



Form Number: 100.40-NO4 (LS02)

706

Supersedes: 100.40-NO4 (LS02) (306)

LITERATURE SUPPLEMENT

File with: 100.40-NO4 (804)

Subject: Use the following tables for programmed factory/default VFD setups
For 50-105 Ton Mod D unit and 106-130 Ton Mod E units

Menu 0## : Operation and Display Settings

| # | Parameter Description | Factory | Supply Fan Setup 1 | Exhaust Fan Setup 2 | Return Fan |
|-----|-----------------------------------|----------------|--------------------|---------------------|----------------|
| 001 | Language | ENGLISH | ENGLISH | ENGLISH | ENGLISH |
| 002 | Active Setup | FACTORY | SETUP 1 | SETUP 2 | SETUP 1* |
| 003 | Copying of Setups | NO COPY | NO COPY | NO COPY | NO COPY |
| 004 | LCP Copy | NO COPY | NO COPY | NO COPY | NO COPY |
| 005 | Max Value of User-defined Readout | 100.000 | 100.000 | 100.000 | 100.000 |
| 006 | Unit for User-defined Readout | % | % | % | % |
| 007 | Big Display Readout | FREQUENCY, % | FREQUENCY, Hz | FREQUENCY, Hz | FREQUENCY, Hz |
| 008 | Small Display Readout 1.1 | REFERENCE, % | REFERENCE, % | REFERENCE, % | REFERENCE, % |
| 009 | Small Display Readout 1.2 | MTR CURRENT, A | MTR CURRENT, A | MTR CURRENT, A | MTR CURRENT, A |
| 010 | Small Display Readout 1.3 | POWER, HP | POWER, HP | POWER, HP | POWER, HP |
| 011 | Unit of Local Reference | % OF F MAX. | % OF F MAX. | % OF F MAX. | % OF F MAX. |
| 012 | Hand Start on LCP | ENABLE | ENABLE | ENABLE | ENABLE |
| 013 | OFF/STOP on LCP | ENABLE | ENABLE | ENABLE | ENABLE |
| 014 | Auto Start on LCP | ENABLE | ENABLE | ENABLE | ENABLE |
| 015 | Reset on LCP | ENABLE | ENABLE | ENABLE | ENABLE |
| 016 | Lock for Data Change | NOT LOCKED | NOT LOCKED | NOT LOCKED | NOT LOCKED |
| 017 | Operating State at Power Up | AUTO RESTART | AUTO RESTART | AUTO RESTART | AUTO RESTART |

* Return Fan Setup is the same as Supply Fan Setup except for items 201, 204, 206 & 207

Menu 2## : Load and Motor Settings

| # | Parameter Description | Factory | Supply Fan Setup 1 | Exhaust Fan Setup 2 | Return Fan |
|-----|----------------------------------|-------------------|--------------------|---------------------|---|
| 100 | Configuration | OPEN LOOP | OPEN LOOP | OPEN LOOP | OPEN LOOP |
| 101 | Torque Characteristics | AEO FUNCTION | AEO FUNCTION | AEO FUNCTION | MULTIPLE MTRS - MOD D AEO FUNCTION - MOD E |
| 102 | Motor Power | SPECIFIC TO MOTOR | | | |
| 103 | Motor Voltage | SPECIFIC TO MOTOR | | | |
| 104 | Motor Frequency | 60 Hz | 60 Hz | 60 Hz | 60 Hz |
| 105 | Motor Current | SPECIFIC TO MOTOR | | | |
| 106 | Rated Motor Speed | SPECIFIC TO MOTOR | | | |
| 107 | Automatic Motor Adaptation, AMA | NO AMA | NO AMA | NO AMA | NO AMA |
| 108 | Start Voltage of Parallel Motors | 0.0 V | 0.0 V | 0.0 V | 0.0 V |
| 109 | Resonance Dampening | 100% | 100% | 100% | 100% |
| 110 | High Breakaway Torque | OFF | OFF | OFF | OFF |
| 111 | Start Delay | 000.0 s | 000.0 s | 000.0 s | 000.0 s |
| 112 | Motor Preheater | DISABLE | DISABLE | DISABLE | DISABLE |
| 113 | Motor Preheater DC Current | 50% | 50% | 50% | 50% |
| 114 | DC Braking Current | 50% | 50% | 50% | 50% |
| 115 | DC Braking Time | 10.0 s | 10.0 s | 10.0 s | 10.0 s |
| 116 | DC Brake Cut-in Frequency | OFF | OFF | OFF | OFF |
| 117 | Motor Thermal Protection | ETR TRIP 1 | ETR TRIP 1 | ETR TRIP 2 | ETR TRIP 3 |

2## : References and Limits

| # | Parameter Description | Factory | Supply Fan Setup 1 | Exhaust Fan Setup 2 | Return Fan |
|-----|-----------------------------|---------------------|---------------------|---------------------|---------------------|
| 200 | Output Frequency Range | 120 Hz | 120 Hz | 120 Hz | 120 Hz |
| 201 | Output Frequency Low Limit | 0.0 Hz | 25.0 Hz | 6.0 Hz | 15.0 Hz |
| 202 | Output Frequency High Limit | 60 Hz | 60.0 Hz | 60.0 Hz | 60.0 Hz |
| 203 | Reference Handling | LINKED TO HAND/AUTO | LINKED TO HAND/AUTO | LINKED TO HAND/AUTO | LINKED TO HAND/AUTO |
| 204 | Minimum Reference | 0.0 Hz | 25.0 Hz | 6.0 Hz | 15 Hz |
| 205 | Maximum Reference | 60.0 Hz | 60.0 Hz | 60.0 Hz | 60.0 Hz |
| 206 | Ramp-up Time | 60 sec. | 30 sec. | 60 sec. | 15 sec. |
| 207 | Ramp-down Time | 60 sec. | 60 sec. | 60 sec | 30 sec. |
| 208 | Automatic Ramp-up/down | ENABLE | ENABLE | ENABLE | ENABLE |
| 209 | Jog Frequency | 10.0 Hz | 10.0 Hz | 10.0 Hz | 10.0 Hz |
| 210 | Reference Type | EXTERNAL PRESET | EXTERNAL PRESET | EXTERNAL PRESET | EXTERNAL PRESET |
| 211 | Preset Reference 1 | 0.00% | 0.00% | 0.00% | 0.00% |
| 212 | Preset Reference 2 | 0.00% | 0.00% | 0.00% | 0.00% |
| 213 | Preset Reference 3 | 0.00% | 0.00% | 0.00% | 0.00% |
| 214 | Preset Reference 4 | 0.00% | 0.00% | 0.00% | 0.00% |
| 215 | Current Limit | 1.1 | 1.1 | 1.1 | 1.1 |
| 216 | Frequency Bypass Bandwidth | DISABLED | DISABLED | DISABLED | DISABLED |
| 217 | Frequency Bypass 1 | 1 120.0 Hz | 120.0 Hz | 120.0 Hz | 120.0 Hz |
| 218 | Frequency Bypass 2 | 2 120.0 Hz | 120.0 Hz | 120.0 Hz | 120.0 Hz |
| 219 | Frequency Bypass 3 | 3 120.0 Hz | 120.0 Hz | 120.0 Hz | 120.0 Hz |
| 220 | Frequency Bypass 4 | 4 120.0 Hz | 120.0 Hz | 120.0 Hz | 120.0 Hz |
| 221 | Warning: Low Current | 0.0 A | 0.0 A | 0.0 A | 0.0 A |
| 222 | Warning: High Current 1 | I I [A] | I [A] | I [A] | I [A] |
| 223 | Warning: Low Frequency | 0.0 Hz | 0.0 Hz | 0.0 Hz | 0.0 Hz |
| 224 | Warning: High Frequency | 120.0 Hz | 120.0 Hz | 120.0 Hz | 120.0 Hz |
| 225 | Warning: Low Reference | -999,999.999 Hz | -999,999.999 Hz | -999,999.999 Hz | -999,999.999 Hz |
| 226 | Warning: High Reference | 999,999.999 Hz | 999,999.999 Hz | 999,999.999 Hz | 999,999.999 Hz |
| 227 | Warning: Low Feedback | -999,999.999 Hz | -999,999.999 Hz | -999,999.999 Hz | -999,999.999 Hz |
| 228 | Warning: High Feedback | 999,999.999 Hz | 999,999.999 Hz | 999,999.999 Hz | 999,999.999 Hz |

Menu 3## : Inputs and Outputs

| # | Parameter Description | Factory | Supply Fan Setup 1 | Exhaust Fan Setup 2 | Return Fan |
|----------|------------------------------------|------------------|---------------------------|----------------------------|-------------------|
| 300 | Terminal 16, Digital Input | RESET | RESET | RESET | RESET |
| 301 | Terminal 17, Digital Input | NO OPERATION | NO OPERATION | NO OPERATION | NO OPERATION |
| 302 | Terminal 18, Digital Input | START | START | START | START |
| 303 | Terminal 19, Digital Input | REVERSING | REVERSING | REVERSING | REVERSING |
| 304 | Terminal 27, Digital Input | SAFETY INTERLOCK | SAFETY INTERLOCK | SAFETY INTERLOCK | SAFETY INTERLOCK |
| 305 | Terminal 29, Digital Input | JOG | JOG | JOG | JOG |
| 306 | Terminal 32, Digital Input | NO OPERATION | NO OPERATION | NO OPERATION | NO OPERATION |
| 307 | Terminal 33, Digital Input | NO OPERATION | NO OPERATION | NO OPERATION | NO OPERATION |
| 308 | Terminal 53, Analog Input Voltage | NO OPERATION | REFERENCE | REFERENCE | REFERENCE |
| 309 | Terminal 53, Min. Scaling | 0.0 V | 0.0 V | 0.0 V | 0.0 V |
| 310 | Terminal 53, Max. Scaling | 10.0 V | 10.0 V | 10.0 V | 10.0 V |
| 311 | Terminal 54, Analog Input Voltage | NO OPERATION | NO OPERATION | NO OPERATION | NO OPERATION |
| 312 | Terminal 54, Min. Scaling | 0.0 V | 0.0 V | 0.0 V | 0.0V |
| 313 | Terminal 54, Max. Scaling | 10.0 V | 10.0 V | 10.0 V | 10.0V |
| 314 | Terminal 60, Analog Input Current | REFERENCE | NO OPERATION | NO OPERATION | NO OPERATION |
| 315 | Terminal 60, Min. Scaling | 4.0 mA | 4.0 mA | 4.0 mA | 4.0 mA |
| 316 | Terminal 60, Max. Scaling | 20.0 mA | 20.0 mA | 20.0 mA | 20.0 mA |
| 317 | Live Zero Time | 10 sec. | 10 sec. | 10 sec. | 10 sec. |
| 318 | Function After Time Out | NO FUNCTION | NO FUNCTION | NO FUNCTION | NO FUNCTION |
| 319 | Terminal 42, Output | MTR CURRENT | MTR CURRENT | MTR CURRENT | MTR CURRENT |
| 320 | Terminal 42, Output, Pulse Scaling | 5000 Hz | 5000 Hz | 5000 Hz | 5000 Hz |
| 321 | Terminal 45, Output | OUT. FREQ. | OUT. FREQ. | OUT. FREQ. | OUT. FREQ. |
| 322 | Terminal 45, Output, Pulse Scaling | 5000 Hz | 5000 Hz | 5000 Hz | 5000 Hz |
| 323 | Relay 1, Output Function | NO ALARM | F OUT > F HIGH | NO ALARM | F OUT > F HIGH |
| 324 | Relay 1, ON Delay | 0 sec. | 60 sec. | 0 sec. | 60 sec. |
| 325 | Relay 1, OFF Delay | 2 sec. | 60 sec. | 2 sec. | 60 sec. |
| 326 | Relay 2, Output Function | RUNNING | RUNNING | RUNNING | RUNNING |
| 327 | Pulse Reference, Max. Frequency | 5000 Hz | 5000 Hz | 5000 Hz | 5000 Hz |
| 328 | Pulse Feedback, Max. Frequency | 25000 Hz | 25000 Hz | 25000 Hz | 25000 Hz |

Menu 4## : Application Functions

| # | Parameter | Factory | Supply Fan Setup 1 | Exhaust Fan Setup 2 | Return Fan |
|-----|--------------------------------|---|--------------------|---------------------|---------------|
| 400 | Reset Function | INFINITE AUTO | INFINITE AUTO | INFINITE AUTO | INFINITE AUTO |
| 401 | Automatic Restart Time | 10 sec. | 10 sec. | 10 sec. | 10 sec. |
| 402 | Flying Start | ENABLE | ENABLE | ENABLE | ENABLE |
| 403 | Sleep Mode Timer OFF | OFF | OFF | OFF | OFF |
| 404 | Sleep Frequency | 0 Hz | 0 Hz | 0 Hz | 0 Hz |
| 405 | Wake up Frequency | 60 Hz | 60 Hz | 60 Hz | 60 Hz |
| 406 | Boost Setpoint | 100% | 100% | 100% | 100% |
| 407 | Switching Frequency | DEPENDS ON VFD . NO YORK ADJUSTMENT NECESSARY | | | |
| 408 | Interference Reduction Method | ASFM | ASFM | ASFM | ASFM |
| 409 | Function in Case of No Load | WARNING | WARNING | WARNING | WARNING |
| 410 | Function in Case of Phase Loss | TRIP | TRIP | TRIP | TRIP |
| 411 | Function at Over Temp | TRIP | TRIP | TRIP | TRIP |
| 412 | Trip Delay Overcurrent | 60 sec. | 60 sec. | 60 sec. | 60 sec. |
| 413 | Minimum Feedback | 0.000 | 0.000 | 0.000 | 0.000 |
| 414 | Maximum Feedback | 100.000 | 100.000 | 100.000 | 100.000 |
| 415 | Units Relating to Closed Loop | % | % | % | % |
| 416 | Feedback Conversion | LINEAR | LINEAR | LINEAR | LINEAR |
| 417 | Feedback Calculation | MAXIMUM | MAXIMUM | MAXIMUM | MAXIMUM |
| 418 | Setpoint 1 | 0.000 | 0.000 | 0.000 | 0.000 |
| 419 | Setpoint 2 | 0.000 | 0.000 | 0.000 | 0.000 |
| 420 | PID Normal/Inverse Control | NORMAL | NORMAL | NORMAL | NORMAL |
| 421 | PID Anti Windup | ENABLE | ENABLE | ENABLE | ENABLE |
| 422 | PID Start-up Frequency | 0 Hz | 0 Hz | 0 Hz | 0 Hz |
| 423 | PID Proportional Gain | 0.30 | 0.30 | 0.30 | 0.30 |
| 424 | PID Integral Time | OFF | OFF | OFF | OFF |
| 425 | PDI Differentiation Time | OFF | OFF | OFF | OFF |
| 426 | Differentiation Gain Limit | 5 | 5 | 5 | 5 |
| 427 | PID Lowpass Filter Time | 0.01 | 0.01 | 0.01 | 0.01 |

