

MCH FAULT MESSAGES

FAULT	DESCRIPTION
OUTPUT	Output transistor fault: Output current exceeded 200%. May be ground fault or short circuit.
LO VOLTS	Low DC Bus Voltage fault: DC bus voltage dropped below 60%. May be low line voltage.
HI VOLTS	High DC Bus Voltage fault: DC bus voltage exceeded 120%. May be overhauling load.
HI TEMP	High Temperature fault: Heatsink or ambient temperature too high.
OVERLOAD	Current Overload fault: Output current exceeded 100% for too long. VFD may be undersized.
PWR TRAN	Power Transient fault.
PWR SAG	Power Sag fault: New control board installed. Perform factory reset using Parameter 65.
LANGUAGE	Language EEPROM fault.
EXTERNAL	External fault: TB-13D activated (Parameter 50).
DB ERROR	Dynamic Brake fault: DB Resistors overloaded.
CONTROL	Control Board fault: Was new software installed? Perform factory reset using Parameter 65.
INTERNAL	Internal fault.
INTERN (#)	Internal fault.
FLWR / SER	Loss of Follower/Serial fault: 4-20 mA signal at TB-5B dropped below 2 mA (Parameter 55), or the serial link was lost (Parameter 56).

MCH FAULT HISTORY

Parameter 99 - FAULT HISTORY stores the last eight faults that tripped the drive. The FAULT HISTORY indicates the number of the fault (number 1 is the most recent fault), the fault message, and the status of the drive at the time of the fault. An example is shown below:

99 FAULT HISTORY		
2	OVERLOAD	ACCEL
FAULT NUMBER	FAULT MESSAGE	DRIVE STATUS

In the example above, the second fault is being viewed, which is an OVERLOAD fault that occurred while the drive was accelerating.

MCH PARAMETERS

NO.	PARAMETER NAME	FACTORY DEFAULT	NO.	PARAMETER NAME	FACTORY DEFAULT
0	LINE VOLTS	AUTO	40	TB5 MAX FREQ	60.00 HZ
1	PRESET #1	20.00 HZ	41	AN INPUT FLTR	0.02 SEC
2	PRESET #2	20.00 HZ	42	TB10A OUTPUT	NONE
3	PRESET #3	20.00 HZ	43	TB10A SCALING	60.00 HZ
4	PRESET #4	20.00 HZ	44	TB10B OUTPUT	NONE
5	SKIP FREQ #1	.00 HZ	45	TB10B SCALING	125 %
6	SKIP FREQ #2	.00 HZ	47	TB13A INPUT	NONE
7	BANDWIDTH	1.00 HZ	48	TB13B INPUT	NONE
8	ACCEL RATE	30.0 SEC	49	TB13C INPUT	NONE
9	DECEL RATE	30.0 SEC	50	TB13D INPUT	EXT FAULT
10	MINIMUM FREQ	.50 HZ	52	TB14/RELAY #2	NONE
11	MAXIMUM FREQ	60.00 HZ	53	TB15/RELAY #3	NONE
12	DC BRAKE VOLT	.0 VDC	54	RELAY #1	NONE
13	DC BRAKE TIME	.0 SEC	55	TB5B LOSS	FAULT
14	DYNAMIC BRAKE	OFF	56	SERIAL LOSS	FAULT
16	CURRENT LIMIT	120 %	57	SERIAL	DISABLE
17	MOTOR OVRLOAD	100 %	58	SERIAL ADDRES	30
18	BASE FREQ	60.00 HZ	61	PASSWORD	0019
19	FIXED BOOST	(NOTE 1)	63	SOFTWARE VERS	(NOTE 2)
22	TORQUE	CONSTANT	64	MONITOR MODE	ON
23	CARRIER FREQ	2.5 KHZ	65	PROGRAM	RESET 60
24	AUTO SOURCE	4-20 MA	66	CLEAR HISTORY	MAINTAIN
25	START METHOD	NORMAL	70	PID MODE	OFF
26	STOP METHOD	COAST	74	PID FEEDBACK	TB-5B
28	SPEED SRC KEY	ENABLED	75	FEEDBACK @ MIN	0.00 %
29	HAND SOURCE	KEYPAD	76	FEEDBACK @ MAX	100.0 %
30	CONTROL	NORMAL	77	PROPOR. GAIN	5.00 %
31	UNITS	spd HERTZ	78	INTEGRAL GAIN	0.0 SEC
32	HZ MULTIPLIER	1.00	79	DIFF. GAIN	0.0 SEC
33	UNITS DECIMAL	XXXXX	80	PID ACCEL	30.0 SEC
34	LOAD MULTIPLY	100 %	81	MIN ALARM	0.00 %
35	LCD CONTRAST	MED	82	MAX ALARM	0.00 %
36	SLEEP THRSOLD	.00 HZ	98	LANGUAGE	ENGLISH
37	SLEEP DELAY	30.0 SEC	99	FAULT HISTORY	(NOTE 2)
39	TB5 MIN FREQ	.00 HZ			

NOTE 1: REFER TO THE MCH MANUAL.

NOTE 2: THESE PARAMETERS ARE VIEW-ONLY.

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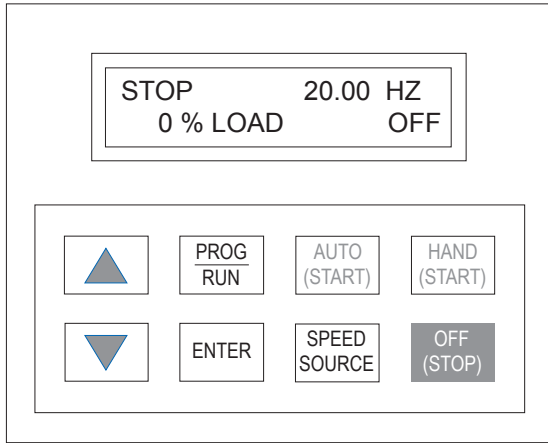


MCH Series Quick Reference Guide

NOTE: Before installing and operating the MCH drive, please read and become familiar with the MCH Series Installation and Operation Manual.

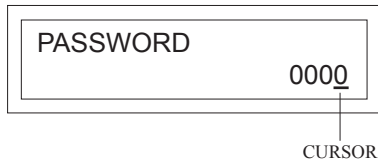
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THE MCH KEYPAD

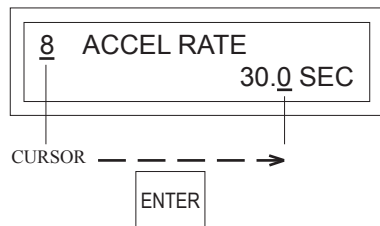


PROGRAMMING THE MCH DRIVE

1. Press the PROG/RUN key. This will cause the PASSWORD prompt to appear (unless the password protection has been disabled), as shown below:



2. Use the ▲ and ▼ keys to scroll to the correct password value (the factory default password is 0019) and press ENTER. The PROGRAM mode will be entered at the start of the parameter menu. A cursor will highlight the parameter number.
3. Use the ▲ and ▼ keys to scroll to the desired parameter and press ENTER. The cursor will shift from the parameter number to the parameter value, as the example below illustrates:



4. Use the ▲ and ▼ keys to scroll to the desired parameter value, and press ENTER to store the new value.
5. Press PROG/RUN to exit the PROGRAM mode.

MCH KEYPAD FUNCTIONS

- HAND (START)** Press the HAND (START) key to start the drive. The HAND (START) key is only active in Keypad H/O/A mode.
- OFF (STOP)** Press the OFF (STOP) key to stop the drive. **NOTE:** The OFF (STOP) key is active in both Keypad H/O/A mode and Remote H/O/A mode. The OFF (STOP) key is also used to reset faults. If the fault condition has passed, pressing the OFF (STOP) key will clear the fault and return the drive to a KSTOP condition.
- AUTO (START)** Press the AUTO (START) key to select AUTO mode. In AUTO mode, close TB-1 to TB-2 to start the drive, and open TB-1 to TB-2 to stop the drive. The AUTO (START) key is only active in Keypad H/O/A mode.

- UP and DOWN ARROWS** - Used to scroll through the parameter menu, change parameter values, and change the speed/PID setpoint when the Keypad is the selected speed/PID reference source.

- SPEED SOURCE** Press the SPEED SOURCE key to select the desired speed reference source, and then press the ENTER key within three seconds to confirm the change. The SPEED SOURCE key is only active if Parameter 28 is ENABLED.

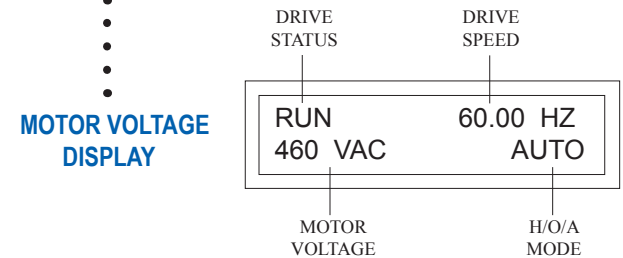
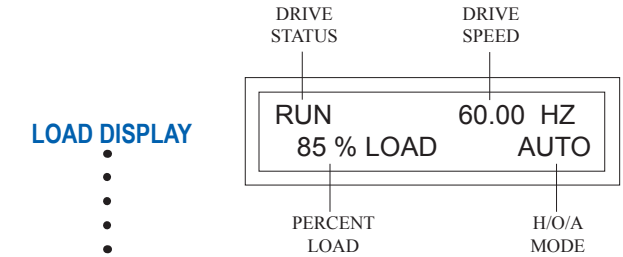
- PROG RUN** Used to enter and exit the PROGRAM mode to set the parameters.

- ENTER** Used for: toggling the display between LOAD and MOTOR VOLTAGE; confirming new parameter values; confirming SPEED SOURCE selections. Press and hold the ENTER key to activate the AUXILIARY MODE, which consists of two displays that cycle in one second intervals. One indicates Keypad H/O/A or Remote H/O/A mode, the speed reference source, and the setting of the SPEED SOURCE key, and the other is an elapsed time meter that indicates total run time.

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MCH DISPLAYS

Shown below are examples of MCH displays. To scroll through the LOAD and MOTOR VOLTAGE displays, press and release the ENTER key.



Press and hold the ENTER key to activate the AUXILIARY MODE, which will cycle in one second intervals between a CONTROL display and a TIME display. An example is shown below:

