

Annex to the Getting Started with Altivar Process ATV900



NHA6158301

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

The combinations in the tables have been tested per UL508C (Reference UL file E116875). Instead of 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 Process as prescribed in the forthcoming UL61800-5-1. These ratings allow proper coordination of short circuit protection. The product would exceed a 100k interrupt rating on the output.

Altivar Process 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] I_{LH} must be set to the rated continuous current indicated on the motor nameplate. (For more information refer to the Altivar Process programming manual NHA80757).

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 .

Altivar Process				Short Circuit Current Ratings (a) (b)			
Input Voltage 50/60 Hz Y	Power Ratings in Normal Duty		Catalog Number	With Fuses (d) SCCR X = 100 kA		With Circuit Breaker (e) SCCR X = 100 kA	
	(kW)	(HP)		Fuse Ampere Rating (A) Z1, Z2	Minimum Enclosure Volume (cu. in.)	Power Pact Z1, Z2	Minimum Enclosure Volume (cu. in.)
200/240 Vac Three-phase	0.75	1	ATV930U07M3	6 (c)	—	HLL36015	2880
	1.5	2	ATV930U15M3	10 (c)	—	HLL36015	2880
	2.2	3	ATV930U22M3	15 (c)	—	HLL36025	2880
	3	-	ATV930U30M3	20 (c)	—	HLL36030	2880
	4	5	ATV930U40M3	25 (c)	—	HLL36030	2880
	5.5	7.5	ATV930U55M3	35 (c)	—	HLL36050	2880
	7.5	10	ATV930U75M3	45 (c)	—	HLL36060	2880
	11	15	ATV930D11M3	60 (c)	—	HLL36070	3390
	15	20	ATV930D15M3	80 (c)	—	HLL36090	7010
	18.5	25	ATV930D18M3	100 (c)	—	HLL36110	7010
	22	30	ATV930D22M3	100 (c)	—	HLL36125	7010
	30	40	ATV930D30M3	175 (c)	—	JLL36175	8040
	30	40	ATV930D30M3C	175 (c)	—	JLL36175	8040
	37	50	ATV930D37M3	200 (c)	—	JLL36225	8040
	37	50	ATV930D37M3C	200 (c)	—	JLL36225	8040
	45	60	ATV930D45M3	200 (c)	—	JLL36250	8040
	45	60	ATV930D45M3C	200 (c)	—	JLL36250	8040
	55	75	ATV930D55M3C	350 (e)	29160	LLL36400	29160
	75	100	ATV930D75M3C	450 (e)	29160	LLL36600	29160
				With Fuses (d) SCCR X = 25 kA			
	55	75	ATV930D55M3C	315 (c)	order VW3A9704	—	—
	75	100	ATV930D75M3C	350 (c)		—	—

(a) The amp rating of the short circuit protection devices in the table are maximum values. Smaller amp sizes may be used; particularly for Heavy Duty ratings. Branch circuit protection must be provided in accordance with the National Electrical Code and any additional local codes.

(b) The maximum prospective short circuit current value that cannot be exceeded is 100 kA. Electrical distribution systems with a higher prospective short circuit will cause higher input currents in the front end of the drive.

(c) Ratings apply to the Altivar Process Type 1 product when mounted on a wall or when mounting in a Type 1, 12, 3R, or 4X rated enclosure.

(d) Use Class CC or J fast acting or time delay.

(e) Ratings apply to an Altivar Process mounted in a Type 1, 12, 3R or 4(X) rated enclosure.

Altivar Process				Short Circuit Current Ratings (a) (b)			
Input Voltage 50/60 Hz Y	Power Ratings in Normal Duty		Catalog Number	With Fuses (d) SCCR X = 100 kA		With Circuit Breaker (e) SCCR X = 100 kA	
	(kW)	(HP)		Fuse Ampere Rating (A) Z1, Z2	Minimum Enclosure Volume (cu. in.)	Power Pact Z1, Z2	Minimum Enclosure Volume (cu. in.)
400/480 Vac Three-phase	0.75	1	ATV930U07N4	3 (c)	—	HLL36015	2880
	0.75	1	ATV950U07N4	3 (c)	—	HLL36015	2880
	1.5	2	ATV930U15N4	6 (c)	—	HLL36015	2880
	1.5	2	ATV950U15N4	6 (c)	—	HLL36015	2880
	2.2	3	ATV930U22N4	10 (c)	—	HLL36015	2880
	2.2	3	ATV950U22N4	10 (c)	—	HLL36015	2880
	3	-	ATV930U30N4	10 (c)	—	HLL36015	2880
	3	-	ATV950U30N4	10 (c)	—	HLL36015	2880
	4	5	ATV930U40N4	15 (c)	—	HLL36015	2880
	4	5	ATV950U40N4	15 (c)	—	HLL36015	2880
	5.5	7,5	ATV930U55N4	15 (c)	—	HLL36025	2880
	5.5	7,5	ATV950U55N4	15 (c)	—	HLL36025	2880
	7.5	10	ATV930U75N4	20 (c)	—	HLL36030	2880
	7.5	10	ATV950U75N4	20 (c)	—	HLL36030	2880
	11	15	ATV930D11N4	30 (c)	—	HLL36050	2880
	11	15	ATV950D11N4	30 (c)	—	HLL36050	2880
	15	20	ATV930D15N4	40 (c)	—	HLL36060	3390
	15	20	ATV950D15N4	40 (c)	—	HLL36060	3390
	18.5	25	ATV930D18N4	50 (c)	—	HLL36070	3390
	18.5	25	ATV950D18N4	50 (c)	—	HLL36070	3390
	22	30	ATV930D22N4	60 (c)	—	HLL36080	3390
	22	30	ATV950D22N4	60 (c)	—	HLL36080	3390
	30	40	ATV930D30N4	80 (c)	—	HLL36100	7010
	30	40	ATV950D30N4	80 (c)	—	HLL36100	7010
	37	50	ATV930D37N4	90 (c)	—	HLL36125	7010
	37	50	ATV950D37N4	90 (c)	—	HLL36125	7010
	45	60	ATV930D45N4	100 (c)	—	HLL36150	7010
	45	60	ATV950D45N4	100 (c)	—	HLL36150	7010
	55	75	ATV930D55N4	150 (c)	—	JLL36175	8040
	55	75	ATV930D55N4C	150 (c)	—	JLL36175	8040
	55	75	ATV950D55N4	150 (c)	—	JLL36175	8040
	75	100	ATV930D75N4	200 (c)	—	JLL36200	8040
	75	100	ATV930D75N4C	200 (c)	—	JLL36200	8040
	75	100	ATV950D75N4	200 (c)	—	JLL36200	8040
	90	125	ATV930D90N4	200 (c)	—	JLL36250	8040
	90	125	ATV930D90N4C	200 (c)	—	JLL36250	8040
	90	125	ATV950D90N4	200 (c)	—	JLL36250	8040
	110	150	ATV930C11N4C	300 (e)	29160	LLL36400	29160
	132	200	ATV930C13N4C	400 (e)	29160	LLL36600	29160
	160	250	ATV930C16N4C	500 (e)	29160	LLL36600	29160
				With Fuses (d) SCCR X = 25 kA			
	110	150	ATV930C11N4C	250 (c)	order VW3A9704	—	—
	132	200	ATV930C13N4C	315 (c)		—	—
	160	250	ATV930C16N4C	350 (c)		—	—

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