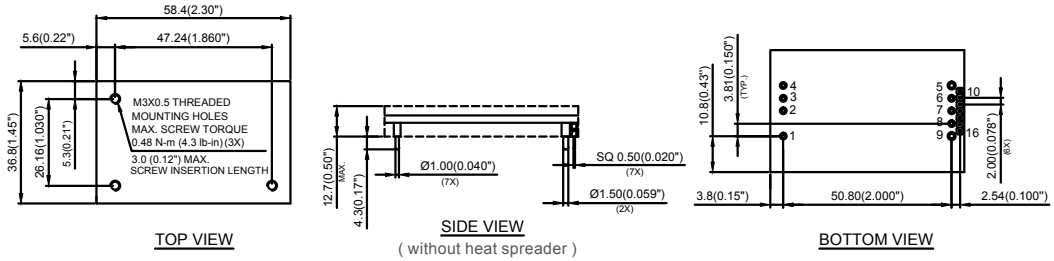
- UL 60950-1 & CSA C22.2 No.60950-1-07

1/4 brick | 2:1 input | digital control | cULus

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
Q48SC12025	36~75V	12V	8~13.2V	25A	300W	95.1%	1500V	57.9 x 36.8 x 11.2 mm
Q48SC12033	36~75V	12V	8~13.2V	33A	400W	95.0%	1500V	57.9 x 36.8 x 11.2 mm
Q48SC12042	36~75V	12V	8~13.2V	42A	500W	95.0%	1500V	57.9 x 36.8 x 12.7 mm
Q48SC12050	36~75V	12V	8~13.2V	50A	600W	94.2%	1500V	58.4 x 36.8 x 12.7 mm
Q48SC32009	36~75V	32V	25.6~32V	9.4A	300W	95.0%	2250V	57.9 x 36.8 x 12.7 mm

MECHANICAL DRAWING



Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	CASE	Ø1.00
4	VIN(-)	Ø1.00
5	VOUT(-)	Ø1.50
6	SENSE(-)	Ø1.00
7	TRIM	Ø1.00
8	SENSE(+)	Ø1.00
9	VOUT(+)	Ø1.50
10	C2	SQ0.50
11	DGND	SQ0.50
12	PMBData	SQ0.50
13	Digital option SMBAlert	SQ0.50
14	PMBCLK	SQ0.50
15	Addr1	SQ0.50
16	Addr0	SQ0.50

PART NUMBERING SYSTEM

Q	48	S	C	120	50	N	R	D	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	Pin Assigment	Option Code
Q - 1/4 Brick	48 - 36~75V	S - Single	C - Family Name	120 - 12V 320 - 32V	09 - 9.4A 25 - 25A 33 - 33A 42 - 42A 50 - 50A	P - Positive N - Negative	K - 0.110” N - 0.145” R - 0.170”	D - Digital pins A - Analog pins I - IBC pins T - Trim pins	

	Trim Pin	Current Sharing	Heat Spreader	Case Pin
H	Yes	No	Yes	No
I	No	Droop	Yes	No
J	No	No	Yes	No
R	Yes	No	Yes	Yes
S	No	Droop	Yes	Yes
T	No	No	Yes	Yes

Note for mechaninal pins option:

1. D - Digital pins: with digital pins & sense pins
2. A - Analog pins: with sense pins, without digital pins
3. I - IBC pins: without digital pins & sense pins
4. T - Trim pins: with digital pins, without sense pins

Q48SQ Series

FEATURES

Electrical

- High efficiency
- Fixed frequency operation
- 2:1 input range
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

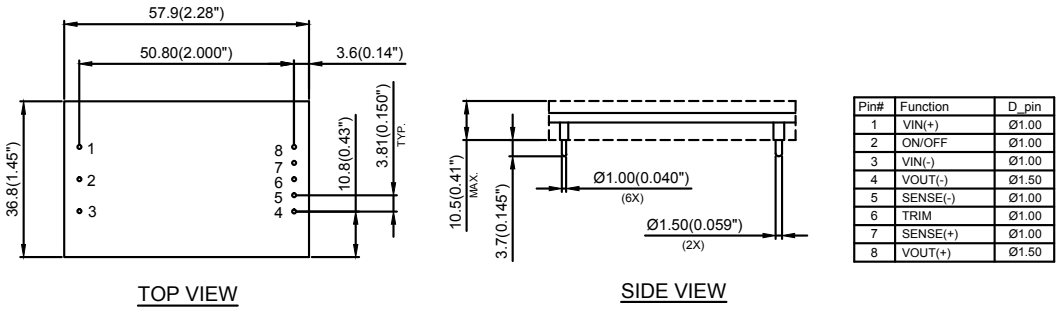
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1

1/4 brick | 2:1 input | cULus

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
Q48SQ12018	36~75V	12V	9.6~13.2V	18A	216W	95.0%	1500V	57.9 x 36.8 x 10.5 mm
Q48SQ12025	36~75V	12V	9.6~13.2V	25A	300W	95.5%	1500V	57.9 x 36.8 x 11.2 mm
Q48SQ12033	36~75V	12V	9.6~13.2V	33A	400W	95.5%	1500V	57.9 x 36.8 x 13.2 mm

MECHANICAL DRAWING



Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	SENSE(-)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

(Q48SQ12018 without heat spreader)

PART NUMBERING SYSTEM

Q	48	S	Q	120	18	N	R	F	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
Q - 1/4 Brick	48 - 36~75V	S - Single	Q- Family Name	120 - 12V	18 - 18A 25 - 25A 33 - 33A	N - Negative P - Positive	K - 0.110” N - 0.145” R - 0.170”	F - RoHS 6/6 (Lead Free) Space - RoHS5/6	A - with trim/sense pin no heat spreader B - no trim/sense pin no heat spreader H - with trim/sense pin with heat spreader N - no trim/sense pin with heat spreader

Q54SG Series

FEATURES

Electrical

- High efficiency
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- PMBUS function (optional)

Safety & Reliability

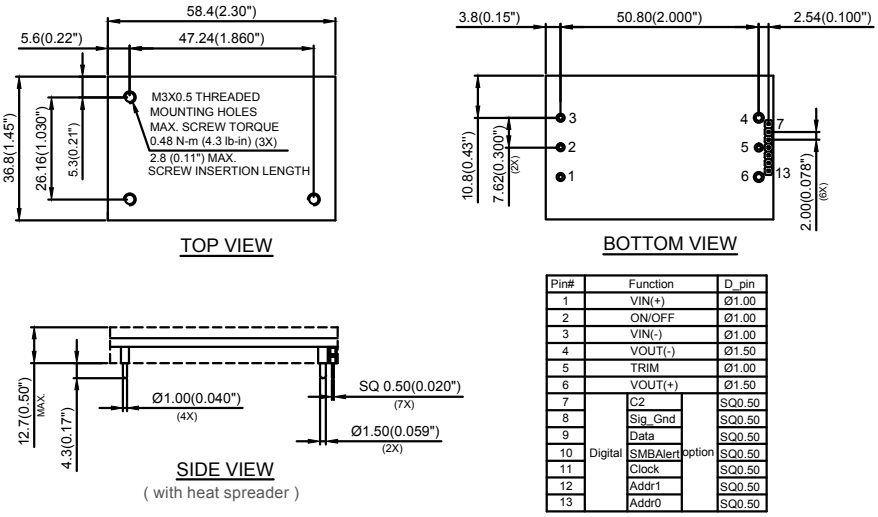
- UL 60950-1 & CSA C22.2 No.60950-1-07

1/4 brick | digital control | cULus

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) with heat spreader
Q54SG12033	40~60V	12V	9.6~13.2V	33A	400W	96.3%	2250V	58.4 x 22.8 x 12.7 mm
Q54SG12050	40~60V	12V	9.6~13.2V	50A	600W	96.7%	2250V	58.4 x 36.8 x 13.2 mm

MECHANICAL DRAWING



Pin#	Function		D_pin
1	VIN(+)		Ø1.00
2	ON/OFF		Ø1.00
3	VIN(-)		Ø1.00
4	VOUT(-)		Ø1.50
5	TRIM		Ø1.00
6	VOUT(+)		Ø1.50
7	Digital option	C2	SQ0.50
8		Sig_Gnd	SQ0.50
9		Data	SQ0.50
10		SMBAlert	SQ0.50
11		Clock	SQ0.50
12		Addr1	SQ0.50
13		Addr0	SQ0.50

PART NUMBERING SYSTEM

Q	54	S	G	120	50	N	R	F	G
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
Q- 1/4 Brick	54 - 40~60V	S- Single	G - Family Name	120 - 12V	33 - 33A 50 - 50A	N - Negative P - Positive	K - 0.110” N - 0.145” R - 0.170” Y - 0.200”	F- RoHS 6/6 (Lead Free)	

	Droop Current Sharing	Trim Pin	PMBus Pin	Heat Spreader
C	No	Yes	No	Yes
G	No	Yes	Yes	Yes

Q54SH Series

coming soon

FEATURES

Electrical

- High efficiency
- Over current protection
- Input UVP/OVP
- Over Temperature Protection
- Remote ON/OFF
- Pre-bias startup
- No minimum load required
- Parallel Operation with Direct Output Connection
- PMbus Communication

Safety & Reliability

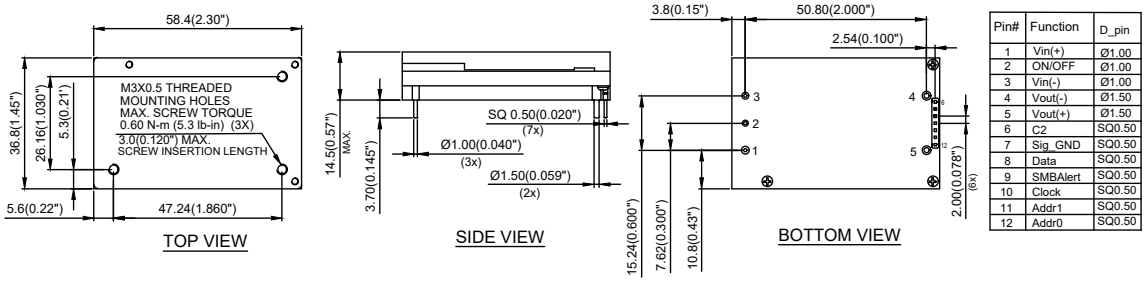
- UL 60950-1 pending

1/4 brick **digital control**

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
Q54SH12050	40~60V	12V	-	51A	600W	97.8%	707V	58.4x36.8x16.5 mm
Q54SH12068	40~60V	12V	-	68A	800W	97.5%	707V	58.4x36.8x14.5 mm
Q54SH12084	40~60V	12V	-	84.8A	1000W	97.6%	707V	58.4x36.8x15.0 mm
Q54SH120A1	40~60V	12V	-	110A	1300W	97.2%	707V	58.4x36.8x15.0 mm

MECHANICAL DRAWING



Pin#	Function	D_pin
1	Vin(+)	Ø1.00
2	ON/OFF	Ø1.00
3	Vin(-)	Ø1.00
4	Vout(-)	Ø1.50
5	Vout(+)	Ø1.50
6	C2	SQ0.50
7	Sig_GND	SQ0.50
8	Data	SQ0.50
9	SMBAlert	SQ0.50
10	Clock	SQ0.50
11	Addr1	SQ0.50
12	Addr0	SQ0.50

(For Q54SH12068NNDH only, please refer to datasheet for the other models)

PART NUMBERING SYSTEM

Q	54	S	H	120	50	N	N	D	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	Pin Assignment	Option Code
Q - 1/4 Brick	54 - 40~60V	S - Single	H- Family Name	120 - 12V	50 - 51A 68 - 68A 84 - 84.8A A1 - 110A	N - Negative P - Positive	C - 0.180” K - 0.110” N - 0.145” R - 0.170”	D - Digital pins P - PIH process	F - Heatspreader and Heatsink Version H - With heat spreader

New Product is coming soon. Please contact Delta for more specification information.

Q55SH Series

coming soon

FEATURES

Electrical

- High efficiency
- Over current protection
- Input UVP/OVP,
- Over Temperature Protection
- Remote ON/OFF
- Pre-bias startup
- No minimum load required
- Parallel Operation with Direct Output Connection
- PMbus Communication

Safety & Reliability

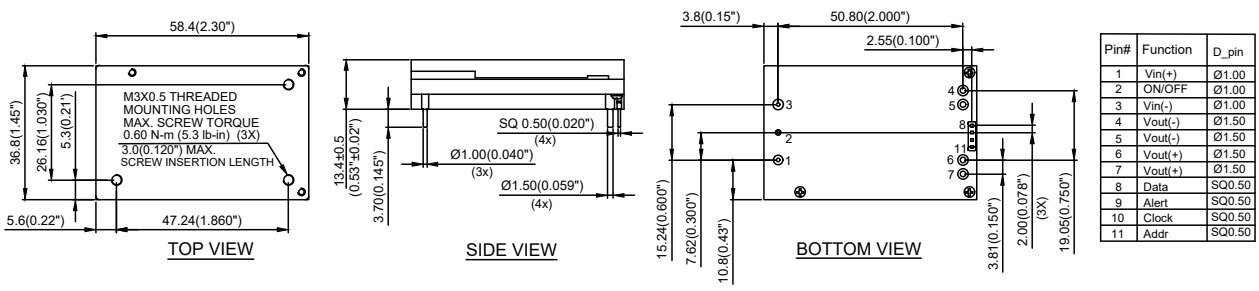
- UL 60950-1 pending

1/4 brick **digital control**

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
Q55SH12092	48~60V	12V	-	93A	1100W	97.5%	707V	58.4x36.8x16.5 mm

MECHANICAL DRAWING



Pin#	Function	D_pin
1	Vin(+)	Ø1.00
2	ON/OFF	Ø1.00
3	Vin(-)	Ø1.00
4	Vout(-)	Ø1.50
5	Vout(-)	Ø1.50
6	Vout(+)	Ø1.50
7	Vout(+)	Ø1.50
8	Data	SQ0.50
9	Alert	SQ0.50
10	Clock	SQ0.50
11	Addr	SQ0.50

PART NUMBERING SYSTEM

Q	55	S	H	120	92	N	N	D	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	Pin Assignment	Option Code
Q - 1/4 Brick	55 - 48~60V	S - Single	H - Family Name	120 - 11.9V	92 - 93A	N - Negative P - Positive	C - 0.180” K - 0.110" N - 0.145” R - 0.170”	A - Analog pins D - Digital pins	H - With heat spreader

New Product is coming soon. Please contact Delta for more specification information.

Q54SJ Series

New

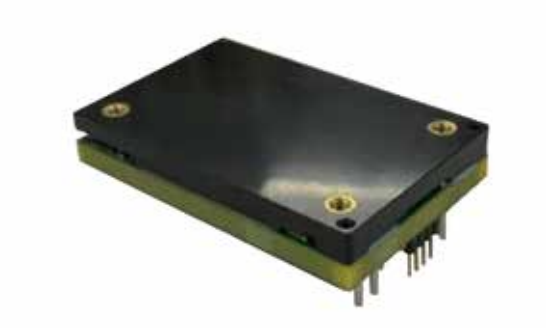
FEATURES

Electrical

- Peak Efficiency up to 97.6%
- Over current protection
- Input UVP/OVP,
- Over Temperature Protection
- Remote ON/OFF
- Pre-bias startup
- No minimum load required
- Parallel Operation with Direct Output Connection
- PMbus Communication
- Black Box for fault logging
- Online upgrade firmware by the system processor without being turned off
- 707Vdc isolation

Safety & Reliability

- UL 60950-1

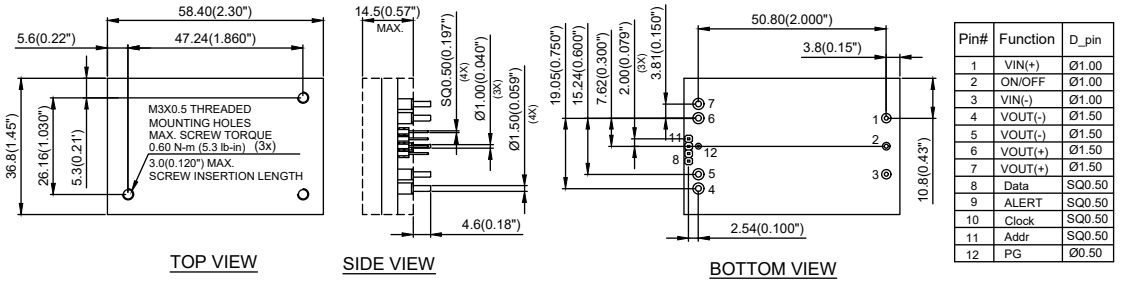


1/4 brick | digital control | cULus

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) with heat spreader
Q54SJ108A2	40~58V	10.7V	-	121A	1300W	97.3%	707V	58.4x36.8x14.5 mm
Q54SJ10892	40~60V	10.8V	-	92A	1000W	97.3%	707V	58.4x36.8x14.5 mm
Q54SJ12058	40~60V	12.2V	-	57.4A	700W	96.4%	800V	57.9x36.8x13.4 mm

MECHANICAL DRAWING



Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	VIN(-)	Ø1.00
4	VOUT(-)	Ø1.50
5	VOUT(-)	Ø1.50
6	VOUT(+)	Ø1.50
7	VOUT(+)	Ø1.50
8	Data	SQ0.50
9	ALERT	SQ0.50
10	Clock	SQ0.50
11	Addr	SQ0.50
12	PG	Ø0.50

(For Q54SJ108A2NCDH only, please refer to datasheet for the other models)

PART NUMBERING SYSTEM

Q	54	S	J	108	92	N	C	D	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	Pin Assignment	Option Code
Q - 1/4 Brick	54 - 40~60V	S - Single	J - Family Name	108 - 10.8V 120 - 12.2V	58 - 58A 92 - 92A A2 - 121A	N - Negative P - Positive	C - 0.180” K - 0.110” N - 0.145" R - 0.170”	D - With PMbus Pins A - Without PMbus Pins P - With PMbus Pins & for PIH process	A - Standard Functions H - With heat spreader

H36SA Series

FEATURES

Electrical

- High efficiency
- Fixed frequency operation
- Wide 4:1 input range
- Input UVLO
- Hiccup output over current protection (OCP)
- Hiccup output over voltage protection (OVP)
- Auto recovery OTP
- Monotonic startup into normal and pre-biased loads
- 2828V isolation and basic insulation
- No minimum load required

Safety & Reliability

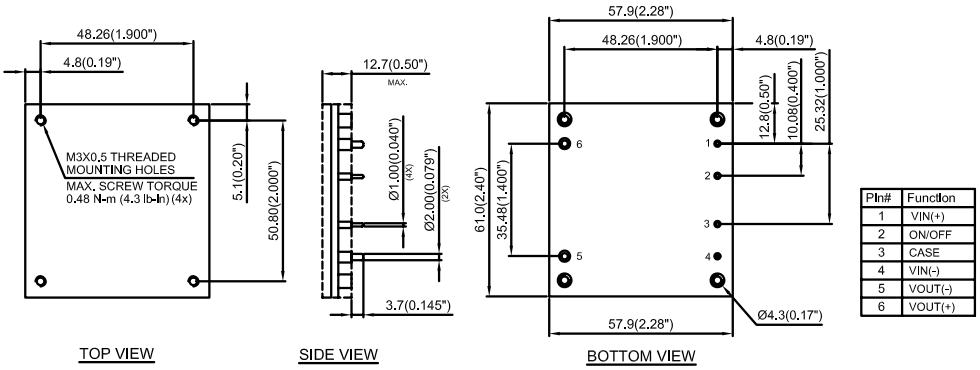
- UL 60950-1 & CSA C22.2 No.60950-1-07

1/2 brick | 4:1 input | cULus

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) with heat spreader
H36SA54003	18~75V	54V	48.6~59.4V	3A	162W	93.5%	2828V	61.0 x 57.9x 13.2 mm

MECHANICAL DRAWING



(with heat spreader)

PART NUMBERING SYSTEM

H	36	S	A	540	03	N	N	F	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
H- Half Brick	36 - 18~75V	S - Single	A - Family Name	540 - 54V	03 - 3A	N - Negative P - Positive	N - 0.145”	F - RoHS 6/6 (Lead Free) Space - RoHS 5/6	H - With heat spreader

H48SA Series

FEATURES

Electrical

- High efficiency
- 2:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense (excluding H48SA53010)

Safety & Reliability

- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1 / EN 60950-1

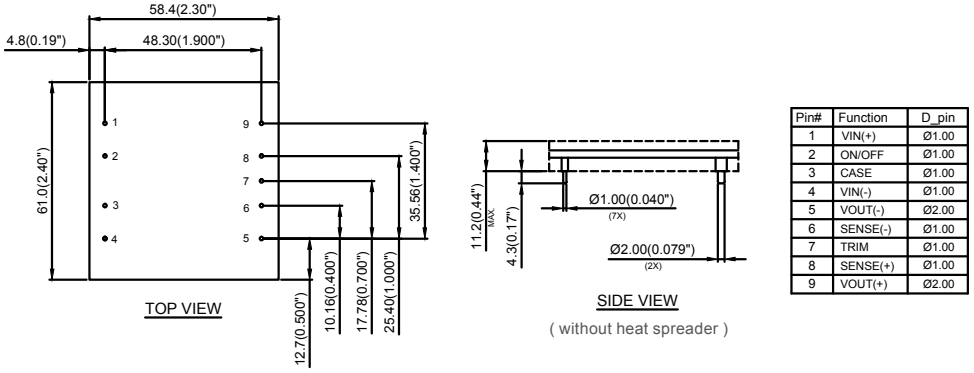
1/2 brick | 2:1 input

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
H48SA12025	36~75V	12V	9.6~13.2V	25A	300W	93.2%	2250V	61 x 58.4 x 11.2 mm
H48SA28016	36~75V	28V	14~33V	16A	450W	92.7%	1500V	61 x 57.9 x 12.7 mm
H48SA48003	36~75V	48V	38.4~52.8V	3.2A	150W	92.0%	2250V	61 x 57.9 x 9.8 mm
H48SA53010	38~60V	54V	51.3~56.7V	10.2A	550W	94.2%	2250V	61 x 58.4 x 11.2 mm

MECHANICAL DRAWING

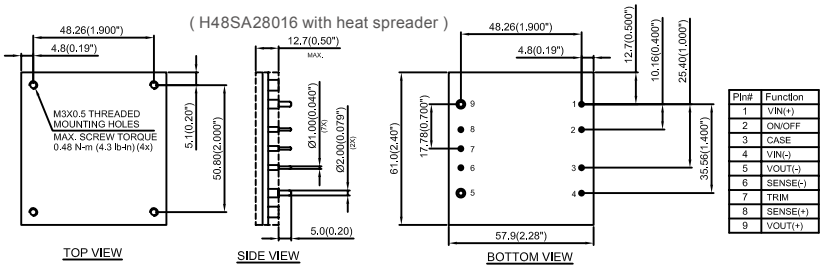
H48SA12025
H48SA53010



Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	CASE	Ø1.00
4	VIN(-)	Ø1.00
5	VOUT(-)	Ø2.00
6	SENSE(-)	Ø1.00
7	TRIM	Ø1.00
8	SENSE(+)	Ø1.00
9	VOUT(+)	Ø2.00

H48SA28016
H48SA48003

(H48SA28016 with heat spreader)



Pin#	Function
1	VIN(+)
2	ON/OFF
3	CASE
4	VIN(-)
5	VOUT(-)
6	SENSE(-)
7	TRIM
8	SENSE(+)
9	VOUT(+)

PART NUMBERING SYSTEM

H	48	S	A	120	25	N	N	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
H - Half Brick	48 - 36~75V or 38~60V	S - Single	A - Family Name	120 - 12V 280 - 28V 480 - 48V 530 - 54V	03 - 3.2A 10 - 10.2A 16 - 16A 25 - 25A	N - Negative P - Positive	K - 0.110” N - 0.145” R - 0.170”	F - RoHS 6/6 (Lead Free)	A - Standard Functions H - With heat spreader

H48SC Series

FEATURES

Electrical

- High efficiency
- 2:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Parallel and droop current sharing
- PMBUS function (optional for H48SC28016)

Safety & Reliability

- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1 / EN 60950-1

1/2 brick | 2:1 input | cULus

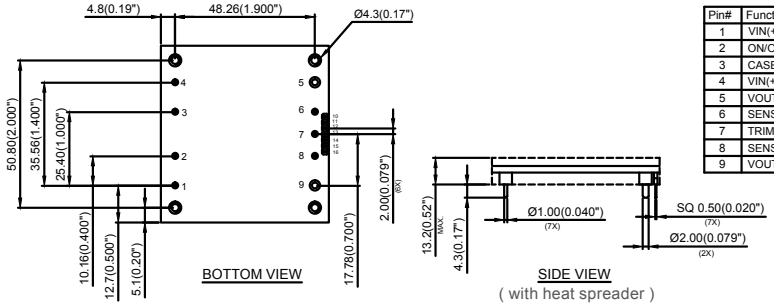
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
H48SC28016	36~75V	28V	23~33V	16A	450W	95%	1500V	61 x 57.9 x 13.2 mm
H48SC28025	36~75V	28V	23~34V	25A	700W	95%	1500V	61 x 57.9 x 12.7 mm
H48SC3R325	36~75V	3.3V	2.64~3.63V	25A	82.5W	93%	2250V	61 x 57.9 x 10.0 mm

MECHANICAL DRAWING

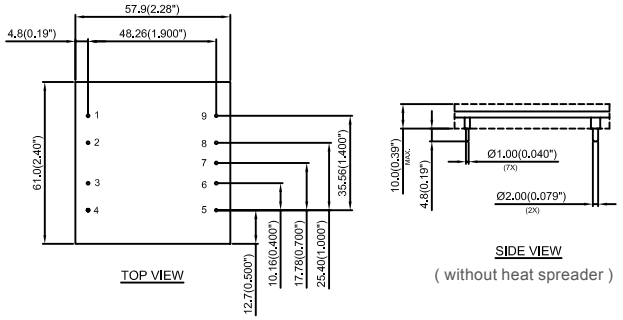
H48SC28016

H48SC28025



Pin#	Function	D_pin	Pin#	Function	D_pin
1	VIN(+)	Ø1.00	10	C2	SQ0.5
2	ON/OFF	Ø1.00	11	DGND	SQ0.5
3	CASE	Ø1.00	12	PMBData	SQ0.5
4	VIN(+)	Ø1.00	13	SMBAlert	SQ0.5
5	VOUT(-)	Ø2.00	14	PMBCLK	SQ0.5
6	SENSE(-)	Ø1.00	15	Addr1	SQ0.5
7	TRIM	Ø1.00	16	Addr0	SQ0.5
8	SENSE(+)	Ø1.00			
9	VOUT(+)	Ø2.00			

H48SC3R325



Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	ON/OFF	Ø1.00
3	CASE	Ø1.00
4	VIN(-)	Ø1.00
5	VOUT(-)	Ø2.00
6	SENSE(-)	Ø1.00
7	TRIM	Ø1.00
8	SENSE(+)	Ø1.00
9	VOUT(+)	Ø2.00

PART NUMBERING SYSTEM

H	48	S	C	280	16	N	R	F	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
H - Half Brick	48 - 36~75V	S - Single	C- Famliy Name	280 - 28V 3R3 - 3.3V	16 - 16A 25 - 25A	N - Negative P- Positive	K – 0.110” N – 0.145” R – 0.170”	F - RoHS 6/6 (Lead Free)	

	PMBUS pin (10~16pin)	Heat Spreader
A	No	No
B	Yes	No
C	Yes	Yes
H	No	Yes

H51SA Series

New

FEATURES

Electrical

- High efficiency: 97.0% @ 50V/22A output
- Pre-bias startup
- No minimum load required
- Fixed frequency operation
- Input UVP
- Hiccup output over current protection (OCP)
- Auto recovery OTP
- Output Over Voltage protection(OVP)
- 2250V isolation
- Remote on/off

Safety & Reliability

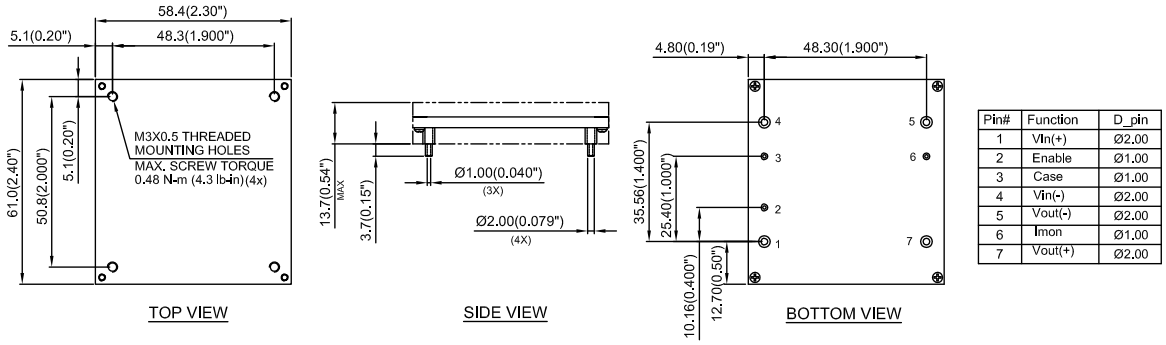
- UL/cUL 60950-1 (US & Canada)

1/2 Brick

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
H51SA50022	40~60V	50V	-	22A	1100W	97%	2250V	58.4x 61 x 13.7 mm
H51SA50033	45~60V	50V	-	33A	1650W	97%	2250V	58.4x 61 x 13.7 mm

MECHANICAL DRAWING



Pin#	Function	D_pin
1	Vin(+)	Ø2.00
2	Enable	Ø1.00
3	Case	Ø1.00
4	Vin(-)	Ø2.00
5	Vout(-)	Ø2.00
6	Imon	Ø1.00
7	Vout(+)	Ø2.00

PART NUMBERING SYSTEM

H	51	S	A	500	22	N	N	F	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
H - Half Bick	51 - 40~60V	S - Single	A - Family Name	500 - 50V	22 - 22A 33 - 33A	N - Negative P - Positive	K - 0.110" N - 0.145" R - 0.170"	F- RoHS 6/6 (Lead Free)	H - With heat spreader

S36SE Series

FEATURES

Electrical

- High efficiency
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required

Safety & Reliability

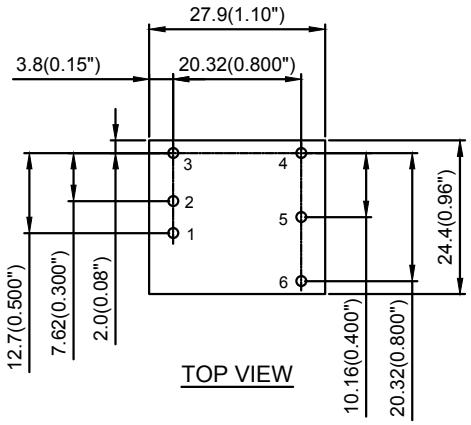
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1

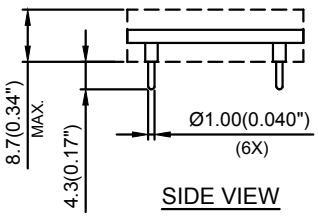
1" x 1"

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
S36SE3R305	18~75V	3.3V	2.97~3.63V	5A	16.5W	86.5%	2250V	27.9 x 24.4 x 8.7 mm
S36SE05003	18~75V	5V	4.5~5.5V	3A	15W	83.5%	2250V	27.9 x 24.4 x 8.7 mm
S36SE12001	18~75V	12V	10.8~13.2V	1.3A	15.5W	87.0%	2250V	27.9 x 24.4 x 8.7 mm
S36SE12002	36~75V	12V	10.8~13.2V	2A	24W	87.0%	2250V	27.9 x 24.4 x 8.7 mm

MECHANICAL DRAWING





Pin#	Function
1	VIN(+)
2	VIN(-)
3	ON/OFF
4	VOUT(-)
5	TRIM
6	VOUT(+)

PART NUMBERING SYSTEM

S	36	S	E	050	03	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
S - Small Power	36 - 18~75V or 36~75V	S - Single	E - Family Name	3R3 - 3.3V 050 - 5.0V 120 - 12V	01 - 1.3A 02 - 2A 03 - 3A 05 - 5A	N - Negative P - Positive	K - 0.110" N - 0.145" R - 0.170" M - SMD	F- RoHS 6/6 (Lead Free)	A - No trim pin B - With trim pin (Default)

S48SP Series

FEATURES

Electrical

- High efficiency
- 2:1 input range
- Fixed frequency operation
- OTP, Input UVLO, Output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF

Safety & Reliability

- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1

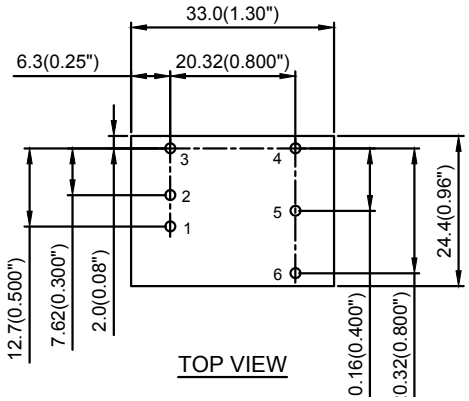
1" x 1"

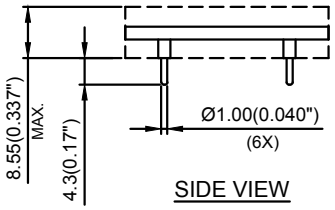
2:1 input

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
S48SP3R310	36~75V	3.3V	2.97~3.63V	10A	33W	90.0%	2250V	33.0 x 24.4 x 8.55 mm
S48SP05007	36~75V	5V	4.5~5.5V	7A	35W	90.0%	2250V	33.0 x 24.4 x 8.55 mm
S48SP12003	36~75V	12V	10.8~13.2V	3A	36W	90.0%	2250V	33.0 x 24.4 x 8.55 mm

MECHANICAL DRAWING





Pin#	Function
1	VIN(+)
2	VIN(-)
3	ON/OFF
4	VOUT(-)
5	TRIM
6	VOUT(+)

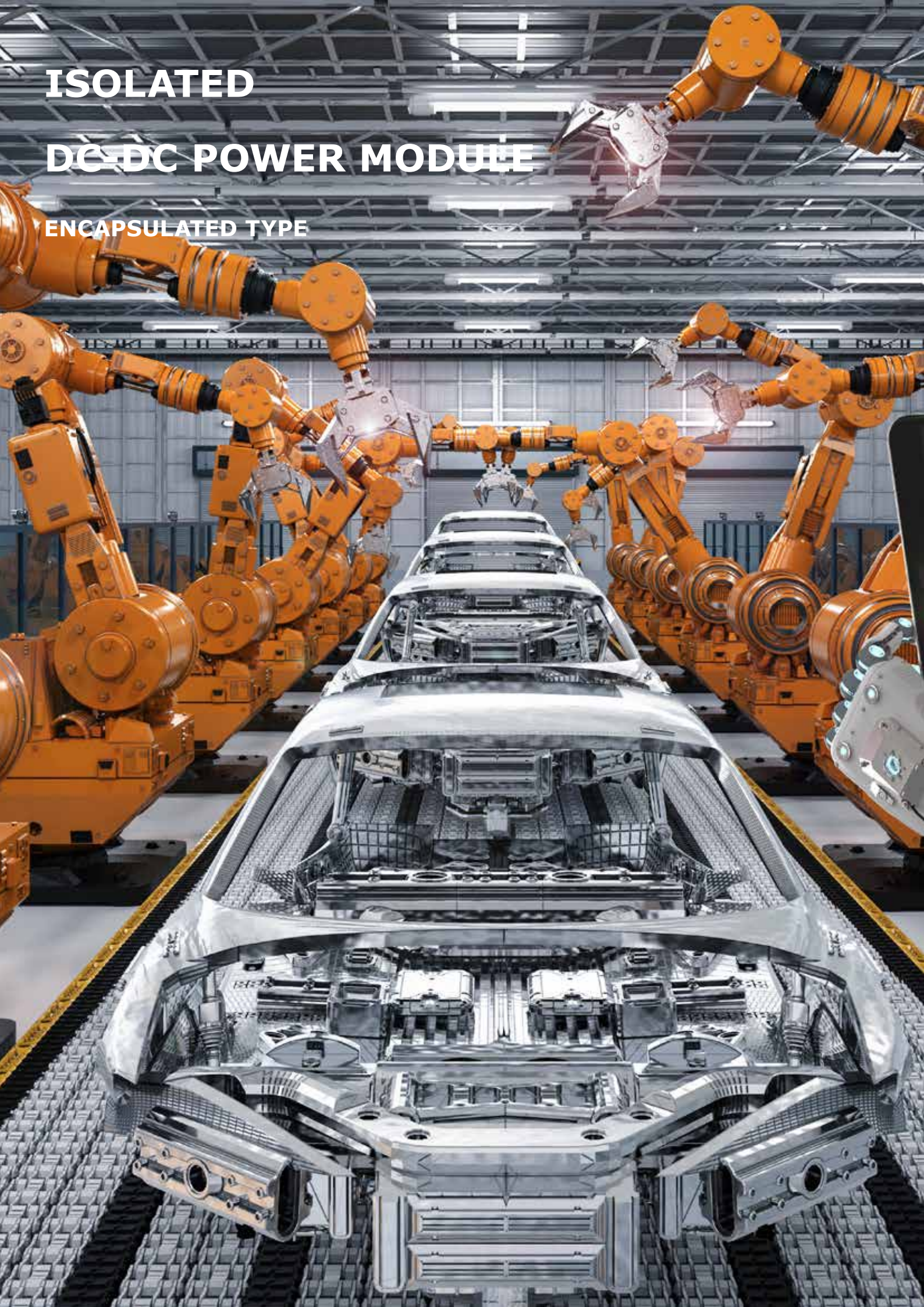
PART NUMBERING SYSTEM

S	48	S	P	050	07	N	R	F	B
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
S - Small Power	48 - 36V~75V	S - Single	P - Family Name	3R3 - 3.3V 050 - 5V 120 - 12V	03 - 3A 07 - 7A 10 - 10A	N - Negative P - Positive E - No remote on/off control pin	K - 0.110" N - 0.145" R - 0.170" M - SMD	F - RoHS 6/6 (Lead Free)	A - No trim pin B - With trim pin (Default)

ISOLATED

DC-DC POWER MODULE

ENCAPSULATED TYPE



Product Overview

Low Power (1~10W)

Delta's expansive product portfolio provides solution capability to meet the specific requirements of industrial application. Products use Delta's creative design topology and patented technologies to achieve extremely high efficiency, low power dissipation and greater reliability. These modules housed in industry standard footprint and pinout are easy to use and available in a fully encapsulated package for harsh environment applications.

Series	Output Power	Input Voltage(V)	Output Voltage (V)	Safety Mark	Max Eff.	Isolation Voltage	Package
 DA01S	1W	5,12,24 (±10%)	5, 9, 12, 15	N/A	79%	3000VDC	DIP
 PA01S	1W	3.3, 5,12,24 (±10%)	5, 9, 12, 15	N/A	80%	1000VDC	SIP
 PB01S PB01D	1W	5,12,15,24 (±10%)	3.3, 5, 9, 12, 15 ±5, ±9, ±12, ±15	N/A	81%	1000VDC	SIP
 PD01S PD01D	1W	5,12,24 (±10%)	3.3, 5, 9, 12, 15 ±5, ±9, ±12, ±15	N/A	81%	3000VDC	SIP
 PE01S PE01D	1W	5,12,24 (±10%)	5, 9, 12, 15 ±5, ±9, ±12, ±15		88.5%	1000VDC	SIP
 PF01S	1W	5,12,24 (±10%)	5, 9, 12, 15		88%	3000VDC	SIP
 PI01S PI01D	1W	5,12 (±10%)	5, 12, 15 ±5, ±12, ±15		75%	3000VAC	SIP
 PL01S PL01D	1W	4.5-9,9-18, 18-36,36-75	5, 12, 15 ±12, ±15		80%	1500VDC	SIP
 SA01S	1W	5,12,24 (±10%)	3.3, 5, 9, 12, 15	N/A	82%	1000VDC	SMD
 SA01D	1W	5,12,24 (±10%)	±5, ±9, ±12, ±15	N/A	80%	1000VAC	SMD

Series	Output Power	Input Voltage(V)	Output Voltage (V)	Safety Mark	Max Eff.	Isolation Voltage	Package
	SB01S SB01D	1W	5,12,24 (±10%)	5, 12, 15 ±5, ±12, ±15	N/A	81%	3000VDC	SMD
	SH01S SH01D	1W	5,12,15,24 (±10%)	3.3, 5, 9, 12, 15 ±5, ±12, ±15	N/A	80%	1500VDC	SMD
	SK01S SK01D	1W	5,12,24,48 (±10%)	5, 12, 15 ±12, ±15		82%	1500VDC	SMD
	DB02S DB02D	2W	4.5-9,9-18, 18-36,36-75	3.3, 5, 12, 15 ±5, ±12, ±15		80%	1500VDC	DIP
	DC02S DC02D	2W	5,12,24 (±10%)	5, 12, 15 ±5, ±12, ±15	N/A	64%	6000VDC	DIP
	DK02S DK02D	2W	5,12,24 (±10%)	5, 12, 15 ±12, ±15		75%	4000VAC	DIP
	PC02S PC02D	2W	5,12,24 (±10%)	3.3, 5, 12, 15 ±5, ±12, ±15	N/A	83%	1000VDC	SIP
	PG02S	2W	4.5-9,9-18, 18-36,36-75	3.3, 5, 12	N/A	81%	1000VDC	SIP
	PH02S PH02D	2W	9-36,18-75	3.3, 5, 12, 15 ±5, ±12, ±15	N/A	80%	1500VDC	SIP
	SC02S SC02D	2W	5,12,24 (±10%)	5, 12 ±5, ±12, ±15	N/A	82%	1000VDC	SMD
	SD02S SD02D	2W	4.5-9,9-18, 18-36,36-75	3.3, 5, 12, 15 ±5, ±12, ±15		81%	1500VDC	SMD
	SG02S SG02D	2W	5,12,24 (±10%)	5, 12, 15 ±12, ±15		75%	4000VAC	SMD

Series	Output Power	Input Voltage(V)	Output Voltage (V)	Safety Mark	Max Eff.	Isolation Voltage	Package
 DD03S DD03D	3W	4.5-9,9-18, 18-36,36-75	5, 12, 15 ±12, ±15		81%	1500VDC	DIP
 DL03S DL03D	3W	9-36,18-75	3.3, 5, 12, 15 ±12, ±15		84%	1500VDC	DIP
 DM03S DM03D	3W	4.5-9,9-18, 18-36,36-75	5, 12, 24 ±12, ±15		84%	4000VDC	DIP
 DN03S DN03D	2-3W	4.5 ~ 9, 9 ~ 18	3.3, 5, 12, 15, 24 ±5, ±12, ±15		85%	1500VDC 3000VDC	DIP
 PJ03S PJ03D	3W	4.5-18,9-36,18-75	3.3, 5, 12, 15 ±5, ±12, ±15		81%	1600VDC	SIP
 SE03S SE03D	3W	9-18,18-36,36-75	3.3, 5, 12, 15 ±5, ±12, ±15		83%	1500VDC	SMD
 DF04S DF04D	4W	9-36,18-75	3.3, 5, 12, 15 ±5, ±12, ±15		85%	1500VDC	DIP
 SF05S SF05D	5W	9-18,18-36,36-75	3.3, 5, 12, 15 ±5, ±12, ±15		85%	1500VDC	SMD
 DH06S DH06D	6W	9-18,18-36,36-75	3.3, 5, 12, 15, 24 ±5, ±12, ±15		84%	1500VDC 3000VDC	DIP
 DJ06S DJ06D	6W	9-36,18-75	3.3, 5, 12, 15, 24 ±5, ±12, ±15		84%	1500VDC 3000VDC	DIP
 DU06S DU06D	6W	9-18,18-36,36-75	5, 12 ±12, ±15		80%	4000VDC	DIP
 DT10S DT10D	10W	9-18,18-36,36-75	5, 12 ±12, ±15		82%	4200VAC	DIP

Product Overview

10 ~ 240W

These are encapsulated board-mounted DC/DC power modules in a compact footprint with industry standard pinout. Designed for harsh environments such as process control and automation, data communication and telecom equipment, test equipment, or industrial, railway and healthcare markets, all modules are packaged in metal case and potted with thermal potting material, which ensures good thermal performance and high reliability in harsh environment applications.

Series	Output Power	Input Voltage	Output Voltage (V)										Max Efficiency	Isolation Voltage	Package	Page
			3.3	5	12	15	24	28	48	54	±12	±15				
S24SE	10~30W	9~36V	•	•	•	•							89.0%	1600VDC	1"x1"	50
S24DE	10~30W	9~36V									•	•	88.0%	1600VDC	1"x1"	51
S24SP	40~60W	9~36V		•	•	•	•						93.0%	1500VDC	2"x1"	52
S36SE	15~16.5W	18~75V	•	•	•								93.0%	2250VDC	1"x1"	53
E24SE*	150W	9~36V		•	•		•		•				93.5%	4000VDC	1/2 brick	54
E35SE*	120W	9~60V		•	•		•		•				-	4000VDC	1/2 brick	55
Q24SE*	240W	9~36V		•	•		•		•				92.5%	2250VDC	1/4 brick	61

50 ~ 200W

These are isolated DC-DC power converters designed for various railway applications such as drive controls, power controls, safety monitors and communications systems under the European Standard EN 50155. Delta designed these products with ultra wide input range for optimal performance in extensive transportation market. With creative design technology and optimization of component placement, these converters possess outstanding electrical and thermal performance as well as high reliability under extremely harsh operating conditions.

Series	Output Power	Input Voltage	Output Voltage (V)										Max Efficiency	Isolation Voltage	Package	Page
			3.3	5	12	15	24	28	48	54	±12	±15				
Q80SV*	150W	14.4~160V		•	•		•			•			89.0%	3000VDC	1/4 brick	56
HA1SV	50~120W	53~154V			•	•	•						89.0%	3000VDC	1/2 brick	57
H80SV*	100~200W	16.8~137.5V			•	•	•		•	•			91.0%	4242VDC	1/2 brick	58

720 ~ 1200W

These are new modules upto 1200W.

Series	Output Power	Input Voltage	Output Voltage (V)										Max Efficiency	Isolation Voltage	Package	Page
			3.3	5	12	14	24	28	48	54	±12	±15				
FB7SR*	720~1200W	200~400V				•		•		•			95.0%	4242VDC	full brick	59
FG5SR*	720~1200W	400~800V				•		•	50V	•			95.0%	4242VDC	full brick	59
QC8SC*	750W	360~400V			•								96.6%	4242VDC	1/4 brick	60

* New Product

S24SE Series

FEATURES

Electrical

- High efficiency
- Industry standard footprint and pinout
- Wide 4:1 input range
- Fixed frequency operation
- OTP, input UVLO, output OCP, OVP
- Positive or negative remote ON/OFF
- Without tantalum capacitor inside module

Safety & Reliability

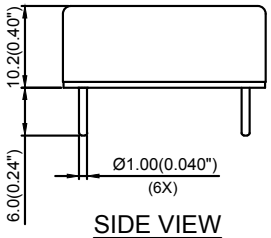
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC/EN 60950-1
- EN 50155

1" x 1" | 4:1 input | c UL us | single output

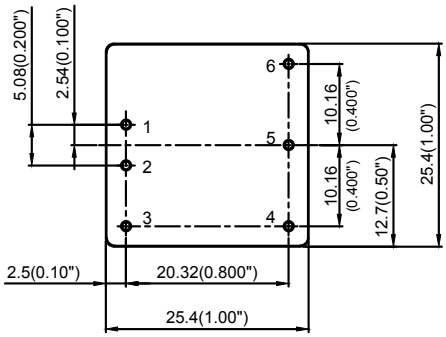
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
S24SE3R303	9~36V	3.3V	3A	10W	87.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE3R305	9~36V	3.3V	4.5A	15W	87.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE3R306	9~36V	3.3V	6A	20W	87.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE3R307	9~36V	3.3V	7.5A	30W	88.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE05002	9~36V	5V	2A	10W	87.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE05003	9~36V	5V	3A	15W	89.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE05004	9~36V	5V	4A	20W	88.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE05006	9~36V	5V	6A	30W	89.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE12001	9~36V	12V	1.25A	15W	87.5%	1600V	25.4 x 25.4 x 10.2 mm
S24SE12002	9~36V	12V	1.67A	20W	88.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE12003	9~36V	12V	2.5A	30W	88.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE120R8	9~36V	12V	0.83A	10W	86.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE15001	9~36V	15V	1.33A	20W	88.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE15002	9~36V	15V	2A	30W	88.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE150R6	9~36V	15V	0.67A	10W	87.0%	1600V	25.4 x 25.4 x 10.2 mm
S24SE150R9	9~36V	15V	1A	15W	87.5%	1600V	25.4 x 25.4 x 10.2 mm

MECHANICAL DRAWING



SIDE VIEW



BOTTOM VIEW

PIN	Single	Dual
1	Vin(+)	Vin(+)
2	Vin(-)	Vin(-)
3	ON/OFF	ON/OFF
4	Vout(-)	Vout(-)
5	Trim	Comm
6	Vout(+)	Vout(+)

S24DE Series

FEATURES

Electrical

- High efficiency
- Industry standard footprint and pinout
- Wide 4:1 input range
- Fixed frequency operation
- OTP, input UVLO, output OCP, OVP
- Positive or negative remote ON/OFF
- Without tantalum capacitor inside module

Safety & Reliability

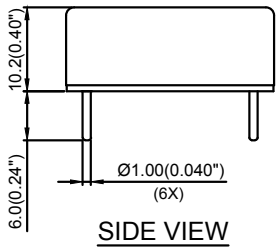
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC/EN 60950-1
- EN 50155

1" x 1" | 4:1 input | dual outputs

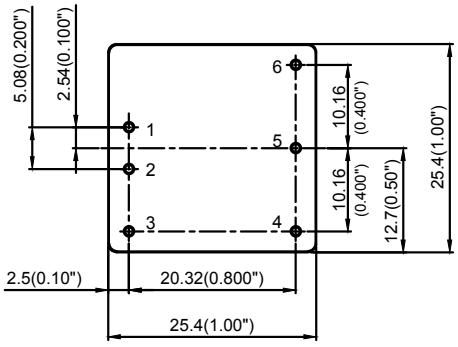
SPECIFICATIONS

Part Number	Input Voltage	Outputs		Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
S24DE120R4	9~36V	12V/0.42A	-12V/0.42A	10W	87.0%	1600V	25.4 x 25.4 x 10.2 mm
S24DE120R6	9~36V	12V/0.625A	-12V/0.625A	15W	87.5%	1600V	25.4 x 25.4 x 10.2 mm
S24DE120R8	9~36V	12V/0.83A	-12V/0.83A	20W	88.0%	1600V	25.4 x 25.4 x 10.2 mm
S24DE12001	9~36V	12V/1.25A	-12V/1.25A	30W	88.0%	1600V	25.4 x 25.4 x 10.2 mm
S24DE150R3	9~36V	15V/0.33A	-15V/0.33A	10W	87.0%	1600V	25.4 x 25.4 x 10.2 mm
S24DE150R5	9~36V	15V/0.5A	-15V/0.5A	15W	87.5%	1600V	25.4 x 25.4 x 10.2 mm
S24DE150R6	9~36V	15V/0.67A	-15V/0.67A	20W	88.0%	1600V	25.4 x 25.4 x 10.2 mm
S24DE15001	9~36V	15V/1.33A	-15V/1.33A	30W	88.0%	1600V	25.4 x 25.4 x 10.2 mm

MECHANICAL DRAWING



SIDE VIEW



BOTTOM VIEW

PIN	Single	Dual
1	Vin(+)	Vin(+)
2	Vin(-)	Vin(-)
3	ON/OFF	ON/OFF
4	Vout(-)	Vout(-)
5	Trim	Comm
6	Vout(+)	Vout(+)

PART NUMBERING SYSTEM

S	24	S	E	050	02	P	D	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
S - Small Power	24 - 9~36V	S - Single D - Dual	E - Family Name	3R3 - 3.3V 050 - 5.0V 120 - 12V or ±12V 150 - 15V or ±15V	02 - 2A 03 - 3A 04 - 4A 06 - 6A etc.	N - Negative P - Positive	R - 0.17" T - 0.22" D - 0.24"	F - RoHS 6/6 (Lead Free)	A - Standard (with metal case) H - With metal case and heat sink

S24SP Series

FEATURES

Electrical

- High efficiency
- Industry standard footprint and pinout
- Wide 4:1 input range
- Fixed frequency operation
- OTP, input UVLO, output OCP, OVP
- Positive or negative remote ON/OFF
- Without tantalum capacitor inside module

Safety & Reliability

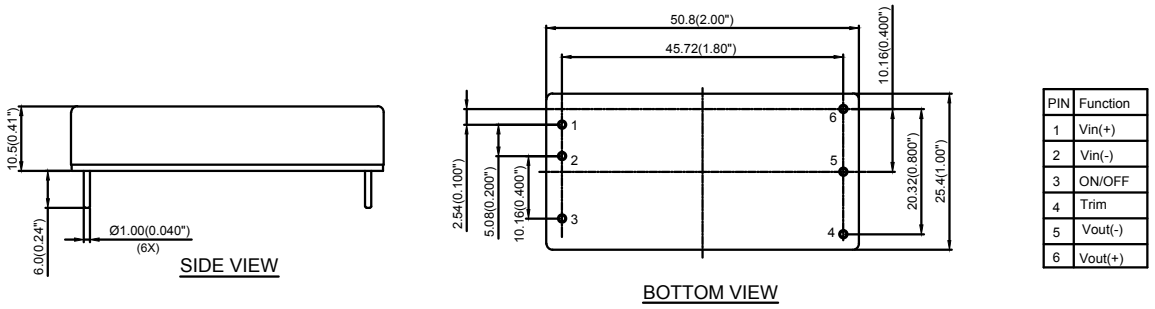
- UL 60950-1 & CSA C22.2 No.60950-1-07
- EN 50155

2" x 1" **4:1 input**

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
S24SP05008	9~36V	5V	4.5~5.5V	8A	40W	92.80%	1500V	50.8 x 25.4 x 10.5 mm
S24SP05012	9~36V	5V	4.5~5.5V	12A	60W	92.40%	1500V	50.8 x 25.4 x 10.5 mm
S24SP12004	9~36V	12V	10.8~13.2V	3.5A	40W	92.80%	1500V	50.8 x 25.4 x 10.5 mm
S24SP12005	9~36V	12V	10.8~13.2V	5A	60W	92.80%	1500V	50.8 x 25.4 x 10.5 mm
S24SP15003	9~36V	15V	13.5~16.5V	2.7A	40W	93.70%	1500V	50.8 x 25.4 x 10.5 mm
S24SP15004	9~36V	15V	13.5~16.5V	4A	60W	93.30%	1500V	50.8 x 25.4 x 10.5 mm
S24SP24002	9~36V	24V	21.6~26.4V	1.7A	40W	92.50%	1500V	50.8 x 25.4 x 10.5 mm
S24SP24003	9~36V	24V	21.6~26.4V	2.5A	60W	93.30%	1500V	50.8 x 25.4 x 10.5 mm

MECHANICAL DRAWING



PIN	Function
1	Vin(+)
2	Vin(-)
3	ON/OFF
4	Trim
5	Vout(-)
6	Vout(+)

PART NUMBERING SYSTEM

S	24	S	P	050	12	P	D	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
S - Small Power	24 - 9~36V	S - Single	P - Family Name	050 - 5V	08 - 8A 12 - 12A	N - Negative P - Positive	R - 0.17" T - 0.22" D - 0.24"	F - RoHS 6/6 (Lead Free)	A - Standard (with metal case) H - With metal case and heat sink
				120 - 12V	04 – 3.5A 05 - 5A				
				150 - 15V	03 – 2.7A 04 - 4A				
				240 - 24V	02 – 1.7A 03 – 2.5A				

S36SE Series

FEATURES

Electrical

- High efficiency
- 4:1 input range
- Fixed frequency operation
- OTP, input UVLO, output OCP, OVP
- Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF

Safety & Reliability

- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC 60950-1

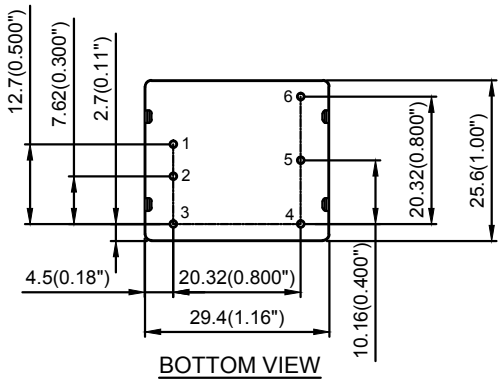
1" x 1"

4:1 input

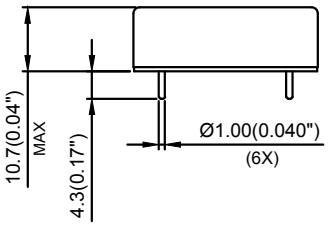
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
S36SE3R305	18~75V	3.3V	2.7~3.63V	5A	16.5W	86.5%	2250V	29.4 x 25.6 x 10.7 mm
S36SE05003	18~75V	5V	4.4~5.5V	3A	15W	83.5%	2250V	29.4 x 25.6 x 10.7 mm
S36SE12001	18~75V	12V	10.8~13.2V	1.3A	15.5W	87.0%	2250V	29.4 x 25.6 x 10.7 mm

MECHANICAL DRAWING



BOTTOM VIEW



SIDE VIEW

Pin#	Function
1	VIN(+)
2	VIN(-)
3	ON/OFF
4	VOUT(-)
5	TRIM
6	VOUT(+)

PART NUMBERING SYSTEM

S	36	S	E	050	03	N	R	F	G
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
S - Small Power	36- 18~75V	S - Single	E - Family Name	3R3 - 3.3V 050 - 5.0V 120 - 12V	01 - 1.3A 03 - 3A 05 - 5A	N - Negative P - Positive E - No remote on/off control pin	K - 0.110” N - 0.145” R - 0.170”	F- RoHS 6/6 (Lead Free)	G - Encapsulated

E24SE Series

coming soon

FEATURES

Electrical

- Efficiency up to 93.5%
- OTP, Input UVLO, Output OVP, OCP
- Wide output voltage trim range
- Monotonic startup and pre-biased loads
- 4000V isolation
- Working altitude up to 5500 m
- Input surge 50V/100mS

Safety & Reliability

- UL62368-1 pending
- EN50155 and EN45545-2 pending

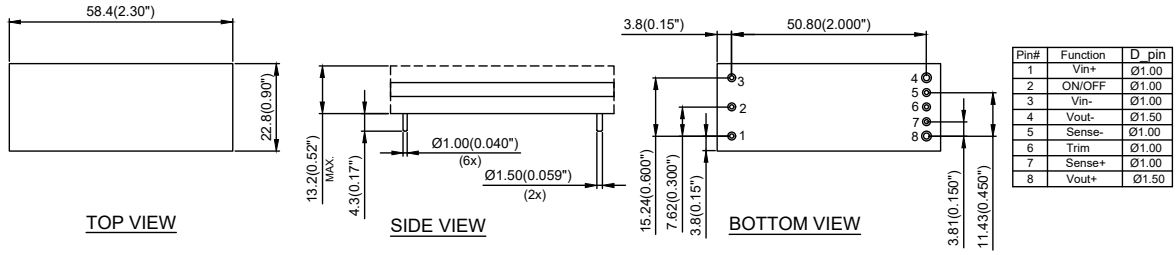
1/8 Brick

4:1 input

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
E24SE05030	9~36V	5V	4~6V	30A	150W	93.5%	4000V	58.4x22.8x13.2mm
E24SE12013	9~36V	12V	9.6~14.4V	13A	150W	93.5%	4000V	58.4x22.8x13.2mm
E24SE24006	9~36V	24V	19.2~28.8V	6A	150W	93.5%	4000V	58.4x22.8x13.2mm
E24SE48003	9~36V	48V	38.4~57.6V	3A	150W	93.5%	4000V	58.4x22.8x13.2mm

MECHANICAL DRAWING



Pin#	Function	D_pin
1	Vin+	Ø1.00
2	ON/OFF	Ø1.00
3	Vin-	Ø1.00
4	Vout-	Ø1.50
5	Sense-	Ø1.00
6	Trim	Ø1.00
7	Sense+	Ø1.00
8	Vout+	Ø1.50

(with potting and regular case only, please refer to datasheet for the other options)

PART NUMBERING SYSTEM

E	24	S	E	050	30	P	D	P	G
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	Operating Ambient Temperature	Option Code
E - 1/8 Brick	24 - 9~36V	S - Single	E - Family Name	050 - 5V 120 - 12V 240 - 24V 480 - 48V	03 - 3A 06 - 6A 13 - 13A 30 - 30A	N - Negative P - Positive	D - 0.24'' T - 0.22" R - 0.17"	P - -40~85°C M - -45~85°C R - -55~85°C *Note1	A - Open frame H - With baseplate G - With potting and regular case F - With potting and flanged baseplate

*Note1: 'M' and 'R' available only for last code = 'G' or 'F'

New Product is coming soon. Please contact Delta for more specification information.

E35SE Series

coming soon

FEATURES

Electrical

- Eficiency up to 91.5%
- OTP, Input UVLO, Output OVP, OCP
- Wide output voltage trim range
- Monotonic startup and pre-biased loads
- 4kVdc isolation
- Working altitude up to 5500 m

Safety & Reliability

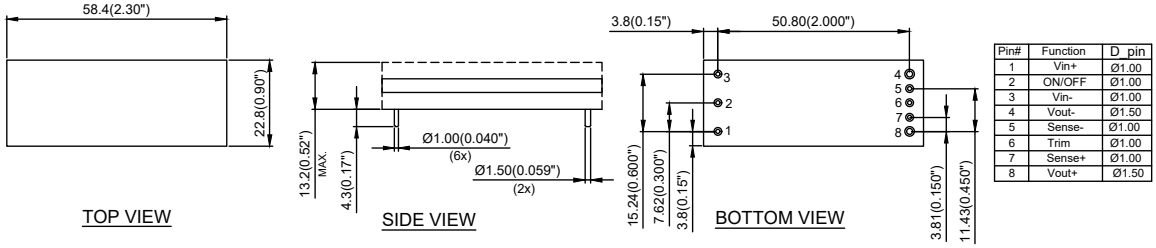
- UL62368-1 pending
- EN50155 and EN45545-2 pending

1/8 Brick | wide input | high isolation

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
E35SE05024	9~60V	5V	4~6V	24A	120W	-	4000V	58.4x22.8x13.2mm
E35SE12010	9~60V	12V	9.6~14.4V	10A	120W	-	4000V	58.4x22.8x13.2mm
E35SE24005	9~60V	24V	19.2~28.8V	5A	120W	-	4000V	58.4x22.8x13.2mm
E35SE48003	9~60V	48V	38.4~57.6V	2.5A	120W	-	4000V	58.4x22.8x13.2mm

MECHANICAL DRAWING



Pin#	Function	D_pin
1	Vin+	Ø1.00
2	ON/OFF	Ø1.00
3	Vin-	Ø1.00
4	Vout-	Ø1.50
5	Sense-	Ø1.00
6	Trim	Ø1.00
7	Sense+	Ø1.00
8	Vout+	Ø1.50

(with potting and regular case only, please refer to datasheet for the other options)

PART NUMBERING SYSTEM

E	35	S	E	050	24	P	D	P	G
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	Operating Ambient Temperature	Option Code
E - 1/8 Brick	35 - 9~60V	S - Single	E - Family Name	050 - 5V 120 - 12V 240 - 24V 480 - 48V	03 - 2.5A 05 - 5A 10 - 10A 24 - 24A	N - Negative P - Positive	D - 0.24'' T - 0.22" R - 0.17"	P - -40~85°C M - -45~100°C R - -55~100°C *Note1	A - Open frame H - With baseplate G - With potting and regular case F - With potting and flanged baseplate

*Note1: 'M' and 'H' available only for last code = 'G' or 'F'

New Product is coming soon. Please contact Delta for more specification information.

Q80SV Series

coming soon

FEATURES

Electrical

- Efficiency up to 89% @110Vin
- Ultra wide input range, 14.4V-160V
- 12V/1S, 200V/1S transient voltage
- Over voltage protection, Over current protection, hiccup mode
- Positive or Negative Remote ON/OFF
- Without tantalum capacitor inside module
- Operating Base plate Temperature range - 40°C to +100°C
- 3000VDC input to output reinforced isolation
- Hold up time PIN option: connect AL capacitor from this PIN to input ground for 10ms hold up time
- RoHs Compliant

Safety & Reliability

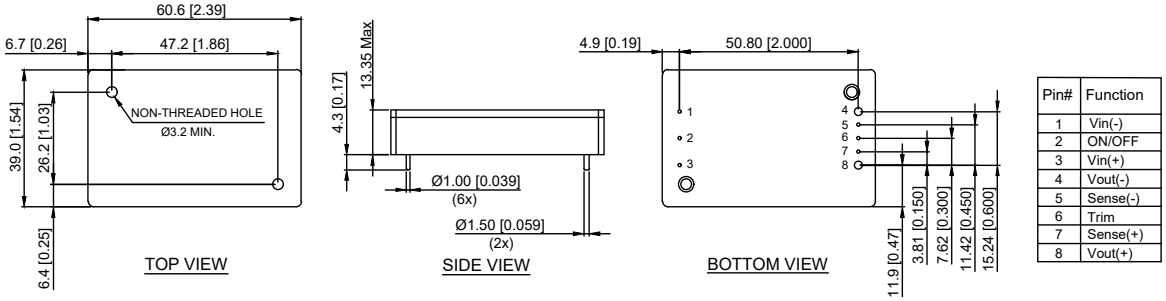
- UL62368-1 pending
- EN50155 pending

1/4 Brick | wide input | railway

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
Q80SV05030	14.4~160V	5V	3.3~5.5V	30A	150W	86%	3000VDC	60.6x 39 x 12.7 mm
Q80SV12013	14.4~160V	12V	9.6~15V	13A	150W	89%	3000VDC	60.6x 39 x 12.7 mm
Q80SV24006	14.4~160V	24V	19.2~28V	6.3A	150W	87%	3000VDC	60.6x 39 x 12.7 mm
Q80SV54003	14.4~160V	54V	43.2~59.4V	2.8A	150W	87%	3000VDC	60.6x 39 x 12.7 mm

MECHANICAL DRAWING



Pin#	Function
1	Vin(-)
2	ON/OFF
3	Vin(+)
4	Vout(-)
5	Sense(-)
6	Trim
7	Sense(+)
8	Vout(+)

PART NUMBERING SYSTEM

Q	80	S	V	120	13	P	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
Q - 1/4 Brick	80 - 14.4-160V continuously / 12-200V transient 1s	S - Single	V - Family Name	050 - 5V 120 - 12V 240 - 24V 540 - 54V	30 - 30A 13 - 12.5A 06 - 6.3A 03 - 2.8A	N - Negative P - Positive	N - 0.145” R - 0.170”	F - RoHS 6/6 (Lead Free)	A - STD & through hole S - STD & threaded screw hole

New Product is coming soon. Please contact Delta for more specification information.

HA1SV Series

FEATURES

Electrical

- High efficiency
- Industry standard footprint and pinout
- Wide input range
- Fixed frequency operation
- OTP, Input UVLO, OVP, Output OCP, OVP
- Isolation and reinforce insulation
- Pre-biased startup
- No minimum load required
- Positive or negative remote ON/OFF
- Remote sense

Safety & Reliability

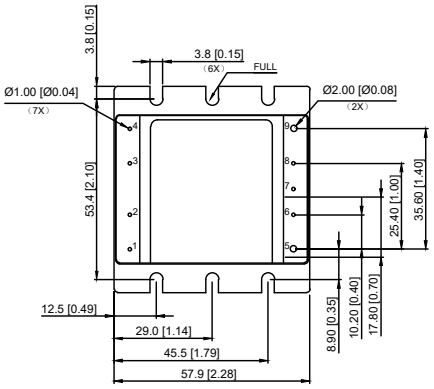
- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC/EN 60950-1
- EN 50155

1/2 brick | wide input | high isolation

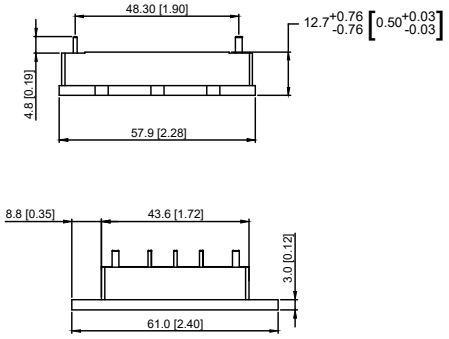
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
HA1SV12004	53~154V	12V	10.8~13.2V	4.2A	50W	86.0%	3000V	61 x 57.9 x 12.7 mm
HA1SV12008	53~154V	12V	10.8~13.2V	8.3A	100W	86.0%	3000V	61 x 57.9 x 12.7 mm
HA1SV15007	53~154V	15V	13.5~16.5V	6.7A	100W	88.5%	3000V	61 x 57.9 x 12.7 mm
HA1SV24002	53~154V	24V	21.6~26.4V	2.1A	50W	87.0%	3000V	61 x 57.9 x 12.7 mm
HA1SV24005	53~154V	24V	21.6~26.4V	5A	120W	89.0%	3000V	61 x 57.9 x 12.7 mm
HA1SV15003	53~154V	15V	13.5~16.5V	3.3A	50W	86.5%	3000V	61 x 57.9 x 12.7 mm

MECHANICAL DRAWING



BOTTOM VIEW



SIDE VIEW

PIN #	Function
1	+In
2	Gate In
3	Gate out
4	-In
5	+Out
6	+Sense
7	Trim
8	-Sense
9	-Out

PART NUMBERING SYSTEM

H	A1	S	V	120	04	P	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
H - 1/2 Brick	A1 - 53V~154V	S - Single	V - Family Name	120 - 12V 150 - 15V 240 - 24V	02 - 2.1A 03 - 3.3A 04 - 4.2A 05 - 5.0A 07 - 6.7A 08 - 8.3A	N - Negative P - Positive	N - 0.145” R - 0.170”	F - RoHS 6/6 (Lead Free) Space - RoHS5/6	A - With baseplate H - Without mounting hole

H80SV Series

New

FEATURES

Electrical

- High efficiency
- Ultra wide input range, 16.8~137.5V
  Continuous operating voltage up to 160V
- 14.4V/1S, 200V/1S transient voltage
- Operating base plate temperature - 40°C to +100°C
- Input Brown-out OTP, Input UVLO, Output OCP, OVP
- Reinforce insulation 4242Vdc
- No minimum load required
- Positive or negative remote ON/OFF
- Pin option for hold up time

Safety & Reliability

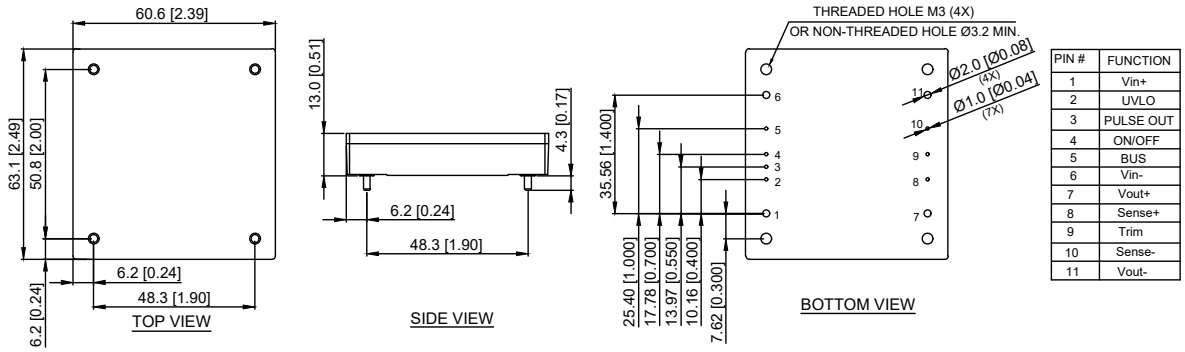
- IEC/UL/EN 60950-1 & CSA C22.2 No. 60950-1-07
- EN50155

1/2 brick | wide input | railway | cULus

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
H80SV12008	16.8~137.5V (160V*Note1)	12V	9.6~13.2V	8A	100W	90.0%	4242V	60.6x63.1x13 mm
H80SV12017	16.8~137.5V (160V*Note1)	12V	9.6~13.2V	17A	200W	90.0%	4242V	60.6x63.1x13 mm
H80SV15007	16.8~137.5V (160V*Note1)	15V	12~16.5V	7A	100W	90.0%	4242V	60.6x63.1x13mm
H80SV15013	16.8~137.5V (160V*Note1)	15V	12~16.5V	13A	200W	91.5%	4242V	60.6x63.1x13mm
H80SV24004	16.8~137.5V (160V*Note1)	24V	19.2~26.4V	4A	100W	88.0%	4242V	60.6x63.1x13mm
H80SV24008	16.8~137.5V (160V*Note1)	24V	19.2~26.4V	8A	200W	88.0%	4242V	60.6x63.1x13mm
H80SV48002	16.8~137.5V (160V*Note1)	48V	38.4~52.8V	2A	100W	90.0%	4242V	60.6x63.1x13mm
H80SV48004	16.8~137.5V (160V*Note1)	48V	38.4~52.8V	4A	200W	90.0%	4242V	60.6x63.1x13mm
H80SV54004	16.8~137.5V (160V*Note1)	54V	43.2~59.4V	4A	200W	90.6%	4242V	60.6x63.1x13mm

MECHANICAL DRAWING



PIN #	FUNCTION
1	Vin+
2	UVLO
3	PULSE OUT
4	ON/OFF
5	BUS
6	Vin-
7	Vout+
8	Sense+
9	Trim
10	Sense-
11	Vout-

PART NUMBERING SYSTEM

H	80	S	V	120	08	P	R	F	S
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
H - 1/2 Brick	80 - 16.8~137.5V (160V*Note1)	S - Single	V - Family Name	120 - 12V 150 - 15V 240 - 24V 480 - 48V 540 - 54V	02 - 2A 04 - 4A 07 - 7A 08 - 8A 13 - 13A 17 - 17A	N - Negative P - Positive	R - 0.170"	F - RoHS 6/6 (Lead Free) Space - RoHS5/6	A - Through Hole S - Screw Hole (M3*0.5)

*Note1: rated voltage 16.8~137.5V, continuously operating voltage 16.8~160V

FB7SR/FG5SR Series

coming soon

FEATURES

Electrical

- High efficiency : ≥95% @full load
- Industry standard pin out and footprint
- Fixed frequency operation
- Input UVLO
- Hiccup output over current protection (OCP)
- Latch output over voltage protection (OVP)
- Output current limited protection(OCL)
- Auto recovery OTP
- Negative enable (Positive enable optional)
- =Active current sharing
- Remote sense
- Sync Start and fast sync off
- Monotonic startup into normal
- 4242V isolation and reinforce insulation
- No minimum load required

full brick | wide input | high isolation

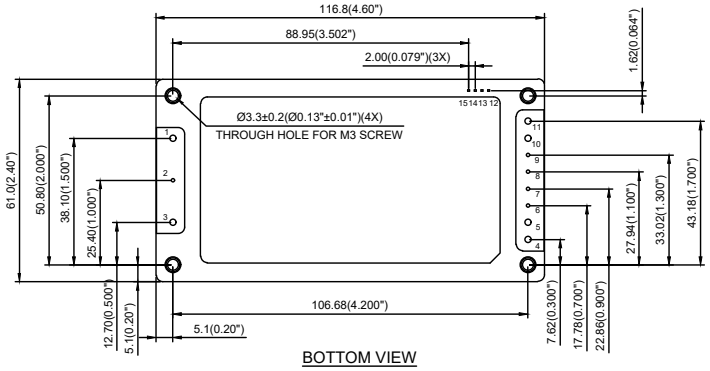
Safety & Reliability

- IEC/UL/EN 60950-1 pending

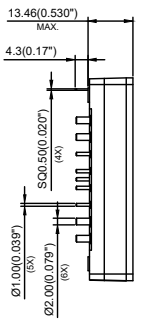
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
FB7SR14086	200~400V	14V	11.2~15.4V	86A	1204W	94.6%	4242V	116.8x61x12.7mm
FB7SR28043	200~400V	28V	22.4~30.8V	43A	1204W	95.0%	4242V	116.8x61x12.7mm
FB7SR54022	240~400V	54V	46.0~57.5V	22A	1188W	96.5%	4242V	116.8x61x12.7mm
FG5SR14086	400~800V	14V	11.2~15.4V	86A	1204W	94.8%	4242V	116.8x61x12.7mm
FG5SR28043	400~800V	28V	22.4~30.8V	43A	1204W	95.0%	4242V	116.8x61x12.7mm
FG5SR54022	480~800V	54V	46.0~57.5V	22A	1188W	96.4%	4242V	116.8x61x12.7mm
FG5SR50024	560~900V	50V	40.0~55.0V	24A	1200W	95.5%	4242V	116.8x61x12.7mm

MECHANICAL DRAWING



BOTTOM VIEW



SIDE VIEW

PIN#	FUNCTION
1	Vin-
2	ON/OFF
3	Vin+
4	Vout+
5	
6	Sense+
7	Trim
8	CS/SS
9	Sense-
10	Vout-
11	
12	GND
13	DATA
14	CLK
15	ADD

PART NUMBERING SYSTEM

F	B7	S	R	140	86	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
F - Full Brick	B7 - 270V G5 - 750V	S - Single	R - Family Name	140 - 14V 280 - 28V 500 - 50V 540 - 54V	22 - 22A 24 - 24A 43 - 43A 86 - 86A	N - Negative P - Positive	R - 0.170"	F - RoHS 6/6 (Lead Free) Space - RoHS5/6	A - With baseplate

New Product is coming soon. Please contact Delta for more specification information.

QC8SC Series

coming soon

FEATURES

Electrical

- Peak Efficiency up to 97.0%
- Over current protection
- Input UVP/OVP,
- Over Temperature Protection
- Remote ON/OFF
- Pre-bias startup
- No minimum load required
- PMbus Communication
- Reinforced insulation
- 4242Vdc Isolation Voltage

Safety & Reliability

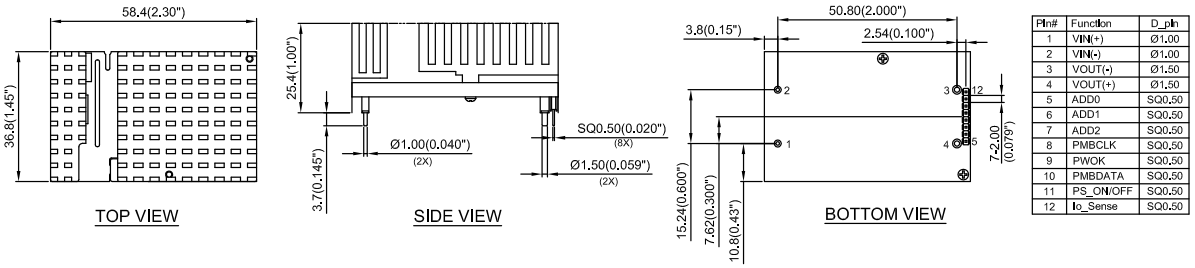
- UL 60950-1 pending

1/4 brick | digital control

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
QC8SC12063	360~400V	12V	-	63A	750W	96.6%	4242V	58.4 x 36.8 x 25.4 mm

MECHANICAL DRAWING



Pin#	Function	D_pin
1	VIN(+)	Ø1.00
2	VIN(-)	Ø1.00
3	VOUT(-)	Ø1.50
4	VOUT(+)	Ø1.50
5	ADD0	SQ0.50
6	ADD1	SQ0.50
7	ADD2	SQ0.50
8	PMBCLK	SQ0.50
9	PWOK	SQ0.50
10	PMBDATA	SQ0.50
11	PS_ON/OFF	SQ0.50
12	Io_Sense	SQ0.50

PART NUMBERING SYSTEM

Q	C8	S	C	120	63	N	N	D	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
Q - 1/4 Brick	C8 - 360~400V	S - Single	C - Family Name	120 - 12V	63 - 63A	N - Negative P - Positive	N - 0.145" R - 0.170"	D - Digital pins A - Analog pins	H - Heat sink Version

New Product is coming soon. Please contact Delta for more specification information.

Q24SE Series

coming soon

FEATURES

Electrical

- Efficiency up to 92.5%
- OTP, Input UVLO, Output OVP, OCP
- Wide output voltage trim range
- Monotonic startup and pre-biased startup
- PMBus Rev 1.2 compliance
- 2250V isolation
- Working altitude up to 5500 m
- Input surge 50V/100mS

Safety & Reliability

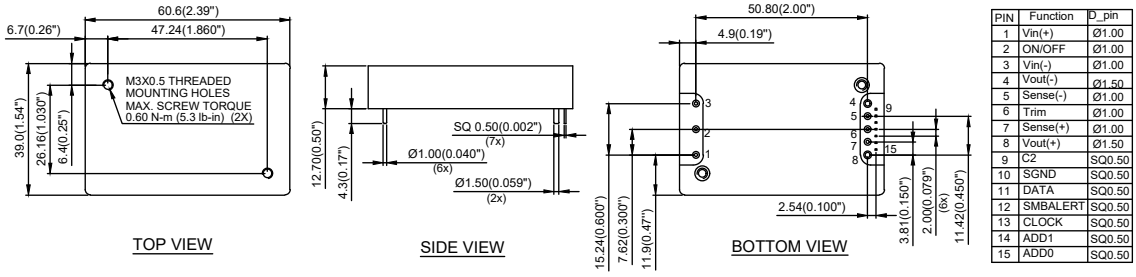
- UL62368-1 pending

1/4 brick **4:1 input** **digital control**

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
Q24SE05048	9~36V	5V	4~5.5V	48A	240W	92.5%	2250V	60.6x39x12.7 mm
Q24SE12020	9~36V	12V	6~13.2V	20A	240W	92.5%	2250V	60.6x39x12.7 mm
Q24SE24010	9~36V	24V	12~28.8V	10A	240W	92.5%	2250V	60.6x39x12.7 mm
Q24SE48005	9~36V	48V	24~55.2V	5A	240W	92.0%	2250V	60.6x39x12.7 mm

MECHANICAL DRAWING



PIN	Function	D_pin
1	Vin(+)	Ø1.00
2	ON/OFF	Ø1.00
3	Vin(-)	Ø1.00
4	Vout(-)	Ø1.50
5	Sense(-)	Ø1.00
6	Trim	Ø1.00
7	Sense(+)	Ø1.00
8	Vout(+)	Ø1.50
9	C2	SQ0.50
10	SGND	SQ0.50
11	DATA	SQ0.50
12	SMBALERT	SQ0.50
13	CLOCK	SQ0.50
14	ADD1	SQ0.50
15	ADD0	SQ0.50

(with potting, regular case and unthreaded mounting hole only, please refer to datasheet for the other options)

PART NUMBERING SYSTEM

Q	24	S	E	050	48	P	D	P	G
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length Pin Type	RoHS	Option Code
Q – 1/4 Brick	24 - 9V~36V	S - Single	E - Family Name	050 - 5V 120 - 12V 240 - 24V 480 - 48V	05 - 5A 10 - 10A 20 - 20A 48 - 48A	N - Negative P - Positive	D - 0.24” T - 0.22” R - 0.17”	P - -40~85°C M - -45~100°C H - -55~100°C *Note1	A - Open Fame H - With baseplate G - With potting, regular case and unthreaded mounting hole S - with potting, regular case and threaded mounting hole

*Note1: ‘M‘ and ‘H’ available only for last code = ‘G’ or ‘S’

New Product is coming soon. Please contact Delta for more specification information.

ISOLATED

DC-DC POWER MODULE

PANEL MOUNT & DIN-RAIL

Product Overview

Panel-mounted DCDC converter, a wide input voltage range of 18~106V, can provide 500W, regulated DC output voltage with high efficiency. The power module offers input UVLO, output over current limit, short circuit, output over voltage, over temperature, and input reverse polarity protections. It has an option for integrated fuse holder and enable on/off function. It also has parallel function; and allows a wide operating temperature range of -40°C to +75°C. With creative design technology and optimization of component placement, this converter possess outstanding electrical and thermal performance, as well as high reliability under extremely harsh operating conditions. All products meet IP67 protection.

Series	Output Power	Input Voltage	Output Voltage (V)						Max Efficiency	Isolation Voltage	Package	Page
			5	12.4	13.7	24	±12	±15				
B40SR	200~300W	18~60V		•	•				98.5%	2250VDC	Panel Mount	64
B62SR	200~360W	18~106V		•	•	•			91.0%	2250VDC	Panel Mount	64
B70SR	300W	36~106V		•	•	•			92.5%	2250VDC	Panel Mount	64
B70SP*	500W	32~96V		•	•	•			91.5%	2250VDC	Panel Mount	66

These are designed particularly for industrial applications where no PCB mounting is possible the module has to be mounted on panel or din-rail. The series come with a host of industry-standard features, such as over current protection, over voltage protection, over temperature protection and remote on/off. An optional heatsink is available for more extreme thermal requirements. All models have wide input voltage range. With operating temperature of -40°C to +85°C, it is suitable for customers' critical applications, such as process control and automation, transportation, data communication and telecom equipment, test equipment, medical device and everywhere where space on the PCB is critical.

Series	Output Power	Input Voltage	Output Voltage (V)						Max Efficiency	Isolation Voltage	Package	Page
			5	12	15	24	±12	±15				
PM24S*	60W	9~36V	•	•	•	•			93.7%	1600VDC	Panel Mount	67
PM24D*	30W	9~36V					•	•	88.0%	1600VDC	Panel Mount	67
DR24S*	60W	9~36V	•	•	•	•			93.7%	1600VDC	Din Rail	67
DR24D*	30W	9~36V					•	•	88.0%	1600VDC	Din Rail	67
PM80S	200W	16.8~137.5V		•	•	•	48V	54V	89.0%	4242VDC	Panel Mount	69

* New Product

B40SR/B62SR/B70SR Series

FEATURES

Electrical

- Ultra wide input voltage range 18~106V
- Intergrated fuse holder (optional)
- Parallel connection of multiple units
- Operating temperature range -40°C to +75°C
- Minimized inrush current
- Input reverse polarity protection
- OTP, input UVLO, output OCL, SCP, OVP
- Enable on/off (optional)
- Isolation voltage 2250VDC

Mechanical

- Box type package with metal base plate
- Package dimension: 190x76x44mm
- IP67 protection

Safety & Reliability

- UL 60950-1 & CSA C22.2 No.60950-1-07
- IEC/EN 60950-1

Box | ultra wide input voltage | IP67 | CE | cULus | RoHS

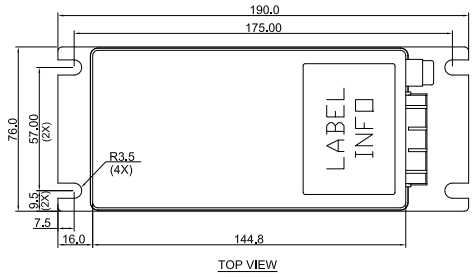
SPECIFICATIONS

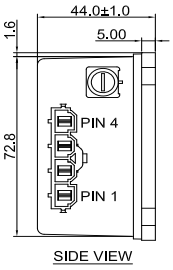
Part Number	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency
B40SR12424DP	18~60V	12.4V	24A	300W	88.3%
B40SR12424A/B/C/D	18~60V	12.4V	24A	200W @18~27Vin	88.3%
B40SR13722A/B/C/D	18~60V	13.7V	22A	300W @27~60Vin	88.5%
B62SR12424A/B/C/D	18~106V	12.4V	24A	200W @18~27Vin	88.0%
B62SR13722A/B/C/D	18~106V	13.7V	22A	300W @27~106Vin	88.5%
B62SR24125A/B/C/D	18~106V	24V	12.5A		91.0%
B62SR24015A/B/C/D	18~106V	24V	15A	360W	90.5%
B70SR12424A/B/C/D	36~106V	12.4V	24A		89.5%
B70SR13722A/B/C/D	36~106V	13.7V	22A	300W	90.2%
B70SR24125A/B/C/D	36~106V	24V	12.5A		92.5%

MECHANICAL DRAWING

BXXSRXXXXXA

- With built-in fuse holder
- No enable pin

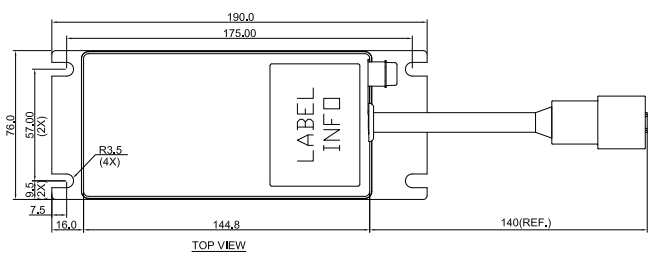


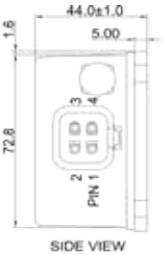


Pin	Function
1	Output-
2	Output+
3	Input-
4	Input+

BXXSRXXXXXB

- With built-in fuse holder
- No enable pin
- With sealed connector & fuse holder

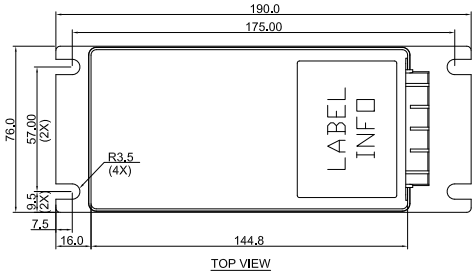


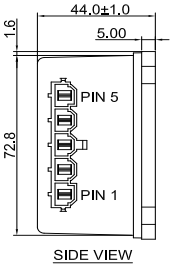


Pin	Function
1	Output-
2	Output+
3	Input-
4	Input+

BXXSRXXXXXC

- No built-in fuse holder
- With enable pin

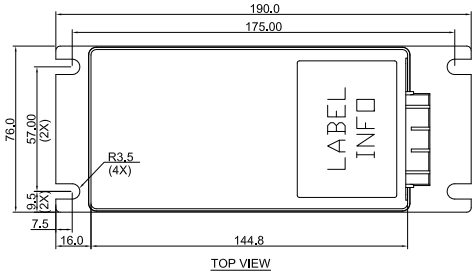


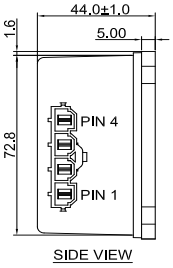


Pin	Function
1	Output-
2	Output+
3	Input-
4	Input+
5	Enable

BXXSRXXXXXD

- No built-in fuse holder
- No enable pin





Pin	Function
1	Output-
2	Output+
3	Input-
4	Input+

B70SP Series

coming soon

FEATURES

Electrical

- Wide input voltage range, 32~96V
- 500W Output
- Full Load Efficiency up to 91.5% @48Vin and 72Vin
- Parallel Connection of multiple units
- Box type package with metal base plate
- Package Dimension:
  198.0x113.0x45.0mm (7.80”x4.45”x1.77”)
- Operating Temperature Range - 40°C to +75°C
- Input Reverse Polarity Protection
- Input UVLO, Output OCL, Short circuit protection, OVP, OTP
- Enable on/off
- 2250VDC Isolation
- IP67 protection(With fully assembled mating connector)
- RoHs Compliant

Safety & Reliability

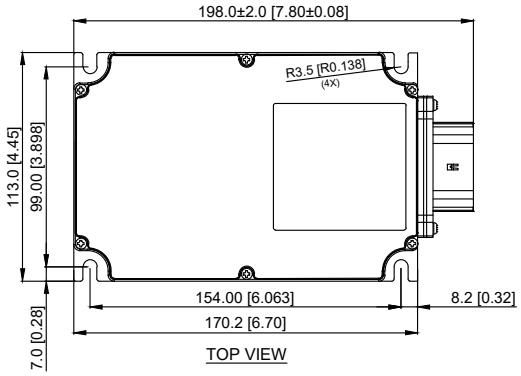
- UL60950, UL62368, CE Mark pending
- EMC compatible: EN12895-2015, CISPR11 Class A pending

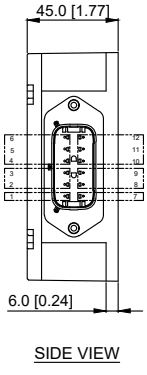
Box | IP67 | RoHs | cULus

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency
B70SP12440A/B	32~96V	12.4V	40A	500W	88.0%
B70SP13736A/B	32~96V	13.7V	36.5A	500W	89.5%
B70SP24020A/B	32~96V	24.5V	21A	500W	91.5%

MECHANICAL DRAWING





PIN CONNECTIONS:

PIN #	FUNCTION
1	ENABLE
2	INPUT+
3	
4	OUTPUT-
5	
6	
7	NA
8	INPUT-
9	
10	OUTPUT+
11	
12	

PART NUMBERING SYSTEM

B	70	S	P	124	40	AC	
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	Option Code	
B - Box	70 - 32~96V	S - Single	P - High Power	124 - 12.4V	40 - 40A		Connector Kit
						A	Without parallel function	with mating connector
						B	with parallel function	with mating connector

New Product is coming soon. Please contact Delta for more specification information.

PM & DR Series

New

FEATURES

Electrical

- Output LED Indicator
- EN55022 Class B EMC Filter built-in
- Internal Fuse
- Reverse Polarity Protected
- Minimized Inrush Current
- Output Trim Potentiometer (only for single output)
- -40°C to 85°C Operating Ambient Temperature
- OTP, Input UVLO and Output OVP, OCP
- Isolation Voltage
- No Min Load Required

Mechanical

- Metal Case
- Screw terminal
- Panel mount or Din-rail mount
- Size Panel mount : 100x56x19 mm
  Din-rail : 118.6x67.1x23.5 mm

Safety & Reliability

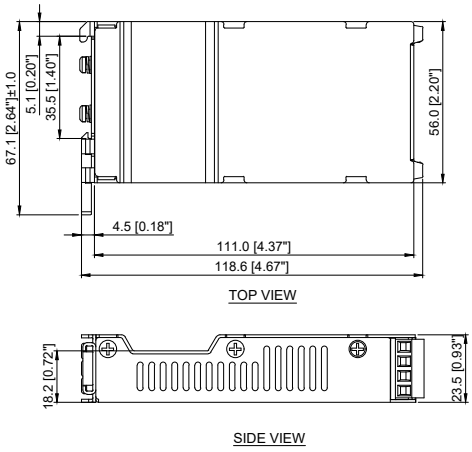
- UL 60950-1 & CSA C22.2 No.60950-1-07 pending
- CE Mark pending

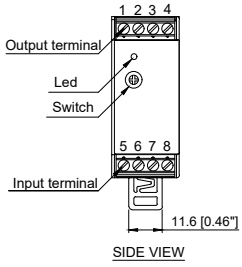
4:1 input

RoHs

MECHANICAL DRAWING

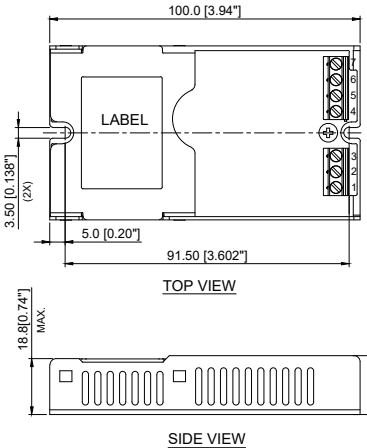
DR24S/D Series

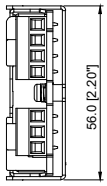




Pin#	Single Output	DUAL Output
1	Vout-	NC
2	Vout-	Vout-
3	Vout+	COM
4	Vout+	Vout+
5	On/off	On/off
6	Vin-	Vin-
7	Vin-	Vin-
8	Vin+	Vin+

PM24S/D Series





Pin#	Single Output	DUAL Output
1	Vin+	Vin+
2	Vin-	Vin-
3	On/off	On/off
4	Vout-	Vout-
5	Vout-	Common
6	Vout+	Vout+
7	Vout+	NC

PM & DR Series

New

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
DR24S05006	9~36V	5V	4.5~5.5V	6A	30W	88.0%	1600V	118.6x67.1x23.5mm
DR24S05008	9~36V	5V	4.5~5.5V	8A	40W	92.0%	1500V	118.6x67.1x23.5mm
DR24S05012	9~36V	5V	4.5~5.5V	12A	60W	92.0%	1500V	118.6x67.1x23.5mm
DR24S12001	9~36V	12V	-	1.25A	15W	87.5%	1600V	118.6x67.1x23.5mm
DR24S12003	9~36V	12V	10.8~13.2V	3.4A	40W	88.0%	1600V	118.6x67.1x23.5mm
DR24S12004	9~36V	12V	10.8~13.2V	3.4A	40W	92.0%	1500V	118.6x67.1x23.5mm
DR24S12005	9~36V	12V	10.8~13.2V	5A	60W	92.3%	1500V	118.6x67.1x23.5mm
DR24S150R9	9~36V	15V	13.5~16.5V	1A	15W	87.5%	1600V	118.6x67.1x23.5mm
DR24S15002	9~36V	15V	13.5~16.5V	2A	30W	88.0%	1600V	118.6x67.1x23.5mm
DR24S15003	9~36V	15V	13.5~16.5V	2.7A	40W	93.0%	1500V	118.6x67.1x23.5mm
DR24S15004	9~36V	15V	13.5~16.5V	4A	60W	92.8%	1500V	118.6x67.1x23.5mm
DR24S24002	9~36V	24V	-	1.7A	40W	93.0%	1500V	118.6x67.1x23.5mm
DR24S24003	9~36V	24V	-	2.5A	60W	92.5%	1500V	118.6x67.1x23.5mm
DR24D120R6	9~36V	±12V	-	2x0.625A	15W	87.5%	1600V	118.6x67.1x23.5mm
DR24D12001	9~36V	±12V	-	2x1.25A	30W	88.0%	1600V	118.6x67.1x23.5mm
DR24D150R5	9~36V	±15V	-	2x0.5A	15W	87.5%	1600V	118.6x67.1x23.5mm
DR24D15001	9~36V	±15V	-	2x1A	30W	88.0%	1600V	118.6x67.1x23.5mm
PM24S05003	9~36V	5V	4.5~5.5V	3A	15W	89.0%	1600V	100x56x19mm
PM24S05006	9~36V	5V	4.5~5.5V	6A	30W	88.0%	1600V	100x56x19mm
PM24S05008	9~36V	5V	4.5~5.5V	8A	40W	92.0%	1500V	100x56x19mm
PM24S05012	9~36V	5V	4.5~5.5V	12A	60W	92.0%	1500V	100x56x19mm
PM24S12001	9~36V	12V	10.8~13.2V	1.25A	15W	87.5%	1600V	100x56x19mm
PM24S12003	9~36V	12V	10.8~13.2V	2.5A	30W	88.0%	1600V	100x56x19mm
PM24S12004	9~36V	12V	10.8~13.2V	3.4A	40W	92.0%	1500V	100x56x19mm
PM24S12005	9~36V	12V	10.8~13.2V	5A	60W	92.3%	1500V	100x56x19mm
PM24S150R9	9~36V	15V	13.5~16.5V	1A	15W	87.5%	1600V	100x56x19mm
PM24S15002	9~36V	15V	13.5~16.5V	2A	30W	88.0%	1600V	100x56x19mm
PM24S15003	9~36V	15V	13.5~16.5V	2.7	40W	93.0%	1500V	100x56x19mm
PM24S15004	9~36V	15V	13.5~16.5V	4A	60W	92.8%	1500V	100x56x19mm
PM24S24002	9~36V	24V	21.6~26.4V	1.7A	40W	93.0%	1500V	100x56x19mm
PM24S24003	9~36V	24V	21.6~26.4V	2.5A	60W	92.5%	1500V	100x56x19mm
PM24D120R6	9~36V	±12V	-	2x0.625A	15W	87.5%	1600V	100x56x19mm
PM24D12001	9~36V	±12V	-	2x1.25A	30W	88.0%	1600V	100x56x19mm
PM24D150R5	9~36V	±15V	-	2x0.5A	15W	87.5%	1600V	100x56x19mm
PM24D15001	9~36V	±15V	-	2x1A	30W	88.0%	1600V	100x56x19mm

PART NUMBERING SYSTEM

PM	24	S	050	03	P	A	F	A
Form Factor	Input Voltage	Number of Outputs	Output Voltage	Output Current	ON/OFF Logic	Terminal Type	RoHS	Option Code
PM - Panel Mount DR - Din-rail Mount	24 - 9~36V	S - Single D - Dual	5V, 12V, 15V 24V, +/-12V +/-15V	1A, 1.25A, 1.7A 2A, 2.5A, 2.7A 3A, 3.5A, 4A 4.2A, 5A, 6A 8A, 10A, 12A	P - Positive	A - Screw terminal	F - RoHS 6/6 (Lead Free)	A - Built-in EMI filter

PM80S Series

coming soon

FEATURES

Electrical

- Efficiency up to 89% @110V
- Ultra wide input range, 16.8~137.5V
  Continuous operating voltage up to 160V
- Input transient voltage 14.4V/1S, 200V/1S
- OTP, Input UVLO, Output OVP & OCP
- 4242Vdc input to output reinforced isolation
- Operating Baseplate Temperature - 40°C to +85°C
- Monotonic startup and pre-biased startup
- No minimum load requirement
- Working altitude up to 5000 m

Safety & Reliability

- UL60950-1 pending
- EN50155 pending

panel mount

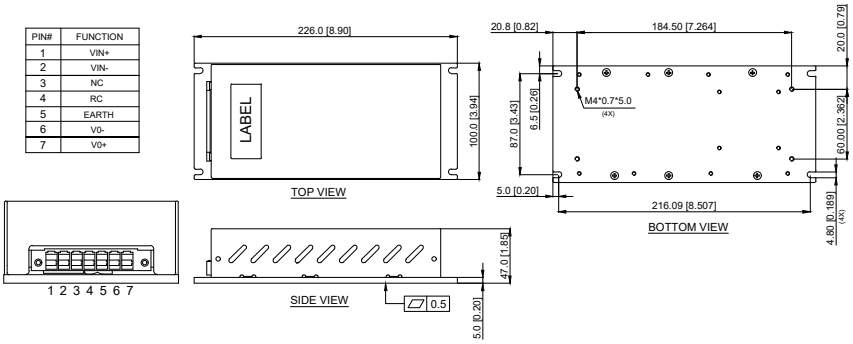
EN50155

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
PM80S12017	16.8~137.5V (160V*Note1)	12V	17A	200W	89%	4242V	226x100x47 mm
PM80S15013	16.8~137.5V (160V*Note1)	15V	13A	200W	89%	4242V	226x100x47 mm
PM80S24008	16.8~137.5V (160V*Note1)	24V	8.3A	200W	88%	4242V	226x100x47 mm
PM80S48004	16.8~137.5V (160V*Note1)	48V	4.2A	200W	88%	4242V	226x100x47 mm
PM80S54004	16.8~137.5V (160V*Note1)	54V	3.8A	200W	88%	4242V	226x100x47 mm

-

MECHANICAL DRAWING



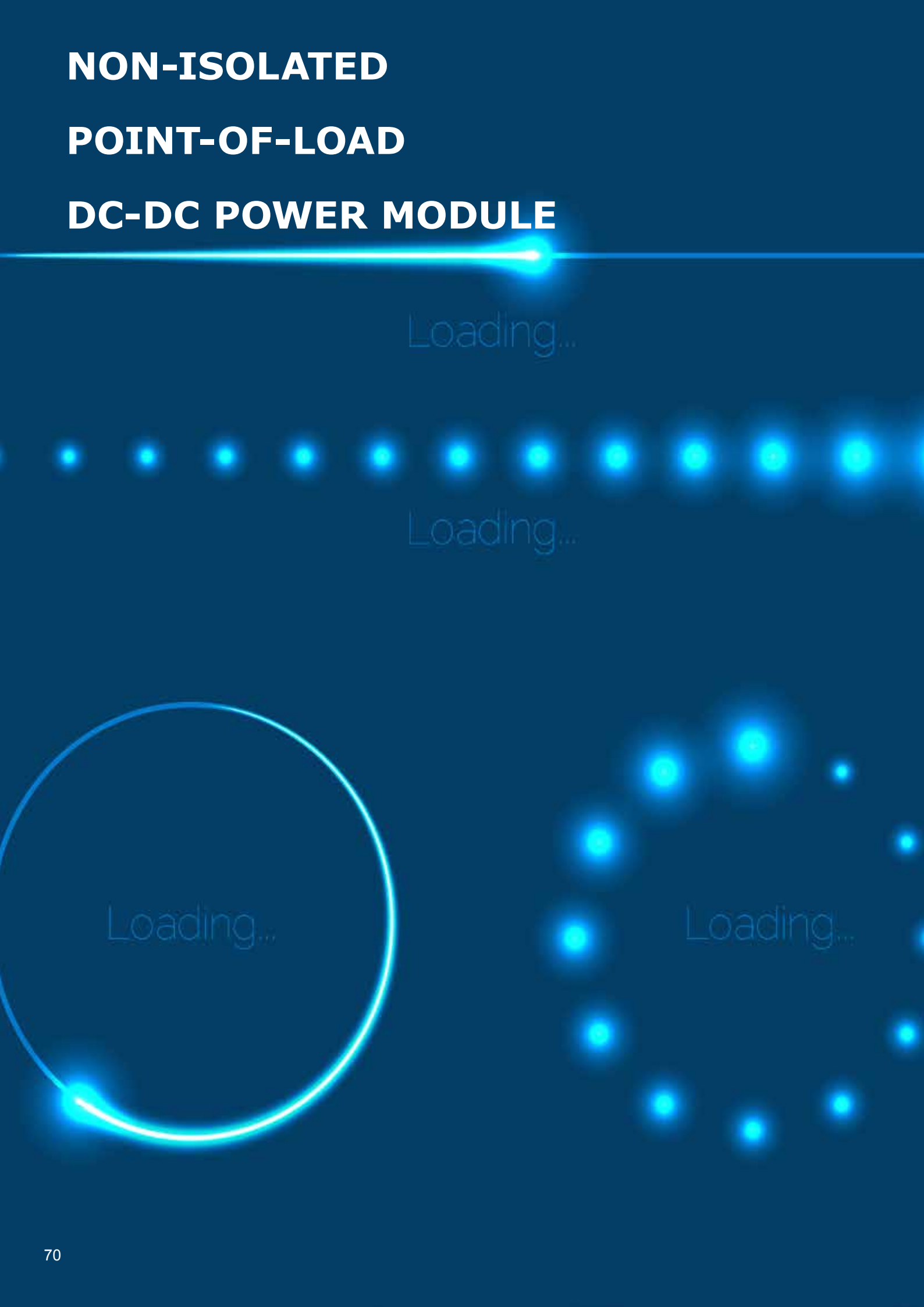
PART NUMBERING SYSTEM

PM	80	S	120	17	P	A	F	A
Form Factor	Input Voltage	Number of Outputs	Output Voltage	Output Current	ON/OFF Logic	Connector Type	RoHS	Option Code
PM - panel Mount	80 - 16.8~137.5V (160V*Note1)	S - Single	120 - 12V 150 - 15V 240 - 24V 480 - 48V 540 - 54V	04 - 4A 08 - 8A 13 - 13A 17 - 17A	N - Negative P - Positive	A - default Others- customized	F - RoHS 6/6 (Lead Free)	A - Parallel Function B - Non parallel

*Note1: rated voltage 16.8~137.5V, continuously operating voltage 16.8~160V

New Product is coming soon. Please contact Delta for more specification information.

NON-ISOLATED POINT-OF-LOAD DC-DC POWER MODULE



Product Overview

Non-Iso Brick

This group offers non-isolated, wide input and output range solution for converting variable voltages to a regulated output voltage. Can be used to provide a regulated output voltage from a battery or other variable voltage source. The output voltage can be programmed by connecting one external resistor.

Page 72

Power Block

Power block DC-DC power modules are developed to address the ever-growing demands of increased current and power densities in networking applications while providing maximum flexibility for system configuration. Power block modules, containing all necessary power components with high power density, work with either digital or analog controllers. Multiple modules can be applied to power system, in parallel.

Page 73

Integrated POL

Integrated Point-of-Load power modules are designed in an industry standard, compact, IC-like, molded package. They are highly integrated and do not require external components to provide the point-of-load function. A copper pad on the back of the module, in close contact with the internal heat dissipation components, provides excellent thermal performance. All integrated POL power modules are manufactured by fully automatic assembly.

Page 76-77

DOSA Standard POL

DOSA POL power modules are designed in an industry standard footprint and pinout. Each provides programmable output voltage by using an external resistor. Some series have flexible and programmable tracking and sequencing features to enable a variety of startup voltage as well as sequencing and tracking between power modules. DOSA I POL power modules are available in SIP and SMD package. DOSA II POL power modules are packaged by SMD.

Page 74-75

Datacom POL

Compared with NC series products, the second generation of datacom POL power modules provide wide input range for more bus voltage point-of-load applications. Datacom POL power converters can cover output current from 3A to 80A to meet various demands.

Page 78-79

New

H60SB Series

FEATURES

Electrical

- Peak Efficiency up to 98%
- PMBUS compatibility
- Wide input range
- Over current protection
- Input UVP
- Over Temperature Protection
- Remote ON/OFF, negative logic
- Pre-bias startup
- No minimum load required
- Parallel Operation with Active Current Sharing

Safety & Reliability

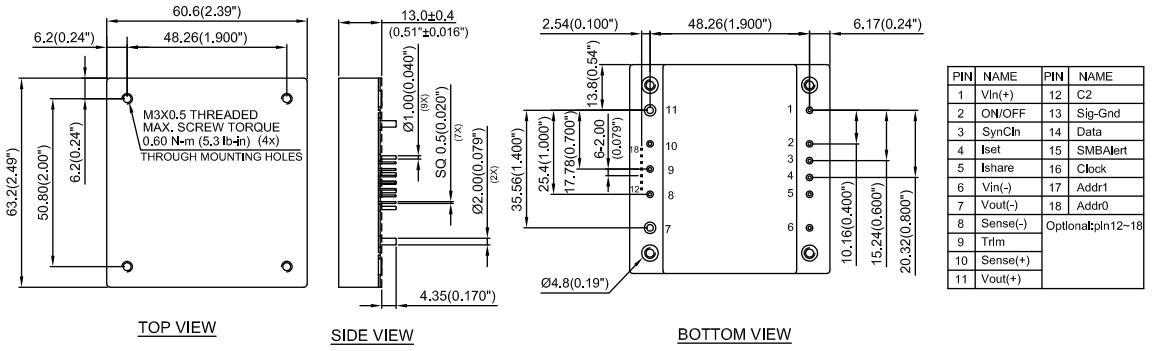
- UL 62368-1 & UL60950-1

1/2 brick | non-isolated | digital control | cULus

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
H60SB0A050NRDC	9~60V	0~60V	50A	max 3kW	96.0%	Non-isolated	63.2x60.6x13mm
H60SB0A050NRAC	9~60V	0~60V	50A	max 3kW	96.0%	Non-isolated	63.2x60.6x13mm

MECHANICAL DRAWING



PIN	NAME	PIN	NAME
1	Vin(+)	12	C2
2	ON/OFF	13	Sig-Gnd
3	SynCin	14	Data
4	Iset	15	SMBAlert
5	Ishare	16	Clock
6	Vin(-)	17	Addr1
7	Vout(-)	18	Addr0
8	Sense(-)	Optional:pin12~18	
9	Trim		
10	Sense(+)		
11	Vout(+)		

(H60SB0A050NRDC : pin 1~18
H60SB0A050NRAC : pin 1~11)

PART NUMBERING SYSTEM

H	60	S	B	0A0	50	N	R	D	C
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	Pin Assigment	Option Code
H - 1/2 Brick	60 - 9~60V	S - Single	B - Series number	0A0 - Adjustable	50 - 50A	N - Negative	R - 0.170"	D - Digital pins A - Analog pins	B - baseplate C - base plate & encased F - flanged baseplate& encased

Power Block

FEATURES

Electrical

- High efficiency
- Small size with SMD package
- Parallelable units
- OTP, Input UVLO, Output OCP, OVP, SCP (determined by controller)

Safety & Reliability

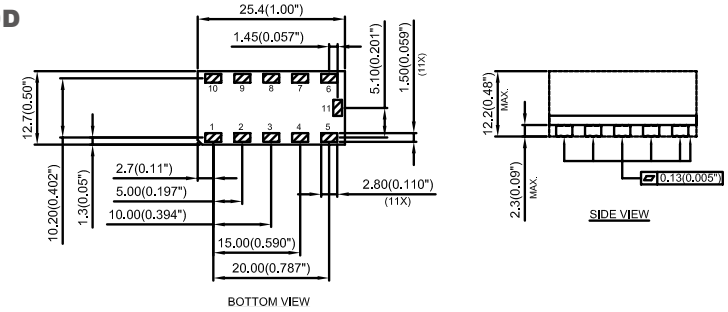
- UL 60950-1 & CSA C22.2 No.60950-1-07

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency	Package	Size (LxWxH)
D12S1R830D	7~13.2V	0.8~1.8V	30A	54W	91.5%	SMD	25.4x12.7x12.2 mm
D12S72C	7~13.2V	0.8~1.8V	40A	72W	91.5%	SMD	25.4x15.7x12.7 mm
D12S1R880D	7~13.2V	0.6~3.3V	80A	264W	95.2%	SMD	25.4x12.7x12.2 mm

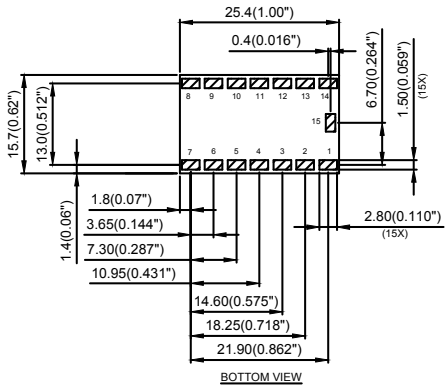
MECHANICAL DRAWING

D12S1R830D



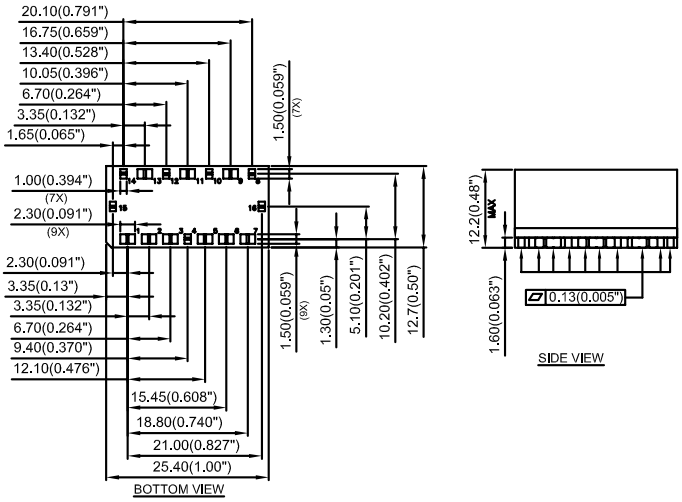
PIN#	Function
1	Vout
2	GND
3	PWM
4	Temperature
5	+7V
6	Vin
7	-Cs
8	+Cs
9	GND
10	Vout
11	GND

D12S72C



PIN#	Function	PIN#	Function
1	Vin	9	GND
2	GND	10	Cs-
3	+7Vin	11	Vout
4	PWML	12	Vout
5	PWMH	13	GND
6	GND	14	Temp-
7	Vin	15	Temp+
8	Cs+		

D12S1R880D



PIN#	Function
1	GND
2	Vout1
3	Vout1
4	+7Vin
5	Vout2
6	Vout2
7	GND
8	+CS2
9	Vin
10	PWM2
11	GND
12	PWM1
13	Vin
14	+CS1
15	-CS1
16	-CS2

DOSA Standard POL

DOSA I

FEATURES

Electrical

- High efficiency
- Pre-bias startup
- No minimun load required
- Output voltage programmable via external resistor
- Fixed frequency operation
- Output voltage tracking (optional)
- Current sharing (optional)
- Input UVLO, Output OCP
- Output OTP (optional)
- Remote ON/OFF
- Remote sense (optional)

Mechanical

- Standard footprint with SIP or SMD package

Safety & Reliability

- UL 60950-1 & CSA C22.2 No.60950-1-07

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency	Package	Size (LxWxH)
DNT04S0A0R03NFA DNT04S0A0S03NFA	2.4~5.5V	0.75~3.63V	3A	11W	93.5%	SIP SMD	22.86x10.16x6.35 mm 20.32x11.43x6.86 mm
DNT12S0A0R03NFA DNT12S0A0S03NFA	8.3~14V	0.75~5V	3A	15W	92.5%	SIP SMD	22.86x10.16x6.35 mm 20.32x11.43x6.86 mm
DNT04S0A0R05NFA DNT04S0A0S05NFA	2.4~5.5V	0.75~3.63V	5A	18W	93.5%	SIP SMD	22.86x10.16x6.35 mm 20.32x11.43x6.86 mm
DNT12S0A0R05NFA DNT12S0A0S05NFA	8.3~14V	0.75~5V	5A	25W	92.5%	SIP SMD	22.86x10.16x6.35 mm 20.32x11.43x6.86 mm
DNS04S0A0R06PFD DNS04S0A0S06PFD	2.8~5.5V	0.75~3.63V	6A	22W	94.0%	SIP SMD	25.4x12.7x6.7 mm 27.9x11.4x7.1 mm
DNS10S0A0R06PFD DNS10S0A0S06PFD	8.3~14V	0.75~5V	6A	30W	89.5%	SIP SMD	25.4x12.7x6.7 mm 27.9x11.4x7.1 mm
DNM04S0A0R10PFD DNM04S0A0S10PFD	2.8~5.5V	0.75~3.63V	10A	36W	96.0%	SIP SMD	50.8x13.4x8.5 mm 33.0x13.5x8.8 mm
DNM10S0A0R10PFD DNM10S0A0S10PFD	8.3~14V	0.75~5V	10A	50W	93.0%	SIP SMD	50.8x12.7x9.5 mm 33.0x13.5x8.8 mm
DNL04S0A0R16PFD DNL04S0A0S16PFD	2.8~5.5V	0.75~3.63V	16A	58W	95.0%	SIP SMD	50.8x13.4x8.5 mm 33.0x13.5x8.8 mm
DNL10S0A0R16PFD DNL10S0A0S16PFD	8.3~14V	0.75~5V	16A	80W	92.0%	SIP SMD	50.8x12.7x9.5 mm 33.0x13.5x9.7 mm
DNK05S0A0R30NFA	4.5~5.5V	0.8~3.63V	30A	109W	95.0%	SIP	50.8x12.7x14.0 mm
DNK12S0A0R30NFA	6~14V	0.8~5V	30A	150W	95.0%	SIP	50.8x12.7x14.0 mm
DNL10S0A0R20PFD	2.8 ~ 5.5 V	0.75 ~ 3.63 V	20A	100W	93.5%	SIP	50.8x12.7x9.5 mm

DOSA II

FEATURES

Electrical

- High efficiency
- Pre-bias startup
- No minimun load required
- Output voltage programmable via external resistor
- Fixed frequency operation
- Output voltage tracking (optional)
- Current sharing (optional)
- Input UVLO, Output OCP
- Output OTP (optional)
- Remote ON/OFF
- Remote sense (optional)

Mechanical

- Standard footprint with SIP or SMD package

Safety & Reliability

- UL 60950-1 & CSA C22.2 No.60950-1-07

DCM12S0A0S12NFA

DCL12S0A0S20NFA

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency	Package	Size (LxWxH)
DCM04S0A0S12PFA	2.4~5.5V	0.6~3.3V	12A	40W	95.0%	SMD	20.3x11.4x8.50 mm
DCM12S0A0S12NFA	4.5~14V	0.69~5.5V	12A	66W	95.4%	SMD	20.3x11.4x8.50 mm
DCK12S0A0S30NFA	6~14V	0.8~3.3V	30A	99W	92.8%	SMD	33.0x13.5x10.0 mm
DCL12S0A0S20NFA	4.5~14V	0.69~5V	20A	100W	93.0%	SMD	33.0x13.5x8.50 mm

coming soon

T31SN Series

FEATURES

Electrical

- High efficiency: 96.5% @ 24Vin/12Vo/6A
- Industry standard 1/32nd brick form factor
- Fixed frequency operation
- Thermal limit, Input UVLO
- Output OCP Hiccup mode
- Output voltage trim range: 3.3V~30V
- Output Remote sense
- Monotonic startup into normal and pre-biased loads
- No minimum load requirement
- Working altitude to 5000m

Safety & Reliability

- UL 60950-1 & CSA C22.2 No.60950-1-07 pending
- IPC9592B pending

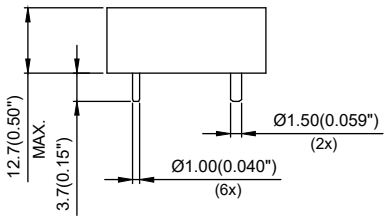
1/32 brick

non-isolated

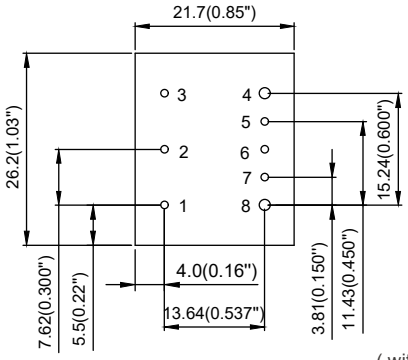
SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Output Range	Output Current	Output Power	Efficiency	Size (LxWxH)
T31SN12008	9~53V	3.3~16.5V	3.3~16.5V	8A/6A	Max 100W	96.5%	19.1x23.4x9.6 mm
T31SN24005	9~53V	5~30V	5~30V	4.5	Max 100W	96.5%	19.1x23.4x9.6 mm

MECHANICAL DRAWING



SIDE VIEW



BOTTOM VIEW

Pin#	Function	D_pin
1	Vin+	Ø1.00
2	ON/OFF	Ø1.00
3	Vin-	Ø1.00
4	Vout-	Ø1.50
5	PG(OPTIONAL)	Ø1.00
6	Trim	Ø1.00
7	Sense+	Ø1.00
8	Vout+	Ø1.50

(with through hole & potting & Standard case only, please refer to datasheet for the other options)

PART NUMBERING SYSTEM

T	31	S	N	120	08	N	N	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code
T - 1/32 Brick	31 - 9V~53V	S - Single	N - Family Name	120 - 3.3~16.5 240 - 5~30V	08 - 8A 05 - 4.5A	N - Negative P - Positive	K - 0.110'' N - 0.145" R - 0.170" M - SMD	F - RoHS 6/6 (Lead Free)	

	Power Good	Standard Case (Potting)	Flanged Case (Potting)
A	No	No	No
B	Yes	No	No
C	Yes	Yes	No
D	No	Yes	No
E	Yes	No	Yes
F	No	No	Yes

New Product is coming soon. Please contact Delta for more specification information.

PM05S Series

FEATURES

Electrical

- Efficiency up to 97%
- Wide input range
- Excellent line/loads regulation
- Operating temperature range -40°C to +80°C
- Low ripple and noise
- Low stand-by current
- Short circuit protection, thermal shutdown

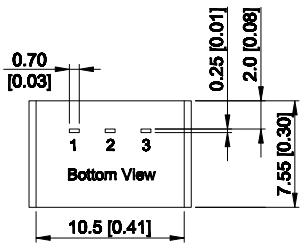
Mechanical

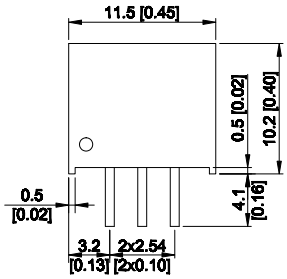
- SIP Package 11.5x7.5x10.2 mm

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency	Package	Size (LxWxH)
PM05S015A	4.75~32V	1.5V	0.5A	0.75W	73%	SIP	11.5x7.5x10.2 mm
PM05S018A	4.75~32V	1.8V	0.5A	0.9W	82%	SIP	11.5x7.5x10.2 mm
PM05S025A	4.75~32V	2.5V	0.5A	1.25W	87%	SIP	11.5x7.5x10.2 mm
PM05S033A	4.75~32V	3.3V	0.5A	1.65W	91%	SIP	11.5x7.5x10.2 mm
PM05S050A	6.5~32V	5.0V	0.5A	2.5W	94%	SIP	11.5x7.5x10.2 mm
PM05S065A	8~32V	6.5V	0.5A	3.25W	95%	SIP	11.5x7.5x10.2 mm
PM05S090A	11~32V	9.0V	0.5A	4.5W	96%	SIP	11.5x7.5x10.2 mm
PM05S120A	15~32V	12V	0.5A	6W	97%	SIP	11.5x7.5x10.2 mm
PM05S150A	18~32V	15V	0.5A	7.5W	97%	SIP	11.5x7.5x10.2 mm

MECHANICAL DRAWING





Pin	Function
1	+Vin
2	GND
3	+Vout

Generation I

FEATURES

Electrical

- High efficiency
- No minimun load required
- Output voltage programmable via external resistor
- Fixed frequency operation
- Input UVLO, Output OCP, OVP, SCP
- Remote ON/OFF
- Remote sense

Mechanical

- Small size with vertically or horizontally mounted through-hole package

Safety & Reliability

- UL 60950-1 & CSA C22.2 No.60950-1-07

NC12S0A0V06PNFA

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency	Package	Size (LxWxH)
NC12S0A0H06PNFA NC12S0A0V06PNFA	10.2~13.8V	0.9~5V	6A	30W	91%	DIP SIP	30.5x15.5x12.3 mm 30.5x15.5x11.7 mm
NC12S0A0H15PNFA NC12S0A0V15PNFA	10.2~13.8V	0.9~5V	15A	75W	91%	DIP SIP	30.5x27.9x12.9 mm 30.5x27.9x11.4 mm
NC12S0A0H20PNFA NC12S0A0V20PNFA	10.2~13.8V	0.9~5V	20A	100W	91%	DIP SIP	30.5x27.9x12.9 mm 30.5x27.9x11.4 mm
NC12S0A0H30PNFA NC12S0A0V30PNFA	10.2~13.8V	0.9~5V	30A	150W	94%	DIP SIP	61.0x31.8x12.32 mm 61.0x31.8x12.32 mm
NC12S0A0H40PNFA NC12S0A0V40PNFA	10.2~13.8V	0.9~5V	40A	200W	92%	DIP SIP	61.0x31.8x12.32 mm 61.0x31.8x12.32 mm
NC12S0A0H60PNFA NC12S0A0V60PNFA	11.04~12.6V	0.9~5V	60A	300W	95%	DIP SIP	81.3x32.0x13.5 mm 81.3x32.0x13.5 mm

NC12S0A0H15PNFA NC12S0A0V15PNFA

NC12S0A0V60PNFA

Datacom POL

Generation II

FEATURES

Electrical

- High efficiency
- No minimun load required
- Output voltage programmable via external resistor
- Fixed frequency operation
- Wide input range
- Input UVLO, Output OCP, OVP, SCP
- Remote ON/OFF
- Remote sense
- Power good function

D12S05020-1

NE12S0A0V03PNFA

Mechanical

- Small size with vertically or horizontally mounted through-hole package

DUS1250E

Safety & Reliability

- UL 60950-1 & CSA C22.2 No.60950-1-07

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency	Package	Size (LxWxH)
NE12S0A0H03PNFA NE12S0A0V03PNFA	3~13.8V	0.59~5V	3A	15W	92.5%	DIP SIP	9.4x15.5x7.9 mm 9.4x15.5x6.6 mm
NE12S0A0H06PNFA NE12S0A0V06PNFA	3~13.8V	0.59~5.1V	6A	30.6W	94.5%	DIP SIP	10.4x16.5x11.5 mm 10.4x16.5x11.0 mm
NE12S0A0H10PNFA NE12S0A0V10PNFA	3~13.8V	0.59~5.1V	10A	51W	94.0%	DIP SIP	10.4x16.5x11.5 mm 10.4x16.5x11.0 mm
DUS1250E	2.97~13.2V	0.59~5V	10A	50W	92.0%	SIP	17.15x13.97x8.07 mm
NE12S0A0V20PNFA	4.5~13.8V	0.59~5.1V	20A	102W	94.0%	SIP	30.5x15.5x12.0 mm
D12S05020-1	4.5~13.2V	0.59~5V	20A	100W	93.4%	SIP	30.5x15.5x12.0 mm
D12F200	4.5~13.8V	0.6~5V	40A	200W	94.0%	SIP	30.5x27.9x11.1 mm
ND12S0A0H40PKFA ND12S0A0V40PKFA	8~13.8V	0.9~5V	40A	200W	94.0%	DIP SIP	36.8x32.2x14.8 mm 36.8x32.2x13.0 mm
D12S2R550	4.5~13.8V	0.6~5V	50A	250W	93.6%	SIP	33.0x28.0x20.2 mm
D12S300-1	4.5~13.8V	0.6~5V	60A	300W	94.0%	SIP	65.53x31.75x11 mm
D12S400	10.8~13.2V	0.8375~5V	80A	400W	94.0%	SIP	61.0x31.8x12.3 mm

D12F200

D12S2R550

D12S300-1

AC-DC
POWER MODULE

AA AB AC Series

Low Power (2~60W)

Delta's expansive product portfolio provides solution capability to meet the specific requirements of industrial application. Products use Delta's creative design topology and patented technologies to achieve extremely high efficiency, low power dissipation and greater reliability. These modules housed in industry standard footprint and pinout are easy to use and available in a fully encapsulated package for harsh environment applications.

	Series	Output Power	Input Voltage(V)	Output Voltage (V)	Safety Mark	Max Eff.	Isolation Voltage	Package
	AA04S AA04D	4W	85-264 VAC	3.3, 5, 9, 12, 15, 24 ±12, ±15, +5/+3.3, +12/+5		77%	3000VDC	PCB Mounting
	AA07S	7W	85-264 VAC	3.3, 5, 12, 15, 24		78%	3000VDC	PCB Mounting
	AA10S	10W	85-264 VAC	3.3, 5, 12, 15, 24		76%	3000VDC	PCB Mounting
	AA15S AA15D AA15T	15W	85-264 VAC	5, 12, 15, 24, 48 ±12, ±15, 5/12, 5/ ±12, 5/±15		79%	3000VDC	PCB/ Chassis Mounting
	AA30S AA30D AA30T	30W	85-264 VAC	5, 12, 15, 24, 48 ±12, ±15, 5/12, 5/ ±12, 5/±15, 5/3.3/ 12, 3.3/5/12		80%	3000VDC	PCB/ Chassis/ Din-Rail Mount
	AA60S	60W	85-264 VAC	5.1, 12, 15, 24, 36		84%	3000VDC	PCB/ Chassis/ Din-Rail Mount
	AB24S AB24D	24W	85-264 VAC	5, 9, 12, 15, 24 ±12, ±15		85%	4000VAC	PCB/ Chassis/ Din-Rail Mount
	AB40S AB40D	40W	85-264 VAC	5, 12, 15, 24 ±12, ±15		85%	4000VDC	PCB/ Chassis/ Din-Rail Mount
	AB60S	60W	85-264 VAC	5.1, 12, 15, 24, 48		88%	4000VDC	PCB/ Chassis/ Din-Rail Mount
	AC02S AC02D	2W	85-264 VAC	8, 14, 24, 8/3.3 8/5, 14/3.3, 14/5		76%	3000VDC	PCB Mounting

PACSR Series

New

FEATURES

Electrical

- High efficiency 94% @220VAC
- Universal input voltage range
- Operating base plate temperature - 40°C to +100°C
- Input Brown-out OTP, Input UVLO, Output OCP, OVP
- Ultra small size 110x50.8x12.7mm
- Minimized inrush control
- Reinforce insulation 3000Vac
- No minimum load required

Safety & Reliability

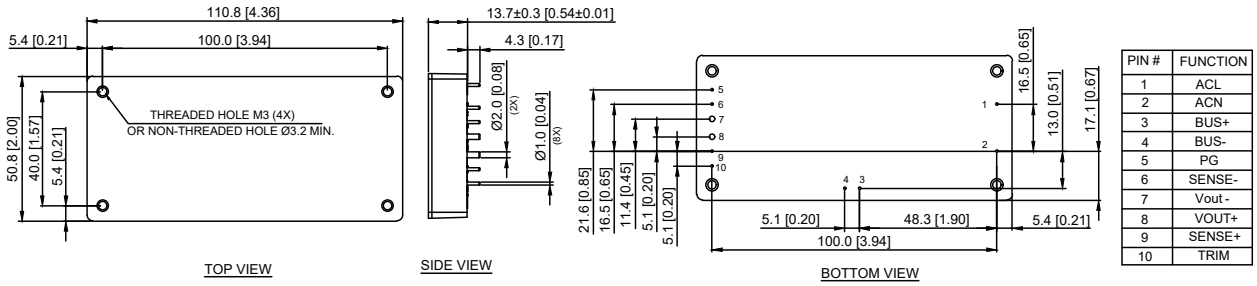
- IEC/UL/EN 60950-1

high isolation

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH) without heat spreader
PACSR12025	85~265V	12V	12~12.6V	25A	300W	91.5%	3000Vac	110.8 x 50.8 x13.7 mm
PACSR12042	85~265V	12V	12~12.6V	42A	500W	91.0%	3000Vac	110.8 x 50.8 x13.7 mm
PACSR24012	85~265V	24V	22.8~26.4V	12.5A	300W	92.5%	3000Vac	110.8 x 50.8 x13.7 mm
PACSR24021	85~265V	24V	22.8~26.4V	21A	500W	93.0%	3000Vac	110.8 x 50.8 x13.7 mm
PACSR28010	85~265V	28V	26.6~30.8V	10.5A	300W	93.0%	3000Vac	110.8 x 50.8 x13.7 mm
PACSR28018	85~265V	28V	27.16~30.8V	18A	500W	93.0%	3000Vac	110.8 x 50.8 x13.7 mm
PACSR48006	85~265V	48V	47~52.8V	6.3A	300W	93.5%	3000Vac	110.8 x 50.8 x13.7 mm
PACSR48010	85~265V	48V	47~52.8V	10.5A	500W	94.0%	3000Vac	110.8 x 50.8 x13.7 mm

MECHANICAL DRAWING



PIN #	FUNCTION
1	ACL
2	ACN
3	BUS+
4	BUS-
5	PG
6	SENSE-
7	Vout -
8	VOUT+
9	SENSE+
10	TRIM

PART NUMBERING SYSTEM

P	AC	S	R	120	25	S
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	Option Code
P - Form factor code	AC - 85~265V	S - Single	R - Regular	120 - 12V 240 - 24V 280 - 28V 480 - 48V	06 - 6.3A 10 - 10.5A 12 - 12.5A 18 - 18A 21 - 21A 25 - 25A 42 - 42A	A - Through hole S - Screw hole(M3*0.5)

FACSR Series

coming soon

FEATURES

Electrical

- Full Load Efficiency up to 93% @220VAC
- Metal Case Box Type Package
- Package Dimension: 116.8x61.0x12.7mm
- Operating Temperature Range - 40°C to +90°C
- Input Brown-Out, Output OCL, OTP, OVP, SHORT protection
- ACOK,DCOK signal
- 12V STBY power
- Parallel operation
- 3000VAC Isolation
- RoHs Compliant
- PMBus

full brick | high isolation | cULus

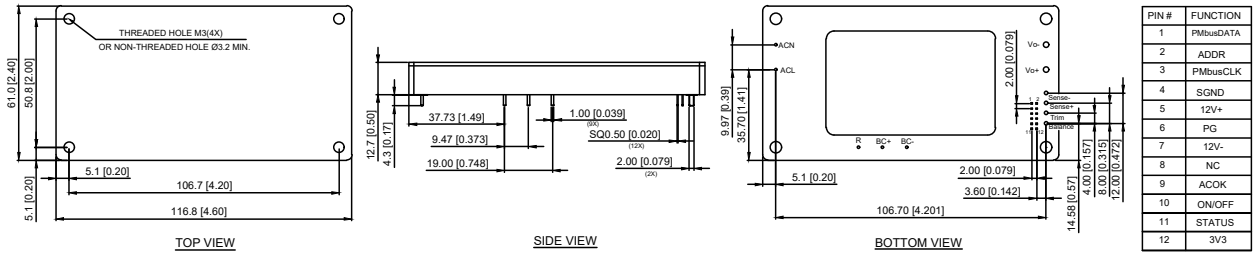
Safety & Reliability

- CE Mark
- EMC compatible: CISPR11 ClassB (with EMC Board)
- UL62368-1 pending

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Vo trim range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
FACSR12067	85~265V	12V	6~14.4V	67A	800W	90%	3000Vac	116.8x61x12.7mm
FACSR28028	85~265V	28V	14~33.6V	28A	800W	92%	3000Vac	116.8x61x12.7mm
FACSR48017	85~265V	48V	24~57.6V	17A	800W	93%	3000Vac	116.8x61x12.7mm

MECHANICAL DRAWING



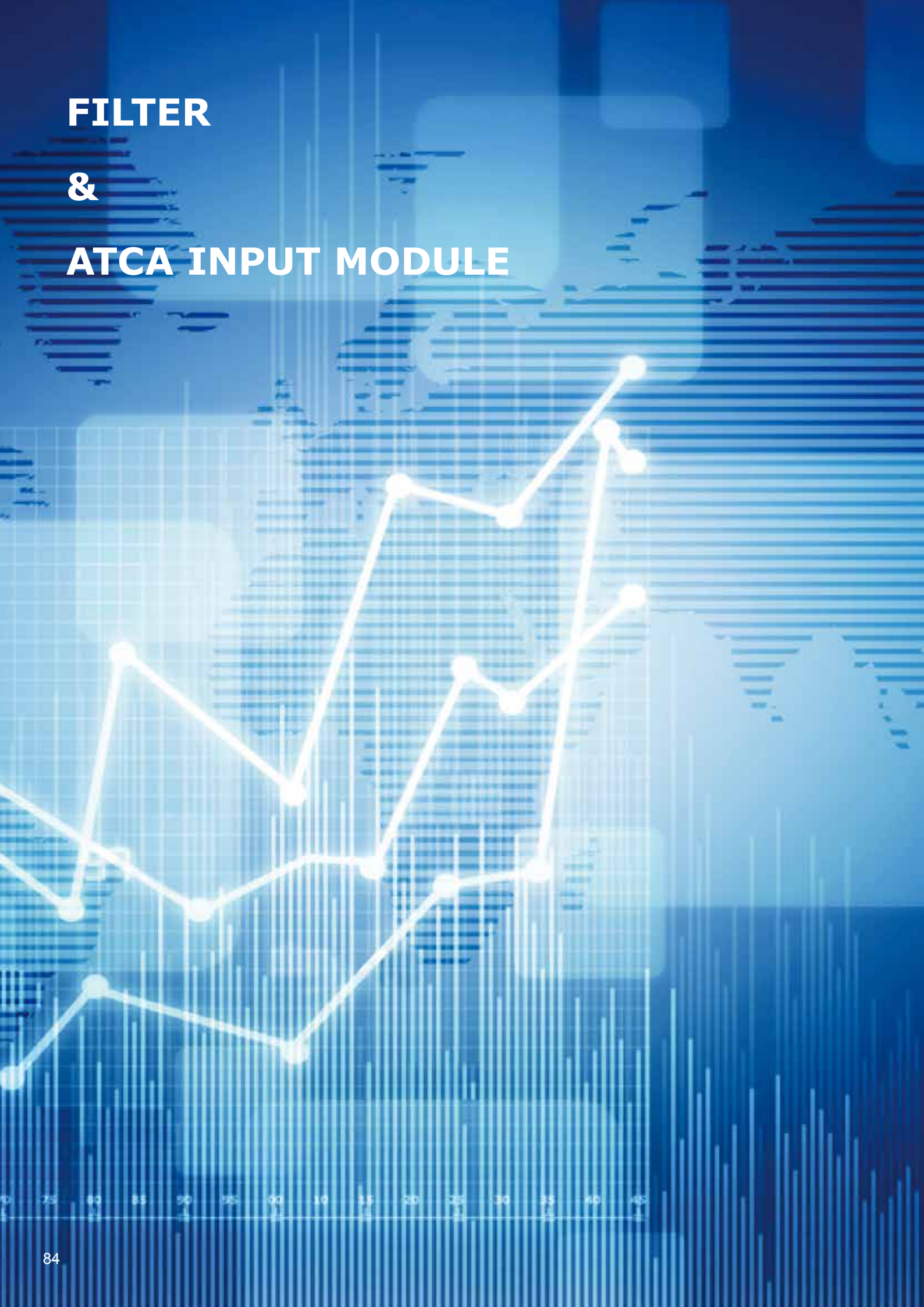
PIN #	FUNCTION
1	PMbusDATA
2	ADDR
3	PMbusCLK
4	SGND
5	12V+
6	PG
7	12V-
8	NC
9	ACOK
10	ON/OFF
11	STATUS
12	3V3

PART NUMBERING SYSTEM

F	AC	S	R	120	67	S	P	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	Option	Option Code	Option
F - Full brick	AC - 85~265V	S - Single	R - Regulator	120 - 12V 280 - 28V 480 - 48V	67 - 67A 28 - 28A 17 - 17A	A - Unthreaded mounting hole S - Threaded mounting hole	P - With pin1~10 N - Without pin1~10	A - Standard Functions

New Product is coming soon. Please contact Delta for more specification information.

FILTER
&
ATCA INPUT MODULE



Filter

The filter modules are designed to reduce the conducted common-mode and differential-mode noise on input or output lines of high-frequency switching power supplies, with the industry standard footprint and pin-out. With creative design technology and optimization of component placement, Delphi FL75L05 filter modules possess outstanding electrical and thermal performance, as well as extremely high reliability under highly stressful operating conditions.

FEATURES

- ROHS Compliant
- Industry standard footprint and pin-out
- Optimized for use with high frequency board mounted DC/DC converters
- ISO 9001, TL 9000, ISO 14001, QS 9000, OHSAS 18001 certified manufacturing facility
- UL/cUL 60950 (US & Canada) recognized, VDE 0805 (IEC60950) licensed


FL75L05 A


FL75L07 A


FL75L10 A


FL75L20 A

Part Number	Input Voltage	Output Current	Common-mode Insertion Loss	Differential-mode Insertion Loss	Package	Size (LxWxH)
FL75L05 A	0~75V	5A	43dB	45dB	Through hole	25.4 x 25.4 x 10.2 mm
FL75L07 A FL75L07 B	0~75V	7A	40dB	70dB	SMD Through hole	25.4 x 25.4 x 12.5 mm 25.4 x 25.4 x 12.7 mm
FL75L10 A	0~75V	10A	30dB	25dB	Through hole	50.8 x 27.9 x 11.7 mm
FL75L20 A FL75L20 B	0~75V	20A	28dB	46dB	Through hole (A: Pin length=5.0mm) (B: Pin length=3.1mm)	50.8 x 40.6 x 12.7 mm

ATCA Input Module

DIM series, dual redundant input power processing isolated DC/DC converter, provide up to 400 watts of power in an industry standard footprint and pinout. The DIM series are designed to simplify the task and reduce the board space of implementing dual redundant, hot swappable 48Vdc power distribution with EMI filtering and inrush current limiting for an ATCA (Advanced Telecommunications Computing Architecture) or other telecom boards. In addition to processing the dual redundant 48V bus, the DIM module also provides isolated auxiliary 3.3V, and/or 5V BLUE_LED power for other housekeeping functions. All models are fully protected from abnormal input/output voltage, current, and temperature conditions.

FEATURES

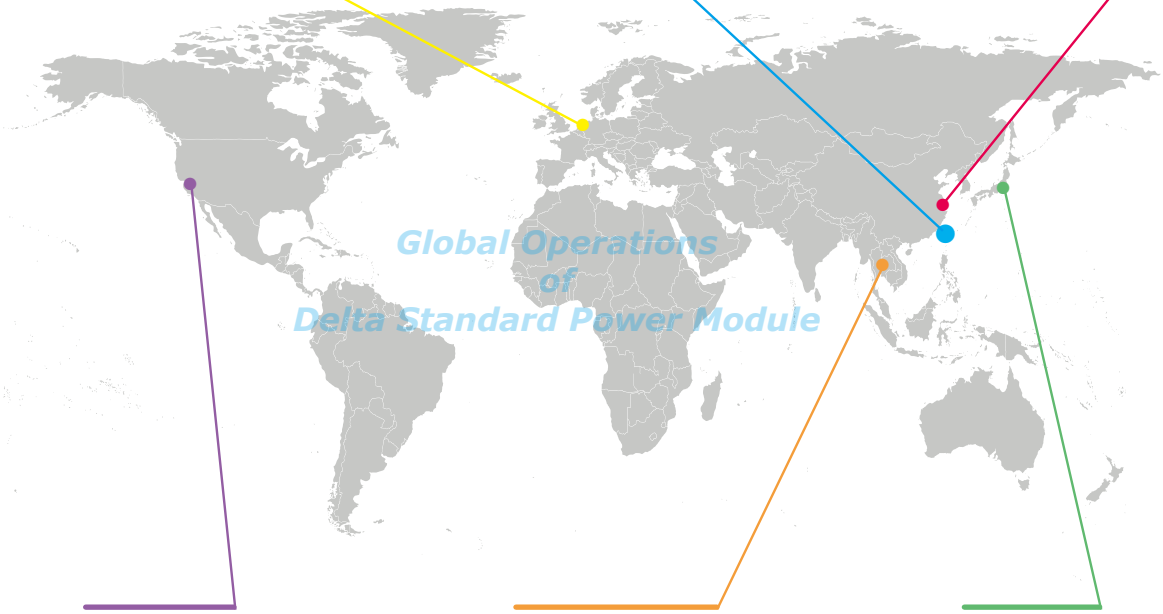
- Input UVLO, Main Output OCP, OTP, Management power: OCP,OTP and OVP
- Input OR'ing for the A/B dual input power feeds as well as A/B Enable signals
- Inrush protection and hot swap capability
- Integral EMI filter designed for the ATCA board to meet CISPR Class B
- Adjustable Hold Up Voltage
- For charging the external holdup capacitors resulting in significant board real estate savings and bleed resistor power dissipation
- I^2C interface for data monitoring and reporting
- Hardware alarms via opto-isolators for loss of A or B Feeds/Fuse
- UL/cUL 60950-1
- ISO 9001, TL 9000, ISO 14001, QS9000, OHSAS18001 certified manufacturing facility

Part Number	Input Voltage	Auxiliary Output 1	Auxiliary Output 2	Output Power	Efficiency	Features	Package	Size (LxWxH)
DIM3R3300SFA	-36 ~ -75V	3.3V/2.4A	-	300W	98.0%		Through hole	70.6 x 36.8 x 12.7 mm
DIM3R3300SFB	-36 ~ -75V	3.3V/2.4A	5V/100mA	300W	98.0%		Through hole	70.6 x 36.8 x 12.7 mm
DIM3R3400SFA	-36 ~ -75V	3.3V/3.6A	5V/150mA	400W	98.2%	digital control	Through hole	58.4 x 36.8 x14.2 mm
DIM3R3500SFA	-36 ~ -75V	3.3V/3.6A	5V/150mA	500W	98.3%	digital control	Through hole	58.4 x 36.8 x14.2 mm

Amsterdam, the Netherlands

Taipei, Taiwan

Shanghai, China



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