

Solid-State Power Controllers



DDC is the world leader in the design and manufacture of programmable solid-state power controllers (SSPC) for military vehicles, with more than 800,000 nodes installed since 1988. In addition to distributing and controlling power with reduced SWaP, protecting loads and wire harnesses with higher reliability and longer life, DDC SSPC's also enable smart power management that simplifies vehicle power control and provides health monitoring for diagnostics that allow the operator to focus their time on other mission critical activities.

DDC Solid-State Power Controllers Enable...

Smart Power Management

- Intelligent Overcurrent Protection – I²t and Instant Trip Protection, plus Controlled Rise/Fall Time
- Programmability and Flexibility – Reconfigure, Trip Levels, Channel Paralleling, Power-up Defaults
- Network Control – Load Channel Control and Status, Load Current and Voltage, Channel Reconfiguration, BIT
- Vehicle Health and Diagnostics – Autonomous Operation, Load Protection and Monitoring, Alarms (Current, Voltage, Temperature), Power-up Sequencing

Compared with Electromechanical Breakers and Relays, SSPC's Provide...

Reduced SWaP

- 7x Improvement in Power/Volume Density
- 5x Improvement in Power/Weight Density
- 70% Reduction in Dissipated Power






Higher Reliability and Longer Life

- Over 25x Improvement in MTBF
- No Vibration-Sensitive Contacts or Wearing Parts
- Reduced EMI Resulting from Controlled Switching Time

Applications










- Military Land Vehicles
- Commercial Trucks
- Industrial Controls
- Military and Commercial Ships
- Weapon Systems
- Unmanned Vehicles
- Primary Power Switching

SSPC Power Distribution Units

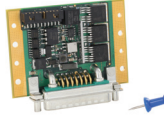

| Product | Model Number | Channel Count | Total Current | Features |
|---|----------------------------|---------------|---------------|--|
|  | RP-2032151XD0 | 32 | 120A | <ul style="list-style-type: none"> • Nominal 28V Operation, MIL-STD-1275D, MIL-STD-704F, MIL-STD-461E, Def Stan 61-5, and MIL-STD-810F Compliant • Independent Remote Control of Individual Channels/Groups |
|  | RP-2F241XXX | 24 | 260A | <ul style="list-style-type: none"> • Channel Paralleling for High Current Loads • Low Power Dissipation Across Channels • Serial RS-485 and SAE J1939 CAN Interface |
|  | RP-20161XXXC/D1 | 16 | 238A | <ul style="list-style-type: none"> • -40°C to +85°C Operating Temperature • RP-2032151XD0: Compact Lightweight (3 lbs) Form Factor / Ruggedized, IP-65 Rated Enclosure with D-Sub Power Connectors |
|  | RP-20S19XXX | 8 | 200A | <ul style="list-style-type: none"> • RP-2F241XXX: Flight safety critical architecture certified to MIL-STD-461, MIL-STD-810, and DO-160G • RP-20161XXXC/D1: Ruggedized, IP-67 Rated Enclosure with Military Connectors or D-Sub Power Connectors |
|  | RP-20S16XXX RP-20S14XXX | 4 | 300A | <ul style="list-style-type: none"> • RP-20S14/6/9XXX: Compact (Stackable) Form Factor / Ruggedized, IP-67 Rated Enclosure with Military Connectors or Power Stud Inputs |

Note: For more information on DDC's Solid-State Power Controllers, please visit: www.ddc-web.com/sspcprod

SSPC Boards

| Product | Model Number | Channel Count | Total Current | Features |
|---|---------------|-----------------|---------------|--|
|  | RP-2661100N0 | 32 | 320A | <ul style="list-style-type: none"> Nominal 28V Operation, MIL-STD-1275C, MIL-STD-704F, and Def Stan 61-5 Compliant MIL-STD-1275D Compliant Options Independent Remote Control of Individual Channels/Groups Channel Paralleling for High Current Loads Low Power Dissipation Across Channels Serial RS-485 and SAE J1939 CANbus Interface Ruggedized, Conduction Cooled Form Factor -40°C to 105°C Operating Temperature |
|  | RP-2621X000 | 16 | 238A | |
|  | RP-26231000NX | 16 | 250A | |
|  | RP-26401000N1 | 8 | 200A | |
|  | RP-2630X00XNX | 4 | 300A | |
|  | RP-26311000NX | 4 | 400A | |
|  | RP-26321000Nx | 2 | 200A | |
|  | RP-27001X | 10 | 120A | |
|  | High Voltage | Contact Factory | 20KW | <ul style="list-style-type: none"> 300V DC |

SSPC Point-of-Load Modules

| Product | Model Number | Channel Count | Total Current | Features |
|---|---------------|---------------|---------------|---|
|  | RP-23031M1 | 1 | 3.5A to 35A | <ul style="list-style-type: none"> Nominal 28V Operation, MIL-STD-1275 and MIL-STD-704 Compliant Low Power Dissipation Discrete I/O Control Interface -40°C to +85°C Operating Temperature PM API Compatible Command Set SAE J1939 Compatible CAN Interface Contact Factory for Pulse Width Modulation (PWM) Version |
|  | RP-20011601S0 | 1 | 3.5A to 35A | |



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