GS/*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 GS2 and *DURAPULSE* AC drives. (AutomationDirect GS style fuses and fuse kits are NOT available for GS1 drives at this time.)

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 GS2 and 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			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		Al/Cu 2/0-#6		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				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	One-pole				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		Cu 2/0-#12		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		Al/Cu 2/0-#6		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	One-pole			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				Figure 12 **	600V@600A		GS-4100-FUSE	$385.00

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.

GS/*DURA*PULSE 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						
GS2-57P5				20A@600V		***HCLR20***
GS2-5010				30A@600V		***HCLR30***

NOTE:
Refer to the Edison Fuses section of this catalog for pricing, specifications, and dimensions.

Fuse Block Dimensions

Units = inches

Figure 1

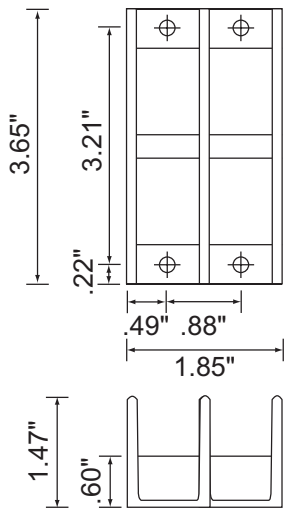


Figure 2

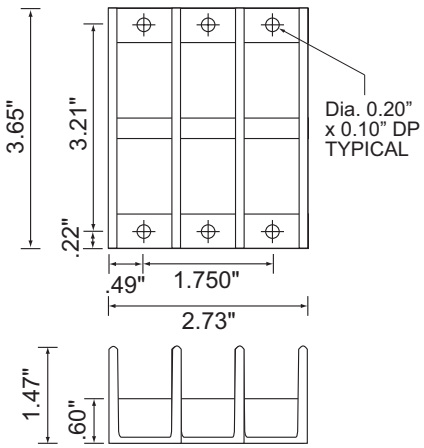


Figure 3

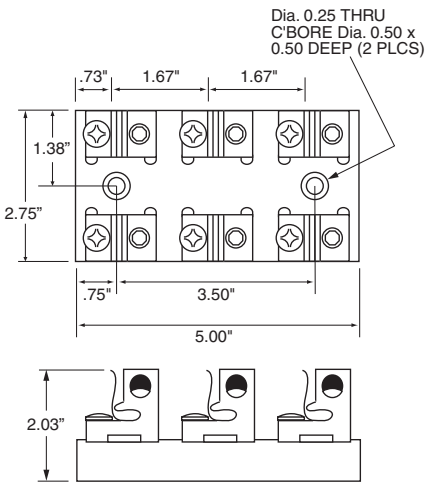


Figure 4

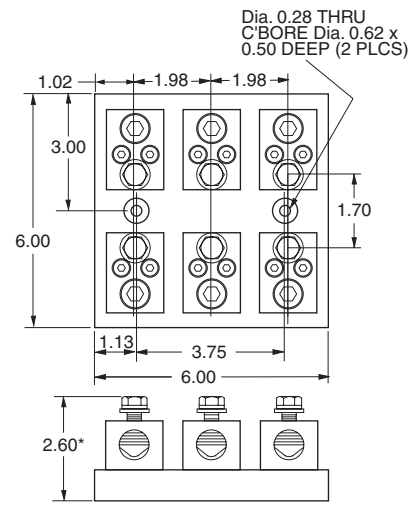


Figure 5

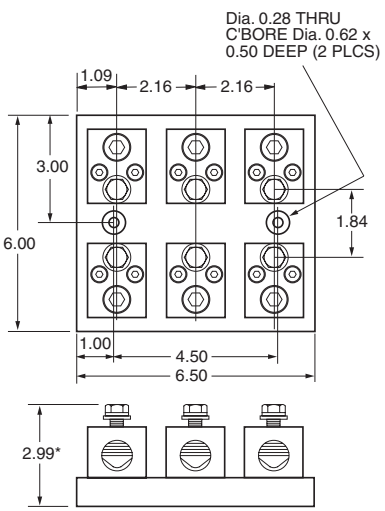
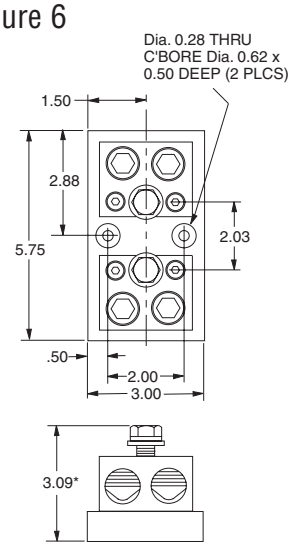


Figure 6



GS/*DURAPULSE* Accessories – Fusing

Fuse Block Dimensions

Units = inches

Figure 7

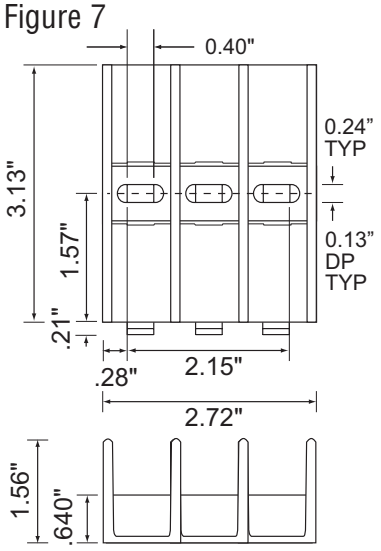


Figure 8

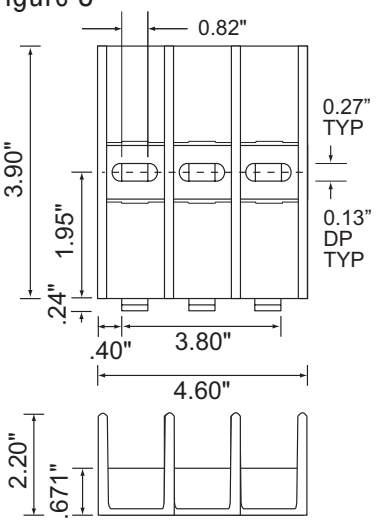


Figure 9

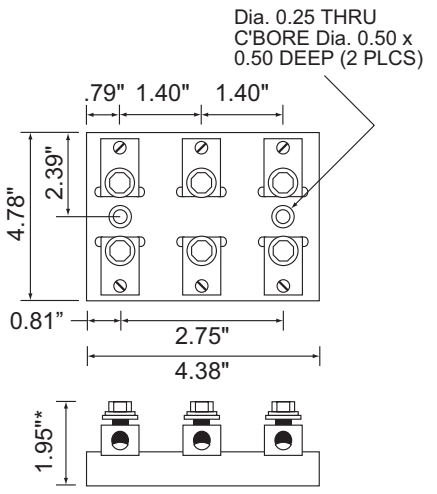


Figure 10

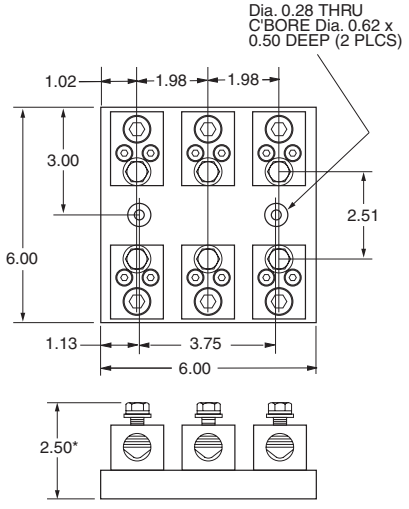


Figure 11

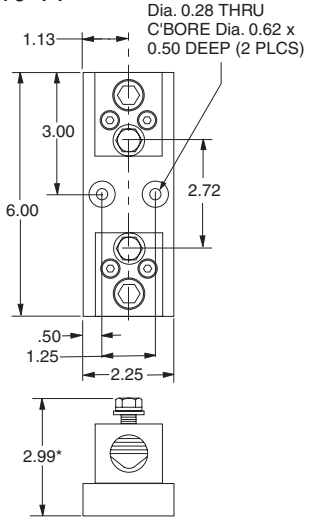
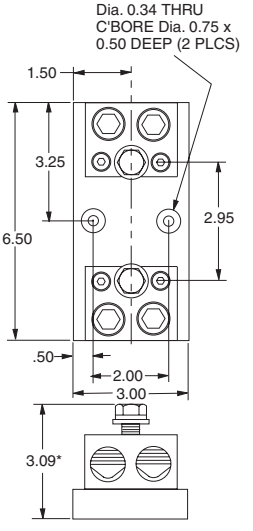


Figure 12



**** Height includes nominal fuse blade thickness.***

GS/*DURAPULSE* Accessories – Overview

Accessories – Part numbering system

Note: With the exception of the EMI filters, RF filters, and LR series line reactors, each accessory part number begins with GS, followed by the AC Drive rating, and then the relevant accessory code. Following the accessory code, you will find a description code when applicable. The diagram at right shows the accessory part numbering system.

GS - 22P0 - LR - 3PH

Description Code (optional)
1PH: Single phase **3PH**: Three phase **ENC**: Enclosure **Blank**: For reactor, blank = 3-phase

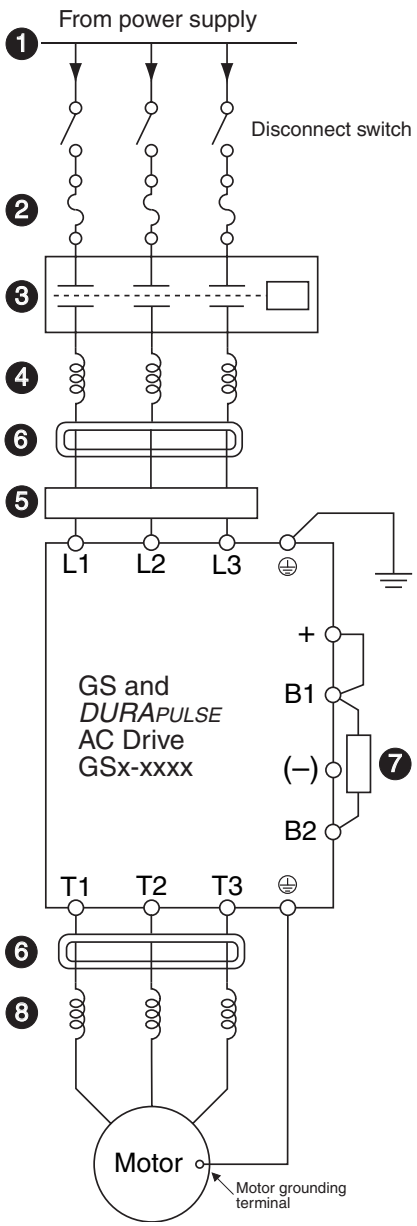
Accessory Code
BR: Braking resistor **BZL**: Bezel **CBL**: Cable **DBU**: Dynamic Brake Unit
EDRV: Ethernet board **FB**: Feedback board **FKIT**: Fuse Kit **FUSE**: Replacement fuses for FKIT
KPD: Keypad **LR**: Line reactor (legacy) **RS**: Recommended Standard

Horsepower Rating
Example: **2P0** = 2.0 hp **7P5** = 7.5 hp **010** = 10 hp

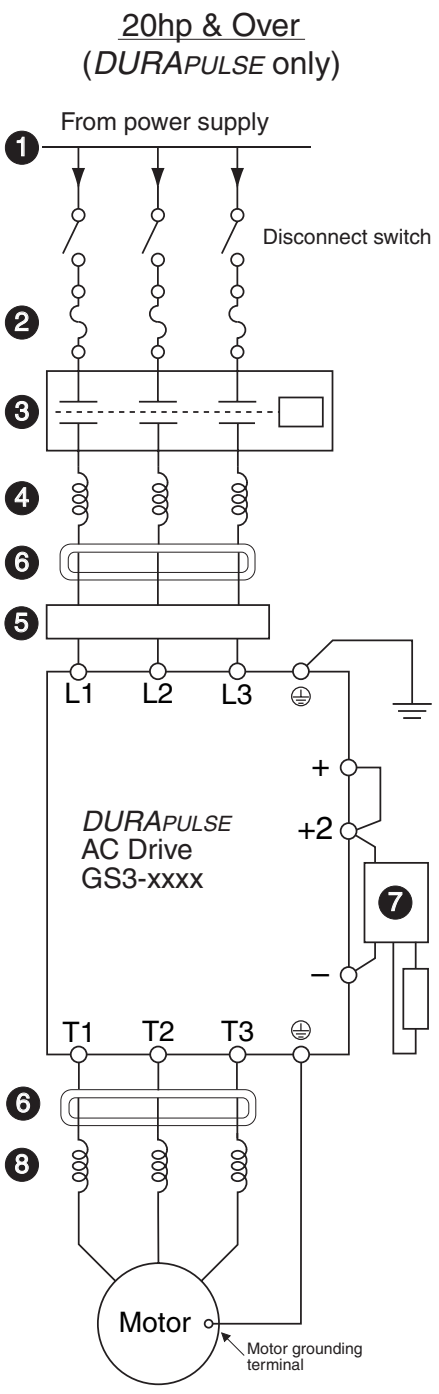
Voltage Rating
1: 115V **2**: 230V **4**: 460V **5**: 575V

Series
GS: All GS and DURApulse Series Drives
GS1: GS1 Series **GS2**: GS2 Series **GS3**: DURApulse Series **LR**: Newer line reactor series

Under 20hp



GS/*DURAPULSE* Accessories – Overview



❶ Power Supply

Please follow the specific power supply requirements shown in Chapter 1 of the ***DURAPULSE*** AC Drives User Manual.

❷ Fuses (Please refer to catalog page 80in the Drives section* of our catalog.)

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.

❸ Contactor (Optional) (Refer to the Motor Controls section.)

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.

❹ Input Line Reactor (Optional)

(Please refer to catalog page 49 in the Drives section* of our catalog.)

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.

❺ EMI filter (Optional)

(Please refer to catalog page 73 in the Drives section* of our catalog.)

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.

❻ RF filter (Optional)

(Please refer to catalog page 79 in the Drives section* of our catalog.)

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

❼ Braking Unit & Braking Resistor (Optional)

(Please refer to catalog page 66 in the Drives section* of our catalog.)

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.

❽ Output Line Reactor (Optional)

(Please refer to catalog page 49 in the Drives section* of our catalog.)

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**.

The Drives section is in Book 2 of current version of our catalog, or you can download PDF of section here.