ANNEX
Getting Started with ATV312

S1B1632802

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

The combinations in the tables have been tested per UL508C (Reference UL file E116875). These ratings are in addtion to ratings on the nameplate of the product. The values for the overcurrent protection devices are the maximum allowable amp size. Smaller amp ratings may be used.
Integral solid state short circuit protection does not provide branch circuit protection. Branch circuit protection must be provided in accordance with the National Electrical Code and any additional local codes.

The devices are not provided with thermal protection of the motor. A sensing of motor overtemperature is required to be provided by the end user.

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_.

ATV312 Drive							Short-Circuit Current Ratings [2]							
Input Voltage 60 Hz **Y**	(kW)	(HP)	Reference [7]	Input Rating [1] (kA)	Minimun Inductance (mH)	Line Reactor Reference	With Circuit Breaker		With GV●P				With Fuses	
							PowerPact **Z1, Z2**	SCCR (kA) [4] **X**	GV●P Type E [4, 5] **Z1, Z2**	GV●P Voltage rating (V)	GV●P Power (HP) [8]	SCCR (kA)	Fuse (A) [6] **Z1, Z2**	SCCR (kA) [3,4] **X**
Three-phase without line reactor														
208/230V	0.18	0.25	ATV312H018M3	5	-	-	HxL36015	5	-	-	-	-	3	5
	0.37	0.5	ATV312H037M3	5	-	-	HxL36015	5	-	-	-	-	6	5
	0.55	0.75	ATV312H055M3	5	-	-	HxL36015	5	-	-	-	-	10	5
	0.75	1	ATV312H075M3	5	-	-	HxL36015	5	-	-	-	-	10	5
	1.1	1.5	ATV312HU11M3	5	-	-	HxL36015	5	-	-	-	-	15	5
	1.5	2	ATV312HU15M3	5	-	-	HxL36015	5	-	-	-	-	15	5
	2.2	3	ATV312HU22M3	5	-	-	HxL36020	5	-	-	-	-	20	5
	3	-	ATV312HU30M3	5	-	-	HxL36020	5	-	-	-	-	25	5
	4	5	ATV312HU40M3	5	-	-	HxL36030	5	-	-	-	-	35	5
	5.5	7.5	ATV312HU55M3	22	-	-	HxL36040	22	-	-	-	-	50	22
	7.5	10	ATV312HU75M3	22	-	-	HxL36060	22	-	-	-	-	60	22
	11	15	ATV312HD11M3	22	-	-	HxL36070	22	-	-	-	-	80	22
	15	20	ATV312HD15M3	22	-	-	HxL36090	22	-	-	-	-	110	22
400/480V	0.37	0.5	ATV312H037N4	5	-	-	HxL36015	5	-	-	-	-	3	5
	0.55	0.75	ATV312H055N4	5	-	-	HxL36015	5	-	-	-	-	6	5
	0.75	1	ATV312H075N4	5	-	-	HxL36015	5	-	-	-	-	6	5
	1.1	1.5	ATV312HU11N4	5	-	-	HxL36015	5	-	-	-	-	10	5
	1.5	2	ATV312HU15N4	5	-	-	HxL36015	5	-	-	-	-	10	5
	2.2	3	ATV312HU22N4	5	-	-	HxL36015	5	-	-	-	-	15	5
	3	-	ATV312HU30N4	5	-	-	HxL36015	5	-	-	-	-	15	5
	4	5	ATV312HU40N4	5	-	-	HxL36015	5	-	-	-	-	20	5
	5.5	7.5	ATV312HU55N4	22	-	-	HxL36020	22	-	-	-	-	30	22
	7.5	10	ATV312HU75N4	22	-	-	HxL36030	22	-	-	-	-	35	22
	11	15	ATV312HD11N4	22	-	-	HxL36035	22	-	-	-	-	50	22
	15	20	ATV312HD15N4	22	-	-	HxL36050	22	-	-	-	-	70	22
Three-phase with line reactor														
208/230V	0.18	0.25	ATV312H018M3	5	3	RL-00401	HxL36015	65	-	-	-	65	3	22
	0.37	0.5	ATV312H037M3	5	3	RL-00401	HxL36015	65	-	-	-	65	6	22
	0.55	0.75	ATV312H055M3	5	3	RL-00401	HxL36015	65	-	-	-	65	10	22
	0.75	1	ATV312H075M3	5	3	RL-00401	HxL36015	65	-	-	-	65	10	22
	1.1	1.5	ATV312HU11M3	5	1.5	RL-00801	HxL36015	65	GV2P14	240	3	65	15	22
	1.5	2	ATV312HU15M3	5	1.5	RL-00801	HxL36015	65	GV2P14	240	3	65	15	22
	2.2	3	ATV312HU22M3	5	1.25	RL-01201	HxL36020	65	GV3P18 / 13	240	5/3	65	20	22
	3	-	ATV312HU30M3	5	1.25	RL-01801	HxL36020	65	GV3P18	240	5	65	25	22
	4	5	ATV312HU40M3	5	1.25	RL-01801	HxL36030	65	GV3P25	240	7.5	65	35	22
	5.5	7.5	ATV312HU55M3	22	0.5	RL-02501	HxL36040	65	GV3P40/ 32	240	10/7.5	65	50	22
	7.5	10	ATV312HU75M3	22	0.4	RL-03501	HxL36060	65	GV3P50	240	10	65	60	22
	11	15	ATV312HD11M3	22	0.3	RL-04501	HxL36070	65	GV3P65	240	15	65	80	22
	15	20	ATV312HD15M3	22	0.2	RL-08001	HxL36090	65	-	-	-	-	110	22

Footnotes are on page 3.

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ATV312 Drive							Short-Circuit Current Ratings [2]							
Input Voltage 60 Hz **Y**	(kW)	(HP)	Reference [7]	Input Rating [1] (kA)	Minimun Inductance (mH)	Line Reactor Reference	With Circuit Breaker		With GV●P				With Fuses	
							PowerPact **Z1**, **Z2**	SCCR (kA) [4] **X**	GV●P Type E [4, 5] **Z1**, **Z2**	GV●P Voltage rating (V)	GV●P Power (HP) [8]	SCCR (kA)	Fuse (A) [6] **Z1**, **Z2**	SCCR (kA) [3,4] **X**
Three-phase with line reactor														
400/480V	0.37	0.5	ATV312H037N4	5	12	RL00201	HxL36015	65	GV2P07	480Y/277	1	65	3	100
	0.55	0.75	ATV312H055N4	5	12	RL00201	HxL36015	65	GV2P07	480Y/277	1	65	6	100
	0.75	1	ATV312H075N4	5	12	RL00201	HxL36015	65	GV2P08	480Y/277	2	65	6	100
	1.1	1.5	ATV312HU11N4	5	6.5	RL00402	HxL36015	65	GV2P08	480Y/277	2	65	10	100
	1.5	2	ATV312HU15N4	5	6.5	RL00402	HxL36015	65	GV2P10	480Y/277	3	65	10	100
	2.2	3	ATV312HU22N4	5	5	RL00803	HxL36015	65	GV2P14	480Y/277	5	65	15	100
	3	-	ATV312HU30N4	5	3	RL00802	HxL36015	65	GV2P14	480Y/277	5	65	15	100
	4	5	ATV312HU40N4	5	3	RL00802	HxL36015	65	GV3P13	480Y/277	7.5	65	20	100
	5.5	7.5	ATV312HU55N4	22	2.5	RL01202	HxL36020	65	GV3P18	480Y/277	7.5	65	30	100
	7.5	10	ATV312HU75N4	22	1.5	RL01802	HxL36030	65	GV3P25	480Y/277	15	65	35	100
	11	15	ATV312HD11N4	22	1.2	RL02502	HxL36035	65	GV3P32	480Y/277	20	65	50	100
	15	20	ATV312HD15N4	22	0.8	RL03502	HxL36050	65	GV3P40	480Y/277	25	65	70	100
575/600V	0.75	1	ATV312H075S6	5	20	RL-00202	HxL36015	22	-	-	-	-	6	22
	1.5	2	ATV312HU15S6	5	9	RL-00403	HxL36015	22	-	-	-	-	6	22
	2.2	3	ATV312HU22S6	5	6.5	RL-00402	HxL36015	22	-	-	-	-	10	22
	4	5	ATV312HU40S6	5	5	RL-00803	HxL36015	22	-	-	-	-	15	22
	5.5	7.5	ATV312HU55S6	22	2.5	RL-01202	HxL36025	22	-	-	-	-	20	22
	7.5	10	ATV312HU75S6	22	2.5	RL-01202	HxL36030	22	-	-	-	-	25	22
	11	15	ATV312HD11S6	22	1.5	RL-01802	HxL36045	22	-	-	-	-	35	22
	15	20	ATV312HD15S6	22	1.2	RL-02502	HxL36060	22	-	-	-	-	45	22
Single-phase without line reactor														
208/230V	0.18	0.25	ATV312H018M2	1	-	-	-	-	-	-	-	-	6	1
	0.37	0.5	ATV312H037M2	1	-	-	-	-	-	-	-	-	10	1
	0.55	0.75	ATV312H055M2	1	-	-	-	-	-	-	-	-	10	1
	0.75	1	ATV312H075M2	1	-	-	-	-	-	-	-	-	15	1
	1.1	1.5	ATV312HU11M2	1	-	-	-	-	-	-	-	-	20	1
	1.5	2	ATV312HU15M2	1	-	-	-	-	-	-	-	-	20	1
	2.2	3	ATV312HU22M2	1	-	-	-	-	-	-	-	-	30	1
	4	5	ATV312HU75M3	2	-	-	HxL36060	2	-	-	-	-	60	2
	5.5	7.5	ATV312HD11M3	2	-	-	HxL36070	2	-	-	-	-	80	2
	7.5	10	ATV312HD15M3	2	-	-	HxL36090	2	-	-	-	-	110	2
400/480V	0.37	0.5	ATV312H075N4	5	-	-	HxL36015	5	-	-	-	-	6	5
	0.55	0.75	ATV312HU11N4	5	-	-	HxL36015	5	-	-	-	-	10	5
	0.75	1	ATV312HU15N4	5	-	-	HxL36015	5	-	-	-	-	10	5
	1.1	1.5	ATV312HU22N4	5	-	-	HxL36015	5	-	-	-	-	15	5
	1.5	2	ATV312HU30N4	5	-	-	HxL36015	5	-	-	-	-	15	5
	2.2	3	ATV312HU40N4	5	-	-	HxL36015	5	-	-	-	-	20	5
	2.2	3	ATV312HU55N4	22	-	-	HxL36020	22	-	-	-	-	30	22
	4	5	ATV312HU75N4	22	-	-	HxL36030	22	-	-	-	-	35	22
	5.5	7.5	ATV312HD11N4	22	-	-	HxL36035	22	-	-	-	-	50	22
	7.5	10	ATV312HD15N4	22	-	-	HxL36050	22	-	-	-	-	70	22
Single-phase with line reactor														
208/230V	4	5	ATV312HU75M3	22	0.75	RL-03502	HxL36060	65	-	-	-	-	60	22
	5.5	7.5	ATV312HD11M3	22	0.375	RL-05502	HxL36070	65	-	-	-	-	80	22
	7.5	10	ATV312HD15M3	22	0.278	RL-08002	HxL36090	65	-	-	-	-	110	22
400/480V	0.37	0.5	ATV312H075N4	5	5.79	RL-00402	HxL36015	65	-	-	-	-	6	22
	0.55	0.75	ATV312HU11N4	5	4.27	RL-00402	HxL36015	65	-	-	-	-	10	22
	0.75	1	ATV312HU15N4	5	4.27	RL-00803	HxL36015	65	-	-	-	-	10	22
	1.1	1.5	ATV312HU22N4	5	2.77	RL-00802	HxL36015	65	-	-	-	-	15	22
	1.5	2	ATV312HU30N4	5	2.77	RL-00802	HxL36015	65	-	-	-	-	15	22
	2.2	3	ATV312HU40N4	5	1.68	RL-01202	HxL36015	65	-	-	-	-	20	22
	2.2	3	ATV312HU55N4	22	1.29	RL-01802	HxL36020	65	-	-	-	-	30	22
	4	5	ATV312HU75N4	22	0.912	RL-02502	HxL36030	65	-	-	-	-	35	22
	5.5	7.5	ATV312HD11N4	22	0.694	RL-03502	HxL36035	65	-	-	-	-	50	22
	7.5	10	ATV312HD15N4	22	0.569	RL-04502	HxL36050	65	-	-	-	-	70	22

Footnotes are on page 3.

1. This column shows the maximum prospective short-circuit current value for which these Altivar 312 drives can be installed on without adding impedance. Electrical distribution systems with a higher prospective short-circuit current will cause higher input currents in the front end of the drive.
Add the inductance referred to in the table at the input of the drive if installing the drive on a system with higher prospective short-circuit current. A 3% (minimum) input line reactor or equivalent inductance is required for the 500/600 Vac Altivar 312 drives and provides the listed value with the listed fuse protection.

2. An output short-circuit test was performed for 100 kA. In addition to this test, a breakdown of components test was performed by shorting components internal to the drive.
These ratings allow proper coordination of short-circuit protection.

3. Ratings also apply to ATV312 Type 1 product, i.e.: an ATV312 fitted with a conduit box.

4. Ratings apply to an ATV312 mounted in a non-ventilated Type 1, 3R, 4(X) or 12 rated enclosure. Minimum enclosure volume is 3.375 times the drive volume.

5. 480Y/277V ratings are for Wye connected electrical distribution systems only. GV2P●● self protected manual combination starter must be used with GV2GH7 insulating barrier to meet UL 508 Type E rating. GV3P●● must be used with GV3G66 and GVAM11 in order to meet UL508 Type E rating.

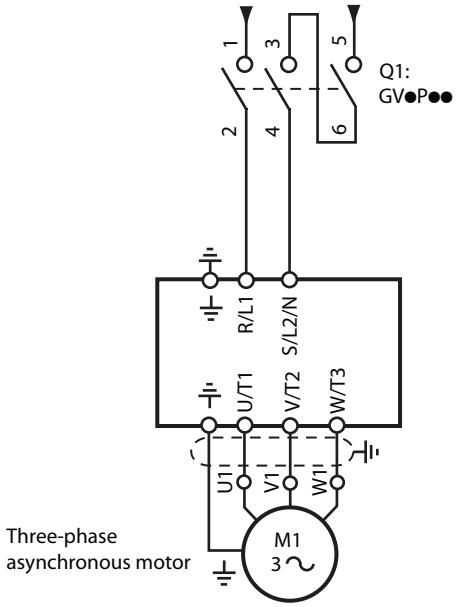
6. Fuse type: Class J, can be fast acting or time delay, or Class CC.

7. Available also for **B** products. Example: ATV312H018M3**B**

8. UL508C Par. 57.1 requires 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 UL508C paragraph 45.8.11 and 45.8.12).
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.

Wiring three-phase ATV312 on single-phase power supply

When using GV2P or GV3P manual self-protected combination starters for single-phase input applications, wire the drive as illustrated :



Notes: