

# DeltaV™ Bulk Power Supplies



New DeltaV 10A and 20 A Bulk Power Supplies

- Easy to use
- Flexible and cost-effective

## Introduction

Power—your system won't operate without it. DeltaV™ Bulk Power Supplies offer you the *most efficient and reliable power solution* for your money. The DeltaV Bulk Power supply suite provides power to the system electronics and to the field. This is all the power required for your DeltaV system.

## Benefits

**Easy to use.** The DeltaV Bulk Power Supplies provide reliable 12 and 24 VDC power for your DeltaV system power and bussed field power needs. They mount easily onto a T-type DIN rail—*easy!*

**Flexible and cost-effective.** The Legacy DeltaV Bulk Power Supplies has built in load-sharing capabilities enable you to add more power or provide power redundancy to your system while the new DeltaV Bulk Power Supplies will use external redundancy Modules for this purpose which makes their footprint smaller.

**Legacy AC to 24 VDC Bulk Power Supply**

The Legacy 24 V Bulk Power Supply provides a centralized power supply and distributes power to system power supplies and also can provide power for field devices. The Legacy AC to 24 VDC Power Supply comes in a 300 W version. It converts 120/230 VAC power to 24 VDC power. The 24 VDC power provides power to the field devices via power distribution.

Description	DIN-rail Mounted Bulk AC to 24 VDC Power Supply Specifications
AC input	120/230 VAC nominal, 90 VAC to 264 VAC range, 47 Hz to 63 Hz, single-phase
Output power rating 60°C	24.6 VDC at 12.0 A
Output power rating 70°C	24.6 VDC at 9.0 A
Input	4.2 A (24V supply)
Inrush current	40/25 A maximum (hot/cold start)
Hold-up time	20 ms (from 90 to 264 VAC input)
Ripple and Noise	1% PK to PK max (Bandwidth 20 MHz)
Output overvoltage protection	110% - 120%
Power factor	0.98 at full rated load
Input protection	Internally fused, non-replaceable fuses. <b>Note:</b> The internal fuse is for an internal fault condition only. Shorts and overload will not cause the fuse to fail.
Alarm relay contact rating	30 VDC at 2.0 A, 250 VAC at 2.0 A
Redundancy output isolation diode	Integrated in unit. External Isolation diode not required
Relative humidity	5 to 95%, non-condensing
Airborne contaminants	ISA-S71.04-1985 airborne contaminants class G3
Shock	MIL-STD-810D Method 516.3, Procedure III
Vibration	MIL-STD-810D Method 514.3, Category 1, Procedure I
Approvals	CSA certified to C22.2 No. 60-950 FM 3611 ATEX cat 3 EN50021 NE21 CE EN61326 ATEX II 3G EexnC IIC T4
Dimensions	
Height (max)	13.5 cm (5.3 in.)
Width (max)	24.0 cm (9.5 in.)
Depth (max)	10.6 cm (4.2 in.)
Weight	6.1 lbs (2.77 kg.)

**Legacy AC to 12 VDC Bulk Power Supply**

The Legacy 12 V Bulk Power Supply provides a centralized power supply and distributes power to system power supplies. The Legacy AC to 12 VDC Power Supply comes in a 177 W version. It converts 120/230 VAC power to 12 VDC power. The 12 VDC power provides power to the controllers and I/O cards

Description	DIN-rail Mounted Bulk AC to 12 VDC Power Supply Specifications
AC input	120/230 VAC nominal, 90 VAC to 264 VAC range, 47 Hz to 63 Hz, single-phase
Output power rating 60°C	12.3 VDC at 12.0 A
Output power rating 70°C	12.3 VDC at 9.0 A
Input	3.6 A (12V supply)
Inrush current	40/25 A maximum (hot/cold start)
Hold-up time	20 ms (from 90 to 264 VAC input)
Ripple and Noise	1% PK to PK max (Bandwidth 20 MHz)
Output overvoltage protection	110% - 120%
Power factor	0.98 at full rated load
Input protection	Internally fused, non-replaceable fuses. <b>Note:</b> The internal fuse is for an internal fault condition only. Shorts and overload will not cause the fuse to fail.
Alarm relay contact rating	30 VDC at 2.0 A, 250 VAC at 2.0 A
Redundancy output isolation diode	Integrated in unit. External Isolation diode not required
Relative humidity	5 to 95%, non-condensing
Airborne contaminants	ISA-S71.04-1985 airborne contaminants class G3
Shock	MIL-STD-810D Method 516.3, Procedure III
Vibration	MIL-STD-810D Method 514.3, Category 1, Procedure I
Approvals	CSA certified to C22.2 No. 60-950 FM 3611 ATEX cat 3 EN50021 NE21 CE EN61326 ATEX II 3G EexnC IIC T4
Dimensions	
Height (max)	13.5 cm (5.3 in.)
Width (max)	24.0 cm (9.5 in.)
Depth (max)	10.6 cm (4.2 in.)
Weight	6.1 lbs (2.77 kg.)



Legacy Bulk Power Supply

**Using Multiple Legacy Bulk Power Supplies**

The DIN rail mounted Legacy Bulk AC to 24 VDC and Bulk AC to 12 VDC Power Supplies can be used in systems requiring load sharing as well as redundancy. The DIN rail-mounted Bulk Power Supplies have an integrated OR-ing diode. If the DIN rail-mounted Bulk Power Supply is used in a system that requires redundancy or load sharing, connect the SHARE terminals on the top of the power supplies as shown in the installation manual.

**Connecting the DIN Rail-Mounted Bulk Power Supply for Redundancy or Load Sharing**

The following table shows the current provided to the system based on the number of DIN rail-mounted Bulk Power Supplies (AC to 12 and 24 VDC) and whether simplex or redundant power is used in the configuration.

**Legacy Bulk Power Provided to the System**

Number of Legacy Bulk Power Supplies (AC to 24 VDC and AC to 12 VDC)	System Current Provided by Simplex Power	System Current Provided by Redundant Power
1	12 A	N/A
2	24 A	12 A
3	36 A	24 A
4	48 A	36 A
5	-	48 A

## DeltaV Bulk Power Supply 100-240 VAC to 24 VDC, 10 A

Description	DeltaV Bulk AC to 24 VDC, 10 A Power Supply Specifications
AC input Voltage	100-240 VAC $\pm 15\%$ , 50-60 Hz $\pm 6\%$ , single-phase
DC input Voltage	110-150 VDC -20%/+25%, single-phase
Input current	2.37 A at 110 VDC
Inrush current	10 A peak maximum 5 A peak typical
Derating	12 W/°C at +60°C to +70°C
Output Voltage	24 VDC
Output Voltage Adjustment range	24-28 VDC
Output Current	10-9 A continuous 15-13.5 A for 4 seconds (typical)
Output power	240 W continuous 360 W for 4 seconds (typical)
Output Hold-up time	26 ms at 110 VDC (typical)
Output Ripple and Noise	< 50 mV peak-to-peak at 20 Hz to 20 MHz
Efficiency	91.8% at 110 VDC
Losses	21.4 W at 110 VDC
Power factor	1 or N/A at 110 VDC
Input protection	Internally fused, non-replaceable fuses. Note: The internal fuse is for an internal fault condition only. Shorts and overload will not cause the fuse to fail.
Alarm relay contact rating	60 VDC at 0.3 A, 30 VDC at 1 A, 30 VAC at 0.5 A
Operational temperature range	-25°C to + 70°C
Relative humidity	5 to 95%, non-condensing
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Approvals	CSA certified to C22.2 No. 60-950 CE EN61326 UL 508
Dimensions	
Height (max)	12.5 cm (4.9 in.)
Width (max)	6.0 cm (2.3 in.)
Depth (max)	11.7 cm (4.6 in.)
Weight	1.98 lbs (0.9 kg)

## DeltaV Bulk Power Supply 100-240 VAC to 24 VDC, 20 A

Description	DeltaV Bulk AC to 24 VDC, 20 A Power Supply Specifications
AC input Voltage	100-240 VAC $\pm 15\%$ , 50-60 Hz $\pm 6\%$ , single-phase
DC input Voltage	110-150 VDC -20%/+25%, single-phase
Input current	4.6 A at 110 VDC
Inrush current	13 A peak maximum 10 A peak typical
Derating	12 W/°C at +60°C to +70°C
Output Voltage	24 VDC
Output Voltage Adjustment range	24-28 VDC
Output Current	20-17 A continuous 30-26 A for 4 seconds (typical)
Output power	480 W continuous 720 W for 4 seconds (typical)
Output Hold-up time	32 ms at 110 VDC (typical)
Output Ripple and Noise	< 100 mV peak-to-peak at 20 Hz to 20 MHz
Efficiency	92% at 110 VDC
Losses	41.8 W at 110 VDC
Power factor	1 or N/A at 110 VDC
Input protection	Internally fused, non-replaceable fuses. Note: The internal fuse is for an internal fault condition only. Shorts and overload will not cause the fuse to fail.
Alarm relay contact rating	60 VDC at 0.3 A, 30 VDC at 1 A, 30 VAC at 0.5 A
Operational temperature range	-25°C to + 70°C
Relative humidity	5 to 95%, non-condensing
Shock	IEC 60068-2-27
Vibration	IEC 60068-2-6
Approvals	CSA certified to C22.2 No. 60-950 CE EN61326 UL 508
Dimensions	
Height (max)	12.5 cm (4.9 in.)
Width (max)	8.2 cm (3.2 in.)
Depth (max)	12.7 cm (4.6 in.)
Weight	2.65 lbs (1.2 kg)



*DeltaV Bulk 10A and 20 A Power Supplies*



Ordering Information

Description	Model Number
Legacy DIN-rail Mounted Bulk AC to 24 VDC Power Supply	CE5011
Legacy DIN-rail Mounted Bulk AC to 12 VDC Power Supply	CE5012
DeltaV Bulk Power Supply 100-240 VAC to 24 VDC, 10 A	CE5023
DeltaV Bulk Power Supply 100-240 VAC to 24 VDC, 20 A	CE5026

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