



DC/DC Standard Power Module for

5G Telecom Equipment

www.deltaww.com/dcdc



Standard Power Modules for 5G Telecom Equipment

Delta offers AC-DC and DC-DC standard power modules.

The AC-DC power modules provide power output up to 800 W. Compact and fully encapsulated plastic packages with built-in heat dissipation substrates, they are ideal for applications in harsh environments such as micro 5G stations. The entire product line provides a universal input voltage.

Delta's DC-DC isolated converters range from 1/16 to 1/2 bricks and 50 W to 800 W. Supporting input power ranges include 9 ~ 60 V / 18 ~ 75 V / 36 ~ 75 V, which cover varied configurations and applications. Delta also provides selectable 5 V and 12 V buses as well as power amplifiers (28 V, 32 V, 50 V). The sizes and pin specifications of all models comply with industrial standards.

Product Overview

AC-DC Power Module

Series	Product Type	Input Voltage	Output Voltage	Output Power	Digital Control
PACSR	3/4 Brick	85 ~ 265 V _{AC}	12 V, 24 V, 28 V, 48 V	300 ~ 500 W	
FACSR	Full Brick	85 ~ 288 V _{AC}	12 V, 28 V, 48 V	800 W	Yes

DC-DC Isolated Power Module

Series	Product Type	Input Voltage	Output Voltage	Output Power	Digital Control
S36SE	1" x 1"	18 ~ 75 V	3.3 V, 5 V, 12 V	15 ~ 24 W	
V36SE	1/16 Brick	18 ~ 75 V	3.3 V, 5 V, 12 V	50 ~ 60 W	
V48SC	1/16 Brick	36 ~ 75 V	3.3 V, 5 V, 12 V	50 ~ 120 W	
V48SD	1/16 Brick	36 ~ 60 V	5 V, 12 V	60 ~ 120 W	
V48SK	1/16 Brick	36 ~ 75 V	5 V	200 W	
E35SE	1/8 Brick	9 ~ 60 V	5 V, 12 V, 24 V, 48 V	120 ~ 150 W	
E36SC	1/8 Brick	18 ~ 75 V	3.3 V, 5 V, 12 V	108 ~ 125 W	
E48SC	1/8 Brick	36 ~ 75 V	3.3 V, 5 V, 12 V	50 ~ 120 W	
E48SC	1/8 Brick	36 ~ 75 V	12 V	240 ~ 360 W	Yes
E48SC	1/8 Brick	36 ~ 72 V	32 V, 50 V	160 ~ 300 W	Yes
E48SK	1/8 Brick	36 ~ 75 V	12 V	450 W	Yes
Q36SR	1/4 Brick	18 ~ 75 V	12 V	204 ~ 240 W	
Q48SA	1/4 Brick	36 ~ 75 V	28 V	476 ~ 700 W	
Q48SK	1/4 Brick	36 ~ 75 V	12 V	600 ~ 800 W	Yes
H48SC	1/2 Brick	36 ~ 75 V	28 V	450 ~ 700 W	Yes



PACSR Series

Features

Electrical

- Full Load Efficiency up to 94 % @220 V_{AC}
- Universal input voltage range
- Operating base plate temperature -40 °C to +100 °C
- Input Brown-Out, Output OCP, OTP, OVP, SHORT protection
- Minimized inrush control
- 3000 V_{AC} insulation
- No minimum load requirement



Safety & Certificate

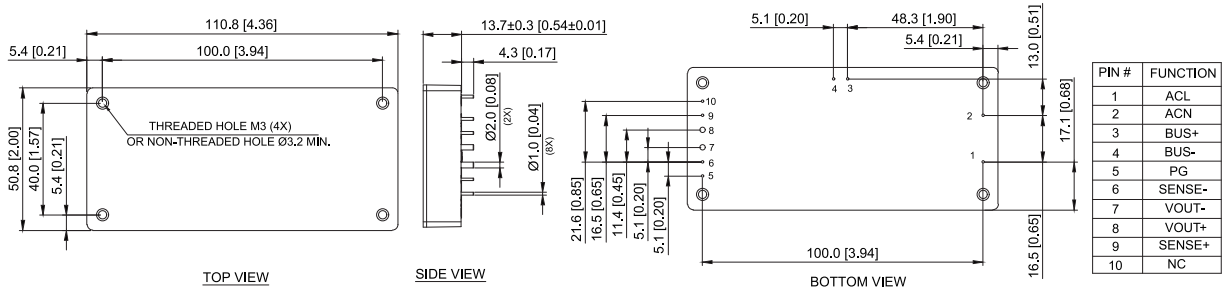
- CE Mark
- IEC/UL/EN 62368-1
- EMC compatible: CISPR11 ClassB (with external filter)



Specifications

Part Number	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
PACSR12025	85 ~ 265 V	12 V	25 A	300 W	91.5 %	3000 V _{AC}	110.8 x 50.8 x13.7 mm
PACSR12042	85 ~ 265 V	12 V	42 A	500 W	91.0 %	3000 V _{AC}	110.8 x 50.8 x13.7 mm
PACSR24012	85 ~ 265 V	24 V	12.5 A	300 W	92.5 %	3000 V _{AC}	110.8 x 50.8 x13.7 mm
PACSR24021	85 ~ 265 V	24 V	21 A	500 W	93.5 %	3000 V _{AC}	110.8 x 50.8 x13.7 mm
PACSR28018	85 ~ 265 V	28 V	18 A	500 W	93.0 %	3000 V _{AC}	110.8 x 50.8 x13.7 mm
PACSR48006	85 ~ 265 V	48 V	6.3 A	300 W	93.5 %	3000 V _{AC}	110.8 x 50.8 x13.7 mm
PACSR48010	85 ~ 265 V	48 V	10.5 A	500 W	94.0 %	3000 V _{AC}	110.8 x 50.8 x13.7 mm

Mechanical Drawing



Part Numbering System

P	AC	S	R	120	42	S
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	Option Code
P - 3/4 Brick	AC - 85 ~ 265 V _{AC}	S - Single	R - R Series	120 - 12 V 240 - 24 V 280 - 28 V 480 - 48 V	06 - 6.3 A 10 - 10.5 A 12 - 12 A 18 - 18 A 21 - 21 A 25 - 25 A 42 - 42 A	A - Through Hole S - Screw Hole (M3*0.5)

FACSR Series

Features

Electrical

- Full Load Efficiency up to 93 % @220 V_{AC}
- PMBus communication
- Support AC frequency 45 ~ 66 Hz
- Wide input voltage range : 85 ~ 288 V_{AC}
- Active current sharing
- Additional Aux power 12 V / 0.2 A
- High Power Factor : 0.99
- Input Brown-Out, Output OCP, OTP, OVP, SHORT protection



Safety & Certificate

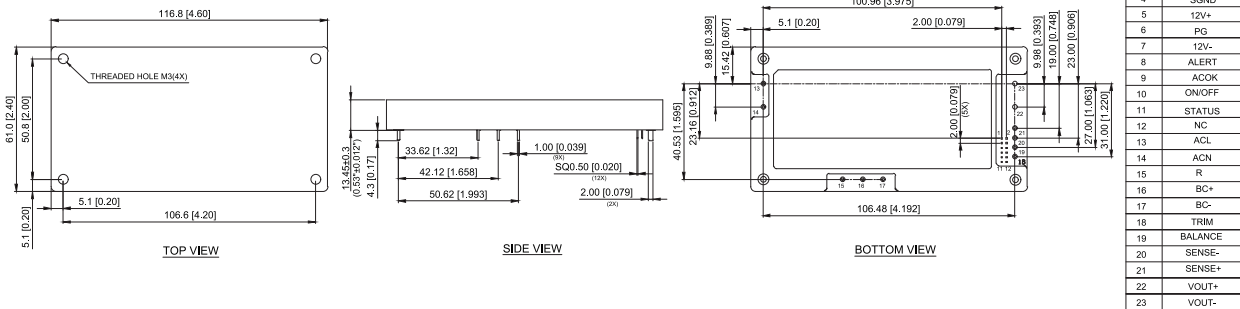
- CE Mark
- IEC/UL/EN 62368-1
- EMC compatible: CISPR11 ClassB (with external filter)



Specifications

Part Number	Input Voltage	Output Voltage	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
FACSR12067	85 ~ 288 V _{AC}	12 V	67 A	800 W	91 %	3000 V _{AC}	116.8 x 61.0 x 13.45 mm
FACSR28028	85 ~ 288 V _{AC}	28 V	28 A	800 W	92.5 %	3000 V _{AC}	116.8 x 61.0 x 13.45 mm
FACSR48017	85 ~ 288 V _{AC}	48 V	17 A	800 W	93 %	3000 V _{AC}	116.8 x 61.0 x 13.45 mm

Mechanical Drawing



Part Numbering System

F	AC	S	R	120	67	S	D	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	Option	Pin Assignment	Option
F - Full Brick	AC - 85 ~ 288 V _{AC}	S - Single	R - R Series	120 - 12 V 280 - 28 V 480 - 48 V	17 - 17 A 28 - 28 A 67 - 67 A	S - Threaded Mounting Hole (M3*0.5)	D - With PMBus Pins (Pin 1 ~ 12)	A - Standard

S36SE Series

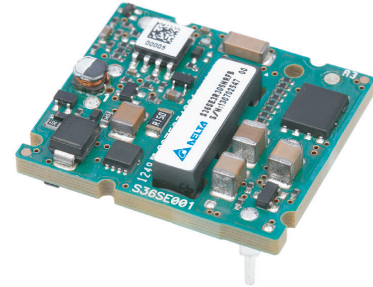
Features

Electrical

- Wide 4:1 input range
- OTP, input UVLO, output OCP, OVP
- 2250 V isolation and basic insulation
- Monotonic startup into normal and pre-bias loads
- No minimum load required
- Remote ON/OFF

Safety & Certificate

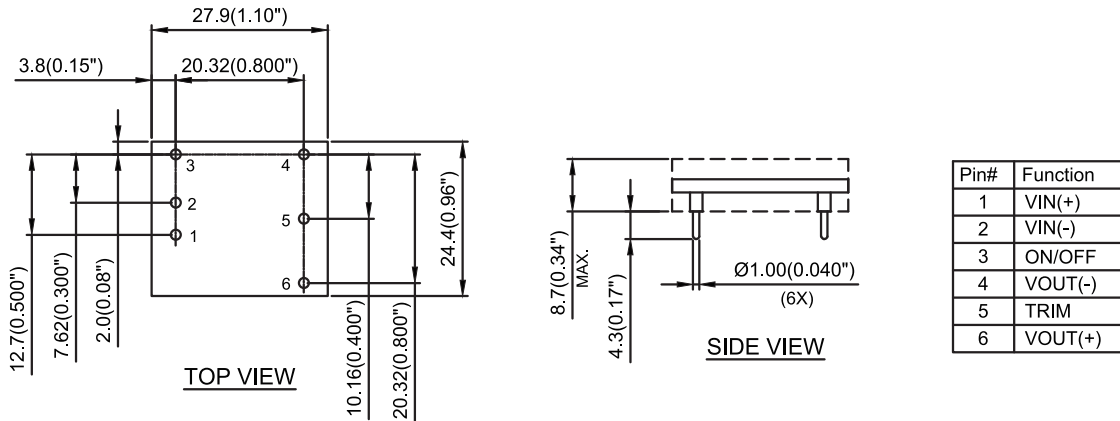
- IEC/EN/UL/CSA 62368-1



Specifications

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

Mechanical Drawing



Part Numbering System

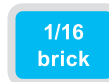
S	36	S	E	050	03	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length/Type	RoHS	Option Code
S - 1" x 1"	36 - 18 ~ 75 V or 36 ~ 75 V	S - Single	E - E Series	3R3 - 3.3 V 050 - 5.0 V 120 - 12 V	01 - 1.3 A 02 - 2 A 03 - 3 A 05 - 5 A	N - Negative P - Positive	K - 0.110" R - 0.170" M - SMD	F - RoHS 6/6 (Lead Free)	A - No Trim Pin B - With Trim Pin (Default)

V36SE Series

Features

Electrical

- Efficiency up to 91 %
- Wide 4:1 input range
- OTP, Input UVLO, Output OCP, OVP (default is auto-recovery)
- 2250 V isolation and basic insulation
- Monotonic startup into normal and pre-biased loads
- No minimum load required
- Remote ON/OFF
- Remote sense



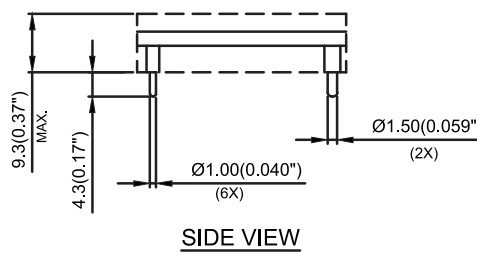
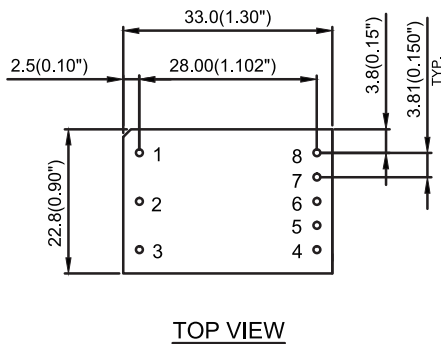
Safety & Certificate

- IEC/EN/UL/CSA 62368-1

Specifications

Part Number	Input Voltage	Output Voltage	Vo Trim Range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
V36SE3R315	18 ~ 75 V	3.3 V	2.64 ~ 3.63 V	15 A	50 W	90.5 %	2250 V	33 x 22.8 x 9.3 mm
V36SE05010	18 ~ 75 V	5 V	4 ~ 5.5 V	10 A	50 W	91.0 %	2250 V	33 x 22.8 x 9.3 mm
V36SE12004	18 ~ 75 V	12 V	9.6 ~ 13.2 V	4.2 A	50 W	88.0 %	2250 V	33 x 22.8 x 8.7 mm
V36SE12005	18 ~ 75 V	12 V	9.6 ~ 13.2 V	5 A	60 W	88.0 %	2250 V	33 x 22.8 x 8 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

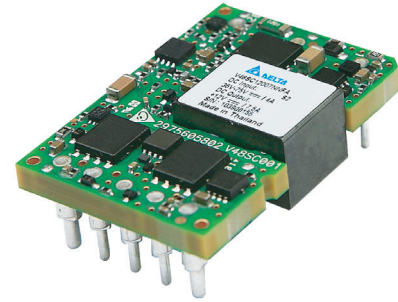
V	36	S	E	050	10	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON / OFF Logic	Pin Length / Type	RoHS	Option Code
V - 1/16 Brick	36 - 18 ~ 75 V	S - Single	E - E Series	3R3 - 3.3 V 050 - 5 V 120 - 12 V	04 - 4.2 A 05 - 5 A 10 - 10 A 15 - 15 A	N - Negative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

V48SC Series

Features

Electrical

- Efficiency up to 92 %
- OTP, Input UVLO, Output OCP, OVP
- 1500 V isolation and basic insulation
- Monotonic startup into normal and pre-biased loads
- No minimum load required
- Remote ON/OFF
- Remote sense



Safety & Certificate

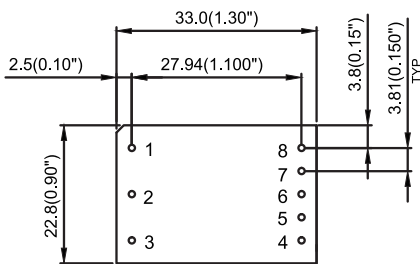
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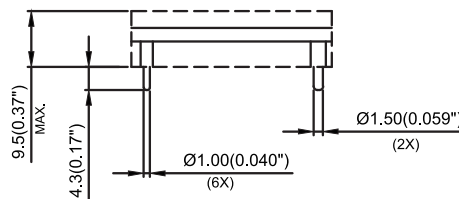
Specifications

Part Number	Input Voltage	Output Voltage	Vo Trim Range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
V48SC3R315	36 ~ 75 V	3.3 V	2.64 ~ 3.63 V	15 A	49.5 W	91.5 %	1,500 V	33 x 22.8 x 9.5 mm
V48SC3R320	36 ~ 75 V	3.3 V	2.64 ~ 3.63 V	20 A	66 W	91.0 %	1,500 V	33 x 22.8 x 9.5 mm
V48SC3R325	36 ~ 75 V	3.3 V	2.64 ~ 3.63 V	25 A	82.5 W	91.0 %	1,500 V	33 x 22.8 x 9.5 mm
V48SC05013	36 ~ 75 V	5 V	4 ~ 5.5 V	13 A	65 W	91.5 %	1,500 V	33 x 22.8 x 9.5 mm
V48SC05017	36 ~ 75 V	5 V	4 ~ 5.5 V	17 A	85 W	91.5 %	1,500 V	33 x 22.8 x 9.5 mm
V48SC05020	36 ~ 75 V	5 V	4 ~ 5.5 V	20 A	100 W	91.0 %	1,500 V	33 x 22.8 x 9.5 mm
V48SC12007	36 ~ 75 V	12 V	9.6 ~ 13.2 V	7.5 A	90 W	92.0 %	1,500 V	33 x 22.8 x 9.5 mm
V48SC12008	36 ~ 75 V	12 V	9.6 ~ 13.2 V	8.3 A	100 W	92.0 %	1,500 V	33 x 22.8 x 9.5 mm
V48SC12010	42 ~ 60 V	12 V	9.6 ~ 13.2 V	10 A	120 W	91.1 %	1,500 V	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	TRIM(+)	Ø1.00
6	TRIM	Ø1.00
7	SENSE(+)	Ø1.00
8	VOUT(+)	Ø1.50

Part Numbering System

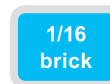
V	48	S	C	050	13	N	N	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length / Type	RoHS	Option Code
V - 1/16 Brick	48 - 36 ~ 75 V	S - Single	C - C Series	3R3 - 3.3 V 050 - 5.0 V 120 - 12 V	07 - 7.5 A 08 - 8.3 A 10 - 10 A 13 - 13 A 15 - 15 A 17 - 17 A 20 - 20 A 25 - 25 A	N - Negative (Default)	K - 0.110" N - 0.145" R - 0.170" M - SMD	F - RoHS 6/6 (Lead Free)	A - Standard Function H - With Baseplate

V48SD Series

Features

Electrical

- High efficiency: 93.5% @ full load
- 2250 V isolation and basic insulation
- Output voltage trim: max 20 %
- OTP, Output OCP, OVP
- Pre-biased startup
- No minimum load required
- Remote ON/OFF
- Remote sense



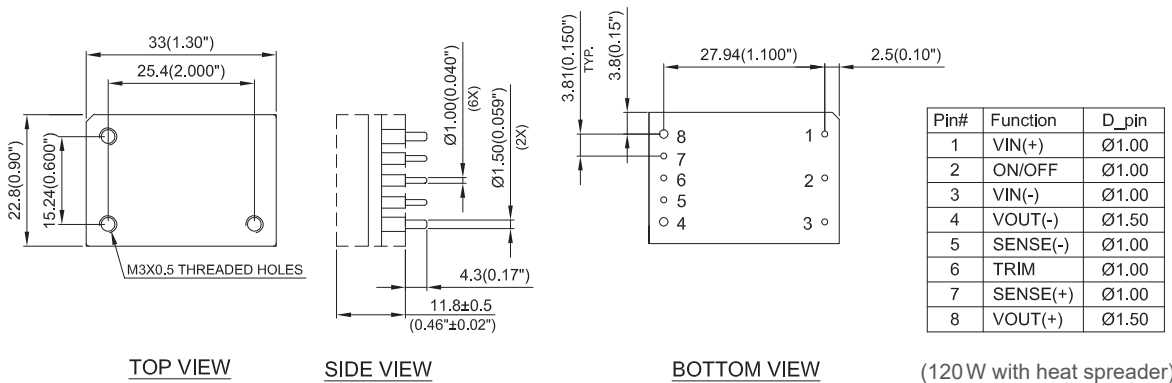
Safety & Certificate

- IEC/EN/UL/CSA 62368-1

Specifications

Part Number	Input Voltage	Output Voltage	Vo Trim Range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
V48SD05012	36 ~ 60 V	5 V	4 ~ 6 V	12 A	60 W	93.50 %	2250 V	33.0 x 22.8 x 11.8 mm
V48SD12005	36 ~ 60 V	12 V	9.6 ~ 14.4 V	5 A	60 W	93.00 %	2250 V	33.0 x 22.8 x 11.8 mm
V48SD05024	36 ~ 60 V	5 V	4 ~ 6 V	24 A	120 W	91.90 %	2250 V	33.0 x 22.8 x 12.2 mm
V48SD12010	36 ~ 60 V	12 V	9.6 ~ 14.4 V	10 A	120 W	91.90 %	2250 V	33.0 x 22.8 x 12.2 mm

Mechanical Drawing



Part Numbering System

V	48	S	D	120	10	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length / Type	RoHS	Option Code
V - 1/16 Brick	48 - 36 ~ 60 V	S - Single	D - D Series	050 - 5.0 V 120 - 12 V	05 - 5 A 10 - 10 A 12 - 12 A 24 - 24 A	N - Negative	N - 0.145" R - 0.170" M - SMD	F - RoHS 6/6 (Lead Free)	A - Standard Functions H - With Baseplate

V48SK Series

Features

Electrical

- High efficiency: 94 % @ 5 V / 40 A
- 2250 V isolation and basic insulation
- Fully protected: Input UVLO. Output OVP, OCP and OTP
- Monotonic and pre-biased startup
- No minimum load required
- Remote ON / OFF
- Remote sense



Safety & Certificate

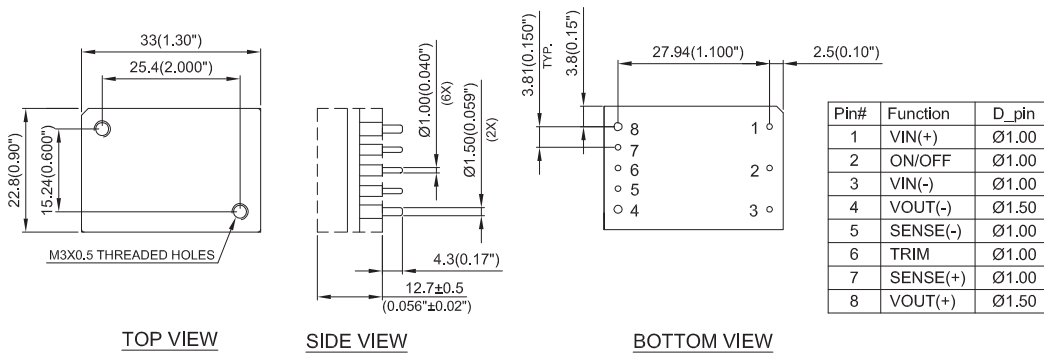
- IEC/EN/UL/CSA 62368-1



Specifications

Part Number	Input Voltage	Output Voltage	Vo Trim Range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
V48SK05040	36 ~ 72 V	5 V	4 ~ 5.5 V	40 A	200 W	94 %	2250 V	33 x 22.8 x 12.7 mm(H)

Mechanical Drawing



Part Numbering System

V	48	S	K	050	40	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length / Type	RoHS	Option Code
V - 1/16 Brick	48 - 36 ~ 72 V	S - Single	K - K Series	050 - 5.0 V	40 - 40 A	N - Negative	N - 0.145" R - 0.170" M - SMD	F - RoHS 6/6 (Lead Free)	A - Open Frame H - With Baseplate

E35SE Series

Features

Electrical

- Efficiency up to 92.2 %
- Wide input voltage range
- Fully protected : Input UVLO, Output OVP, OCP and OTP
- Wide output voltage trim range
- Up to 4242 V_{DC} isolation
- Working altitude up to 5500 m
- No minimum load required



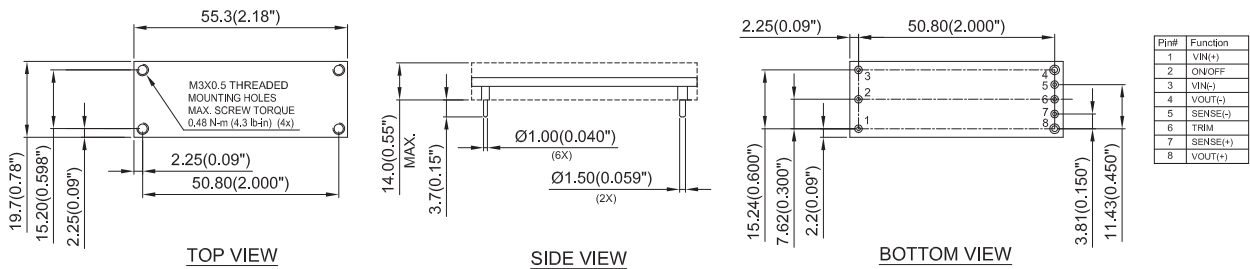
Safety & Certificate

- IEC/EN/UL/CSA 62368-1
- Meet EN50155 and EN45545-2

Specifications

Part Number	Input Voltage	Output Voltage	Vo Trim Range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
E35SE05030	9 ~ 60 V	5 V	4 ~ 6 V	24 A / 30 A	Max. 150 W	92.2 %	4242 V	55.3 x 19.7 x 14.0 mm(H)
E35SE12013	9 ~ 60 V	12 V	9.6 ~ 14.4 V	10 A / 13 A	Max. 150 W	91.0 %	4242 V	55.3 x 19.7 x 14.0 mm(H)
E35SE24006	9 ~ 60 V	24 V	19.2 ~ 28.8 V	5 A / 6 A	Max. 150 W	92.2 %	4242 V	55.3 x 19.7 x 14.0 mm(H)
E35SE48003	9 ~ 60 V	48 V	38.4 ~ 57.6 V	2.5 A / 3 A	Max. 150 W	91.2 %	4242 V	55.3 x 19.7 x 14.0 mm(H)

Mechanical Drawing



Part Numbering System

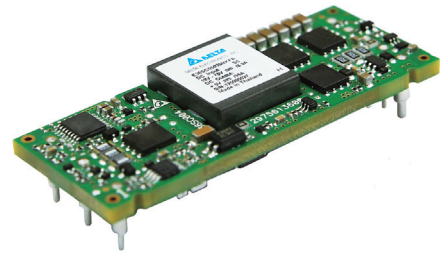
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length / Type	Operating Ambient Temperature	Option Code
E - 1/8 Brick	35 - 9 ~ 60 V	S - Single	E - E Series	050 - 5 V 120 - 12 V 240 - 24 V 480 - 48 V	03 - 3 A 06 - 6 A 13 - 13 A 30 - 30 A	P - Positive	D - 0.24" R - 0.17"	P - -40 ~ 85°C	A - Open Frame H - With Baseplate G - With Baseplate and Potting

E36SC Series

Features

Electrical

- High efficiency: 92 %
- Wide 4:1 input range
- OTP, Input UVLO, Output OCP, OVP
- 1500 V isolation and basic insulation
- Monotonic startup into normal and pre-biased loads
- No minimum load required
- Remote ON/OFF
- Remote sense



1/8
brick

4:1
input



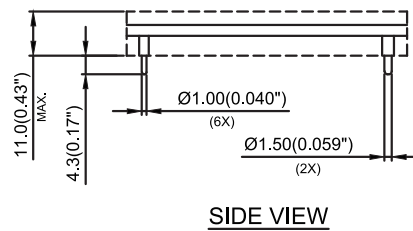
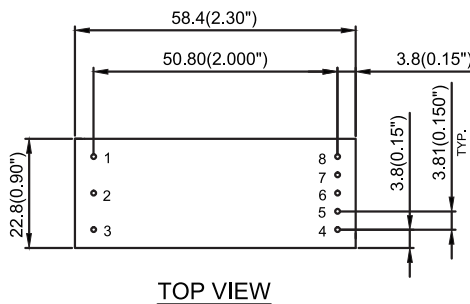
Safety & Certificate

- IEC/EN/UL/CSA 62368-1

Specifications

Part Number	Input Voltage	Output Voltage	Vo Trim Range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
E36SC3R335	18 ~ 75 V	3.3 V	2.97 ~ 3.63 V	35 A	116 W	91 %	1500 V	58.4 x 22.8 x 11 mm
E36SC05025	18 ~ 75 V	5 V	4 ~ 5.5 V	25 A	125 W	91 %	1500 V	58.4 x 22.8 x 11 mm
E36SC12009	18 ~ 75 V	12 V	10.8 ~ 13.2 V	9 A	108 W	92 %	1500 V	58.4 x 22.8 x 11 mm
E36SC12010	18 ~ 75 V	12 V	10.8 ~ 13.2 V	10 A	120 W	92 %	1500 V	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

Part Numbering System

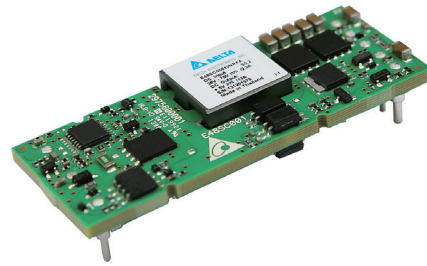
E	36	S	C	050	25	N	K	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length / Type	RoHS	Option Code
E - 1/8 Brick	35 - 18 ~ 75 V	S - Single	C - C Series	3R3 - 3.3 V 050 - 5.0 V 120 - 12 V	09 - 9 A 10 - 10 A 25 - 25 A 35 - 35 A	N - Negative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

E48SC Series

Features

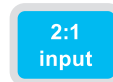
Electrical

- Efficiency up to 92 %
- Input UVLO, Output OCP, OVP, OTP
- 2250 V Isolation and basic insulation
- Pre-biased startup
- No minimum load required
- Remote ON/OFF
- Remote sense



Safety & Certificate

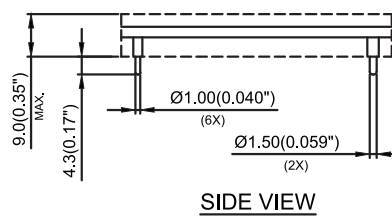
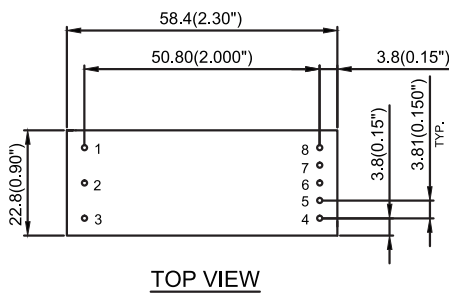
- IEC/EN/UL/CSA 62368-1



Specifications

Part Number	Input Voltage	Output Voltage	Vo Trim Range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
E48SC3R315	36 ~ 75 V	3.3 V	2.97 ~ 3.63 V	15 A	50 W	91.0 %	2250 V	58.4 x 22.8 x 9 mm
E48SC3R320	36 ~ 75 V	3.3 V	2.64 ~ 3.63 V	20 A	66 W	91.0 %	2250 V	58.4 x 22.8 x 9 mm
E48SC3R325	36 ~ 75 V	3.3 V	2.97 ~ 3.63 V	25 A	82.5 W	91.0 %	1500 V	58.4 x 22.8 x 10 mm
E48SC05012	36 ~ 75 V	5 V	4.5 ~ 5.5 V	12 A	60 W	91.5 %	1500 V	58.4 x 22.8 x 9 mm
E48SC05015	36 ~ 75 V	5 V	4.5 ~ 5.5 V	15 A	75 W	91.0 %	1500 V	58.4 x 22.8 x 9 mm
E48SC12005	36 ~ 75 V	12 V	9.6 ~ 13.2 V	5 A	60 W	92.0 %	2250 V	58.4 x 22.8 x 8.4 mm
E48SC12008	36 ~ 75 V	12 V	10.8 ~ 13.2 V	8 A	96 W	92.0 %	2250 V	58.4 x 22.8 x 8.4 mm
E48SC12010	36 ~ 75 V	12 V	10.8 ~ 13.2 V	10 A	120 W	91.7 %	2250 V	58.4 x 22.8 x 8.4 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	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 / Type	RoHS	Option Code
E - 1/8 Brick	48 - 36 ~ 75 V	S - Single	C - C Series	3R3 - 3.3 V 050 - 5.0 V 120 - 12 V	05 - 5 A 08 - 8 A 10 - 10 A 12 - 12 A 15 - 15 A 20 - 20 A 25 - 25 A	N - Negative	K - 0.110" N - 0.145" R - 0.170"	F - RoHS 6/6 (Lead Free)	A - Standard Function H* - With Baseplate

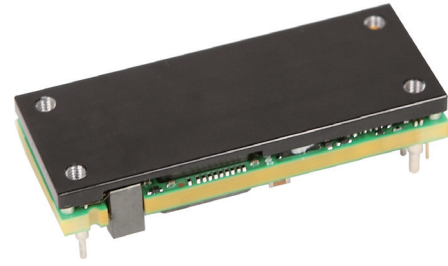
*Applied to E48SC12005, E48SC12008, E48SC12010 only

E48SC Series - Digital Control

Features

Electrical

- Efficiency up to 95.2 %
- Fully protected: Input UVLO, Output OCP and OVP, OTP
- 1500 V isolation
- Pre-biased startup
- No minimum load required
- Remote ON/OFF
- PMBus function (optional)



Safety & Certificate

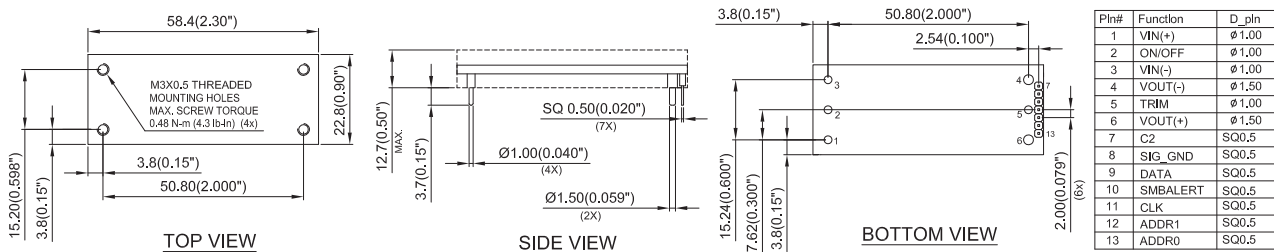
- IEC/EN/UL/CSA 62368-1



Specifications

Part Number	Input Voltage	Output Voltage	Vo Trim Range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
E48SC12020	36 ~ 75 V	12 V	8 ~ 13.2 V	20 A	240 W	95.2 %	1500 V	58.4 x 22.8 x 12.7 mm(H)
E48SC12025	36 ~ 75 V	12 V	8 ~ 13.2 V	25 A	300 W	95.0 %	1500 V	58.4 x 22.8 x 12.7 mm(H)
E48SC12030	36 ~ 75 V	12 V	8 ~ 13.2 V	30 A	360 W	94.5 %	1500 V	58.4 x 22.8 x 12.7 mm(H)

Mechanical Drawing



Part Numbering System

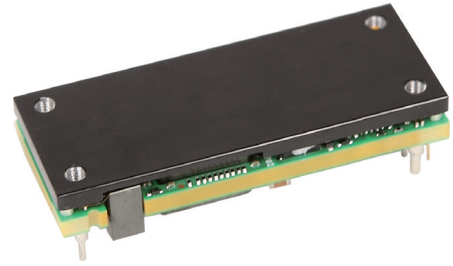
E	48	S	C	120	20	N	R	F	A																												
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length	RoHS	Option Code																												
E - 1/8 Brick	48 - 36 ~ 75 V	S - Single	C - C Series	120 - 12 V	20 - 20 A 25 - 25 A 30 - 30 A	N - Negative P - Positive	K - 0.110" N - 0.145" R - 0.170"	F - RoHS 6/6 (Lead Free)	<table border="1"> <thead> <tr> <th></th> <th>PMBus Pin (7~13 Pin)</th> <th>Trim Pin</th> <th>Baseplate</th> </tr> </thead> <tbody> <tr><td>A</td><td>Yes</td><td>Yes</td><td>No</td></tr> <tr><td>B</td><td>No</td><td>Yes</td><td>No</td></tr> <tr><td>C</td><td>No</td><td>Yes</td><td>Yes</td></tr> <tr><td>D</td><td>No</td><td>No</td><td>No</td></tr> <tr><td>E</td><td>No</td><td>No</td><td>Yes</td></tr> <tr><td>H</td><td>Yes</td><td>Yes</td><td>Yes</td></tr> </tbody> </table>		PMBus Pin (7~13 Pin)	Trim Pin	Baseplate	A	Yes	Yes	No	B	No	Yes	No	C	No	Yes	Yes	D	No	No	No	E	No	No	Yes	H	Yes	Yes	Yes
	PMBus Pin (7~13 Pin)	Trim Pin	Baseplate																																		
A	Yes	Yes	No																																		
B	No	Yes	No																																		
C	No	Yes	Yes																																		
D	No	No	No																																		
E	No	No	Yes																																		
H	Yes	Yes	Yes																																		

E48SC Series - Digital Control

Features

Electrical

- Peak Efficiency up to 94.8 %
- OTP, Input UVLO, Output OCP, OVP
- 2250 V_{DC} isolation
- Pre-biased startup
- No minimum load required
- Remote ON/OFF
- PMBus function (optional)
- Wide V_{out} trim range -50 % ~ +10 %



Safety & Certificate

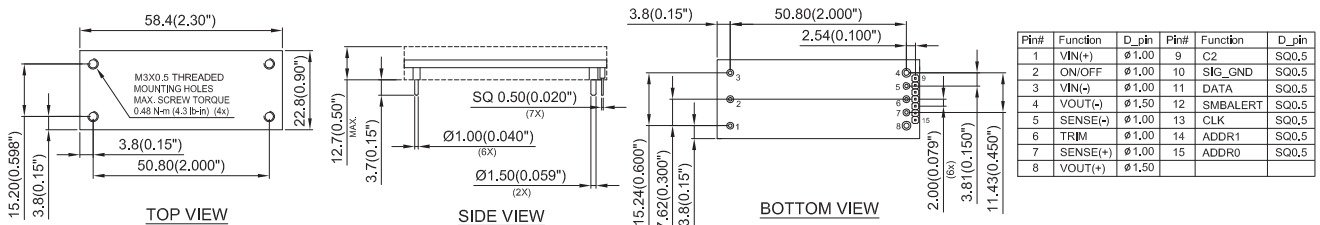
- IEC/EN/UL/CSA 62368-1



Specifications

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

Mechanical Drawing



Part Numbering System

Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length / Type	Pin Assignment	Option Code
E - 1/8 Brick	48 - 36 ~ 72 V	S - Single	C - C Series	320 - 32 V 500 - 50 V	05 - 5 A 06 - 6 A 09 - 9 A	N - Negative	R - 0.170" N - 0.145"	A - Analog Pins D - Digital Pins (Pin 9 ~ 15)	A - Open Frame H - With Baseplate

E48SK Series

Features

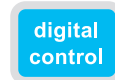
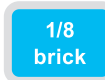
Electrical

- Typical efficiency up to 96 %
- PMBus communication
- Fully protected: Input UVP, output OVP, OCP and OTP
- 2250 V_{DC} isolation
- Monotonic and Pre-biased startup
- No minimum load required
- Remote ON/OFF



Safety & Certificate

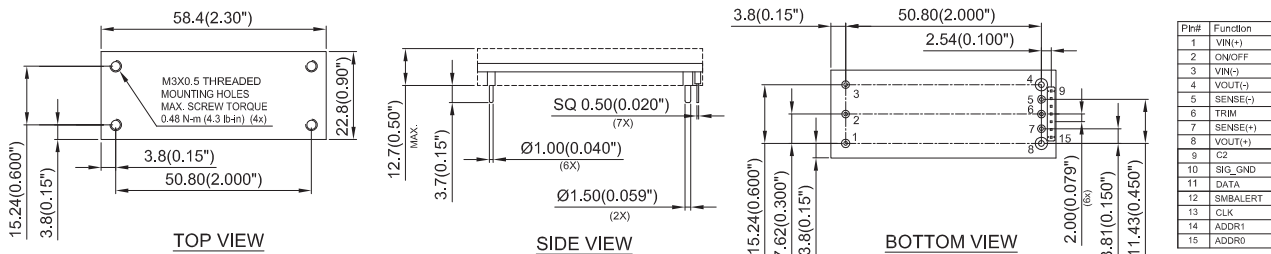
- IEC/EN/UL/CSA 62368-1



Specifications

Part Number	Input Voltage	Output Voltage	Vo Trim Range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
E48SK12038	36 ~ 75 V	12 V	8 ~ 13.2 V	37.5 A	450 W	95.6 %	2250 V	58.4 x 22.8 x 12.7 mm

Mechanical Drawing



Part Numbering System

E	48	S	K	120	38	N	R	A	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length / Type	Pin Assignment	Option Code
E - 1/8 Brick	48 - 36 ~ 75 V	S - Single	K - K Series	120 - 12 V	38 - 37.5 A	N - Negative	N - 0.145" R - 0.170"	A - Analog Pins D - Digital Pins I - IBC Pins	H - With Baseplate

Q48SK Series

Features

Electrical

- Efficiency up to 95.4 % at full load
- 2250 V_{DC} isolation
- Fully protected: Input UVP, output OVP, OCP and OTP
- Monotonic and Pre-bias startup
- No minimum load required
- Remote ON/OFF
- Remote sense



Safety & Certificate

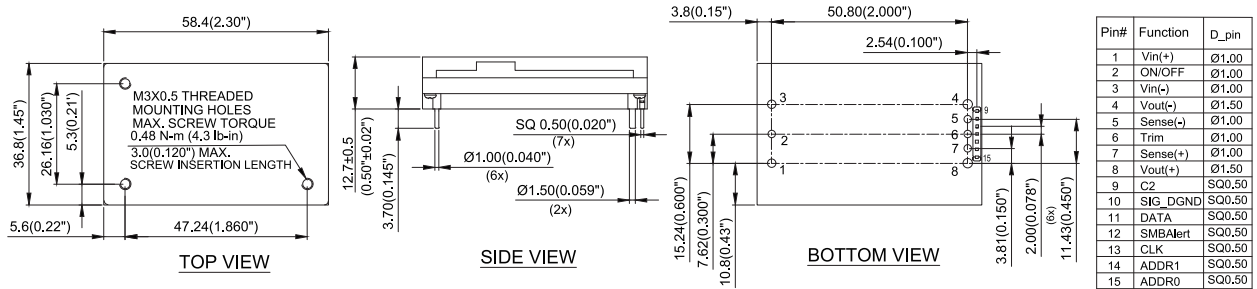
- IEC/EN/UL/CSA 62368-1



Specifications

Part Number	Input Voltage	Output Voltage	Vo Trim Range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
Q48SK12050	36 ~ 75 V	12 V	9.6 ~ 13.2 V	50 A	600 W	95.40 %	2250 V	58.4x36.8x12.7 mm
Q48SK12067	36 ~ 75 V	12 V	9.6 ~ 13.2 V	67 A	800 W	95.40 %	2250 V	58.4x36.8x12.7 mm

Mechanical Drawing



Part Numbering System

Q	48	S	K	120	67	N	R	D	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length / Type	Pin Assignment	Option Code
Q - 1/4 Brick	48 - 36 ~ 75 V	S - Single	K - K Series	120 - 12 V	50 - 50 A 67 - 67 A	N - Negative P - Positive	N - 0.145" R - 0.170"	A - Analog Pins D - Digital Pins	H - With Baseplate

Q48SA Series

Features

Electrical

- Typical efficiency up to 96 %
- Output voltage trim range 14 ~ 35 V
- 2250 V isolation and basic insulation
- OTP, Output OCP hiccup mode, OVP
- Excellent conduction cooling performance
- Remote ON/OFF
- Remote sense



Safety & Certificate

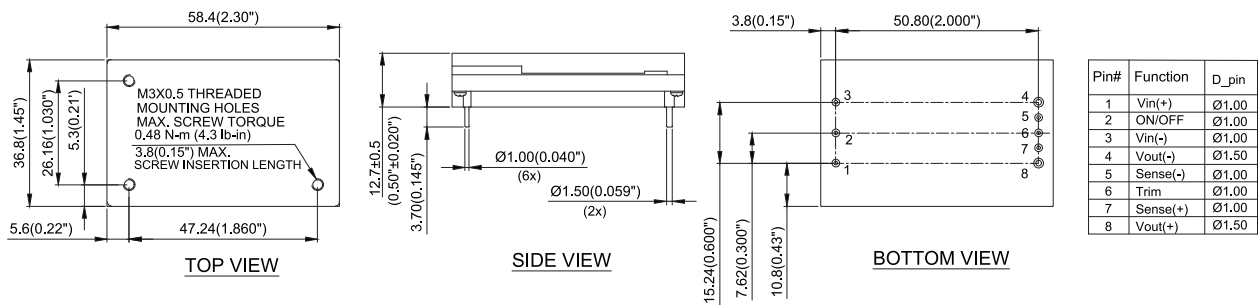
- IEC/EN/UL/CSA 62368-1



Specifications

Part Number	Input Voltage	Output Voltage	Vo Trim Range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
Q48SA28017	36 ~ 75 V	28 V	14 ~ 35 V	17 A	476 W	96.00 %	2250 V	58.4 x 36.8 x 10.9 mm
Q48SA28025	36 ~ 75 V	28 V	14 ~ 35 V	25 A	700 W	95.60 %	2250 V	58.4 x 36.8 x 12.7 mm

Mechanical Drawing



Part Numbering System

Q	48	S	A	280	25	N	N	F	H
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length / Type	RoHS	Option Code
Q - 1/4 Brick	48 - 36 ~ 75 V	S - Single	A - A Series	280 - 28 V	17 - 17 A 25 - 25 A	N - Negative P - Positive	N - 0.145" R - 0.170"	F - RoHS 6/6 (Lead Free)	A - Open Frame H - With Baseplate

Q36SR Series

Features

Electrical

- Efficiency up to 93 %
- Wide 4:1 input range
- OTP, Input UVLO, Output OCP, OVP
- 1500 V isolation and basic insulation
- Monotonic startup into normal and pre-biased loads
- No minimum load required
- Remote ON/OFF
- Remote sense



Safety & Certificate

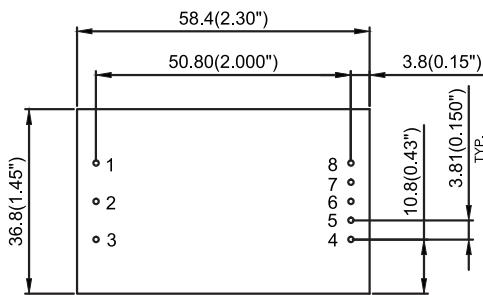
- IEC/EN/UL/CSA 62368-1



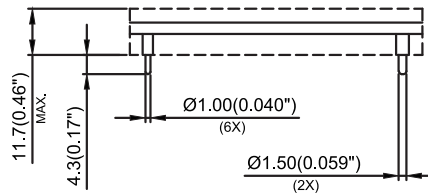
Specifications

Part Number	Input Voltage	Output Voltage	Vo Trim Range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
Q36SR12017	18~75 V	12 V	10.8~13.2 V	17 A	204 W	93 %	1500 V	58.4 x 36.8 x 11.7 mm
Q36SR12019	18~75 V	12 V	10.8~13.2 V	19 A	228 W	93 %	1500 V	58.4 x 36.8 x 11.7 mm
Q36SR12020	18~75 V	12 V	10.8~13.2 V	20 A	240 W	93 %	1500 V	58.4 x 36.8 x 11.7 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

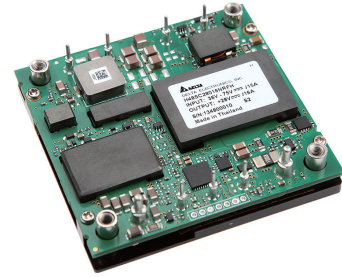
Q	36	S	R	120	17	N	R	F	A
Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length / Type	RoHS	Option Code
Q - 1/4 Brick	36 - 18 ~ 75 V	S - Single	R - R Series	120 - 12 V	17 - 17 A 19 - 19 A 20 - 20 A	N - Negative P - Positive	K - 0.11" N - 0.145" R - 0.170"	F - RoHS 6/6 (Lead Free)	A - Open Frame H - With Baseplate

H48SC Series

Features

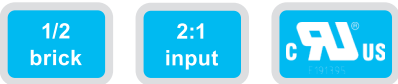
Electrical

- Efficiency up to 95 %
- OTP, Input UVLO, Output OCP hiccup mode, OVP
- 1500V isolation and basic insulation
- Monotonic startup into normal and pre-biased loads
- No minimum load required
- Remote ON/OFF
- PMBUS function



Safety & Certificate

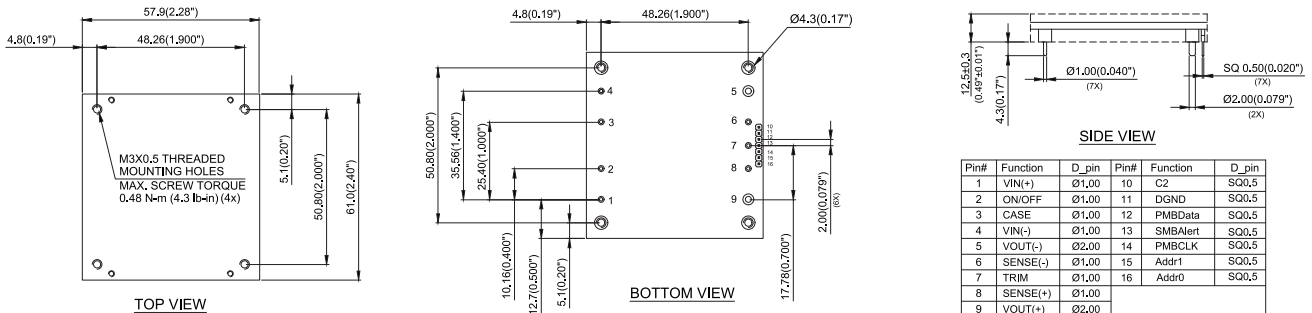
- IEC/EN/UL/CSA 62368-1 (for H48SC28025 only)
- IEC/EN/UL/CSA 60950-1



Specifications

Part Number	Input Voltage	Output Voltage	Vo Trim Range	Output Current	Output Power	Efficiency	Isolation Voltage	Size (LxWxH)
H48SC28016	36 ~ 75 V	28 V	23 ~ 33 V	16 A	450 W	95 %	1500 V	61 x 57.9 x 12.5 mm
H48SC28025	36 ~ 75 V	28 V	23 ~ 34 V	25 A	700 W	95 %	1500 V	61 x 57.9 x 12.7 mm

Mechanical Drawing

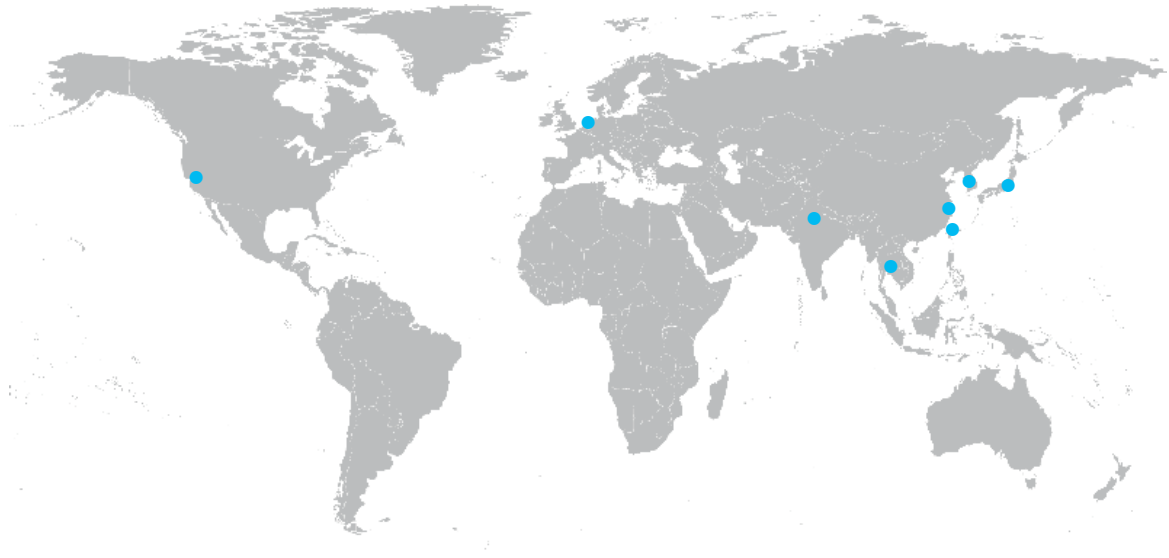


Part Numbering System

Form Factor	Input Voltage	Number of Outputs	Product Series	Output Voltage	Output Current	ON/OFF Logic	Pin Length / Type	Pin Assignment	Option Code
H - 1/2 Brick	48 - 36 ~ 75 V	S - Single	C - C Series	280 - 28 V	16 - 16 A 25 - 25 A	N - Negative P - Positive	N - 0.145" R - 0.170"	F - Analog Pin D* - Digital Pin	H - With Baseplate

*Applied to H48SC28025 only

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