

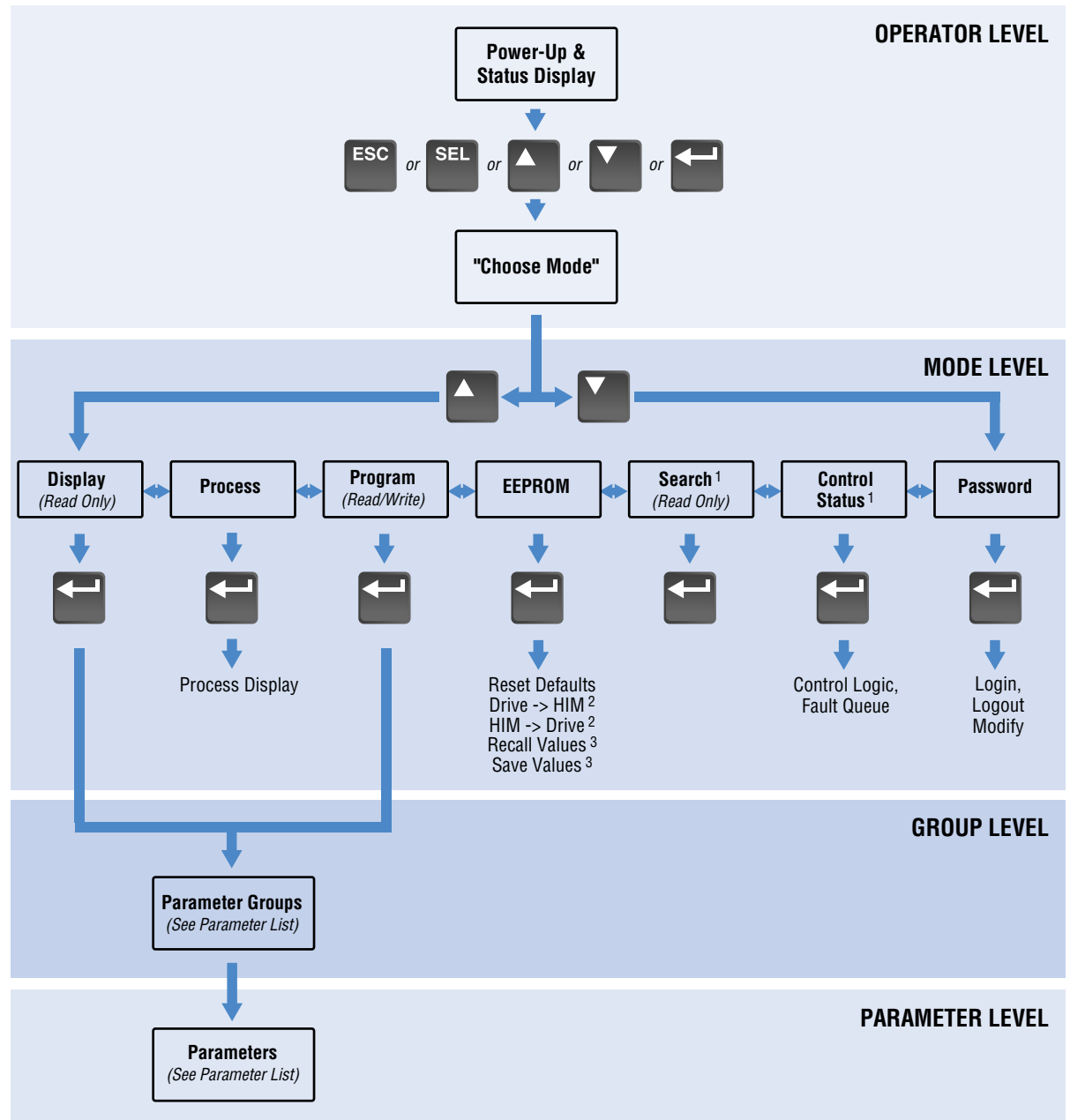
Group/Param.	No.	Disp. Units	Min./Max. Values	Default
Owners (continued)				
Reference Owner	106	Bit 1/0	Read Only	None
Accel Owner	107	Bit 1/0	Read Only	None
Decel Owner	108	Bit 1/0	Read Only	None
Fault Owner	109	Bit 1/0	Read Only	None
MOP Owner	110	Bit 1/0	Read Only	None
Local Owner	179	Bit 1/0	Read Only	None
Adapter I/O				
Data In (8)	111-118	Parameter #	None	0
Data Out (8)	119-126	Parameter #	None	0
Process Display				
Process 1 Par	127	Parameter #	None	1
Process 1 Scale	128	0.01	±327.67	1.00
Process 1 Txt 1-8	129-136	ASCII Code	None	Volts
Process 2 Par	180	Parameter #	None	54
Process 2 Scale	181	0.01	±327.67	1.00
Process 2 Txt 1-8	182-189	ASCII Code	None	Amps
Encoder Feedback				
Speed Control	77	Settings	Selection Parameter	Slip Comp
Encoder Type	152	Settings	Selection Parameter	Pulse
Pulse/Enc Scale	46	1 PPR	1/4096	1024 PPR
Maximum Speed	151	1 Hertz	0/400 Hz	400 Hz
Motor Poles	153	1 Pole	Read Only	None
Speed Ki	165	Numeric	0/20000	100
Speed Error	166	0.01 Hz	±8.33% [Base Frequency]	None
Speed Integral	167	0.01 Hz	±8.33% [Base Frequency]	None
Speed Adder	168	0.01 Hz	±8.33% [Base Frequency]	None
Motor NP RPM	177	1 RPM	60/24000 RPM	1750 RPM
Motor NP Hertz	178	1 Hertz	1/400 Hz	60 Hz
Pulse/Enc Hertz ^{2.01}	63	0.01 Hertz	0.00/400.00 Hz	None
Process PI^{3.01}				
Speed Control	77	Settings	Selection Parameter	Slip Comp
PI Config	213	Bit 1/0	0/1	00000000
PI Status	214	Bit 1/0	Read Only	None
PI Ref Select	215	Settings	Selection Parameter	Preset 1
PI Fdbk Select	216	Settings	Selection Parameter	0-10 Volt
PI Reference	217	0.01 Hertz	±400.00 Hz	None
PI Feedback	218	0.01 Hertz	±400.00 Hz	None
PI Error	219	0.01 Hertz	±400.00 Hz	None
PI Output	220	0.01 Hertz	±400.00 Hz	None
KI Process	221	N/A	0/1024	128
KP Process	222	N/A	0/1024	256
PI Neg Limit	223	0.01 Hz	±400.00 Hz	-8.33% [Max Freq]
PI Pos Limit	224	0.01 Hz	±400.00 Hz	+8.33% [Max Freq]
PI Preload ^{4.01}	225	0.01 Hz	±8.33% [Max Freq]	0.00 Hz
Motor Control^{4.01}				
Control Select ^{4.01}	9	Settings	Selection Parameter	Sens Vector
Flux Amps Ref ^{4.01}	192	0.1A	0.0/75% Drive VT Rtd. Amps	0.0A
IR Drop Volts ^{4.01}	194 ^{4.01}	1 Volt	0/25% Drive Rated Volts	0 Volts
Flux Up Time ^{4.01}	200 ^{4.01}	0.1 Sec	0.0/5.0 Sec	0.0 Sec
Start Boost	48	1 Volt	0/9.5% Drive Rated Volts	0 Volts
Run Boost	83	1 Volt	0/9.5% Drive Rated Volts	0 Volts
Boost Slope ^{4.01}	169	None	1.0/8.0	1.5
Break Voltage	50	1 Volt	0/50% Drive Rated Volts	25% Max. Rtd. Vlt.
Break Frequency	49	1 Hertz	0/120 Hz	25% [Max. Freq]
Base Voltage	18	1 Volt	25/120% Drive Rated Volts	Drive Rtd. Volts
Base Frequency	17	1 Hertz	25/400 Hz	60 Hz
Maximum Voltage	20	1 Volt	25/120% Drive Rated Volts	Drive Rtd. Volts

X.xx Firmware version X.xx or later.

① These parameters are located in the "Diagnostics" group for firmware versions before 2.01.

② Firmware versions before 4.01 only.

Programming System

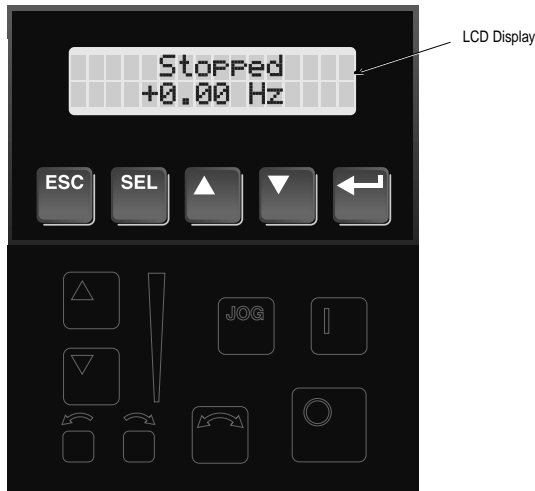


¹ Series A (Version 3.0) and Series B HIM Only.

² Series B HIM Only.

³ Reserved for Future Use.

Display Panel Key Descriptions



LCD Display



Escape

When pressed, the ESCape key will cause the programming system to go back one level in the menu tree.



Select

Pressing the SELect key alternately causes the top or bottom line of the display to become active. The flashing first character indicates which line is active.



Increment/Decrement

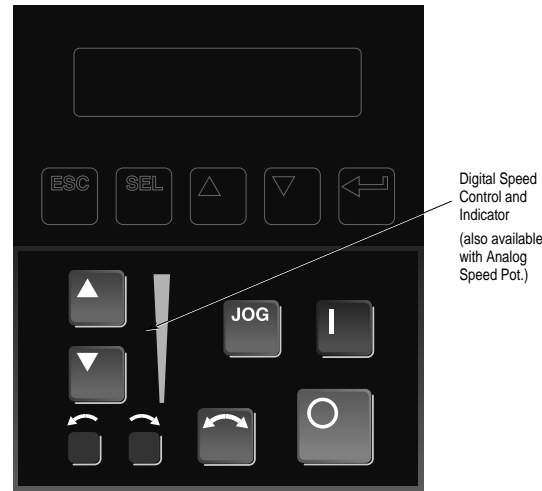
These keys are used to increment and decrement a value or scroll through different groups or parameters. Pressing both keys simultaneously while the Process or Password Display is shown, will save that display as the startup display.



Enter

When pressed, a group or parameter will be selected or a parameter value will be entered into memory. After a parameter has been entered into memory, the top line of the display will automatically become active, allowing another parameter (or group) to be chosen.

Control Panel Key Descriptions



Digital Speed Control and Indicator (also available with Analog Speed Pot.)



Start

The Start key will initiate drive operation if no other control devices are sending a Stop command.



Stop

If the drive is running, pressing the Stop key will cause the drive to stop, using the selected stop mode. Refer to the [Stop Select 1] & [Stop Select 2] parameters.

If the drive has stopped due to a fault, pressing this key will clear the fault and reset the drive. Refer to the [Flt Clear Mode], [Logic Mask] and [Fault Mask] parameters.



Jog

When pressed, jog will be initiated at the frequency set by the [Jog Frequency] parameter, if no other control devices are sending a Stop command. Releasing the key will cause the drive to stop, using the selected stop mode.



Change Direction

Pressing this key will cause the drive to ramp down to zero Hertz and then ramp up to set speed in the opposite direction. The appropriate Direction Indicator will illuminate to indicate the direction of motor rotation.



Direction LEDs (Indicators)

The appropriate LED will illuminate continuously to indicate the commanded direction of rotation. If the second LED is flashing, the drive has been commanded to change direction, but is still decelerating.



Up/Down Arrows

(only available with digital speed control)

Pressing these keys will increase or decrease the HIM frequency command. An indication of this command will be shown on the visual Speed Indicator. The drive will run at this command if the HIM is the selected frequency reference. See [Freq Select 1/2]. Pressing both keys simultaneously stores the current HIM frequency command in HIM memory. Cycling power or removing the HIM from the drive will set the frequency command to the value stored in HIM memory. If the Analog Speed Potentiometer option has been ordered, the Up/Down keys and Speed Indicator will be replaced by the pot.



Speed Indicator

(only available with digital speed control)

Illuminates in steps to give an approximate visual indication of the commanded speed.

If the Analog Speed Potentiometer option has been ordered, the Up/Down keys and Speed Indicator will be replaced by the pot.

Faults

Adptr Freq Err
65

Frequency reference greater than 32767 sent to drive.

Auxiliary Fault
02

Auxiliary input interlock open. Check TB3 connections. If option not installed, set [Input Mode] to "1."

BGND 10ms Over
51

Processor loop fault. Occurs if 10ms background task hasn't run in 15ms.

Blwn Fuse Flt
58

Bus fuse in 30 kW (40 HP) & up drives has blown. Locate cause and replace.

Diag C Lim Flt
36

Drive output current exceeds the hardware current limit & [Cur Lim Trip En] is enabled. Check programming of [Cur Lim Trip En]. Check for excess load.



1336 PLUS Adjustable Frequency AC Drive w/



Reference Guide



ATTENTION: This publication is designed as a reference tool. The 1336 PLUS User Manual (publication 1336 PLUS-5.0) must be consulted for more detailed information about parameters, faults and hazards of personal injury.

Drive Fault Reset 22	Power-up attempted with open Stop contact or closed Start contact.
EE Init Read 53	Trouble reading EEPROM during initialization. Check Power/Driver Bd.
EE Init Value 54	Stored parameter value out of range on initialization. Check Power/Driver Bd.
EEprom Checksum 66	EEPROM checksum does not match. Check connections to Power/Driver Bd.
EEprom Fault 32	EEPROM will not write a new value. Check connections to Control Board.
FGND 10ms Over 52	Occurs if 10ms interrupt is pending before current interrupt is complete.
Ground Fault 13	Check motor and external wiring to drive output for a grounded condition.
Ground Warning 57	If enabled, indicates lower ground current level than Ground Fault (see above).
Hertz Err Fault 29	No valid operating frequency. • Check [Minimum/Maximum Freq] parameters • Check [Skip Freq 1, 2, 3, Band] • Check for loose connections or transducer loss at 4-20mA input, TB2.
Hertz Sel Fault 30	Reprogram [Freq Select 1] and/or [Freq Select 2] with a correct value.
Loop Overrn Flt 23	Overrun of the 2.5ms control loop. Check connections to the Driver Board.
Max Retries Fault 33	Check buffer for fault requiring reset. Correct cause & clear by pressing local Stop key or cycling TB3 Stop input.
Motor Mode Flt 24	Fault detected on Control Board. Check connections to board/Language Module.
Motor Stall Fault 06	If motor is drawing excessive current (over 150%), motor load is excessive and will not allow the drive to accelerate to set speed. A longer accel time or a reduced load may be required.
Neg Slope Fault 35	Check programming. • [Maximum Voltage] must be greater than [Base Voltage] ¹ • [Maximum Freq] must be greater than [Base Frequency] ¹ • [Base Voltage] must be greater than [Start Boost] • If [DC Boost Select] = "Full Custom", [Base Voltage] must be greater than [Break Voltage] and [Break Voltage] must be greater than [Start Boost].
Open Pot Fault 09	Check external pot. circuit at TB2 for an open circuit.
Op Error Fault 11	• A SCANport™ device requests a read/write of a data type not supported. • [Motor Type] set to "Sync PM" & [Stop Mode Used] set to "DC Brake" • [Motor Type] set to "Sync Reluc" or "Sync PM" & [Speed Control] set to "Slip Comp".
Overcurrent Flt 12	Check for short circuit at drive output or excessive load conditions at motor.

Overload Fault 07	Excessive motor load exists. Reduce it so output current does not exceed % current set by the [Overload Current].
Overtemp Fault 08	Check for blocked or dirty heat sink fins. Ambient temperature must not exceed 40° C (104° F).
Overvolt Fault 05	Monitor AC line for high line voltage or transient conditions. Can also be caused by motor regeneration. Extend decel time or install dynamic brake.
Phase U, V, W Fault 38, 39, 40	Check wiring between drive and motor. Check motor for grounded phase.
P Jump Err Flt 37	Reserved for future use.
Poles Calc Flt 50	Calculated value of [Motor Poles] must be between 2 and 32. Check programming of [Motor NP RPM] & [Motor NP Hertz].
Power Loss Fault 03	Monitor the incoming AC line for low voltage or line power interruption.
Power Mode Fault 26	Check all connections to the Control Board/Language Module.
Power Overload ² 26	Drive rating of 150% for 1 minute has been exceeded. Reduce load.
Power Test Flt 46	Internal power mode variable received incorrect value. Check Power/Driver Bd.
Precharge Fault 19	Check the precharge circuit.
Precharge Open 56	Check the precharge circuit.
Reprogram Fault 48	Occurs after drive has been reset to factory default values. Clear fault or cycle drive power. Reprogram.
ROM or RAM Flt 68	Internal ROM/RAM tests failed. Check Language Module.
Run Boost Fault 34	[Run Boost] set greater than [Start Boost]. Verify correct programming.
Serial Fault 10	Check for break in communications line.
Shear Pin Fault ² 63	Programmed [Current Limit] exceeded & [Shear Pin Fault] enabled. Check load requirements & {Current Limit} setting.
Temp Sense Open 55	Heat sink thermistor open or malfunctioning. Check thermistor/connections.
Undervolt Fault 04	Monitor the incoming AC line for low voltage or line power interruption.
UV/UW/VW Short Fault 41, 42, 43	Check motor and external wiring to drive output terminals for a short.
Xsistr Desat Flt 47 (Frame C & up only)	One or more output transistors were operating in active region, instead of saturation. Check for damaged transistors.

¹ Firmware versions before 2.01 only.

² Firmware versions 4.01 & up only.