



NVE8284602

Regenerative Unit

ATVRU75N4
ATVRD15N4



Altivar Regenerative Unit
User Manual
See [NVE88423](#)
on www.schneider-electric.com

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Only appropriately trained persons who are familiar with and understand the contents of this manual and all other pertinent product documentation and who have received safety training to recognize and avoid hazards involved are authorized to work on and with this drive system. Installation, adjustment, repair, and maintenance must be performed by qualified personnel.
- The system integrator is responsible for compliance with all local and national electrical code requirements as well as all other applicable regulations with respect to grounding of all equipment.
- Many components of the product, including the printed circuit boards, operate with mains voltage. Do not touch. Use only electrically insulated tools.
- Do not touch unshielded components or terminals with voltage present.
- Motors can generate voltage when the shaft is rotated. Prior to performing any type of work on the drive system, block the motor shaft to prevent rotation.
- AC voltage can couple voltage to unused conductors in the motor cable. Insulate both ends of unused conductors of the motor cable.
- Do not short across the DC bus terminals or the DC bus capacitors or the braking resistor terminals.
- Before performing work on the drive system:
 - Disconnect all power, including external control power that may be present.
 - Place a "Do Not Turn On" label on all power switches.
 - Lock all power switches in the open position.
 - Wait 15 minutes to allow the DC bus capacitors to discharge. The DC bus LED is not an indicator of the absence of DC bus voltage that can exceed 800 Vdc.
 - Measure the voltage on the DC bus between the DC bus terminals (PA/+ and PC/-) using a properly rated voltmeter to verify that the voltage is < 42 Vdc.
 - If the DC bus capacitors do not discharge properly, contact your local Schneider Electric representative. Do not repair or operate the product.
- Install and close all covers before applying voltage.

Failure to follow these instructions will result in death or serious injury.

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this product.

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Short-Circuit Current Ratings (SCCR) and Branch Circuit Protection

The combinations in the table below have been tested per UL61800-5-1. (Reference UL file E116875). These ratings allow proper coordination of short circuit protection. The product would exceed a 100 kA interrupt rating on the output. The opening of the branch circuit protective device may be an indication that a fault current has been interrupted.



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- Current-carrying parts and other components of the controller should be examined and replaced if damaged.
- If burnout of the current element of an overload relay occurs, the complete overload relay must be replaced.

Failure to follow these instructions will result in death or serious injury.

75°C (167°F) copper conductor with the AWG wire size shown on nameplate for all sizes.

Suitable for use on a circuit capable of delivering not more than __X__ rms symmetrical kiloAmperes, __Y__ Volts maximum, when protected by __Z1__ with a maximum rating of __Z2__, and by __Z3__ with a maximum rating of __Z4__.

ATV Regenerative Unit Short Circuit Current Ratings ^{1,2} With Enclosure				Minimum Enclosure Volume		DC fuses			With GV•P			With Fuses		
Input Voltage 50/60 Hz (Y)	Power Ratings		Catalog Number			Maximum braking power on DC bus	Rating ⁴ (Z3, Z4)	Max I ² t	GV•P (Z1, Z2)			SCCR (X)	600 V Class J ⁵ (Z1, Z2)	SCCR (X)
	(kW)	(HP)							Type E ³	Voltage Rating	Power ⁶			
480 Vac Three-phase	7.5	10	ATVRU75N4	53	3223	0.33	3	300	GV3P32	480V/277	20	100	40	100
						0.50	5	300						
						0.68	6	300						
						1.0	7	300						
						1.4	9	300						
						2.0	14	300						
						2.7	17	300						
						3.6	21	685						
						5.0	24	685						
						6.8	30	1100						
	15	20	ATVRD15N4	53	3223	9.9	40	1900	GV3P50	480V/277	30	65	70	100
						13.5	40	3100						

1. The amp rating of the short circuit protection devices in the table are maximum values. Smaller amp sizes may be used.

Branch circuit protection must be provided in accordance with the National Electrical Code and any additional local codes.

2. Ratings apply to an Altivar Regenerative Unit mounted in a Type 1, 3R, 4(X) or 12 rated enclosure. Minimum enclosure volume allows for specified SCCR. Thermal requirements may require a larger enclosure.

3. For GV2P/3P use, 480 V ratings are for Wye connected electrical distribution systems. GV3P•• self protected manual combination starter must be used with GV3G66 + GVAM11 insulating barrier and auxiliary contact to meet UL 508 Type E rating. The GVAM11 provides a visual indication if the GV3P has tripped.

4. Use semiconductors protection class fuses.

5. Use Class CC or J fast acting or time delay.

6. UL61800-5-1 Par. 6.3.7DV.2.1.1 require publishing the standard Type E combination motor controller power rating since this is a basic identification marking of type E devices. However, when applied as an input overcurrent protective device for a drive, the rated current of the Type E combination motor controller, not the rated power, is the key parameter for dimensioning (reference UL61800-5-1Par. 5.2.3.6.2DV.4.1.11 & 5.2.3.6.2DV.4.1.12).

Schneider Electric GV•P Type E combination motor controllers are adjustable, their current range is shown on the adjustment dial and their selection is based on the input current and not the power rating of the drive.

Note:

- The Altivar Regenerative Unit has a 100 kA interrupt rating on the output. In addition to providing a rating based on shorting the output, these short circuit current ratings have been obtained by shorting components internal to the Altivar Regenerative unit. These ratings allow proper coordination of short circuit protection.