ABB CP-A RU 1SVR427071R0000

Complete Product Information

ABB CP-A RU 1SVR427071R0000 decouples two 24 V DC power supplies to sustain a shared load when one source fails. The base unit has two input channels and a common output.

01 Power-path identity and published ratings

Redundancy inputs	2 independent DC channels
Rated input voltage	24 V DC
Input range, each channel	10-28 V DC without CP-A CM
Input range with CP-A CM	13-28 V DC
Rated input current	1-20 A per channel
Temporary input current	30 A per channel for 300 s
Rated output	24 V DC; 1-40 A
Output voltage drop	0.6 V typical; 0.9 V maximum

02 Functional role and system position

Each CP-A RU input is rated for 1-20 A at 24 V DC, and the output is rated for 1-40 A. The design decouples the sources; both power supplies therefore need independent capacity for the complete load.

The unit has a typical 0.6 V diode drop, reaching 0.9 V maximum. At an ambient of 70 °C its output rating is 30 A rather than the 40 A available at 60 °C, so the cabinet heat and load must be reviewed together.

ABB requires horizontal DIN-rail mounting with the input terminals at the top and clear space for convection. The CP-A CM monitor is a separate accessory; its presence changes the permissible channel input range and adds status outputs.

03 Engineering highlights

Dual-source path

Two 20 A input channels feed one rated 40 A output.

Failover behavior

The healthy source carries the full load after the other source is lost.

Optional monitoring

CP-A CM indicates channel undervoltage when separately fitted.

04 Evidence and applicability boundary

The order-data row identifies 1SVR427071R0000. Base-unit and optional CP-A CM columns are distinguished.

05 Isolation and energy-control map

24 V DC redundant load

Connect two independent sources to INPUT 1 and INPUT 2 and the protected circuit to OUTPUT.

Source-failure continuity

Test loss of each source separately and verify the healthy source sustains the full measured load.

Optional undervoltage monitoring

Fit CP-A CM only when required and verify threshold and relay behavior for each channel.

Cabinet replacement

Match full order code, conductor sizes, mounting clearance and the installed source ratings.

06 Installation and protection controls

Isolate both sources

Prove both DC inputs de-energized before changing terminal wiring.

Verify polarity

Compare INPUT 1, INPUT 2 and OUTPUT labels with the cabinet schematic.

Protect conductors

Size output wiring for total load and use the specified terminal torque.

Preserve convection

Mount horizontally and keep 10 mm side and 50 mm vertical clearance.

Account for voltage drop

Check actual load voltage after the diode path.

Prove each failover

Disconnect one source at a time under approved conditions and record output continuity.

07 Technical notes

Input loading	Each channel is rated to 20 A continuously; size both sources for the complete critical load.
Output derating	Above 60 °C, use the published derating to 30 A at 70 °C.
Accessory boundary	CP-A CM is optional and must not be described as included with the base unit.
Installation	Follow the ABB polarity, mounting, clearance and conductor requirements.

08 Installed-system decision points

How should CP-A RU 1SVR427071R0000 be connected to two 24 V supplies?	Connect each supply to its own input with the correct polarity and take the common load from OUTPUT. Compare the installation drawing before energizing.
Why must each source feeding CP-A RU 1SVR427071R0000 carry the entire load?	The remaining source must carry the full load after the other source fails. Check the measured worst-case load against each supply rating.
How can CP-A RU 1SVR427071R0000 prevent a failed supply from pulling down the healthy one?	Its internal decoupling diodes isolate the two input paths. During acceptance, confirm that loss of either source leaves the load supplied by the other.

09 Electrical restoration and acceptance matrix

Safe-state proof	Apply the complete equipment isolation and stored-energy procedure before handling the unit. Exact model: CP-A RU 1SVR427071R0000.
Physical relationship	Restore polarity, orientation, connector and support relationships from the as-found record. Exact model: CP-A RU 1SVR427071R0000.
Controlled energization	Use the documented staged procedure and monitor the expected electrical and diagnostic response. Exact model: CP-A RU 1SVR427071R0000.
Final acceptance	Record stable operation, relevant measurements and the final fault-free state. Exact model: CP-A RU 1SVR427071R0000.

10 Published technical data - continuation

Temporary output current	60 A for 300 s
Output at 60 °C	40 A
Output at 70 °C	30 A
Derating above 60 °C	2.5% per kelvin to 70 °C
Reverse-feed resistance	<40 V
Protection rating	IP20 housing and terminals
Mounting	35 mm DIN rail; horizontal
Module spacing	10 mm horizontal; 50 mm vertical

11 Product-specific engineering FAQ

How should CP-A RU 1SVR427071R0000 be connected to two 24 V supplies?

Connect each supply to its own input with the correct polarity and take the common load from OUTPUT. Compare the installation drawing before energizing.

Why must each source feeding CP-A RU 1SVR427071R0000 carry the entire load?

The remaining source must carry the full load after the other source fails. Check the measured worst-case load against each supply rating.

How can CP-A RU 1SVR427071R0000 prevent a failed supply from pulling down the healthy one?

Its internal decoupling diodes isolate the two input paths. During acceptance, confirm that loss of either source leaves the load supplied by the other.

What changes when a CP-A CM is fitted to CP-A RU 1SVR427071R0000?

The accessory monitors each input and offers indication and relay outputs. Verify its presence and threshold setting; it is separate from the base redundancy unit.

What spacing is required around CP-A RU 1SVR427071R0000 in a cabinet?

Keep at least 10 mm horizontally and 50 mm vertically, with the input terminals at the top. Check the actual neighboring hardware.

How should the output wiring of CP-A RU 1SVR427071R0000 be checked?

Confirm polarity, conductor rating, fuse protection and the terminal torque. Record the output voltage under the expected load.

What current limit applies to CP-A RU 1SVR427071R0000 near 70 °C?

The ABB rating falls from 40 A at 60 °C to 30 A at 70 °C. Review the cabinet temperature and worst-case load together.

What proof should be retained after replacing CP-A RU 1SVR427071R0000?

Record both input voltages, the loaded output, source-loss tests for each channel, conductor torque and the final cabinet labels.

12 Lifecycle and supply boundary

The production and manufacturer-support phase of CP-A RU 1SVR427071R0000 is unconfirmed. Match the exact order code and the installed dual-supply design when planning a replacement.

Offered reference	ABB CP-A RU 1SVR427071R0000
Included items	the CP-A RU base unit; the CP-A CM monitoring accessory and power supplies are separate unless itemized
Identity check	Compare the complete marking, revision and connections with available unit photographs and the installed record.

13 Commissioning handover record

Isolation and discharge evidence	Retain with the complete model marking, installed asset reference and responsible acceptance sign-off.
Polarity or phase relationship	Retain with the complete model marking, installed asset reference and responsible acceptance sign-off.
Controlled energization result	Retain with the complete model marking, installed asset reference and responsible acceptance sign-off.
Final electrical condition	Retain with the complete model marking, installed asset reference and responsible acceptance sign-off.

14 Enquiry workflow

Review your reference	Send the full CP-A RU 1SVR427071R0000 marking, power-supply models, cabinet photos and required quantity.
Confirm the offer	Confirm the two-source wiring, offered condition, fitted CP-A CM accessory and included items in the written quotation.
Arrange dispatch	Agree quantity, dispatch date and delivery details in the quotation.

15 Related product references

Recommended model	ABB BSFC-02C 3AXD50000011461
Recommended model	ABB GJR5143100R0001 35EK90
Recommended model	ABB GJR5146620R0001 35ZE94G
Recommended model	ABB 3BHE027867R0101
Recommended model	ABB NMFC03

Confirm the complete CP-A RU 1SVR427071R0000 marking, installed relationship and required quantity with Apter Power.

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