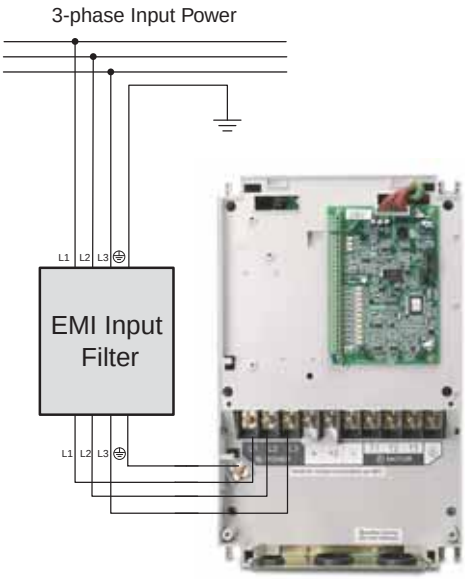
GS/*DURAPULSE* Accessories – EMI Filters

Overview

The CE Declaration of Conformity for the GS2 and *DURAPULSE* AC drives was completed in conjunction with the EMI filters listed. Use the following table to specify the corresponding EMI filter for each AC drive model.

CE compliance requires the use of EMI filters for GS2 and *DURAPULSE* AC drives. GS1 AC drives have internal EMI filtering, and do not require separate filters.



GS3-4030 shown

EMI Input Filter Specifications

AC Drive 115V / 230V	AC Drive 460V / 575V	EMI Filter	Price	Input Power	Dimensions
GS2-1xxx	-	***20DRT1W3S***	<--->	1-phase, 20A	Figure 1
GS2-20P5 (1-ph)					
GS2-21P0 (1-ph)					
GS2-22P0 (1-ph)					
GS3-21P0 (1-ph)					
GS3-22P0 (1-ph)					
GS2-23P0 (1-ph)	-	***32DRT1W3C***	<--->	1-phase, 32A	Figure 2
GS3-23P0 (1-ph)					
GS2-25P0	-	***40TDS4W4B***	<--->	3-phase, 40A	Figure 3
GS2-27P5					
-	GS2-41P0	***11TDT1W4S***	<--->	3-phase, 11A	Figure 4
	GS2-42P0				
	GS2-43P0				
-	GS2-45P0	***17TDT1W44***	<--->	3-phase, 17A	Figure 5
	GS2-47P5				
-	GS2-4010	***26TDT1W4B4***	<--->	3-phase, 26A	Figure 6
GS2-20P5 (3-ph)	GS2-5xxx	***not available***	n/a		
GS2-21P0 (3-ph) (note 1)	-	***10TDT1W4C***	<--->	3-phase, 10A	Figure 7
GS2-22P0 (3-ph) (note 1)					
GS3-21P0					
GS3-22P0					
GS2-23P0 (3-ph) (note 1)	-	***26TDT1W4C***	<--->	3-phase, 26A	Figure 8
GS3-23P0					
GS3-25P0					
GS3-27P5	GS3-4020	***50TDS4W4C***	<--->	3-phase, 50A	Figure 9
GS3-2010	GS3-4025				
GS3-2015	GS3-4030	***100TDS84C***	<--->	3-phase, 100A	Figure 10
GS3-2020	GS3-4040				
-	GS3-4050				
GS3-2025	GS3-4060	***150TDS84C***	<--->	3-phase, 150A	Figure 11
GS3-2030	-				
GS3-2040					
GS3-2050	-	***180TDS84C***	<--->	3-phase, 180A	Figure 12
-	GS3-41P0	***RF022B43AA***	<--->	3-phase, 5.9A	Figure 13
	GS3-42P0				
	GS3-43P0				
-	GS3-45P0	***RF037B43BA***	<--->	3-phase, 11.2A	Figure 14
-	GS3-47P5	***RF110B43CA***	<--->	3-phase, 25A	Figure 15
	GS3-4010				
	GS3-4015				
-	GS3-4075	***200TDDS84C***	<--->	3-phase, 200A	Figure 16
	GS3-4100				

Note 1: EMI filters 10TDT1W4C and 26TDT1W4C mount underneath DURApulse, but do NOT mount underneath GS2 drives.

GS/*DURAPULSE* Accessories – EMI Filters

Dimensions

Figure 1 [units = mm]

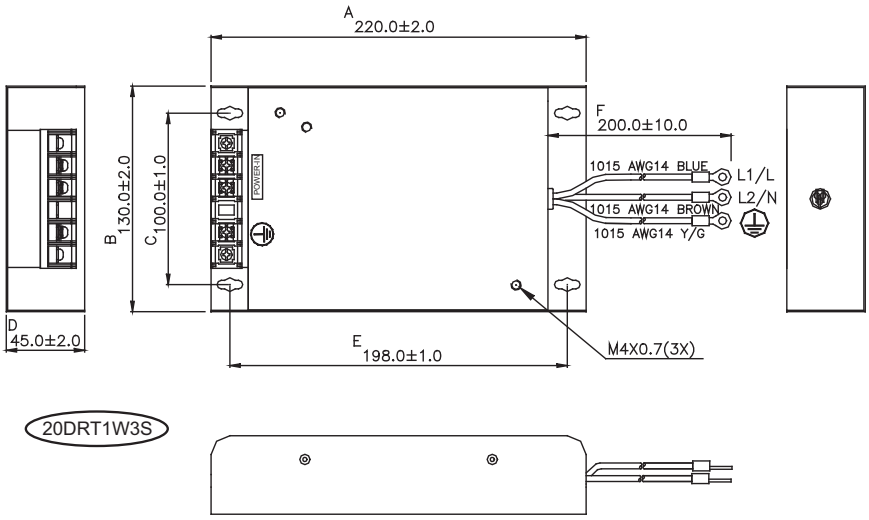


Figure 2 [units = mm]

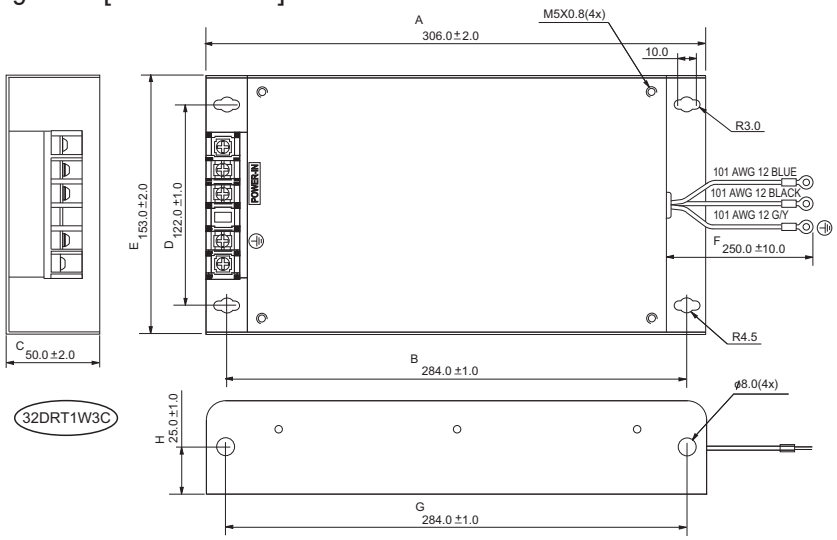


Figure 3 [units = mm]

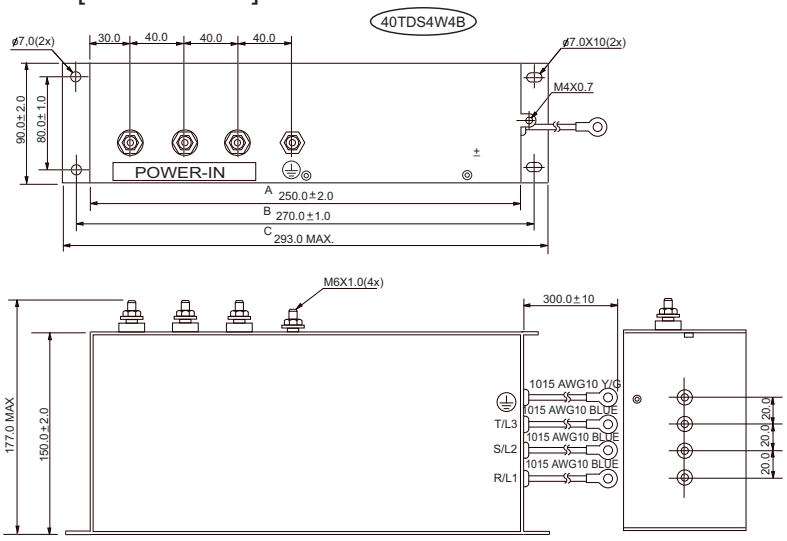


Figure 4 [units = mm]

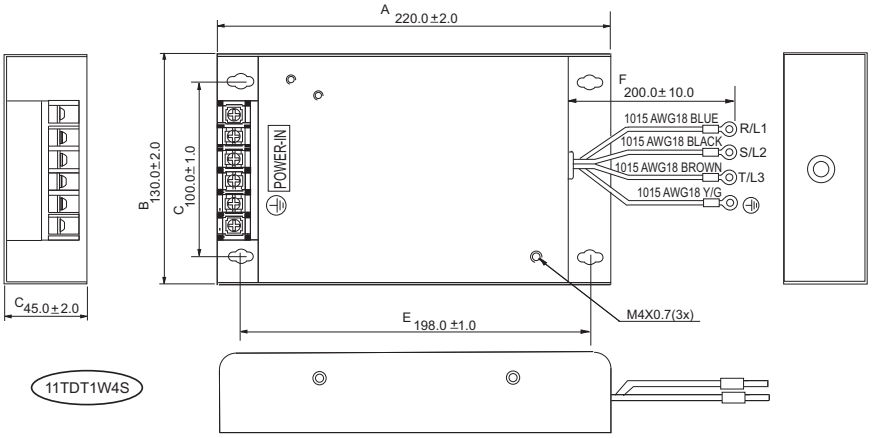


Figure 5 [units = mm]

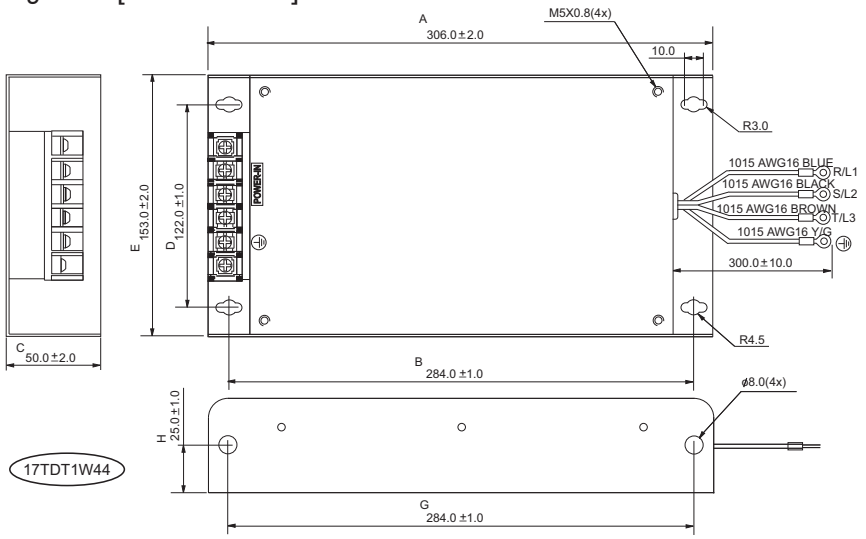
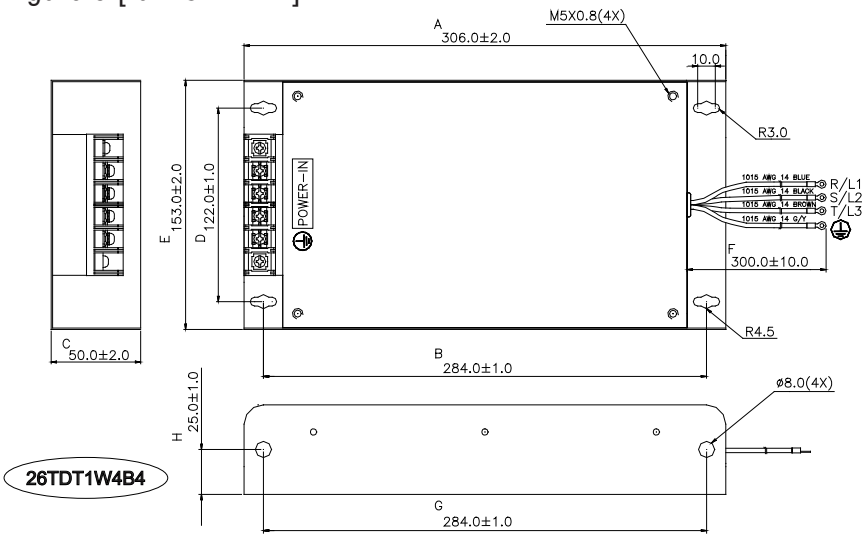


Figure 6 [units = mm]



GS/*DURAPULSE* Accessories – EMI Filters

Figure 7 [units = mm (in)]

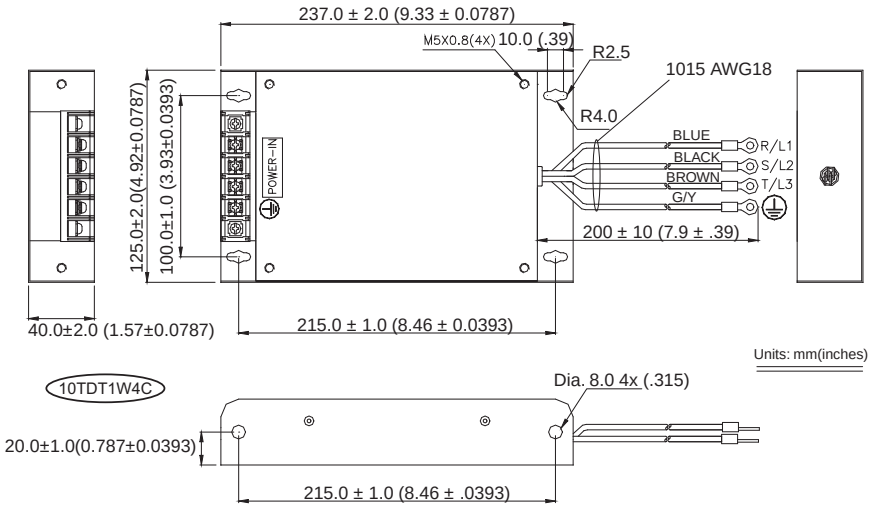


Figure 8 [units = mm (in)]

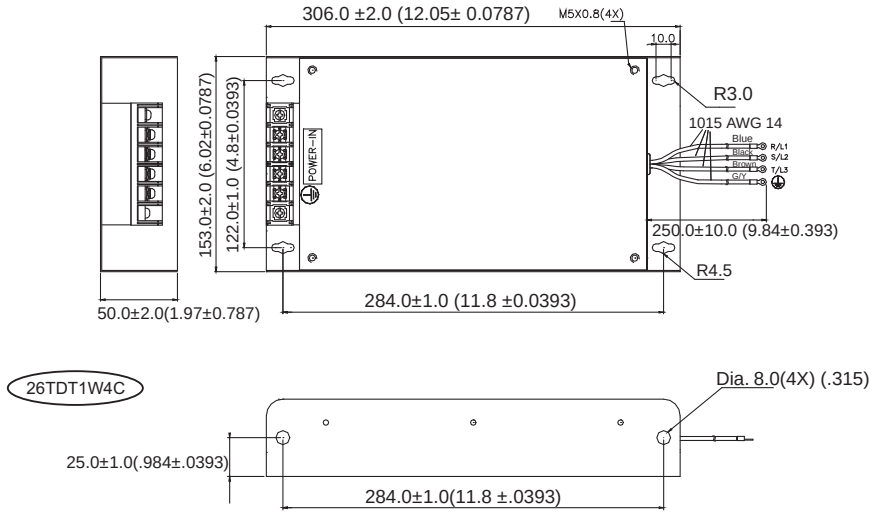


Figure 9 [units = mm (in)]

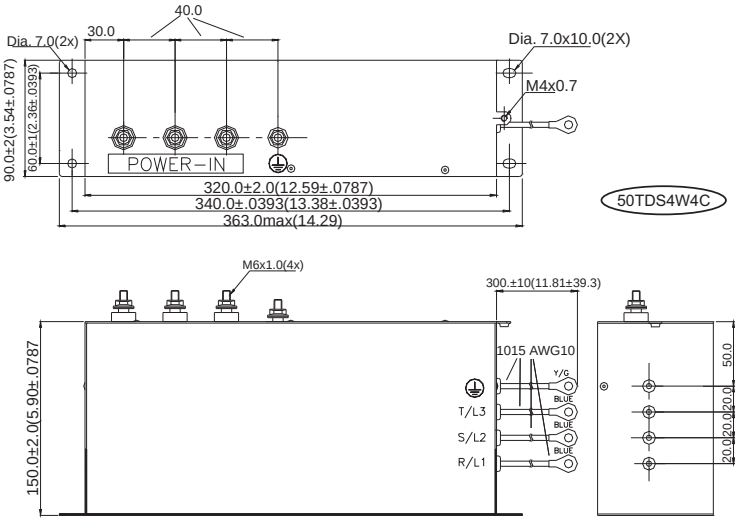


Figure 10 [units = mm (in)]

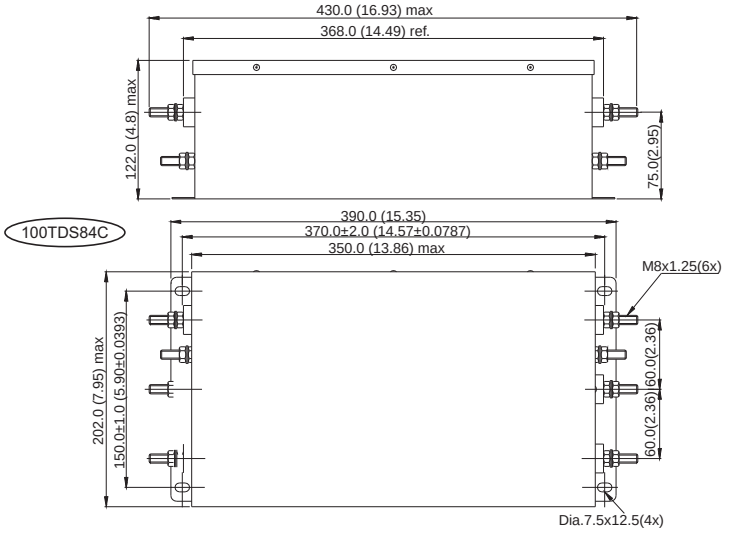


Figure 11 [units = mm (in)]

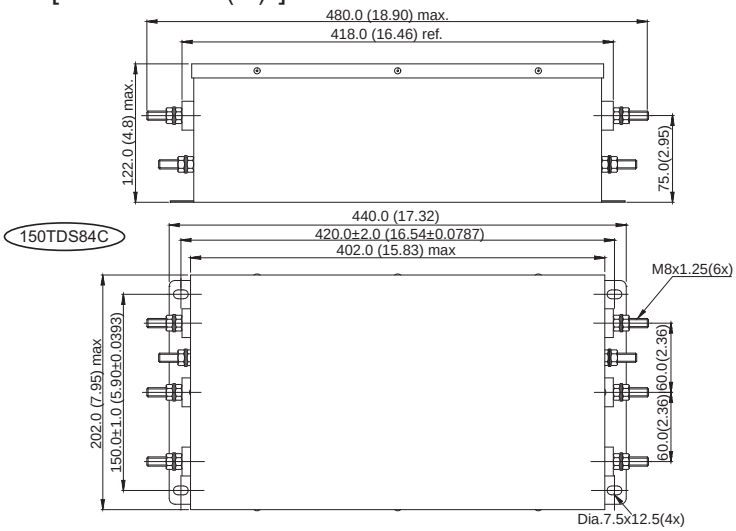
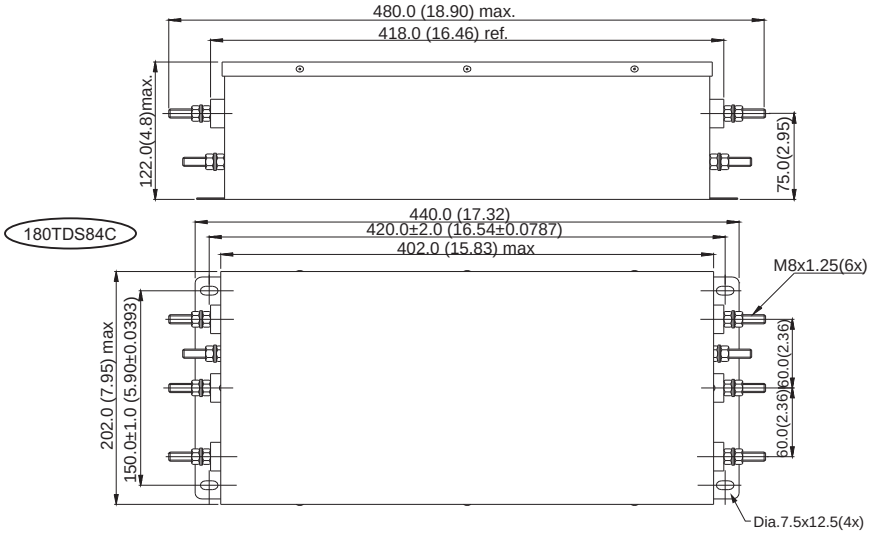
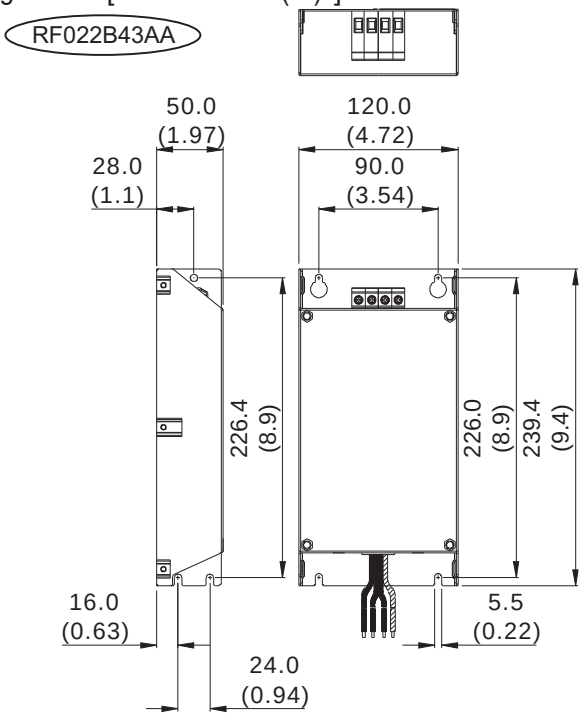


Figure 12 [units = mm (in)]



GS/*DURAPULSE* Accessories – EMI Filters

Figure 13 [units = mm (in)]



Filter Mounting screw
M5x0.8(#10-24)
torque: 1.56~1.96N·m
(14~17lb·in)

Drive Mounting screw
M5x0.8x15-20mm
torque: 1.56~1.96N·m
(14~17lb·in)

Figure 14 [units = mm (in)]

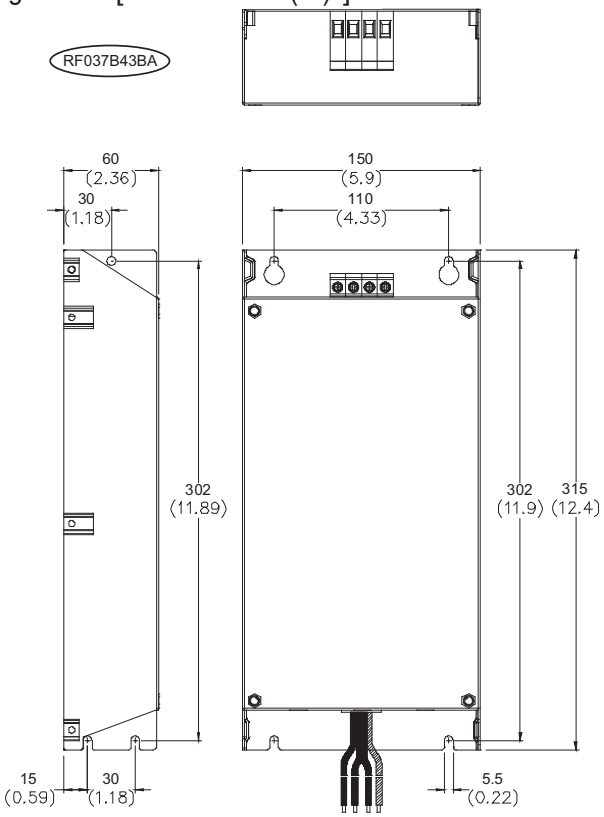


Figure 15 [units = mm (in)]

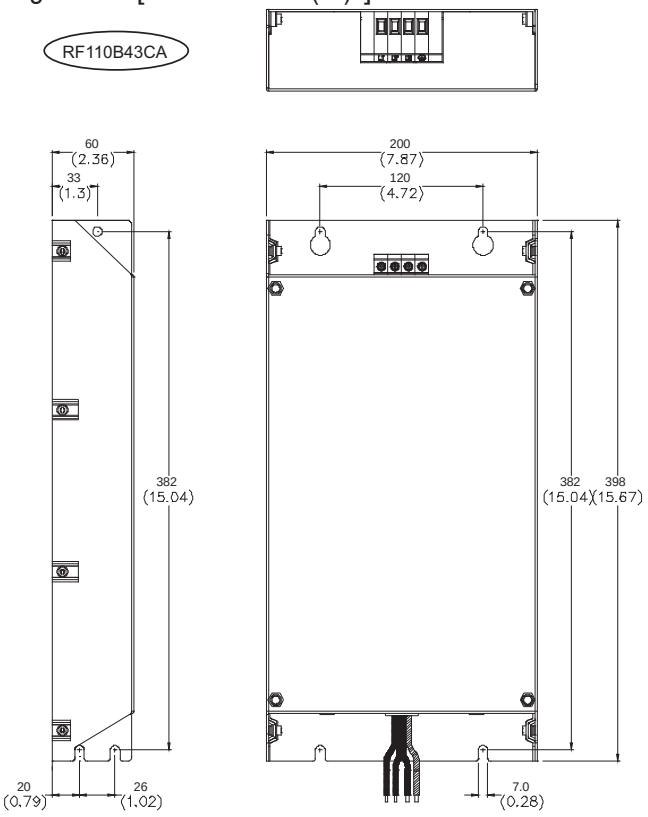
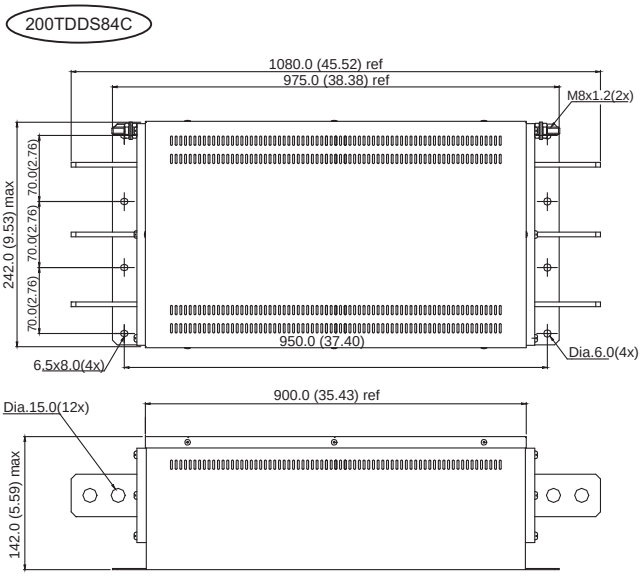


Figure 16 [units = mm (in)]



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

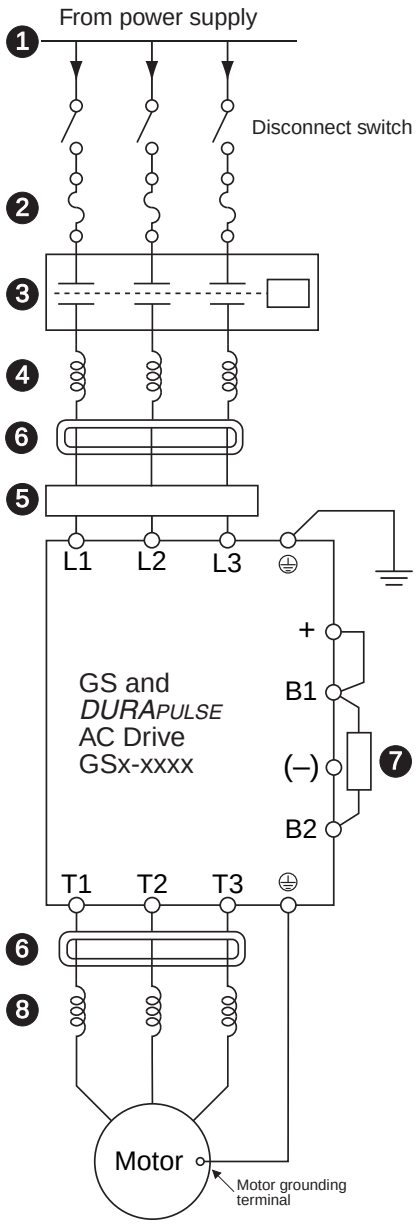
Accessory Code
BR: Braking resistor **BZL**: Bezel **CBL**: Cable **DBU**: Dynamic Brake Unit
EDRV: Ethernet board **FB**: Feedback board **FKIT**: Fuse Kit **FUSE**: Replacement fuses for FKIT
KPD: Keypad **LR**: Line reactor (legacy) **RS**: Recommended Standard

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



❶ Power Supply

Please follow the specific power supply requirements shown in Chapter 1 and the Warning section of the applicable GS or *DURAPULSE* AC Drives User Manual.

❷ Fuses (Refer to page 13–81.)

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. *(AutomationDirect fuses are not available for GS1 drives.)*

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) (Refer to page 13–50.)

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) (Refer to page 13–74.)

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. *(Separate EMI filters are not neccessary for GS1 drives.)*

❻ RF filter (Optional) (Refer to page 13–80.)

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

❼ Braking Resistor (Optional) (Refer to page 13–69.)

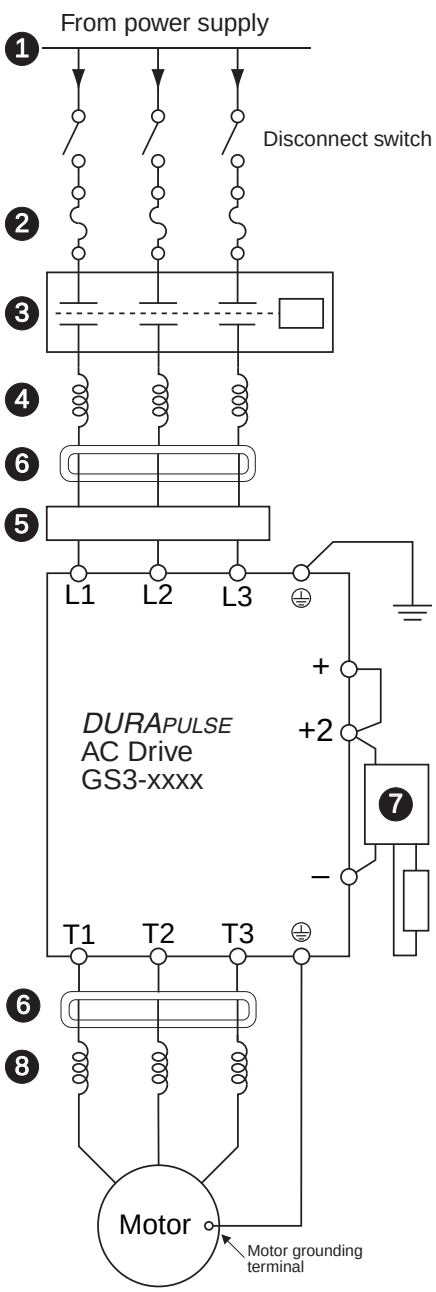
Dynamic braking allows the AC drive to produce additional braking (stopping) torque. AC drives can typically produce between 15% & 20% braking torque without the addition of any external components. The addition of optional braking may be required for applications that require rapid deceleration or high inertia loads. *(Braking resistors are not available for GS1 drives.)*

❽ Output Line Reactor (Optional) (Refer to page 13–50.)

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**.

GS/*DURAPULSE* Accessories – Overview

20hp & Over
(*DURAPULSE* only)



❶ Power Supply

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

❷ Fuses (Refer to page 13–81.)

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) (Refer to page 13–50.)

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) (Refer to page 13–74.)

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) (Refer to page 13–80.)

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

❼ Braking Unit & Braking Resistor (Optional) (pg 13–67)

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) (Refer to page 13–50.)

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**.