

CHAPTER OBJECTIVES

Chapter 1 provides information on the general intent of this manual, gives an overall description of the Bulletin 1305 Adjustable Frequency AC Drive (herein called “the drive”) and provides a listing of key drive options. Additionally, this chapter provides information on receiving and handling the drive.

1.MANUAL OBJECTIVES

The purpose of this manual is to provide the user with the necessary information to install, program, start up and maintain the Bulletin 1305 drive. To assure successful installation and operation, the material presented must be thoroughly read and understood before proceeding. Particular attention must be directed to the **ATTENTION** and **IMPORTANT** statements contained within.

Chapter 2 provides instructions on how to mount and wire the drive. It also describes how to operate the drive without a Human Interface Module. Read the Motor Cable Length section on pages 2-13 – 2-16, and the contact closure inputs information in the Control Terminal Block descriptions on pages 2-19 – 2-21.

Chapter 3 defines the display and control panel keys on the optional Human Interface Module. A flowchart is provided to guide the user through the key strokes of the various menu levels.

Chapter 4 describes the steps to start up the drive. It includes a typical start up routine defining the adjustments and checks to assure proper operation.

Chapter 5 outlines the parameter information of the drive such as description, number, type, units, factory default, minimum and maximum settings.

Chapter 6 defines the various drive faults and the appropriate action to take as well as general troubleshooting information.

Appendix A contains a block diagram and general specifications of the drive.

Appendix B provides the necessary information for drive set up using a PLC®, SLC™ or other logic controller. A table is provided that lists each parameter by parameter group with space for the user to record any custom parameter settings.

Appendix C lists the accessories and their catalog number.

Appendix D lists requirements for CE conformity.

Index – A comprehensive index is provided to assist the user in locating specific information. All parameters and fault information are listed alphabetically under parameters and faults respectively.

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2.Receiving – It is the responsibility of the user to thoroughly inspect the equipment before accepting the shipment from the freight company. Check the item(s) received against the purchase order. If any items are obviously damaged, it is the responsibility of the user not to accept delivery until the freight agent has noted the damage on the freight bill. Should any concealed damage be found during unpacking, it is again the responsibility of the user to notify the freight agent. The shipping container must be left intact and the freight agent should be requested to make a visual inspection of the equipment.

Unpacking – Remove all packing material from within and around the drive.

IMPORTANT: Before the installation and start-up of the drive, a general inspection of the mechanical integrity (i.e. loose parts, wires, connections, etc.) should be made.

Inspection – After unpacking, check the item(s) nameplate catalog number against the purchase order. An explanation of the catalog numbering system for the Bulletin 1305 drive is included as an aid for nameplate interpretation. Refer to the following pages for complete nomenclature.

Storing – The drive should remain in its shipping container prior to installation. If the equipment is not to be used for a period of time, it must be stored according to the following instructions in order to maintain warranty coverage:

- Store in a clean, dry location.
- Store within an ambient temperature range of -40° to $+70^{\circ}\text{C}$.
- Store within a relative humidity range of 0% to 95%, noncondensing.
- Do not store equipment where it could be exposed to a corrosive atmosphere.
- Do not store equipment in a construction area.

3.GENERAL PRECAUTIONS

In addition to the precautions listed throughout this manual, the following statements which are general to the system must be read and understood.

The DC Bus Charge Indicator is a neon bulb that will be illuminated when power is applied to the drive.

Table C.2 Accessories

Accessory	Specifications
Line Reactor	Iron core, 3% Impedance, 600V, Class H insulation, 115°C rise, copper wound, 50/60 Hz, terminal blocks, UL, CSA
Isolation Transformer	230V/230V or 460V/460V, Delta primary/Wye secondary, Class H insulation, 150°C rise, aluminum wound, 60 Hz, ± 5% taps, (1) N.C. thermostat per coil, UL, CSA
Terminators	NEMA 4, 460V units – Refer to “Motor Lead Lengths” for proper selection.

Drive Output Ratings		Input Line Reactors		Isolation Transformer	Terminators
HP	kW	Open Style	NEMA Type 1	NEMA Type 1	NEMA Type 4
240V AC					
1/2	0.37	1321-3R4-A	1321-3RA4-A	1321-3T003-AA	1204-TFA1
3/4	0.55	1321-3R4-A	1321-3RA4-A	1321-3T003-AA	1204-TFA2
1	0.75	1321-3R8-A	1321-3RA8-A	1321-3T005-AA	
2	1.5	1321-3R8-A	1321-3RA8-A	1321-3T005-AA	
3	2.2	1321-3R18-A	1321-3RA18-A	1321-3T005-AA	

460V AC					
1/2	0.37	1321-3R2-B	1321-3RA2-B	1321-3T003-BB	1204-TFA1
3/4	0.55	1321-3R2-B	1321-3RA2-B	1321-3T003-BB	1204-TFA2
1	0.75	1321-3R4-B	1321-3RA4-B	1321-3T005-BB	
2	1.5	1321-3R4-B	1321-3RA4-B	1321-3T005-BB	
3	2.2	1321-3R8-B	1321-3RA8-B	1321-3T005-BB	
5	4.0	1321-3R18-B	1321-3RA18-B	1321-3T007-BB	

Communication Module		
Single Point Remote I/O RS232/RS422/RS485/DF1/DH485	All Bulletin 1305 Drives	1203-GD1 1203-GD2

Drive Output Ratings		Dynamic Brake Kits ①
HP	kW	
230V AC		
2	1.5	1305-KAA12
3	2.2	1305-KAA12
460V AC		
1/2	0.37	1305-KBA03
3/4	0.55	1305-KBA03
1	0.75	1305-KBA03
2	1.5	1305-KBA06
3	2.2	1305-KBA06
5	4	1305-KBA09 ②

CE Conformance Filters	RFI Filters, Kits, and Metal Conduit Plates Required to Meet CE Directives	
Filter (RFB) Metal Plate Kit (MP)	0.5 – 0.75 HP (230V)	1305-RFB-05-A 1305-MP-05-A
	1 HP (230V)	1305-RFB-05-A 1305-MP-06-A
	2 HP (230V), 0.5 – 3 HP (460V)	1305-RFB-08-B 1305-MP-08-B
	3 HP (230V), 5 HP (460V)	1305-RFB-12-C 1305-MP-12-C

① **[DB Enable]** should be set to “Enable” when applying external dynamic brake kits.

② For use with Series B Drives only. DO NOT use with Series A Drives.