# Product data sheet Characteristics

## SSD1A360BDC3

Harmony, Solid state relay, 60 A, DIN rail mount, zero voltage switching, input 4...32 V DC, output 48...600 V AC





#### Main

Range of Product	Harmony Solid State Relays
Product or Component Type	Solid state relay up to 75 A
Device short name	SSD1
Number of Channels	1
Number of phases	1 phase
Product configuration type	Contactor configuration with pluggable spring input
Mounting support	35 mm symmetrical DIN rail conforming to EN/IEC 60715
Rated current	60 A
Output switching mode	Zero voltage switching

#### Complementary

26AWG 12 for input	Complementary	
Output voltage 48600 V AC Control circuit voltage 432 V DC Tightening torque 22.2 N.m for load output 1820 lb.in for load output Connections - terminals Plug-inspring terminals, clamping connection capacity:0.133.30 mm², AWG 26AWG 12 for input Clamp terminal, clamping connection capacity:1026.67 mm², AWG 8AW for output Dielectric strength 4 KV AC for input/output circuit 4 kV AC for input or output to case Rated impulse withstand voltage 6 KV for input or output to case Insulation resistance 1000 MChm at 500 V DC Local signalling For control voltage LED (green) Pick-up voltage 4 V DC turn-on Drop-out voltage 1 V DC turn-off Input current range 1015 mA Solid state switching type Zero voltage switching Load current 0.1560 A Transient overvoltage 1200 V Inrush current 1350 A Maximum voltage drop <1.2 V on-state Motor controller rating 1.5 KW/2 Hp at 120 V AC	Operating frequency	47440 Hz
Control circuit voltage  432 V DC  Tightening torque  22.2 N.m for load output 1820 lb.in for load output 1820 lb.in for load output  Connections - terminals  Plug-inspring terminals, clamping connection capacity:0.133.30 mm², AWG 26AWG 12 for input Clamp terminal, clamping connection capacity:1026.67 mm², AWG 8AW for output  Dielectric strength  4 KV AC for input/output circuit 4 kV AC for input/output circuit 6 kV for input/output circuit 6 kV for input or output to case  Insulation resistance  1000 MOhm at 500 V DC  Local signalling  For control voltage LED (green)  Pick-up voltage  4 V DC turn-on  Drop-out voltage  1 V DC turn-off  Input current range  30id state switching type  Zero voltage switching  Load current  0.1560 A  Transient overvoltage  Insulation resistance  1350 A  Maximum voltage drop  432 V DC  560 A  560 A  Maximum voltage drop  432 V DC  432 V DC  432 V DC  560 A  Maximum voltage drop  432 V DC  432 V DC  560 A  Maximum voltage drop  432 V DC  560 A  432 V DC  560 A  560 A  Maximum voltage drop  432 V On-state	Rated duty	Uninterrupted
Tightening torque  22.2 N.m for load output  1820 lb.in for load output  Connections - terminals  Plug-inspring terminals, clamping connection capacity:0.133.30 mm², AWG 26AWG 12 for input Clamp terminal, clamping connection capacity:1026.67 mm², AWG 8AW for output  Dielectric strength  4 KV AC for input/output circuit 4 kV AC for input or output to case  Rated impulse withstand voltage  6 KV for input or output to case  Insulation resistance  1000 MOhm at 500 V DC  Local signalling  For control voltage LED (green)  Pick-up voltage  4 V DC turn-on  Drop-out voltage  1 V DC turn-off  Input current range  1015 mA  Solid state switching type  Zero voltage switching  Load current  0.1560 A  Transient overvoltage  1200 V  Inrush current  1350 A  Maximum voltage drop  4.2 V on-state  Motor controller rating  1.5 KW/2 Hp at 120 V AC	Output voltage	48600 V AC
1820 lb.in for load output  Connections - terminals Plug-inspring terminals, clamping connection capacity:0.133.30 mm², AWG 26AWG 12 for input Clamp terminal, clamping connection capacity:1026.67 mm², AWG 8AW for output  Dielectric strength 4 KV AC for input/output circuit 4 kV AC for input or output to case  Rated impulse withstand voltage 6 KV for input/output circuit 6 kV for input or output to case  Insulation resistance 1000 MOhm at 500 V DC  Local signalling For control voltage LED (green)  Pick-up voltage 4 V DC turn-on  Drop-out voltage 1 V DC turn-off  Input current range 1015 mA  Solid state switching type Zero voltage switching Load current 0.1560 A  Transient overvoltage 1200 V  Inrush current 1350 A  Maximum voltage drop 4.5 KW/2 Hp at 120 V AC	Control circuit voltage	432 V DC
26AWG 12 for input Clamp terminal, clamping connection capacity:1026.67 mm², AWG 8AW for output  Dielectric strength	Tightening torque	· ·
Rated impulse withstand voltage  6 KV for input/output circuit 6 kV for input or output to case  Insulation resistance  1000 MOhm at 500 V DC  Local signalling  For control voltage LED (green)  Pick-up voltage  4 V DC turn-on  Drop-out voltage  1 V DC turn-off  Input current range  1015 mA  Solid state switching type  Zero voltage switching  Load current  0.1560 A  Transient overvoltage  1200 V  Inrush current  1350 A  Maximum voltage drop  4 kV AC for input or output to case  6 KV for input/output circuit 6 kV for input or output be case  1000 MOhm at 500 V DC  Local signalling  For control voltage LED (green)  4 V DC turn-on  0 1015 mA  2 Zero voltage switching  1 2 Zero voltage switching  1 2 V Or-state  Motor controller rating	Connections - terminals	Clamp terminal, clamping connection capacity:1026.67 mm², AWG 8AWG 3
Insulation resistance 1000 MOhm at 500 V DC  Local signalling For control voltage LED (green)  Pick-up voltage 4 V DC turn-on  Drop-out voltage 1015 mA  Solid state switching type Zero voltage switching  Load current 0.1560 A  Transient overvoltage 1200 V  Inrush current 1350 A  Maximum voltage drop <1.5 KW/2 Hp at 120 V AC	Dielectric strength	· ·
Local signalling  For control voltage LED (green)  Pick-up voltage  4 V DC turn-on  Drop-out voltage  1 V DC turn-off  Input current range  50lid state switching type  Zero voltage switching  Load current  0.1560 A  Transient overvoltage  1200 V  Inrush current  1350 A  Maximum voltage drop  4 V DC turn-off  1015 mA  2ero voltage switching  1200 V  Inrush current  1350 A  Maximum voltage drop  41.2 V on-state  Motor controller rating  1.5 KW/2 Hp at 120 V AC	Rated impulse withstand voltage	
Pick-up voltage 4 V DC turn-on  Drop-out voltage 1 V DC turn-off  Input current range 1015 mA  Solid state switching type Zero voltage switching  Load current 0.1560 A  Transient overvoltage 1200 V  Inrush current 1350 A  Maximum voltage drop <1.2 V on-state  Motor controller rating 1.5 KW/2 Hp at 120 V AC	Insulation resistance	1000 MOhm at 500 V DC
Drop-out voltage 1 V DC turn-off Input current range 1015 mA  Solid state switching type Zero voltage switching Load current 0.1560 A  Transient overvoltage 1200 V Inrush current 1350 A  Maximum voltage drop <1.2 V on-state  Motor controller rating 1.5 KW/2 Hp at 120 V AC	Local signalling	For control voltage LED (green)
Input current range 1015 mA  Solid state switching type Zero voltage switching  Load current 0.1560 A  Transient overvoltage 1200 V  Inrush current 1350 A  Maximum voltage drop <1.2 V on-state  Motor controller rating 1.5 KW/2 Hp at 120 V AC	Pick-up voltage	4 V DC turn-on
Solid state switching type  Load current  0.1560 A  Transient overvoltage  1200 V  Inrush current  1350 A  Maximum voltage drop  41.2 V on-state  Motor controller rating  1.5 KW/2 Hp at 120 V AC	Drop-out voltage	1 V DC turn-off
Load current         0.1560 A           Transient overvoltage         1200 V           Inrush current         1350 A           Maximum voltage drop         <1.2 V on-state	Input current range	1015 mA
Transient overvoltage 1200 V Inrush current 1350 A  Maximum voltage drop <1.2 V on-state  Motor controller rating 1.5 KW/2 Hp at 120 V AC	Solid state switching type	Zero voltage switching
Inrush current  1350 A  Maximum voltage drop  <1.2 V on-state  Motor controller rating  1.5 KW/2 Hp at 120 V AC	Load current	0.1560 A
Maximum voltage drop <1.2 V on-state  Motor controller rating 1.5 KW/2 Hp at 120 V AC	Transient overvoltage	1200 V
Motor controller rating 1.5 KW/2 Hp at 120 V AC	Inrush current	1350 A
	Maximum voltage drop	<1.2 V on-state
7.46 kW/10 hp at 480 V AC	Motor controller rating	3.73 KW/5 Hp at 240 V AC

Electromagnetic compatibility	Electrostatic discharge 6 kV criteria A contact discharge conforming to IEC 61000-4-2
	Electrostatic discharge 8 kV criteria A air discharge conforming to IEC 61000-4-2 Conducted RF disturbances 10 V, 0.1580 MHz criteria A level 3 conforming to IEC 61000-4-6
	Electrical fast transient/burst immunity test 2 kV, 5/100 kHz criteria B output ports conforming to IEC 61000-4-4
	Electrical fast transient/burst immunity test 1 kV, 5/100 kHz criteria B input ports conforming to IEC 61000-4-4
	Radiated radio-frequency electromagnetic field immunity test 10 V/m, 80 MHz1 GHz criteria A conforming to IEC 61000-4-3
	Radiated radio-frequency electromagnetic field immunity test 3 V/m, 1.42 GHz criteria A conforming to IEC 61000-4-3
	Radiated radio-frequency electromagnetic field immunity test 1 V/m, 22.7 GHz criteria A conforming to IEC 61000-4-3
	Surge immunity test 1 kV criteria B output ports line to line conforming to IEC 61000-4-5
	Surge immunity test 2 kV criteria B output ports line to earth conforming to IEC 61000-4-5
	Radiated emission environment B for DC input supply conforming to IEC 60947-4-3
	Conducted emission environment B for DC input supply conforming to IEC 60947-4-3
	Immunity to microbreaks and voltage drops 30 %, 500 ms criteria A conforming to IEC 61000-4-11
	Immunity to microbreaks and voltage drops 100 $\%,$ 20 ms criteria B conforming to IEC 61000-4-11
Device form designation	Form 5 semiconductor output DOL contactor
Maximum I2t for fusing	8320 A <sup>2</sup> .S for 10 ms 7593 A <sup>2</sup> .s for 8.33 ms
Maximum leakage current	1 mA off-state
DV/dt	500 V/µs off-state at maximum rated voltage
Response time	0.5 cycle (turn-on) 0.5 cycle (turn-off)
Load Power Factor Range	With maximum load
Short circuit protection coordination	Type 1 Type 2
Overvoltage category	III
Width	1.77 in (45 mm)
Height	4.39 in (111.5 mm)
Depth	6.08 in (154.4 mm)
Net Weight	1.12 lb(US) (0.507 kg)
Device presentation	Complete product

### Environment

Flammability rating	V-0 conforming to UL 94
Vibration resistance	0.35 mm 10150 Hz) EN/IEC 60068-2-6
Shock resistance	50 gn for 11 ms (peak acceleration) , longitudinal position conforming to EN/IEC 60068-2-27 30 gn for 11 ms (peak acceleration) , vertical position conforming to EN/IEC 60068-2-27
Pollution degree	2
Standards	IEC 61373:class B: category 1 IEC 60947-4-3 IEC 62314 IEC 60950-1 CSA C22.2 No 14-13 UL 508
IP degree of protection	IP20
Ambient Air Temperature for Operation	-40176 °F (-4080 °C)
Ambient Air Temperature for Storage	-40212 °F (-40100 °C)

## Ordering and shipping details

Category	22375-INTERFACE MODULE(ABA,R,S)
Discount Schedule	CP2
GTIN	3606489808112
Nbr. of units in pkg.	1
Package weight(Lbs)	19.61 oz (556.0 g)
Returnability	Yes

## Packing Units

Unit Type of Package 1	PCE
Package 1 Height	2.17 in (5.5 cm)
Package 1 width	4.72 in (12 cm)
Package 1 Length	5.71 in (14.5 cm)
Unit Type of Package 2	S02
Number of Units in Package 2	10
Package 2 Weight	13.17 lb(US) (5.972 kg)
Package 2 Height	5.91 in (15 cm)
Package 2 width	11.81 in (30 cm)
Package 2 Length	15.75 in (40 cm)

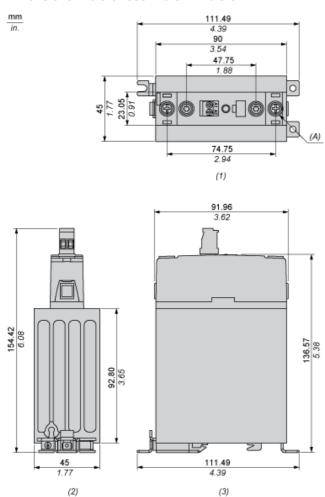
## Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EVEL RoHS Declaration
Mercury free	Yes
RoHS exemption information	€Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

# SSD1A360BDC3

#### **Dimensions**

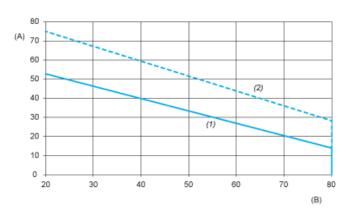
#### Dimensional Tolerances:+-0.5 mm / 0.02 ln.



- Front view
- (1) (2) (3) (A) Top view
- Side view
- Screw 8-32 Stud (2 Places)

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### **Derating Curves**



A: Load Current (Amperes) B: Ambient Temperature (°C)

Multiple units, no minimum spacing between components

1 : 2 : Installed single unit, distance to adjacent components more than 22.5 mm