# **INDUSTRIAL POWER SUPPLIES**

## **DIN Rail Modules**











Redundancy Modules

- Wide input and output range of 22-60Vdc
- Very wide operating temperature from -40°C to +80°C
- Built-in 2 channel DC OK signal and alarm relay contact
- Support N+1 Redundancy connection
- Hazardous Locations approval to ATEX and Class I, Div 2
- Certified according to IEC/EN/UL 62368-1













### **Buffer Modules**

- Minimum buffering time of:
- 250ms @ 24V/20A for DRB-24V020AB□
- 200ms @ 24V/40A for DRB-24V040ABN
- Flexible operating buffering voltage modes: Fixed mode at 22Vdc; Dynamic mode for V.-1V
- Support parallel connection to extend buffering time
- Certified according to IEC/EN/UL 62368-1













### **DC-UPS Module**

- Full corrosion resistant aluminium casing
- Suitable for 24V system up to 40A
- Built-in diagnostic monitoring for DC OK, Discharge and Battery Fail by relay contacts
- LED indicator for DC OK, Battery Charging, Battery Discharging, Battery Fail and Battery Reverse Polarity
- Certified according to IEC/EN/UL 62368-1



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DC-UPS Module

- Suitable for 24V system up to 10A
- Zero switch over time from loss of DC input to battery operation
- Built-in diagnostic monitoring for DC OK, Discharge and Battery Fail by relay contacts
- LED indicator for DC OK, Battery Charging, Battery Discharging, Battery Fail and Battery Reverse Polarity
- Certified according to IEC/EN/UL 62368-1

# DIN Rail Modules Redundancy Modules





### **Features**

- Wide input and output range of 22-60Vdc
- Very wide operating temperature from -40°C to +80°C
- Built-in 2 channel DC OK signal and alarm relay contact
- Support N+1 Redundancy connection
- Conformal coating on PCBAs to protect against common dust and chemical pollutants
- Hazardous Locations approval to ATEX and Class I, Div 2
- IP20 Certified
- Certified according to IEC/EN/UL 62368-1

OUTPUT		DRR-20□	DRR-40□	
Output Current		Normal mode = 0-20Amps; Short Circuit or Overload = 25Amps max	Normal mode = 0-40Amps; Short Circuit or Overload = 50Amps max	
Voltage Drop (V <sub>in</sub> - V <sub>out</sub> )		Typical 0.65V		
INPUT				
Input Voltage Range		22-60Vdc		
Input Current		(1+1 Redundancy) = Nom. 2 x 12.5Amps (N+1 Redundancy) = Nom. 2 x 10Amps (Single use) = Nom. 20Amps	(1+1 Redundancy) = Nom. 2 x 25Amps (N+1 Redundancy) = Nom. 2 x 20Amps (Single use) = Nom. 40Amps	
MECHANICAL				
Case Cover / Chassis		Aluminium		
Dimensions	mm	121 × 50 × 122.1	121 × 50 × 122.1	
$(L \times W \times D)$	inch	4.76 × 1.97 × 4.81	4.76 × 1.97 × 4.81	
Unit Weight		0.38	0.52	
	lb	0.84	1.15	
Cooling System		Convection		
LED Indicators		Green LED DC OK: V <sub>in</sub> 1 and V <sub>in</sub> 2		
MTBF 1)		> 800,000 hrs	> 800,000 hrs	
ENVIRONMENT				
Operating Temperature 2)		-40°C to +80°C		
Storage Temperature		-40°C to +85°C		
Operating Humidity		5 to 95% RH (Non-Condensing)		
Operating Altitude		0 to 2,500 m (0 to 8,200 ft)		



- Notes

  1) MTBF as per Telcordia SR-332 (Confidence level: 90%, I/P: 24Vdc, O/P: 100% load) for vertical mounting orientation.
- MTBF as per Telcordia SR-332 (Confidence level, 65%, . . . .
   Refer power de-rating in the product datasheet.
   All parameters are specified at 25°C ambient temperature unless otherwise indicated.





### **Features**

- Minimum buffering time of:
  - 250ms @ 24V/20A for DRB-24V020AB□
  - 200ms @ 24V/40A for DRB-24V040ABN
- Flexible operating buffering voltage modes: Fixed mode at 22Vdc; Dynamic mode for V<sub>in</sub>-1V
- Support parallel connection to extend buffering time
- Conformal coating on PCBAs to protect against common dust and chemical pollutants
- Hazardous Locations approval to ATEX and Class I, Div 2 (DRB-24V020ABA)
- Certified according to IEC/EN/UL 62368-1

OUTPUT		DRB-24V020AB□	DRB-24V040ABN		
Output Voltage		24Vdc typ. (Depends on V <sub>in</sub> )	24Vdc typ. (Depends on V <sub>in</sub> )		
Output Voltage Range		22-28V  (Switch = "Fix 22V" buffering starts if terminal voltage falls below 22V)  (Switch = "V <sub>in</sub> - 1V" buffering starts if terminal voltage is decreased by more than 1V)			
Output Current		20.0A Max	40.0A Max		
PARD (20MHz)		< 200mVpp, Buffering Mode	< 350mVpp, Buffering Mode		
Buffer Time		250ms Min @ 24V/20A load, 5s Min @ 24V/1A load	200ms Min @ 24V/40A load, 8s Min @ 24V/1A load		
INPUT					
Input Voltage Range		22.8-28.8Vdc			
Input Current		Charging Mode: < 0.6A	Charging Mode: < 0.6A		
Input Power		2.5W average (Standby Mode)			
Charging Time		< 30s	< 40s		
Polarity Protection		Yes	Yes		
MECHANICAL					
Case Cover / Chassis		Aluminium			
Dimensions	mm	121 × 70 × 120.1	121 × 70 × 120.1		
(L × W × D)	inch	4.76 × 2.76 × 4.73	4.76 × 2.76 × 4.73		
Unit Weight	kg	0.76	0.90		
	lb	1.68	1.98		
Cooling System		Convection			
LED Indicators		Green LED Off = Unit is discharged or V <sub>in</sub> < 22Vdc Green LED On = Unit is fully charged (Ready) Green LED Flashing Slowly (1Hz) = Unit is charging Green LED Flashing Quickly (10Hz) = Unit is dischaging (Buffering)			
MTBF 1)		> 800,000 hrs	> 800,000 hrs		
ENVIRONMENT					
Operating Temperature 2)		-25°C to +75°C			
Storage Temperature		-25°C to +85°C			
Operating Humidity		5 to 95% RH (Non-Condensing)			
Operating Altitude		0 to 2,500 m (0 to 8,200 ft)			



- Notes

  1) MTBF as per Telcordia SR-332 (Confidence level: 90%, I/P: 24Vdc, O/P: 100% load) for vertical mounting orientation.

  2) Refer power de-rating in the product datasheet.

  3) All parameters are specified at 25°C ambient temperature unless otherwise indicated.





### **Features**

- Full corrosion resistant aluminium casing
- Suitable for 24V system up to 40A
- Built-in diagnostic monitoring for DC OK, Discharge and Battery Fail by relay contacts
- LED indicator for DC OK, Battery Charging, Battery Discharging, Battery Fail and Battery Reverse Polarity
- High MTBF > 500,000 hrs per Telcordia SR-332
- Conformal coating option on PCBAs to protect against common dust and chemical pollutants
- Certified according to IEC/EN/UL 62368-1

OUTPUT		DRU-24V40ABN
Output Voltage Range		23-28Vdc
Output Current		40.0A Max
Output Power		960W Max
INPUT		
Input Voltage Range		24-28Vdc
Input Current		Charging Mode: 2.0A ± 1.0A
Charging Time		< 3hr ± 1 hr (for battery 24V/15AH)
Efficiency		Charging Mode: > 70.0% Buffering Mode: > 99.0%
MECHANICAL		
Case Cover / Chassis		Aluminium
Dimensions	mm	121 × 50 × 117.3
(L × W × D)	inch	4.76 × 1.97 × 4.62
Unit Weight		0.60
	lb	1.32
Cooling System		Convection
LED Indicators		Green LED ON = Battery is fully charged Green LED Flashing = Battery is charging Orange LED ON = Battery 24V or DC 24V reverse polarity Orange LED Flashing = Battery is discharging Red LED ON = Battery fail (no battery is connected)
MTBF 1)		> 500,000 hrs
ENVIRONMENT		
Operating Temperature 2)		-20°C to +60°C
Storage Temperature		-40°C to +85°C
Operating Humidity		5 to 95% RH (Non-Condensing)
Operating Altitude		0 to 3,000 m (0 to 9,840 ft)



- Notes

  1) MTBF as per Telcordia SR-332 (Confidence level: 90%, I/P: 24Vdc, O/P: 100% load) for vertical mounting orientation.

  2) Refer power de-rating in the product datasheet.

  3) All parameters are specified at 25°C ambient temperature unless otherwise indicated.





### **Features**

- Suitable for 24V system up to 10A
- Zero switch over time from loss of DC input to battery operation
- Built-in diagnostic monitoring for DC OK, Discharge and Battery Fail by relay contacts
- Full power for the entire temperature range from -20°C to
- LED indicator for DC OK, Battery Charging, Battery Discharging, Battery Fail and Battery Reverse Polarity
- High MTBF > 500,000 hrs as per Telcordia SR-332
- Certified according to IEC/EN/UL 62368-1

OUTPUT		DRU-24V10ACZ
Output Voltage Range		23-28Vdc
Output Current		10.0A Max
Output Power		240W Max
INPUT		
Input Voltage Range		24-28Vdc
Input Current		Charging Mode: 0.5A ± 0.1A
Charging Time		< 25hr ± 5 hr (for battery 24V/12AH)
Efficiency		Charging Mode: > 70.0% Buffering Mode: > 99.0%
MECHANICAL		
Case Cover / Chassis		Plastic
Dimensions	mm	91 × 71 × 55.6
(L × W × D)	inch	3.58 × 2.80 × 2.19
Unit Weight	kg	0.14
om voign	lb	0.31
Cooling System		Convection
LED Indicators		Green LED ON = Battery is fully charged Green LED Flashing = Battery is charging Orange LED ON = Battery 24V or DC 24V reverse polarity Orange LED Flashing = Battery is discharging Red LED ON = Battery fail (no battery is connected)
MTBF 1)		> 500,000 hrs
ENVIRONMENT		
Operating Temperature 2)		-20°C to +60°C
Storage Temperature		-40°C to +85°C
Operating Humidity		5 to 95% RH (Non-Condensing)
Operating Altitude		0 to 3.000 m (0 to 9.840 ft)



- MTBF as per Telcordia SR-332 (Confidence level: 90%, I/P: 24Vdc, O/P: 100% load) for vertical mounting orientation.
  Refer power de-rating in the product datasheet.
  All parameters are specified at 25°C ambient temperature unless otherwise indicated.