ANNEX

ANNEX for ATV340 Getting Started

NVE3764103

Short-Circuit Current Ratings (SCCR) and branch circuit protection

The combinations in the tables have been tested per UL61800-5-1 or UL508C (Reference UL file E116875). These short circuit current ratings have been obtained by shorting components internal to the Altivar Machine. These ratings allow proper coordination of short circuit protection.

ATV340 drives are provided with integral overload and over-speed monitoring and can provide motor overload protection at 100% of the full load motor current. The motor thermal current [Motor Th Current] ItH must be set to the rated continuous current indicated on the motor nameplate. For more information, refer to the ATV340 Programming Manual (NVE61643).

The opening of the branch circuit protective device may be an indication that a fault current has been interrupted.

⚠⚠ DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- 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.

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

From UL61800-5-1, paragraph 6.3.7DV.2.1.1
Suitable for use on a circuit capable of delivering not more than __X__ rms symmetrical kiloamperes, 480 Volts maximum,
when protected by __Z1__ Class CC or Class J fuses or
when protected by a circuit breaker having an interrupting rating not less than __Y__ rms symmetrical kiloamperes, 480 Volts maximum. See note 3.

Open Type Without Line Reactor (AC Choke)

Altivar 340 AC Drive Short Circuit Current Ratings[1] With Enclosure, No Line Reactor				Minimum Enclosure Volume		With Circuit Breaker		With GV•P				Fuses	
						PowerPact[3] Catalog Number (Y) see Note 3, (Z1)	SCCR (X)	GV2P/3P (Z1)	GV•P			600 V Class J[6] (Z1)	SCCR (X)
Input Voltage	Power Rating		Catalog Number					Type E[4]	Voltage Rating	Power[7]	SCCR (X)		
	(kW)	(HP)		(liter)	(inch3)		(kA)	–	(V)	(HP)	(kA)	(A)	(kA)
400/480 Vac Three-phase Evaluated For UL61800-5-1	0.75	1	ATV340U07N4•	53	3223	H•L36015	22	GV2P08	480Y/277	2	22	6	22
	1.5	2	ATV340U15N4•	53	3223	H•L36015	22	GV2P10	480Y/277	3	22	12	22
	2.2	3	ATV340U22N4•	53	3223	H•L36015	22	GV2P14	480Y/277	5	22	15	22
	3	3	ATV340U30N4•	53	3223	H•L36015	22	GV2P14	480Y/277	5	22	20	22
	4	5	ATV340U40N4•	53	3223	H•L36020	22	GV3P13[5]	480Y/277	7.5	22	25	22
	5.5	7.5	ATV340U55N4•	53	3223	H•L36025	22	GV3P18[5]	480Y/277	10	22	40	22
	7.5	10	ATV340U75N4•	53	3223	H•L36035	22	GV3P25[5]	480Y/277	15	22	40	22
	11	15	ATV340D11N4•	63	3840	H•L36045	22	GV3P32	480Y/277	20	22	60	22
	15	20	ATV340D15N4•	63	3840	H•L36060	22	GV3P40	480Y/277	25	22	70	22
	18.5	25	ATV340D18N4•	63	3840	H•L36070	22	–	–	–	–	100	22
	22	30	ATV340D22N4•	63	3840	H•L36090	22	–	–	–	–	100	22
400/480 Vac Three-phase Evaluated For UL508C	30	40	ATV340D30N4E	115	7010	H•L36125	100	–	–	–	–	90	100
	37	50	ATV340D37N4E	115	7010	H•L36150	100	–	–	–	–	100	100
	45	60	ATV340D45N4E	132	8040	J•L36175	100	–	–	–	–	150	100
	55	75	ATV340D55N4E	132	8040	J•L36200	100	–	–	–	–	200	100
	75	100	ATV340D75N4E	132	8040	J•L36250	100	–	–	–	–	200	100

(X):SCCR rating. (Y): Interrupting rating (Z1): Rating for circuit breaker, GV2P/GV3P motor protector, or fuse

Open Type With Line Reactor (AC Choke)

Altivar 340 AC Drive Short Circuit Current Ratings[2] With Enclosure And Line Reactor				Line Reactor Mini. Value	Minimum Enclosure Volume		With Circuit Breaker		With GV•P				Fuses	
							PowerPact[3] Catalog Number (Y) see Note 3, (Z1)	SCCR (X)	GV2P/3P (Z1)	GV•P			600 V Class J[6] (Z1)	SCCR (X)
Input Voltage	Power Rating		Catalog Number						Type E[4]	Voltage Rating	Power[7]	SCCR (X)		
	(kW)	(HP)		(mH)	(liter)	(inch3)		(kA)	–	(V)	(HP)	(kA)	(A)	(kA)
400/480 Vac Three-phase Evaluated For UL61800-5-1	0.75	1	ATV340U07N4•	4.8	53	3223	H•L36015	65	GV2P08	480Y/277	2	65	6	100
	1.5	2	ATV340U15N4•	4.8	53	3223	H•L36015	65	GV2P10	480Y/277	3	65	12	100
	2.2	3	ATV340U22N4•	4.8	53	3223	H•L36015	65	GV2P14	480Y/277	5	65	15	100
	3	3	ATV340U30N4•	3	53	3223	H•L36015	65	GV2P14	480Y/277	5	65	20	100
	4	5	ATV340U40N4•	3	53	3223	H•L36020	65	GV3P13[5]	480Y/277	7.5	65	25	100
	5.5	7.5	ATV340U55N4•	1.6	53	3223	H•L36025	65	GV3P18[5]	480Y/277	10	65	40	100
	7.5	10	ATV340U75N4•	1.6	53	3223	H•L36035	65	GV3P25[5]	480Y/277	15	65	40	100
	11	15	ATV340D11N4•	0.6	63	3840	H•L36045	65	GV3P32	480Y/277	20	65	60	100
	15	20	ATV340D15N4•	0.6	63	3840	H•L36060	65	GV3P40	480Y/277	25	65	70	100
	18.5	25	ATV340D18N4•	0.6	63	3840	H•L36070	65	–	–	–	–	100	100
	22	30	ATV340D22N4•	0.6	63	3840	H•L36090	65	–	–	–	–	100	100
400/480 Vac Three-phase Evaluated For UL508C	30	40	ATV340D30N4E	If optional line reactor is used, the SCCR values are the same as on the table without line reactor.										
	37	50	ATV340D37N4E											
	45	60	ATV340D45N4E											
	55	75	ATV340D55N4E											
	75	100	ATV340D75N4E											
(X):SCCR rating. (Y): Interrupting rating (Z1): GV2P/3P motor circuit-breaker or fuse rating														

Type 1 Without Line Reactor (AC Choke)

Altivar 340 AC Drive Short Circuit Current Ratings[1] Type1, No Line Reactor				Fuses	
Input Voltage	Power Rating		Catalog Number	600 V Class J[6] (Z1)	SCCR (X)
	(kW)	(HP)		(A)	(kA)
400/480 Vac Three-phase Evaluated For UL508C	30	40	ATV340D30N4E	90	100
	37	50	ATV340D37N4E	100	100
	45	60	ATV340D45N4E	150	100
	55	75	ATV340D55N4E	200	100
	75	100	ATV340D75N4E	200	100
(Y): Interrupting rating (Z1): Fuse rating					

1. This table shows the maximum Short Circuit Current Rating the Altivar 340 drive can be installed on without adding impedance to the drive. Ratings apply to an Altivar 340 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.

2. Ratings apply to an Altivar 340 drive 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. The listed line reactor minimum inductance is required to get these higher ratings.

3. Circuit Breaker part number designations: • = Ampere Interrupting Rating. It must be equal to or higher than the prospective short circuit current or SCCR.

For 480 V range, use: • = D for 18 kA, G for 35 kA, J for 65 kA, L for 100 kA.

4. For GV2P/3P use, 480 V ratings are for Wye connected electrical distribution systems. GV2P•• self protected manual combination starter must be used with GV2GH7 insulating barrier to meet UL 508 Type E rating. 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.

5. GV2P products detailed below can be used in place of the GV3P products for obtaining an SCCR limited to 10 kA. GV2P16 for GV3P13, GV2P20 for GV3P18, GV2P22 for GV3P25.

6. Fuse type can be fast acting or time delay Class J, or Class CC.

7. UL508C Par. 57.1 & 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 the 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 UL61800-5-1 Par. 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 power rating of the drive.

Note:
• Integral solid state short circuit protection in the drive does not provide branch circuit protection. Branch circuit protection must be provided in accordance with the National Electrical Code and any local codes.
• The Altivar 340 drive has a 100 kA interrupt rating on the output of the drive. In addition to providing a rating based on shorting the output of the drive, these short circuit current ratings have been obtained by shorting components internal to the Altivar 340. These ratings allow proper coordination of short circuit protection.