

Annex to the Getting Started with Altivar Process ATV600



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_{tH} must be set to the rated continuous current indicated on the motor nameplate. (For more information refer to the Altivar Process programming manual EAV64318).

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	ATV630U07M3	6 (c)	–	HLL36015	2880	
	1.5	2	ATV630U15M3	10 (c)	–	HLL36015	2880	
	2.2	3	ATV630U22M3	15 (c)	–	HLL36025	2880	
	3	-	ATV630U30M3	20 (c)	–	HLL36030	2880	
	4	5	ATV630U40M3	25 (c)	–	HLL36030	2880	
	5.5	7,5	ATV630U55M3	35 (c)	–	HLL36050	2880	
	7.5	10	ATV630U75M3	45 (c)	–	HLL36060	2880	
	11	15	ATV630D11M3	60 (c)	–	HLL36070	3390	
	15	20	ATV630D15M3	80 (c)	–	HLL36090	7010	
	18.5	25	ATV630D18M3	100 (c)	–	HLL36110	7010	
	22	30	ATV630D22M3	100 (c)	–	HLL36125	7010	
	30	40	ATV630D30M3	175 (c)	–	JLL36175	8040	
	37	50	ATV630D37M3	200 (c)	–	JLL36225	8040	
	45	60	ATV630D45M3	200 (c)	–	JLL36250	8040	
	55	75	ATV630D55M3	350 (e)	29160	LLL36400	29160	
	75	100	ATV630D75M3	450 (e)	29160	LLL36600	29160	
					With Fuses (d) SCCR X = 25 kA			
		55	75	ATV630D55M3	315 (c)	order VW3A9704	–	–
	75	100	ATV630D75M3	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	ATV630U07N4	3 (c)	–	HLL36015	2880
	0.75	1	ATV650U07N4	3 (c)	–	HLL36015	2880
	1.5	2	ATV630U15N4	6 (c)	–	HLL36015	2880
	1.5	2	ATV650U15N4	6 (c)	–	HLL36015	2880
	2.2	3	ATV630U22N4	10 (c)	–	HLL36015	2880
	2.2	3	ATV650U22N4	10 (c)	–	HLL36015	2880
	3	-	ATV630U30N4	10 (c)	–	HLL36015	2880
	3	-	ATV650U30N4	10 (c)	–	HLL36015	2880
	4	5	ATV630U40N4	15 (c)	–	HLL36015	2880
	4	5	ATV650U40N4	15 (c)	–	HLL36015	2880
	5.5	7,5	ATV630U55N4	15 (c)	–	HLL36025	2880
	5.5	7,5	ATV650U55N4	15 (c)	–	HLL36025	2880
	7.5	10	ATV630U75N4	20 (c)	–	HLL36030	2880
	7.5	10	ATV650U75N4	20 (c)	–	HLL36030	2880
	11	15	ATV630D11N4	30 (c)	–	HLL36050	2880
	11	15	ATV650D11N4	30 (c)	–	HLL36050	2880
	15	20	ATV630D15N4	40 (c)	–	HLL36060	3390
	15	20	ATV650D15N4	40 (c)	–	HLL36060	3390
	18.5	25	ATV630D18N4	50 (c)	–	HLL36070	3390
	18.5	25	ATV650D18N4	50 (c)	–	HLL36070	3390
	22	30	ATV630D22N4	60 (c)	–	HLL36080	3390
	22	30	ATV650D22N4	60 (c)	–	HLL36080	3390
	30	40	ATV630D30N4	80 (c)	–	HLL36100	7010
	30	40	ATV650D30N4	80 (c)	–	HLL36100	7010
	37	50	ATV630D37N4	90 (c)	–	HLL36125	7010
	37	50	ATV650D37N4	90 (c)	–	HLL36125	7010
	45	60	ATV630D45N4	100 (c)	–	HLL36150	7010
	45	60	ATV650D45N4	100 (c)	–	HLL36150	7010
	55	75	ATV630D55N4	150 (c)	–	JLL36175	8040
	55	75	ATV650D55N4	150 (c)	–	JLL36175	8040
	75	100	ATV630D75N4	200 (c)	–	JLL36200	8040
	75	100	ATV650D75N4	200 (c)	–	JLL36200	8040
	90	125	ATV630D90N4	200 (c)	–	JLL36250	8040
90	125	ATV650D90N4	200 (c)	–	JLL36250	8040	
110	150	ATV630C11N4	300 (e)	29160	LLL36400	29160	
132	200	ATV630C13N4	400 (e)	29160	LLL36600	29160	
160	250	ATV630C16N4	500 (e)	29160	LLL36600	29160	
				With Fuses (d) SCCR X = 25 kA			
110	150	ATV630C11N4	250 (c)	order VW3A9704	–	–	
132	200	ATV630C13N4	315 (c)		–	–	
160	250	ATV630C16N4	350 (c)		–	–	

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