



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

Recommended fuse ratings for UL and CSA requirements. Components for use together in accordance with standard UL508

ATV12 are provided with integral overload and over-speed protection for the motor after activation of the function [\[Motor thermal state memo\]](#)  $\pi E \pi$ . (For more information refer to the ATV12 User manual BBV28581).

Protection at 100% of the full load motor current. The motor thermal protection current  $\pi E H$  must be set to the rated current indicated on the motor nameplate.

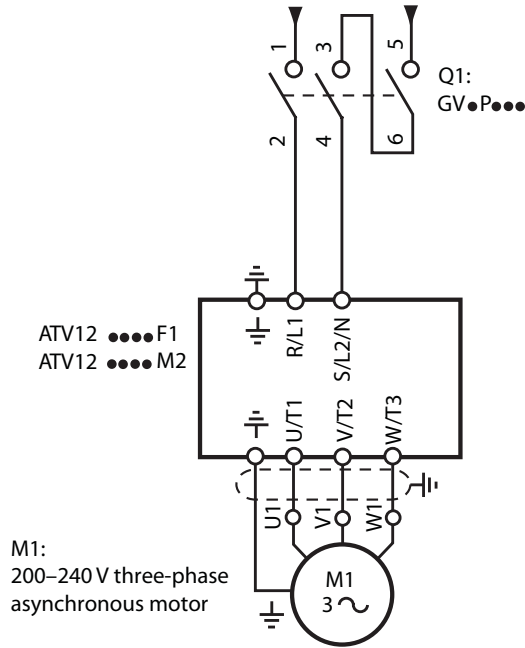
ATV12 Drive					Short Circuit Current Ratings <sup>1</sup>									
Input Voltage +10%/-15% 60 Hz Y	(kW)	(HP)	input withstand Rating (kA) <sup>6</sup>	Reference	With QO Circuit Breaker					With GV2P/3P		With Fuses		
					QO	QOB	QOU	A	SCCR (kA) <sup>7</sup> X	GV2P/3P Type E <sup>2,3</sup>	SCCR (kA)	Fuses(A) <sup>5</sup> Z1, Z2	SCCR (kA)	Line Reactor <sup>4</sup>
120 V, 1 phase	0.18	0.25	1	ATV12H018F1	yes	yes	yes	10	1	GV2P10	1	Ferraz HSJ (15)	1	—
	0.37	0.5	1	ATV12●037F1	yes	yes	yes	20	1	GV2P14	1	Ferraz HSJ (25)	1	—
	0.75	1	1	ATV12H075F1	yes	yes	yes	25	1	GV2P20	1	Ferraz HSJ (40)	1	—
240 V, 1 phase	0.18	0.25	1	ATV12H018M2	yes	yes	yes	10	1	GV2P08	1	Fast Acting Class CC Ferraz ATDR (7)	1	—
	0.37	0.5	1	ATV12●037M2	yes	yes	yes	10	1	GV2P10	1	Ferraz HSJ (15)	1	—
	0.55	0.75	1	ATV12●055M2	yes	yes	yes	15	1	GV2P14	1	Ferraz HSJ (25)	1	—
	0.75	1	1	ATV12●075M2	yes	yes	yes	20	1	GV2P14	1	Ferraz HSJ (25)	1	—
	1.5	2	1	ATV12HU15M2	no	no	yes	25	1	GV2P20	1	Ferraz HSJ (40)	1	—
	2.2	3	1	ATV12HU22M2	no	no	yes	35	1	GV2P22	1	Ferraz HSJ (45)	1	—
240 V, 3 phase	0.18	0.25	5	ATV12H018M3	yes	yes	yes	10	5	GV2P07	5	Fast Acting Class CC Ferraz ATDR (7)	5	—
	0.37	0.5	5	ATV12●037M3	yes	yes	yes	10	5	GV2P08	5	Fast Acting Class CC Ferraz ATDR (7)	5	—
	0.75	1	5	ATV12●075M3	yes	yes	yes	15	5	GV2P14	5	Ferraz HSJ (15)	5	—
	1.5	2	5	ATV12●U15M3	yes	yes	yes	15	5	GV2P16	5	Ferraz HSJ (25)	5	—
	2.2	3	5	ATV12●U22M3	yes	yes	yes	25	5	GV2P20	5	Ferraz HSJ (25)	5	—
	3	3	5	ATV12●U30M3	no	no	yes	30	5	GV2P21	5	Ferraz HSJ (40)	5	—
	4	5	5	ATV12●U40M3	no	no	yes	40	5	GV2P22		Ferraz HSJ (45)	5	—
240 V, 3 phase	0.18	0.25	5	ATV12H018M3	yes	yes	yes	10	10	GV2P07	50	3	65	3%
	0.37	0.5	5	ATV12●037M3	yes	yes	yes	10	10	GV2P08	50	8	65	3%
	0.75	1	5	ATV12●075M3	yes	yes	yes	15	10	GV2P14	50	15	65	3%
	1.5	2	5	ATV12●U15M3	yes	yes	yes	15	10	GV3P13	50	25	65	3%
	2.2	3	5	ATV12●U22M3	yes	yes	yes	25	10	GV3P18	50	30	65	3%
	3	3	5	ATV12●U30M3	no	no	yes	30	10	GV3P25	50	40	65	3%
	4	5	5	ATV12●U40M3	no	no	yes	40	10	GV3P32	50	50	65	3%

- Types of enclosures that can be used: 1, 12, 3, 3R, 4, and 4X—all non-ventilated.
- The GV2P●● self-protected manual combination starter must be used with the GV2GH7 insulating barrier to meet the UL 508 Type E rating.
- The GV3P●● self-protected manual combination starter must be used with the GV3G66 insulating barrier and the GVAM11 auxiliary contact block to meet the UL 508 Type E rating.
- The line reactor is required when the ATV12 drive is used in a system with a current availability higher than the drive's SCCR design
- When fuse type is not specified any Class J or CC can be used. If fuse manufacturer is not specified any fuse manufacturer can be used.
- Input withstand rating is that for which the product has been designed thermally. Installation on a supply greater than this level will require additional inductance to satisfy this level
- Output interrupt rating relies on Integral solid state short circuit protection. This does not provide branch circuit protection. Branch circuit protection must be provided in accordance with the National Electrical Code and any additional local codes. This is dependant on the type of installation

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\_\_\_.

# Wiring

With Single-Phase Power Supply, when using GV2P and GV3P manual self-protected combination starters for single-phase input applications, wire the starter as illustrated :



## Characteristics of the Power Part Terminals

ATV12H	Applicable wire size (1) mm <sup>2</sup> (AWG)	Recommended wire size (2) mm <sup>2</sup> (AWG)	Tightening torque (3) N·m (lb.in)
018F1 037F1 0●●M2 0●●M3	<b>2</b> to 3.5 ( <b>14</b> to 12)	2 (14)	0.8 to 1 (7.1 to 8.9)
075F1 U●●M2	<b>3.5</b> to 5.5 ( <b>12</b> to 10)	5.5 (10)	1.2 to 1.4 (10.6 to 12.4)
U15M3 U22M3	<b>2</b> to 5.5 ( <b>14</b> to 10)	2 (14) for U15M3 3.5 (12) for U22M3	
U30M3 U40M3	5.5 (10)	5.5 (10)	

(1) The value in bold corresponds to the minimum wire gauge to permit secureness.

(2) 75°C (167 °F) copper cable (minimum wire size for rated use)

(3) Recommended to maximum value.