

GS1, GS2, and GS3/DURAPULSE Accessories – Fusing

Fusing Overview

Circuit protection devices are essential to prevent costly damage to your AC drive application equipment. Fuses and fuse kits are available from AUTOMATIONDIRECT for the GS1, GS2, and GS3/DURAPULSE AC drives.

The fuse specifications are shown in the table below. Each fuse kit consists of one fuse block and fuses sized to handle the inrush current while providing superior protection for the corresponding GS2 or DURAPULSE AC drive. The larger drives in the DURAPULSE family require three fuse kits (one per phase). Their part numbers are marked in the table with a double asterisk.

Replacement fuses are also available, and listed in the table next to their companion fuse kits.

Fuse Kit Specifications for GS1, GS2, and GS3/DURAPULSE 115–460V Drives													
Fuse Kit	Price	Fuse Block Type	Wire Range	Fuse Type	Fuse Block Dimensions	Fuse Rating	SCCR	Replacement Fuses (5 fuses per package)	Price				
GS-10P2-FKIT-1P*	\$35.00	Two-pole	Al/Cu #2-14	A3T	Figure 1	300V@20A	200 kA	GS-10P2-FUSE-1P	\$44.00				
GS-10P5-FKIT-1P*	\$35.00					300V@30A		GS-10P5-FUSE-1P	\$41.50				
GS-11P0-FKIT-1P*	\$35.00					300V@50A		GS-11P0-FUSE-1P	\$44.00				
GS-20P2-FKIT-1P	\$35.00					300V@15A		GS-20P2-FUSE-1P	\$38.00				
GS-20P2-FKIT-3P	\$36.00	Three-pole			Figure 2	300V@10A		GS-20P2-FUSE-3P	\$44.00				
GS-20P5-FKIT-1P	\$35.00	Two-pole			Figure 1	300V@20A		GS-20P5-FUSE-1P	\$44.00				
GS-20P5-FKIT-3P	\$36.00	Three-pole			Figure 2	300V@10A		GS-20P5-FUSE-3P	\$41.50				
GS-21P0-FKIT-1P	\$35.00	Two-pole			Figure 1	300V@30A		GS-21P0-FUSE-1P	\$44.00				
GS-21P0-FKIT-3P	\$36.00	Three-pole			Figure 2	300V@20A		GS-21P0-FUSE-3P	\$41.50				
GS-22P0-FKIT-1P	\$35.00	Two-pole			Figure 1	300V@45A		GS-22P0-FUSE-1P	\$44.00				
GS-22P0-FKIT-3P	\$41.50	Three-pole			Figure 2	300V@25A		GS-22P0-FUSE-3P	\$41.50				
GS-23P0-FKIT-1P	\$35.00	Two-pole			Figure 1	300V@60A		GS-23P0-FUSE-1P	\$44.00				
GS-23P0-FKIT-3P	\$46.00	Three-pole			Al/Cu 2/0-#6	A6T		Figure 2	300V@40A	GS-23P0-FUSE-3P	\$44.00		
GS-25P0-FKIT	\$49.00							300V@60A	GS-25P0-FUSE	\$33.00			
GS-27P5-FKIT †	\$81.00		Figure 9	300V@100A			GS-27P5-FUSE	\$46.00					
– †			Figure 4	300V@125A			GS-2010-FUSE	\$54.00					
– †		300V@175A		GS-2015-FUSE			\$54.00						
GS-2020-FKIT	\$208.00	One-pole	Cu 2/0-#12	A6T			Figure 5	300V@250A	GS-2020-FUSE	\$111.00			
GS-2025-FKIT	\$221.00							300V@300A	GS-2025-FUSE	\$111.00			
GS-2030-FKIT	\$221.00							300V@350A	GS-2030-FUSE	\$105.00			
GS-2040-FKIT **	\$231.00	One-pole					Figure 6 **	300V@450A	GS-2040-FUSE	\$57.00			
GS-2050-FKIT **	\$243.00							300V@500A	GS-2050-FUSE	\$150.00			
GS-41P0-FKIT	\$36.00	Three-pole					Al/Cu #2-14	A6T	Figure 7	600V@10A	GS-41P0-FUSE	\$39.50	
GS-42P0-FKIT	\$38.00									600V@15A	GS-42P0-FUSE	\$33.00	
GS-43P0-FKIT	\$41.50									600V@20A	GS-43P0-FUSE	\$53.00	
GS-45P0-FKIT	\$44.00									600V@30A	GS-45P0-FUSE	\$50.00	
GS-47P5-FKIT	\$53.00				Figure 8	600V@50A			GS-47P5-FUSE	\$60.00			
GS-4010-FKIT	\$91.00					Figure 9			600V@70A	GS-4010-FUSE	\$65.00		
GS-4015-FKIT	\$97.00				600V@90A				GS-4015-FUSE	\$32.00			
GS-4020-FKIT	\$115.00				One-pole	Al/Cu 2/0-#6			A6T	Figure 10	600V@125A	GS-4020-FUSE	\$65.00
GS-4025-FKIT	\$115.00										600V@150A	GS-4025-FUSE	\$71.00
GS-4030-FKIT	\$115.00		600V@175A	GS-4030-FUSE							\$69.00		
GS-4040-FKIT **	\$208.00	Figure 11 **	600V@225A	GS-4040-FUSE			\$166.00						
GS-4050-FKIT **	\$208.00		600V@250A	GS-4050-FUSE			\$162.00						
GS-4060-FKIT **	\$221.00		600V@350A	GS-4060-FUSE			\$174.00						
GS-4075-FKIT **	\$221.00		600V@400A	GS-4075-FUSE			\$170.00						
GS-4100-FKIT **	\$441.00		600V@600A	GS-4100-FUSE			\$385.00						
GS-4100-FKIT **	\$441.00		Figure 12 **	600V@600A									

NOTES:

- * – Single phase 115V fuse kits are for use only with GS1 and GS2 drives.
- ** – Kit includes three single-pole fuse blocks and three fuses.
- † – GS-2010-FKIT and GS-2015-FKIT are no longer available. Please use GS-27P5-FKIT instead. (Due to decreased inrush, the 230V 10hp and 15hp drives can now accept the smaller 7.5HP fuses.)

GS2 and GS3/DURAPULSE Accessories – Fusing

Fuse Specifications for GS2 575V Drives						
GS2 Drive Model	Edison Fuse Block	Fuse Block Type	Fuse Class	Fuse Rating	SCCR	Edison Fuses (10 fuses per pack)
GS2-51P0	BC6033PQ or CHCC3D or CHCC3DI	3-pole or 3-pole modular or 3-pole modular indicating	CC	6A@600V	200 kA	HCLR6
GS2-52P0				10A@600V		HCLR10
GS2-53P0				15A@600V		HCLR15
GS2-55P0				20A@600V		HCLR20
GS2-57P5				30A@600V		HCLR30
GS2-5010						

NOTE: Refer to Circuit Protection / Fuses and Fuse Holders at AutomationDirect.com for pricing, specifications, and dimensions.

Fuse Block Dimensions

Units = inches

Figure 1

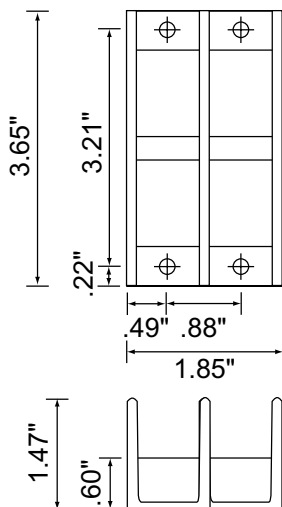


Figure 2

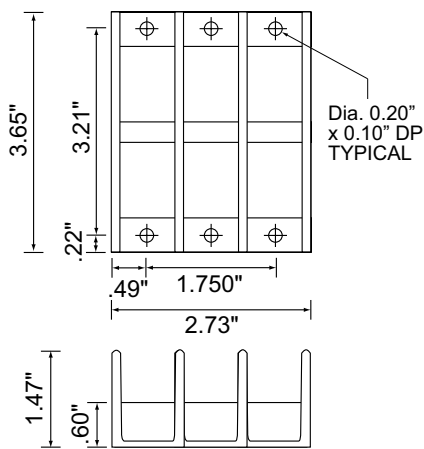


Figure 3

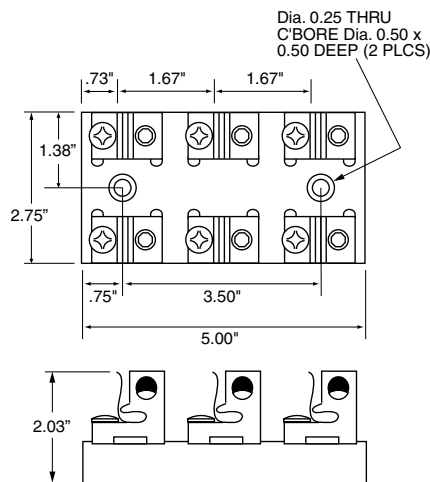


Figure 4

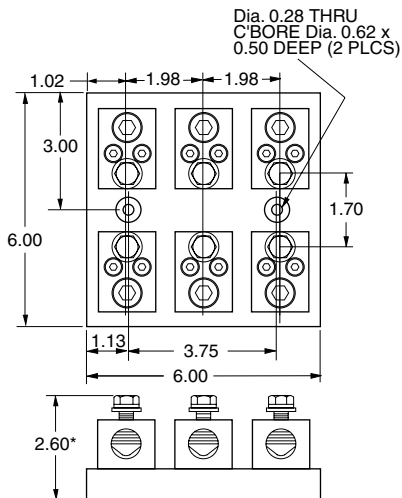


Figure 5

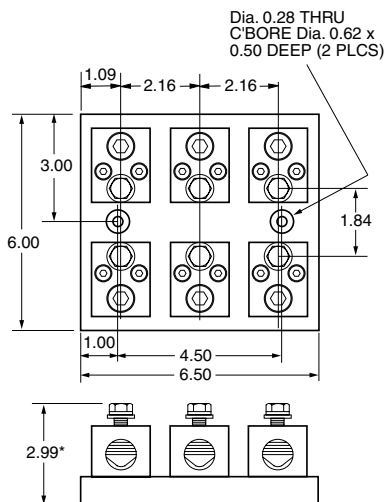
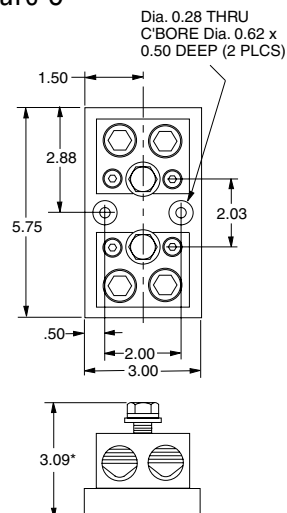


Figure 6



GS2 and GS3/DURAPULSE Accessories – Fusing

Fuse Block Dimensions

Units = inches

Figure 7

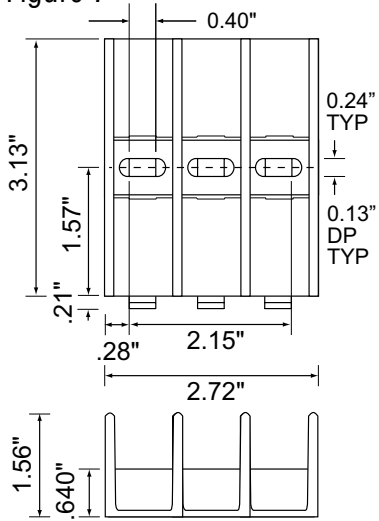


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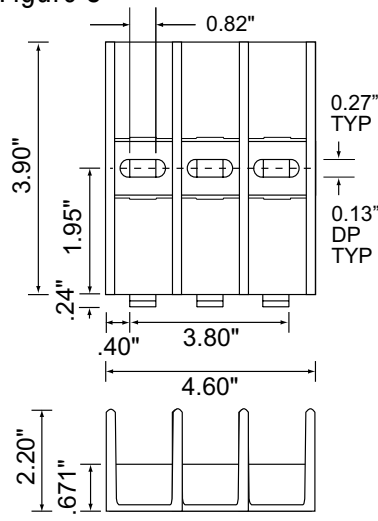


Figure 9

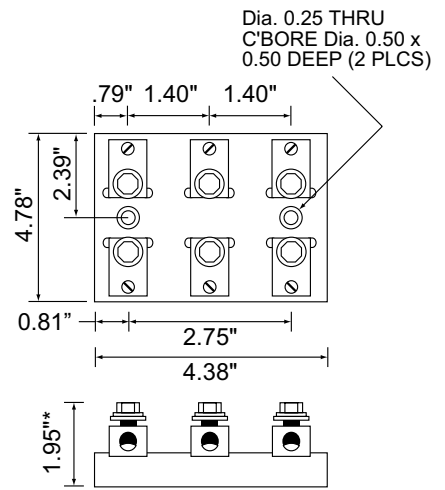


Figure 10

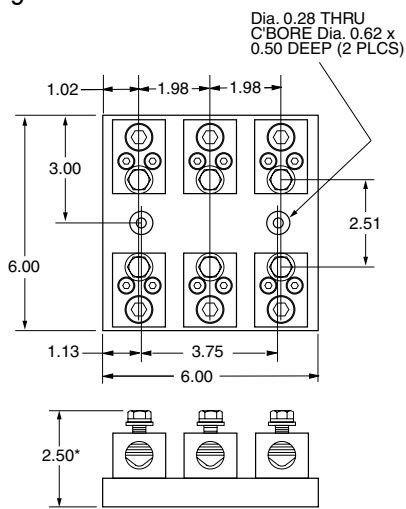


Figure 11

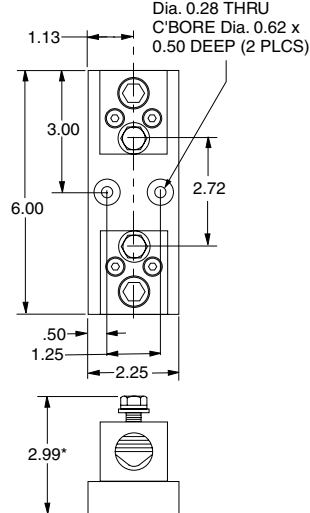
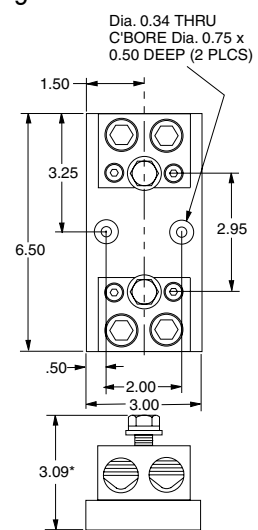


Figure 12



* Height includes nominal fuse blade thickness.

GS4 DURAPULSE Accessories – Fusing

Fuse Selection for GS4 AC Drives

The fuses shown in the table below are available from AutomationDirect. Further information, including dimensional information, is available at AutomationDirect.com.

Fuse Specification Chart GS4 DURAPULSE Drives														
Drive Model	For Three-Phase Input Power							For Single-Phase Input Power						
	HP	Input Power			Input Fuse ***			HP	Input Power			Input Fuse ***		
		Ø	Volts	GS4 Amps	Fuse Amps	Fast Acting Class T	Edison Class J*		Ø	Volts	GS4 Amps	Fuse Amps	Fast Acting Class T	Edison Class J*
GS4-21P0	1	3	230	6.4	10	TJN10	JHL10	0.5	1	230	6.4	10	TJN10	JHL10
GS4-22P0	2	3	230	12	15	TJN15	JHL15	0.75	1	230	9.7	15	TJN15	JHL15
GS4-23P0	3	3	230	16	25	TJN25	JHL25	1	1	230	15	20	TJN20	JHL20
GS4-25P0	5	3	230	20	35	TJN35	JHL35	2	1	230	20	30	TJN30	JHL30
GS4-27P5	7.5	3	230	28	50	TJN50	JHL50	3	1	230	26	40	TJN40	JHL40
GS4-2010	10	3	230	36	70	TJN70	JHL70	3	1	230	26	40	TJN40	JHL40
GS4-2015	15	3	230	52	100	TJN100	JHL100	5	1	230	40	70	TJN70	JHL70
GS4-2020	20	3	230	72	125	TJN125	JHL125	7.5	1	230	58	100	TJN100	JHL100
GS4-2025	25	3	230	83	150	TJN150	JHL150	10	1	230	76	125	TJN125	JHL125
GS4-2030	30	3	230	99	175	TJN175	JHL175	10	1	230	76	125	TJN125	JHL125
GS4-2040**	40	3	230	124	175	TJN175	JHL175	10	1	230	63	90	TJN90	JHL90
GS4-2050**	50	3	230	143	200	TJN200	JHL200	10	1	230	63	90	TJN90	JHL90
GS4-2060	60	3	230	171	250	TJN250	JHL250	15	1	230	94	150	TJN150	JHL150
GS4-2075	75	3	230	206	300	TJN300	JHL300	20	1	230	124	175	TJN175	JHL175
GS4-2100	100	3	230	245	350	TJN350	JHL350	25	1	230	143	200	TJN200	JHL200
GS4-41P0	1	3	460	4.3	6	TJN6	JHL6	single-phase input power not applicable for 460V						
GS4-42P0	2	3	460	5.9	10	TJN10	JHL10							
GS4-43P0	3	3	460	8.7	15	TJN15	JHL15							
GS4-45P0	5	3	460	14	20	TJN20	JHL20							
GS4-47P5	7.5	3	460	17	25	TJN25	JHL25							
GS4-4010	10	3	460	20	35	TJN35	JHL35							
GS4-4015	15	3	460	26	45	TJN45	JHL45							
GS4-4020	20	3	460	35	60	TJN60	JHL60							
GS4-4025	25	3	460	40	70	TJN70	JHL70							
GS4-4030	30	3	460	47	90	TJN90	JHL90							
GS4-4040**	40	3	460	63	125	TJN125	JHL125							
GS4-4050	50	3	460	74	100	TJN100	JHL100							
GS4-4060	60	3	460	101	125	TJN125	JHL125							
GS4-4075	75	3	460	114	150	TJN150	JHL150							
GS4-4100	100	3	460	157	200	TJN200	JHL200							
GS4-4125	125	3	460	167	250	TJN250	JHL250							
GS4-4150	150	3	460	207	300	TJN300	JHL300							
GS4-4175	175	3	460	240	350	TJN350	JHL350							
GS4-4200	200	3	460	300	450	TJN450	JHL450							
GS4-4250	250	3	460	380	500	TJN500	JHL500							
-	-	-	-	-	-	Fast Acting Current Limiting Class L								
GS4-4300	300	3	460	400	700	KTU700								

* High-speed Class J

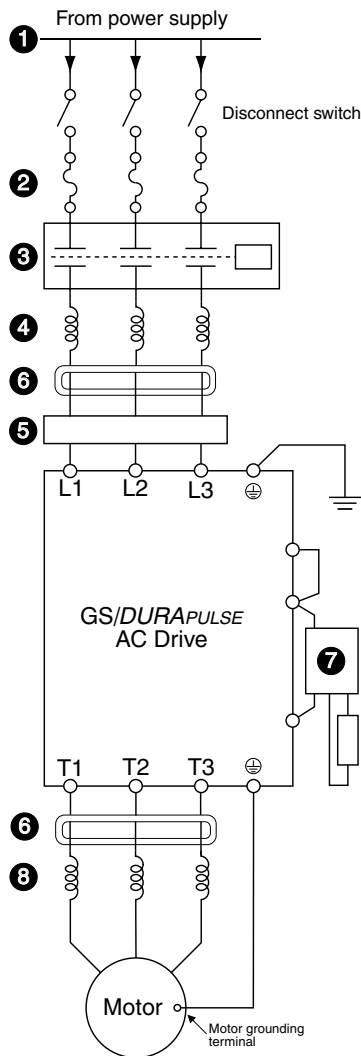
** Includes DC choke

*** The fuses listed above are available from AutomationDirect.com. (Individual web links are associated with each part number listed above.)

GS/DURAPULSE Series AC Drives Optional Accessories – Overview

GS/DURAPULSE Accessories

(not all accessories are applicable for every drive model)



1 Power Supply

Please follow the specific power supply requirements shown in Chapter 1 of the applicable GS/DURAPULSE AC Drives User Manual (AutomationDirect.com).

2 Fuses

(See pages [112](#), [113](#), [115](#), for more information.)

Input fuses protect the AC drive from excessive input current due to line surges, short circuits, and ground faults. They are recommended for all installations and may be required for UL-listed installations.

3 Contactor (Optional)

(Contactors are available from AutomationDirect.com)

Do not use a contactor or disconnect switch for run/stop control of the AC drive and motor. This will reduce the operating life cycle of the AC drive. Cycling a power circuit switching device while the AC drive is in run mode should be done only in emergency situations.

4 Input Line Reactor (Optional)

(See pages [71](#), [73](#), and [74](#) for more information.)

Input line reactors protect the AC drive from transient overvoltage conditions, typically caused by utility capacitor switching. The input line reactor also reduces the harmonics associated with AC drives. Input line reactors are recommended for all installations.

5 EMI filter (Optional)

(See pages [102](#) and [108](#) for more information.)

Input EMI filters reduce electromagnetic interference or noise on the input side of the AC drive. They are required for CE compliance and recommended for installations prone to or sensitive to electromagnetic interference.

6 RF filter (Optional)

(See page [111](#) for more information.)

RF filters reduce the radio frequency interference or noise on the input or output side of the inverter.

7 Braking Unit and/or Braking Resistor (Optional)

(See pages [90](#), [92](#), [93](#), [112](#) for more information.)

Dynamic braking allows the AC drive to produce additional braking (stopping) torque. AC drives can typically produce between 15% & 20% braking torque without the addition of any external components. The addition of optional braking may be required for applications that require rapid deceleration or high inertia loads.

8 Output Load Reactor (Optional)

(See pages [71](#), [73](#), and [74](#) for more information.)

Output line reactors protect the motor insulation against AC drive short circuits and IGBT reflective wave damage, and also “smooth” the motor current waveform, allowing the motor to run cooler. They are **recommended for operating “non-inverter-duty” motors and when the length of wiring between the AC drive and motor exceeds 75 feet.**