

Accessories



Power Supply Redundancy Buffer Module

PS-RDN20 is a 20A redundancy (decoupling) module for the 24V DC power system. Containing 2 sets of 20A Or-ing diodes with wonderful heat dissipation deployment, PS-RDN20 give you a new option for safe connection of 1+1 redundant set-up. Not only perfectly decouple power sources from each other as well as from the load, PS-RDN20 also provides users monitoring signals for both input channels through the built-in relays. Since there's no switching components inside the module, PS-RDN20 will not arise additional EMI issues and should provide you a worry-free application platform!

DC input voltage range	21~28V, 20A max. x 2 channels
Reverse voltage	30V
DC output current	20A max.
DC output voltage drop	0.5V max.
Input voltage alarm	When input is > 20V(±5%) or <30V(±5%), relay contacts
Relay contact rating	30VDC, 1A
Working Temperature	-20~+70°C
EMC standards	EN55022 class B, EN61000-4-2,3,4,5,6,8, ENV50204
Connection	I/P: 4 poles, O/P: 2 poles screw DIN terminal, Single output: 4 poles

UPS Battery Module

PS-UPS40 is a 40A max. DC UPS (battery control) module for the 24 V DC power system. Accompany with external batteries, it can back-up up to 40A of current to critical loads for certain period of time depending on the capacity of batteries. With complete monitoring signals and LED indicators for DC BUS OK, Battery Fail, Battery Discharge and the repeated Battery Test function to check the situation of external batteries. Users can customize their own DC UPS system to back up critical loads and capture the status of the whole system easily.

DC input / DC bus	24~29V, 40A max.
Battery inout voltage	21~29V
Battery input current	0~40A
Charge current (typ.)	2A
External battery (typ.)	24V, 4AH / 7AH / 12AH
DC bus ok	Relay status: Short when DC voltage between 21~29V(±3%), relay contacts
Battery fail	Relay status: Short when battery failure is observed through the battery test function, relay contacts LED (red): Battery over-discharge warning or battery broken: light; battery OK: dark
Battery discharge	Relay status: Short when battery in discharge condition, relay contacts LED (yellow): Battery discharging: light; battery is not discharging or discharging current <2A: dark
Working temperature	-20~+70°C
EMC standards	EN55022 class B, EN61000-4-2,3,4,5,6,8, ENV50204
Connection	I/P: 2 poles, O/P: 2 poles screw DIN terminal, Single output: 6 poles

Redundancy Buffer Module UPS Battery Module

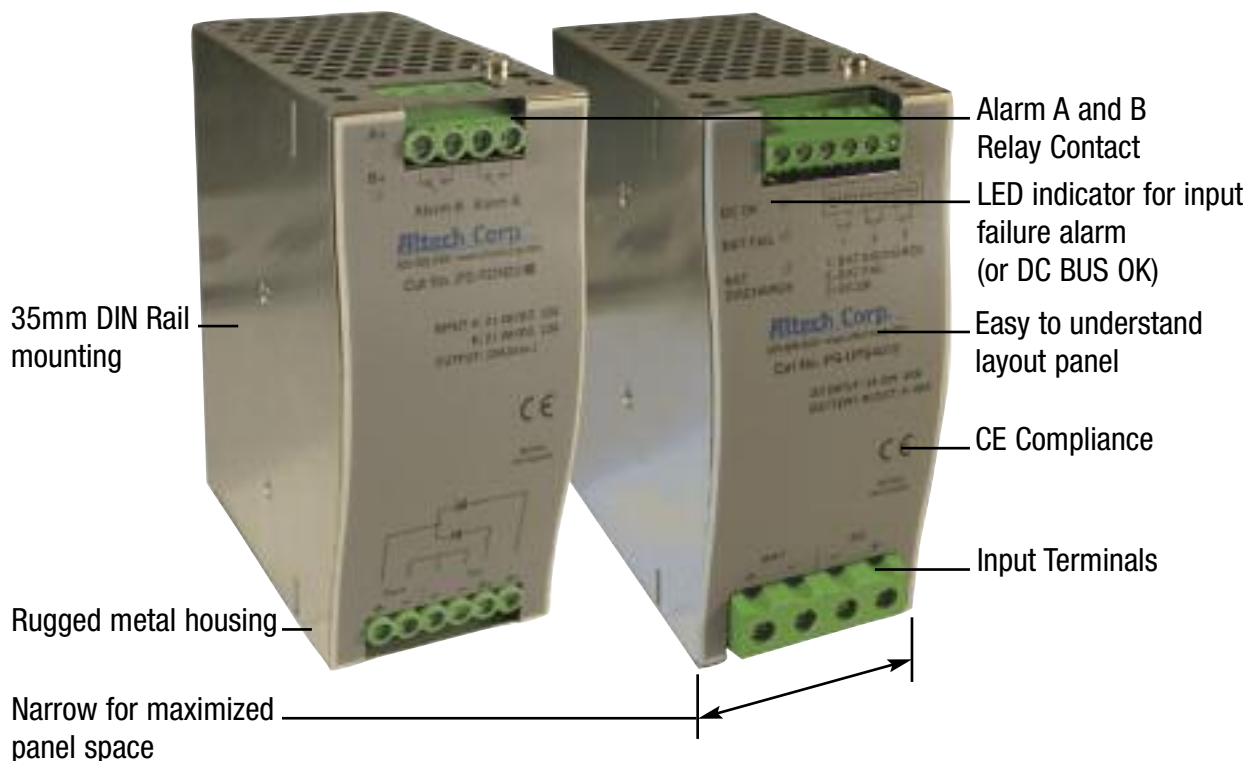


Redundancy Buffer Module Features:

- Suitable for redundant operation of 24V system
- Installed on 35 x 7.5 mm or 35 x 15 mm DIN Rail
- Relay contact signal output and LED indicator for input failure alarm
- Cooling by free air convection
- 3 year warranty

UPS Battery Module Features:

- Battery controller for DIN Rail UPS system
- Installed on 35 x 7.5 mm or 35 x 15 mm DIN Rail
- Parallel connection to DC BUS
- Suitable for 24V system up to 40A
- Built-in battery test function
- Battery polarity protection
- Relay contact signal output and LED indicator for DC BUS OK, battery fail and battery discharge
- Cooling by free air convection
- 3 year warranty



Accessories

- REDUNDANCY BUFFER MODULE
- UPS MODULE



Power Supply Redundancy Buffer Module

PS-RDN20 is a 20A redundancy (decoupling) module for the 24V DC power system. Containing 2 sets of 20A Oring diodes with excellent heat dissipation deployment. PS-RDN20 give you a new option for safe connection of 1+1 redundant set-up. Not only perfectly decouple power sources from each other as well as from the load, PS-RDN20 also provides users monitoring signals for both input channels through the built-in relays. Since there's no switching components inside the module, PS-RDN20 will not arise additional EMI issues and should provide you a worry-free application platform!

Cat. No.	Voltage Range	Current Range	NOTES
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PS-RDN20	21-28V DC	0-20A	
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Connection: Terminal 1 - 4 poles, Terminal 2 - 6 poles
 Size (WxHxD): 55.5x125x100mm (2.19x4.95x3.95 inches)
 Packaging: 1/box; 1.1lbs / 0.5Kg

[DC Fail Block Diagram](#)



40 AMP UPS Battery Controller

PS-UPS40 is a 40A max. DC UPS (battery control) module for the 24 V DC power system. Accompany with external batteries, it can back-up up to 40A of current to critical loads for certain period of time depending on the capacity of batteries. With complete monitoring signals and LED indicators for DC BUS OK, Battery Fail, Battery Discharge and the repeated Battery Test function to check the situation of external batteries. Users can customize their own DC UPS system to back up critical loads and capture the status of the whole system easily.

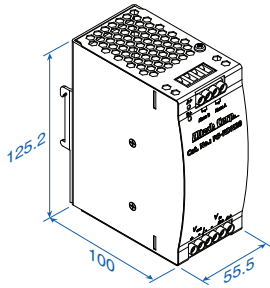
Cat. No.	Voltage Range	Current Range	NOTES
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PS-UPS40	21-29V (Battery) 24-29V (DC)	0 - 40A	
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Connection: Terminal 1 - 4 poles, Terminal 2 - 6 poles
 Size (WxHxD): 55.5x125x100mm (2.19x4.95x3.95 inches)
 Packaging: 1/box; 1.21lbs / 0.55Kg

SPECIFICATIONS

PS-RDN20 Series



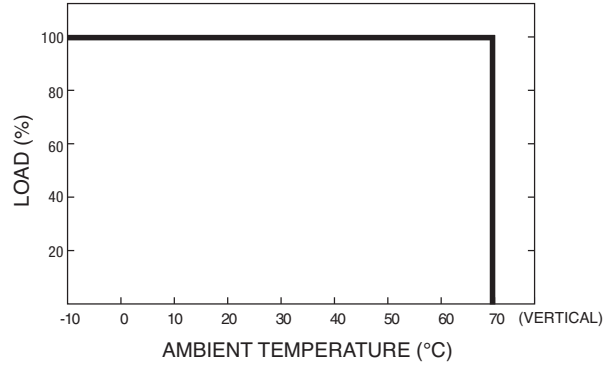
Terminal Pin. No Assign. (TB1)

Pin No.	Assignment
1	Vout+
2	Vout-
3,4	Vin -
5	Vin B+
6	Vin A+

Terminal Pin. No Assign. (TB2)

Pin No.	Assignment
1	Alarm B1
2	Alarm B2
3	Alarm A1
4	Alarm A2

Derating Curve

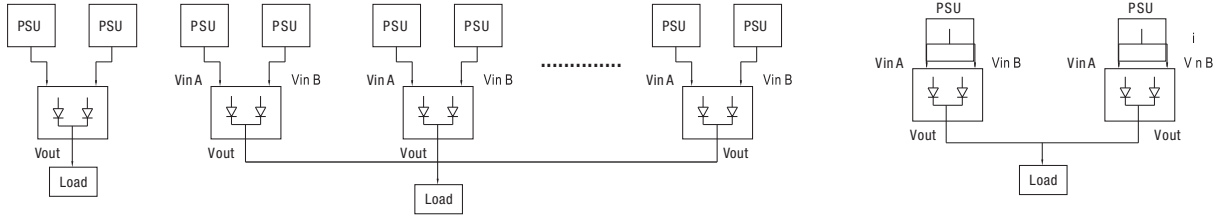


Applications:

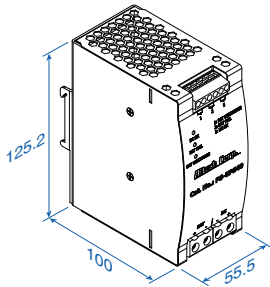
1. 1+1 Redundancy
Using 1 more PSU as the redundant unit

2. 1+N Redundancy: Using more PSUs as the redundant units to increase the reliability

3. Single Use: Connecting only one PSU to one PS-RDN20 to reduce the stress of the diodes and hence increase the reliability



PS-UPS40 Series



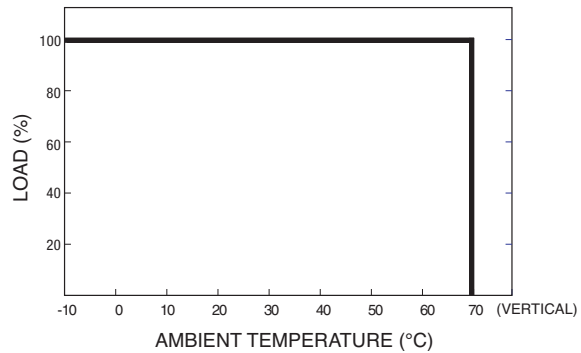
Terminal Pin. No Assign. (TB1)

Pin No.	Assignment
1	BATTERY INPUT +
2	BATTERY INPUT -
3	DC INPUT -
4	DC INPUT +

Terminal Pin. No Assign. (TB2)

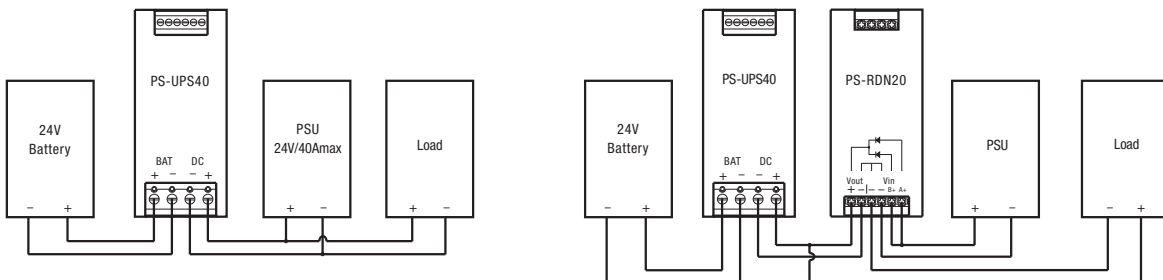
Pin No.	Assignment
1	BAT DISC 1
2	BAT DISC 2
3	BAT OK 1
4	BAT OK 2
5	DC OK 1
6	DC OK 2

Derating Curve



1. Backup connection for AC interruption

2. Combine redundancy module (PS-RDN20) to back up AC interruption or failure of PSU



Note: All dimensions are in millimeters, to convert to inches multiply by 0.03937.



PS-RDN20

Specifications



Features:

- Suitable for redundant operation of 24V system
- Installed on DIN Rail TS35 / 7.5 or 15
- Relay contact signal output and LED indicator for input failure alarm
- Cooling by free air convection
- 3 year warranty

DC INPUT/ DC BUS

Cat. No. PS-RDN20

REVERSE VOLTAGE (max.)	30V
OUTPUT CURRENT (max.)	20A
VOLTAGE DROP	0.5V
LED INDICATORS	Two green LED's indicating each input is OK or fail

BATTERY IN / OUTPUT

INPUT VOLTAGE RANGE	21 ~ 28V
NUMBER OF INPUTS	Two
INPUT CURRENT (max.)	20A per input

FUNCTION

INPUT VOLTAGE ALARM	When input is $\geq 20V (\pm 5\%)$ or $\leq 30V (\pm 5\%)$ relay contacts
RELAY CONTACT RATING (max.)	30VDC, 1A

ENVIRONMENT

WORKING TEMP.	-20 ~ +70°C
WORKING HUMIDITY	20 ~ 90% RH non-condensing
STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH
VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60 min. each long X,Y, Z axes
MOUNTING	Compliance to IEC60068-2-6

SAFETY & EMC

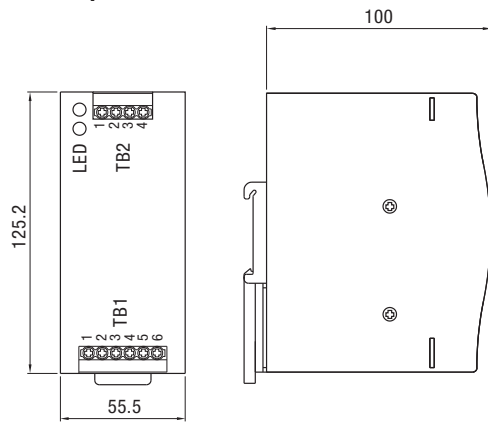
WITHSTAND VOLTAGE	Terminal- Chassis: 0.5KVAC, Relay Contacts- Terminal: 0.5KVAC
ISOLATION RESISTANCE	Terminal- Chassis: $\geq 100M \text{ Ohms} / 500VDC (25^\circ C; 70\% RH)$
EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B
EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8; ENV50204; heavy industry level; criteria A,

OTHERS

MTBF	996.8Khrs min. MIL-HDBK-217K (25°C)
DIMENSION	55.5x125.2x100mm (WxHxD)
PACKING	0.5Kg; 20pcs / 11Kg / 1.29CUFT

All parameters NOT specially mentioned are measured at 24V DC input, rated load and 25°C of ambient temperature.

Mechanical Specification



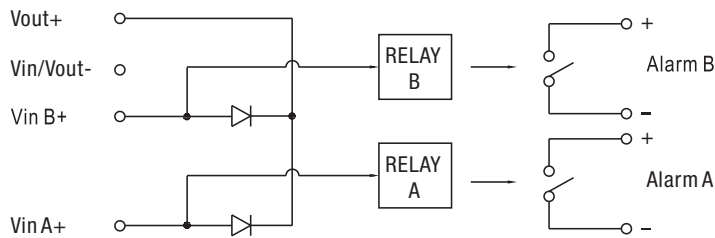
Terminal Pin. No Assignment (TB1)

Pin No.	Assignment
1	Vout+
2	Vout-
3,4	Vin-
5	Vin B+
6	Vin A+

Terminal Pin. No Assignment (TB2)

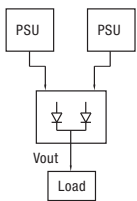
Pin No.	Assignment
1	Alarm B1
2	Alarm B2
3	Alarm A1
4	Alarm A2

Block Diagram

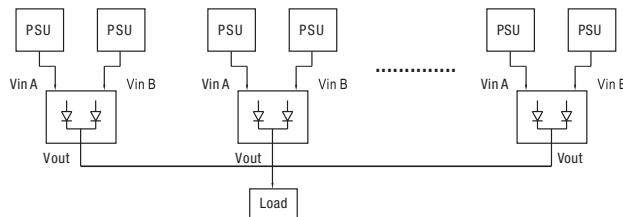


Applications

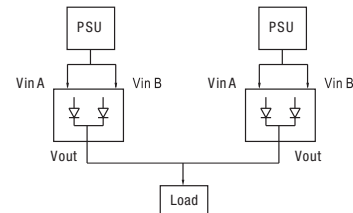
1. 1+1 Redundancy
Using 1 more PSU
as the redundant unit



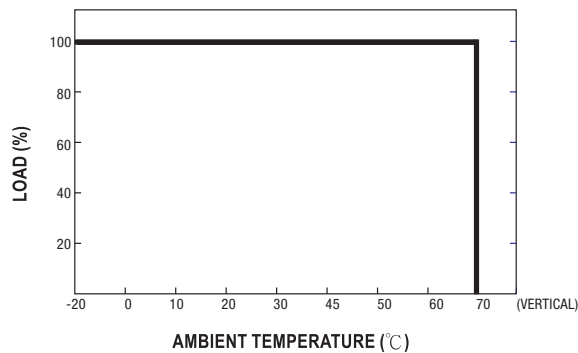
2. 1+N Redundancy: Using more PSUs as the redundant units to increase the reliability



3. Single Use: Connecting only one PSU to one PS-RDN20 to reduce the stress of the diodes and hence increase the reliability



Derating Curve





PS-UPS40

Specifications



Features:

- Battery controller for DIN Rail UPS system
- Parallel connection to DC BUS
- Suitable for 24V system up to 40A
- Installed on DIN Rail TS35/ 7.5 or 15
- Built-in battery test function
- Battery polarity protection
- Relay contact signal output and LED indicator for DC BUS OK,
- Battery fail, and battery discharge
- Cooling by free air convection
- 3 year warranty

DC INPUT/ DC BUS

BATTERY IN / OUTPUT

FUNCTION

ENVIRONMENT

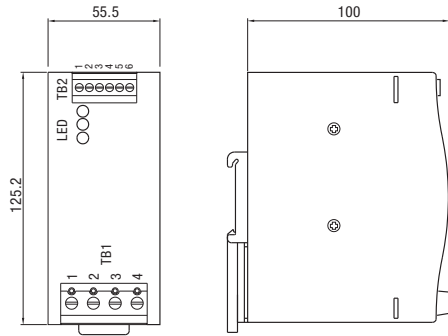
SAFETY & EMC

OTHERS

Cat. No.	PS-UPS40
DC VOLTAGE (Typ.)	24 ~ 29V
RATED CURRENT	40A
VOLTAGE RANGE (Typ.)	21 ~ 29V
CURRENT RANGE	0 ~ 40A
CHARGE CURRENT (Typ.)	2A
EXTERNAL BATTERY (Typ.)	4 / 7 / 12AH / 24V
RELAY CONTACT RATING (max.)	30VDC, 1A
DC BUS OK	Relay contact: Short when DC voltage between 21 ~ 29V ($\pm 3\%$), relay contacts LED (Green): DC BUS OK: light; DC BUS fail: dark
BATTERY FAIL	Relay contact: Short when battery failure is observed through the battery test function, relay contacts LED (Red): Battery over- discharge warning or battery broken: light; Battery OK: dark Every 25 seconds, unit will send out test signal through Battery Fail relay contact and LED indicator once the battery is fail.
BATTERY DISCHARGE	Relay contact: Short when battery in discharge condition, relay contacts LED (Yellow): Battery discharging: light; Battery is not discharging or discharging current $\leq 2.0A$: dark
WORKING TEMP.	-20 ~ +70°C
WORKING HUMIDITY	20 ~ 90% RH
STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH
VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60 min. each long X,Y, Z axes
MOUNTING	Compliance to IEC60068-2-6
WITHSTAND VOLTAGE	Terminal- Chassis: 0.5KVAC, Relay Contacts- Terminal: 0.5KVAC
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EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8; ENV50204; heavy industry level; criteria A
MTBF	161.9Khrs min. MIL-HDBK-217K (25°C)
DIMENSION	55.5x125.2x100mm (WxHxD)
PACKING	0.55Kg; 20pcs / 12Kg / 1.29CUFT

All parameters NOT specially mentioned are measured at rated load and 25°C of ambient temperature.

Mechanical Specification



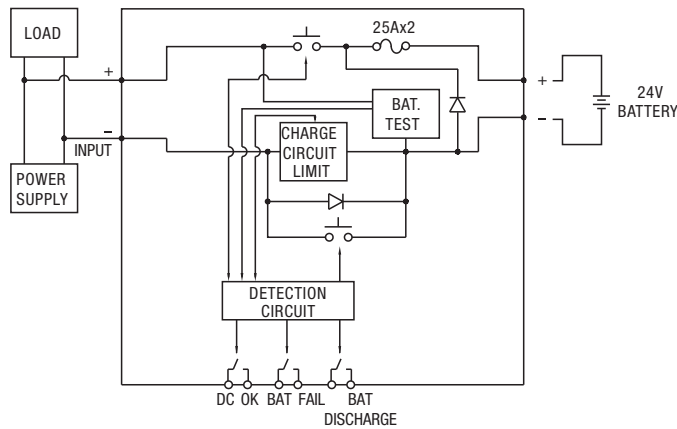
Terminal Pin. No Assignment (TB1)

Pin No.	Assignment
1	BATTERY INPUT +
2	BATTERY INPUT -
3	DC INPUT -
4	DC INPUT +

Terminal Pin. No Assignment (TB2)

Pin No.	Assignment
1	BAT DISC 1
2	BAT DISC 2
3	BAT OK 1
4	BAT OK 2
5	DC OK 1
6	DC OK 2

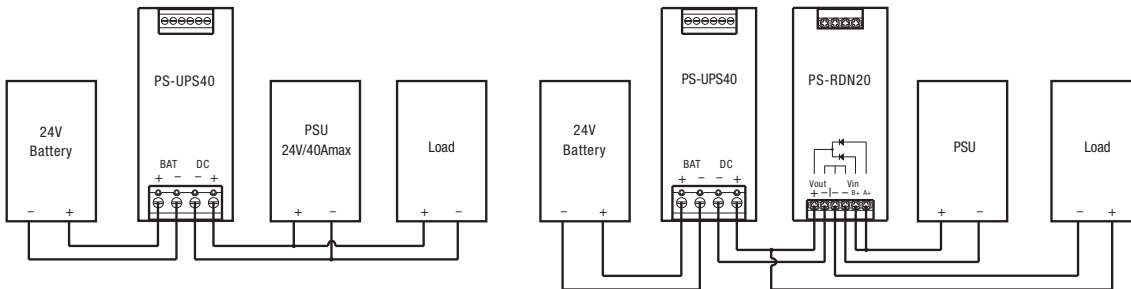
Block Diagram



Applications

1. Backup connection for AC interruption

2. Combine redundancy module (PS-RDN20) to back up AC interruption or failure of PSU



Derating Curve

