Vitronics Soltec

A DOVER COMPANY

INVERTER PROGRAMMING AND REWIRING GUIDE FOR REPLACEMENT OF INVERTERS

Function values for the Fuji / GE inverters FRN00_G9D-_UX / D55XXX V-S part numbers 13830XX:
00 = 1 freq. = voltage input
01 = 1 external run stop
02 = 60 Hz max. frequency
03 = 60 Hz base frequency (this is not min. frequency)
04 = 200, 208, 220, 230 (not 240), 380, 415, 420 (not 440 -480) output voltage
05 = 10 accel. time (seconds)
06 = 10 decel. time
07 = 1.0 Torque boost limit
08 = 0 four pole current limiting inactive for two pole motors
09 = ignore - limit for disabled four pole current limiting (not used)
10 = 0 don't auto-restart after power failure, but set the alarm
11 = 70 Hz high frequency limiter
12 = 0 Hz low frequency limiter
13 = 0 Hz bias frequency
14 = 100 % gain for frequency setting from signal
15 = 180 % acceleration torque limiting
16 = 150 % deceleration torque limiting,
17 = 0 Hz starting frequency for DC injection breaking (not used)
18 = 0 % strength of DC injection breaking (not used)
19 = 0 seconds - operating time for DC injection breaking (not used)
20 = 0 Hz part of the multistep frequency pattern acceleration (not used)
21 – 26 = 0 Hz part of the multistep pattern (not used)
27 = 1 internal thermal overload relay active
28 = 0.0 Hz slip compensation control
29 = 0 Torque vector control inactive
30 = 2 number of motor poles
31 = 1 open next block of functions
32 = 0000 XI-X4 input terminal functions (not used)
33 = 10.0 sec. accel. #2 time (not used)
34 = 10.0 sec. decel. #2 time (not used)
35 = 15.0 sec. accel. #3 time (not used)
36 = 15.0 sec. decel. #3 time (not used)
37 = 3.0 sec. accel. #4 time (not used)
38 = 3.0 sec. decel. #4 time (not used)
39 = 60 Hz base freq. #2 (not used)
40 = 230V for 200 - 240V range, 420V for 380 - 480V range for 2nd motor (not used)
41 = 1.0 Torque boost for 2nd motor (not used)
42 = 1 open next block of functions
43 = 24 pulse rate multiplier for FMP frequency monitor output (not used)
44 = 100 Voltage adjust for FMP frequency monitor output (not used)
45 = 100 Voltage adjust for FMA frequency monitor output (not used)
46 = 0 FMA output function = frequency (not used)
47 = 01234 YI-Y5 output terminal functions
48 = 2.5 Hz frequency equivalence hysteresis (not used)
49 = 6 Hz low freq. detect level (Hz)
50 = 1 Hz low freq. detect hysteresis
51 = 6 for 3HP, 10 for 5 HP, 14 for 7.5 HP max. current limit (Amps.)
52 = 1 open next block of functions
53 = 0 Hz jump freq. #1 (not used)
54 = 0 Hz jump freq. #2 (not used)
55 = 0 Hz jump freq. #3 (not used)
56 = 3 Hz jump freq. hysteresis (not used)
57 = 0.5 Hz start frequency
58 = 0.0 sec. holding time
59 = 0.05 sec. signal filter

60 = 1 open next block of functions
61 = 0 LED monitor displays output frequency
62 = 0 when stopped monitor displays set point
63 = 57 multiplier for conveyor speed display
64 = 2 display frequency and current
65 = 0 special pattern operation inactive
66 – 72 = 0 seconds pattern stage I – 7 (not used)
73 = 0 linear acceleration for special pattern (not used)
74 = 0 special functions (not used)
75 = 0 erergy saving operation inactive
76 = 0 reverse phase frequency lock inactive
77 = 0 do not restore factory settings at this time
78 = 1 language = English (0 = Japanese, 2 = Spanish, 3 = French)
79 = 5 average intensity level on LCD monitor
80 = 1 open next block of functions
81 = 10 set carrier frequency to 15 KHz
82 = 5 output power delay time after input power applied (seconds)
83 = 0 Use function 6 setting to pull in motor after momentary power drop out
84 = 0 do not auto reset
85 = 5 sec. time between autoresets (not used)
86 = 1 standard capacity for motor 1
87 = ignore (not used) single motor rated current
88 = ignore (not used) single motor no load current
89 = ignore (not used) second motor rated current
90 = 0 motor 1 tuning inactive
91 = ignore (not used) set %R1 motor 1 tuning
92 = ignore (not used) set %X1 motor 1 tuning
93 = ignore (not used) reserved for manufacturer
94 = ignore (not used) reserved for manufacturer
95 = 0 allow functions to be modified

Function values for the Magnetek / IDM inverters GPD-XXX / PC3 V-S part numbers 13036XX, 13037XX:

An-0l = 0.00 Hz frequency reference #1
An-02 = 0.00 Hz frequency reference #2
An-03 = 0.00 Hz frequency reference #3
An-04 = 0.00 Hz frequency reference #4
An-05 = 0.00 Hz frequency reference #5
An-06 = 0.00 Hz frequency reference #6
An-07 = 0.00 Hz frequency reference #7
An-08 = 0.00 Hz frequency reference #8
An-09 = 6.00 Hz jog reference
bn-01 = 10.0 seconds acceleration time 1
bn-02 = 10.0 seconds deceleration time 1
bn-03 = 10.0 seconds accel. time 2
bn-04 = 10.0 seconds decel. time 2
bn-05 = 100 % frequency command gain
bn-06 = 0 % frequency command bias
bn-07 = 1.0 torque compensation gain
bn-08 = 0.0 % slip compensation gain
bn-09 = 80 % Energy saving gain
bn-10 = 1 monitor displays frequency while running motors
bn-11 = 1.00 Analog monitor channel 1 gain
bn-12 = 0.5 Analog monitor channel 2 gain
Sn-01 = 03 FOR 3 HP, 04 for 5 HP, 05 for 7.5 HP inverter power selection
Sn-02 = 0F V/F pattern set by Cn-02 through Cn-08
Sn-03 = 0000 read / set all constants
Sn-04 = 0000 ramp to stop, run/stop from external signal, external frequency command
Sn-05 = 0000 use non keyboard signals
Sn-06 = 0011 "S" curve at accel./ decel. with 1 sec delay, use internal freq. Ref.
Sn-07 = 0000 Over torque settings
Sn-08 = 0000 run from on board option
Sn-09 = 0000 reserved for manufacturer
Sn-10 = 0000 enable stall prevention
Sn-11 = 0000 breaking resistor / fault contacts
Sn-12 = 0100 ramp to stop on external fault input
Sn-13 = 0000 reserved for manufacturer
Sn-14 = 0000 electronic thermal overload relay enabled
Sn-15 = 03 terminal #5 = auto / manual select
Sn-16 = 04 terminal #6 = multistep frequency select
Sn-17 = 07 terminal #7 = use bn-01 through bn-04 for accel./decel. times
Sn-18 = 08 terminal #8 = motors on/off
Sn-19 = 00 terminal #16 = analog input for frequency out
Sn-20 = 00 terminals #9 & #10 output contacts closed while in operation
Sn-21 = 0l terminals #25 & #27 output transistor "on" when output freq. = 0 Hz
Sn-22 = 02 terminals #26 & #27 output transistor "on" when output freq. matches Cn-22
Sn-23 = reserved for manufacturer
Sn-24 = reserved for manufacturer
Sn-25 = 0000 enable command input filter
Sn-26 = 0000 use BCD for digital frequency command (not used)
Sn-27 = 0010 pulse monitor option gain (not used)
Sn-28 = 0100 monitor channel 1 = output frequency, monitor channel 2 = ref. freq.
Cn-01 = 230.0V for 200V-240V (240V requires buck transformer) Voltage limit
Cn-02 = 60.0 Hz V/F pattern max. frequency
Cn-03 = 200.OV V/F pattern max. voltage
Cn-04 = 60.0 Hz V/F pattern max. frequency
Cn-05 = 3.0 Hz V/F pattern midpoint frequency
Cn-06 = 13V V/F pattern midpoint Voltage
Cn-07 = 1.5 Hz V/F pattern start frequency

Cn-08 = 7V V/F pattern start volts
Cn-09 = 8.5 A for 3 HP, 14.1 A for 5 HP, 19.6 A for 7.5 HP motor rated current
Cn-10 = 1.5 Hz start frequency for DC injection breaking
Cn-11 = 50 % DC injection breaking current
Cn-12 = 0.0 % DC injection breaking at stop
Cn-13 = 0.0 sec. start time for DC injection breaking
Cn-14 = 100 % frequency command upper limit
Cn-15 = 0 % frequency command lower limit
Cn-16 = 0.0 Hz skip frequency #1 (not used)
Cn-17 = 0.0 Hz skip frequency #2 (not used)
Cn-18 = 0.0 Hz skip frequency #3 (not used)
Cn-19 = 1.0 Hz dead band around skip frequency (not used)
Cn-20 = 0 display output frequency
Cn-21 = 0.0 Hz speed coincidence frequency
Cn-22 = 2.0 Hz speed coincidence bandwidth
Cn-23 = 15.0 KHz carrier frequency upper limit
Cn-24 = 15.0 KHz carrier frequency lower limit
Cn-25 = 00 frequency proportional gain
Cn-26 = 160 % over torque detection level
Cn-27 = 0.1 seconds over torque detection time
Cn-28 = 170 % accel. stall prevention level - constant torque
Cn-29 = 50 % accel. stall prevention level - constant HP
Cn-30 = 160 % stall prevention level at set point
Cn-31 = unknown factory setting - Ohms motor to motor cable resistance
Cn-32 = unknown factory setting - Watts torque compensation iron loss
Cn-33 = unknown factory setting - Volts torque compensation limiter
Cn-34 = 30 % motor no load current
Cn-35 = 2.0 seconds slip compensation first order lag
Cn-36 = 0 number of autorestart attempts
Cn-37 = 0.0 seconds momentary power failure ride through time
Cn-38 = 150 % speed search operation level
Cn-39 = 2.0 sec. speed search decel. time
Cn-40 = unknown factory setting mm. base block time
Cn-41 = 100 % V/F during speed search
Cn-42 = 0.3 seconds Voltage recovery time
Un-0l = display only - frequency reference (Hz)
Un-02 = display only - output frequency (Hz)
Un-03 = display only - Output current (Amps)
Un-04 = display only -Voltage reference (V)
Un-05 = display only - DC Voltage bus (Vpk to neutral)
Un-06 = display only - Output power (KW)
Un-07 = display only - input terminal status
Un-08 = display only - Output terminal status
Un-09 = display only - LED lamp check (8.8.8.8.8.)
Un-l0 = display only - PROM #

Function values for the IDM mini-inverters CIMR-PCU-XXXX V-S part number 13798XX:

00 = 3 all functions available for setting
0l = 0000 run from external controls
02 = 60.0 Hz max. frequency
03 = 230.OV max. Voltage
04 = 60.0 Hz frequency at max. voltage
05 = 3.0 Hz midpoint frequency
06 = 12.OV midpoint Voltage
07 = 1.5 Hz mm. frequency
08 = 7V mm. Voltage
09 = 30.0 seconds first acceleration time
10 = 30.0 sec. first deceleration time
11 = 10.0 sec. second acceleration time (not used)
12 = 10.0 sec. second deceleration time
13 = 0.0 Hz reference frequency #1
14 = 0.0 Hz reference frequency #2
15 = 0.0 Hz reference frequency #3
16 = 0.0 Hz reference frequency #4
17 = 6.0 Hz jog reference frequency
18 = 0000 electronic thermal overload relay enabled
19 = 8.5 A for 3 HP, 14.1 A for 5 HP motor rated current
20 = 0001 enable stall prevention
21 = 0000 analog monitor follows output frequency
22 = 1.00 reference frequency gain
23 = 0.00 reference frequency bias
24 = 100 % frequency upper limit
25 = 0 % frequency lower limit
26 = 50 % DC injection braking current
27 = 0.0 sec. stop time for DC injection braking
28 = 0.0 sec. start time for DC injection braking
29 = 1.0 gain for automatic torque boost
30 = 170 % stall prevention level while running
31 = 160 % stall prevention level while accelerating
32 = 13 alarm reset when terminal #3 connected to ground
33 = 1 external fault (stop) if terminal #4 connected to ground
34 = 3 external fault (stop) if terminal #5 disconnected from ground
35 = 0 analog input = frequency gain / frequency set point
36 = 3 terminals FLT energized if output frequency greater than or equal detect freq.
37 = 0 terminal #13 closed while running
38 = 1 terminal #14 closed if output frequency = detect frequency (function 39)
39 = 5.0 Hz detection frequency
40 = 0000 over torque detection
41 = 160 % over torque detection level
42 = 0.1 sec. over torque detection time
43 = 6 carrier frequency = 15 KHz
44 = reserved for manufacturer
45 = 1.00 analog monitor gain
46 = 0000 discontinue operation after momentary power loss
47 = 0 number of restart attempts after fault
48 = display only = latest fault
49 = display only = PROM number
50 = 0.0 Hz skip frequency
51 = 1.0 Hz skip range around skip frequency
52 = reserved for manufacturer
53 = reserved for manufacturer
54 = reserved for manufacturer
55 = reserved for manufacturer

56 = reserved for manufacturer
57 = reserved for manufacturer
58 = reserved for manufacturer
59 = reserved for manufacturer

Function values for the IDM mini-inverters CIMR-J7CU-XXXX V-S part numbers 14514XX:

01 = 1 all functions available for setting
02 = 1 run from external controls
03 = 2 analog input (0 – 10V) = frequency gain / frequency set point
04 = 0 decelerate to a stop (not coast to stop)
05 = 1 disable reverse direction
06 = 0 enable “stop” key / command
07 = 1 set freq. By keypad (not used)
08 = 1 disable freq. Setting by “enter key” (not used)
09 = 60.0 Hz maximum output frequency
10 = 230 V. maximum output voltage
11 = 60.0 Hz maximum frequency output at max. Voltage
12 = 30.0 Hz middle output frequency
13 = 50 V. middle frequency voltage
14 = 1.5 Hz minimum output frequency
15 = 10 V. minimum output voltage
16 = 10.0 Seconds Acceleration time # 1
17 = 10.0 S. Deceleration time # 1
18 = 10.0 S. Acceleration time # 2
19 = 10.0 S. Deceleration time # 2
20 = 0 no “S-curve” accel. / decel. Characteristic provided
21 = 0.0 Hz multi-step speed select frequency reference # 1 (not used)
22 = 0.0 Hz multi-step speed select frequency reference # 2 (not used)
23 = 0.0 Hz multi-step speed select frequency reference # 3 (not used)
24 = 0.0 Hz multi-step speed select frequency reference # 4 (not used)
25 = 0.0 Hz multi-step speed select frequency reference # 5 (not used)
26 = 0.0 Hz multi-step speed select frequency reference # 6 (not used)
27 = 0.0 Hz multi-step speed select frequency reference # 7 (not used)
28 = 0.0 Hz multi-step speed select frequency reference # 8 (not used)
29 = 6.0 Hz jog frequency reference
30 = 100 % frequency reference upper limit
31 = 0 % frequency reference lower limit
32 = 8.5 A (3hp/2.2kW) or 14.1 A (5hp/3.7kW) maximum current limit
33 = 0 electronic thermal overload applied to general purpose motors
34 = 8 minutes electronic thermal relay time delay
35 = 0 inverter cooling fan operates only when inverter is in run mode
36 = 2 input S2 = reverse run (not used)
37 = 5 input S3 = fault reset
38 = 3 input S4 = external fault input (connect to SC if fault – not used)
39 = 6 input S5 = activate sepeed reference # 1 (not used)
40 = 5 output contact MA closes when the output frequency is less than 5Hz (n58)
41 = 100 % of max. analog input voltage (n03) = maximim output frequency (n09)
42 = 0 % of max frequency (n09) when analog input voltage = 0 Volts
43 = 2.00 seconds analog frequency reference filter time constant
44 = 0 output a frequency to the monitor terminals (not used)
45 = 1.00 gain (multiplier) signal at monitor terminals
46 = 4 set carrier frequency to 10 kHz
47 = 1 automatically restart after a momentary power drop out if the run relay is still energized.
48 = 0 do not try to automatically restart after a fault
49 = 0.0 Hz skip frequency # 1
50 = 0.0 Hz skip frequency # 2
51 = 0.0 Hz skip frequency band width
52 = 50% DC injection braking current
53 = 0.0 seconds DC injection braking time at stop
54 = 0.0 seconds DC injection braking time at start
55 = 0 provide stall prevention during deceleration

56 = 170 % (of inverter max current) stall prevention current limit for acceleration
57 = 160 % (of inverter max current) stall prevention current limit during run
58 = 5 Hz frequency level detected by n40 above & output to MA terminal
59 = 0 over torque not detected
60 = 160 % over torque detection level
61 = 0.1 seconds over torque detection time delay
62 = 0 output frequency is not recorded during a “hold” command
63 = 1.0 torque compensation gain
64 = 2.9 Hz (3hp/2.2kW) or 3.3 Hz (5hp/3.7kW) rated slip for motors
65 = 35 % (3hp/2.2kW) or 32 % (5hp/3.7kW) motor no load current
66 = 1.0 motor slip compensation gain
67 = 2.0 seconds motor slip compensation primary delay time
68 = 0 timeover detection not used
69 = 0 communications frequency reference (not used)
70 = 0 slave address (not used)
71 = 2 initial baud rate (not used)
72 = 0 parity bits (not used)
73 = 10 miliseconds waiting time for “send” signal
74 = 0 RTS/CTS disabled (not used)
75 = - (not available for setting)
76 = - (not available for setting)
77 = - (not available for setting)
78 = - (not available for setting)
79 = - (not available for setting)

Function values for the AC Tech series SCF V-S part numbers 14514XX:

```
01 = 00 for input voltages of 200 – 208,
   = 01 for input voltages of 220 – 240
02 = 04 set carrier frequency to 10 kHz
03 = 01 normal start up
04 = 04 decelerate with DC injection braking
05 = 03 use 0 – 10V input to control output
06 = 01 TB-14 not assigned
07 = not defined
08 = 01 TB-30 analog output disabled
09 = 01 TB-31 analog output disabled
10 = 01 TB-13A input disabled
11 = 01 TB-13B input disabled
12 = 01 TB-13C input disabled
13 = 02 NPN open collector at TB-15 conducts current to ground if invertr is running
14 = 01 control is through the terminal strip only
15 = 01 disable serial communications
16 = 01 keypad speed 0.1 Hz
17 = 01 rotate forward only
18 = 03 range select, set n19, n20,n21 for 1 second increments (may not be available)
19 = 10 seconds acceleration time
20 = 10 seconds deceleration time
21 = 00 seconds of DC injection braking during deceleration
22 = 00 % of max voltage for DC braking
23 = 00 Hz minimum frequency
24 = 60 Hz maximum frequency
25 = 150% of max current - current limit
26 = 100% of max current - motor overload
27 = 60 Hz base frequency
28 = 1% of base frequency - fixed boost
29 = 00 % of base frequency acceleration boost
30 = 00 % of base frequency slip compensation
31 = 00 Hz preset speed # 1
32 = 00 Hz preset speed # 2
33 = 00 Hz preset speed # 3
34 = 00 Hz preset speed # 4
35 = 00 Hz preset speed # 5
36 = 00 Hz preset speed # 6
37 = 00 Hz preset speed # 7
38 = 0.0 Hz skip bandwidth
39 = 0.0 speed scaling gain
40 = 60 Hz frequency scale at TB-30
41 = 200% load scaling at TB-30 and TB-31 for load outputs
42 = 20.0 Sec. Accel. / decel. #2
43 = 1 serial address
44 = 000 disable password. Set at AC Tech to 225 (or 1225)
45 = not defined
46 = not defined
47 = 01 do not clear error history
48 = 01 use user settings (not OEM module or AC Tech settings)
49 = not defined
50 = - fault history – view only
51 = - software codes – view only
52 = - DC Bus voltage – view only
53 = - motor voltage – view only
54 = - load current – view only
55 = - 0 – 10 Volt input – view only
```

56 = - 4 – 20 mA input – view only
57 = - TB strip status – view only
58 = - keypad status – view only
59 = - TB-30 output – view only
60 = - TB-31 output – view only

Function values for the Fuji / GE inverters 6KP11XXXXXX1A1 / D66XXX V-S part number1465101/TDA2036:
F00 = 0 all function data can be changed
F01 = 1 use voltage input (pins 11 & 12) to set frequency
F02 = 1 run/stop from screw terminals – leave stop button active
F03 = 60 Hz. Maximum output frequency
F04 = 60 Hz Base output frequency range
F05 = 220 V rated output voltage
F06 = 220 V maximum output voltage
F07 = 10 Seconds acceleration time
F08 = 10 S deceleration time
F09 = 1.0 Torque boost
F10 = 1 internal thermal overload relay active
F11 = 135% (of rated drive current) thermal overload relay current level
F12 = 0.5 Minutes time delay of thermal overload relay
F13 = 0 deactivate internal braking resistor
F14 = 0 immediate shutdown on under voltage, motors coast to a stop
F15 = 70 Hz upper limit frequency
F16 = 0 Hz lower limit frequency
F17 = 100 % of max. frequency for +10V input (gain setting)
F18 = 0 bias frequency for positive rotation
F19 = not used
F20 = 0 Hz DC injection brake starts at 0 Hz (not used)
F21 = 0 % of output current available for DC injection braking (not used)
F22 = 0.0 S of operating time for DC injection braking (not used)
F23 = 0.5 Hz starting frequency
F24 = 0.0 S hold time for start frequency
F25 = 0.4 Hz stop frequency at end of deceleration
F26 = 15 kHz carrier frequency
F27 = 0 motor sound adjustment – available only for carrier frequencies less than 7 kHz
F28 = not used
F29 = not used
F30 = 100% gain of DC output monitor voltage sent to terminal FMA as set by F31
F31 = 0 set monitor output (terminal FMA) to indicate output frequency
F32 = not used
F33 = 1440 pulses per second – PWM output to terminal FMP (another output monitor)
F34 = 0 % of full scale offset to FMA - the pulse frequency varies directly according to function F35
F35 = 0 – FMA terminal monitors output frequency
F36 = 0 – de-energize the alarm relay when power drops out. (fail safe – normally energized)
F37 = not used
F38 = not used
F39 = not used
F40 = 999 % disable drive torque limiting
F41 = 999 % disable braking torque limiting
F42 = 0 disable torque vector control (not effective with multiple motors)
E01 = 8 - alarm reset if terminal X1 connected to ground (CM)
E02 = 8 - alarm reset if terminal X2 connected to ground (CM)
E03 = 8 - alarm reset if terminal X3 connected to ground (CM)
E04 = 8 - alarm reset if terminal X4 connected to ground (CM)
E05 = 8 - alarm reset if terminal X5 connected to ground (CM)
E06 = 8 - alarm reset if terminal X6 connected to ground (CM)
E07 = 8 - alarm reset if terminal X7 connected to ground (CM)
E08 = 8 - alarm reset if terminal X8 connected to ground (CM)
E09 = 8 - alarm reset if terminal X9 connected to ground (CM)
E10 = 6.0 S acceleration time #2 (for profile) - not used
E11 = 6.0 S deceleration time #2 (for profile) - not used
E12 = 6.0 S acceleration time #3 (for profile) - not used

E13 = 6.0 S deceleration time #3 (for profile) - not used
E14 = 6.0 S acceleration time #4 (for profile) - not used
E15 = 6.0 S deceleration time #4 (for profile) - not used
E16 = 999 % disable drive torque limiting #2
E17 = 999 % disable braking torque limiting #2
E18 = not used
E19 = not used
E20 = 0 – output of terminal Y1 to CMY conducts if in RUN mode – not used
E21 = 1 – output of terminal Y2 to CMY conducts if the out output is at running frequency (E30) – not used
E22 = 2 – output of terminal Y3 to CMY conducts if output frequency above 5 Hz (E31 & E32)
E23 = 7 – output of terminal Y4 to CMY conducts if thermal over load is about to trip (E33 & E34) – not used
E24 = 15 – output of terminal Y5 to CMY conducts if FWD or REV command received – not used
E25 = not used
E26 = not used
E27 = not used
E28 = not used
E29 = not used
E30 = 2.5 Hz – "at set point" detection band width
E31 = 5 Hz output frequency detection point (see E22)
E32 = 0.2 Hz hysteresis for E31 detection point
E33 = 0 use thermal overload relay to activate early warning (E23)
E34 = 22 A = 100 % activate early warning (E23) when overload relay current is exceeded but before timeout
E35 = 10.0 S delay time for E23 alarm if output current level is exceeded – not used
E36 = 60 Hz – ferquency detection level #2 – not used
E37 = 22 A = 100 % 2nd early warning activation level – not used
E38 = not used
E39 = not used
E40 = 100.00 % max. percent of set point can be displayed on front panel
E41 = 0.00 % min. percent of set point can be displayed on front panel
E42 =0.5 S between LED display updates (flicker filter)
E43 = 0 LED display set frequency when stopped, actual frequency while running
E44 = 0 LED display set frequency when stopped, actual frequency while running
E45 = 0 LCD displays status of operation
E46 = 1 display information in english (0 = Japanese, 2 = German, 3 = French, 4 = Spanish, 5 = Italian)
E47 = 5 set LCD contrast
C01 = 0 Hz Jump frequency #1 – not used
C02 = 0 Hz Jump frequency #2 – not used
C03 = 0 Hz Jump frequency #3 – not used
C04 = 3 Hz Jump frequency hysteresis – not used
C05 = 0.00 Hz multi-step frequency #1 (profile) – not used
C06 = 0.00 Hz multi-step frequency #2 (profile) – not used
C07 = 0.00 Hz multi-step frequency #3 (profile) – not used
C08 = 0.00 Hz multi-step frequency #4 (profile) – not used
C09 = 0.00 Hz multi-step frequency #5 (profile) – not used
C10 = 0.00 Hz multi-step frequency #6 (profile) – not used
C11 = 0.00 Hz multi-step frequency #7 (profile) – not used
C12 = 0.00 Hz multi-step frequency #8 (profile) – not used
C13 = 0.00 Hz multi-step frequency #9 (profile) – not used
C14 = 0.00 Hz multi-step frequency #10 (profile) – not used
C15 = 0.00 Hz multi-step frequency #11 (profile) – not used
C16 = 0.00 Hz multi-step frequency #12 (profile) – not used
C17 = 0.00 Hz multi-step frequency #13 (profile) – not used
C18 = 0.00 Hz 0.00 multi-step frequency #14 (profile) – not used
C19 = 0.00 Hz 0.00 multi-step frequency #15 (profile) – not used
C20 = 5.00 Hz move frequency for jogging
C21 = 0 if set for pattern operation (F01=10) do one pattern then stop – not used

C22 = 0.00 F1 pattern stage #1 0.00 Seconds, Forward rotation, accelerate – not used
C23 = 0.00 F1 pattern stage #2 0.00 Seconds, Forward rotation, accelerate – not used
C24 = 0.00 F1 pattern stage #3 0.00 Seconds, Forward rotation, accelerate – not used
C25 = 0.00 F1 pattern stage #4 0.00 Seconds, Forward rotation, accelerate – not used
C26 = 0.00 F1 pattern stage #5 0.00 Seconds, Forward rotation, accelerate – not used
C27 = 0.00 F1 pattern stage #6 0.00 Seconds, Forward rotation, accelerate – not used
C28 = 0.00 F1 pattern stage #7 0.00 Seconds, Forward rotation, accelerate – not used
C29 = not used
C30 = 2 set second frequency by 4 – 20 mA to terminal C – not used
C31 = 0.0 % offset to analog input at terminal 12
C32 = 100.0 % offset to analog input at terminal C1 – not used
C33 = 1.00 Second analog input filter sampling time – noise filter
P01 = 2 number of motor poles
P02 = default 8.7 kW 7.5 hp motor rated power
P03 = default 22 A motor rated current
P04 = 0 deactivate motor tuning (ineffective for multiple motors)
P05 = 0 deactivate continuous motor tuning
P06 = default (6.23) A motor no load current
P07 = default (2.65)% motor constant
P08 = default (28.91)% motor / drive impedance
P09 = 0.00 Hz motor slip compensation
H03 = 0 disabled – 1 would reset ALL functions to factory default
H04 = 0 set auto reset counter value – not used
H05 = 5 S wait before restart after reset – not used
H06 = 0 run internal cooling fan continuously
H07 = 0 use straight line acceleration / deceleration (not soft start “S” pattern)
H08 = 1 lock out reverse rotation
H09 = 0 do not restart a motor until it is stopped
H10 = 0 deactivate “energy save” tuning
H11 = 0 decelerate to a stop using the H07 set pattern
H12 = 1 activate internal over current limiting
H13 = 0.1 S power line drop out ride through time
H14 = 10.00 Hz/S rate of change to synchronize slowing down motor with drive
H15 = 235 auto restart voltage – not used
H16 = 999 in the event of a power drop out, hold the last command until power is restored (or bus power drops out)
H17 = not used
H18 = 0 deactivate analog input torque control
H19 = 0 deactivate “active drive” function – leave acceleration time as set above
H20 = 0 deactivate PID motor control
H21 = 1 use 4-20mA input for motor speed feed back for PID motor control – not used
H22 = 0.1 proportional gain for PID motor control – not used
H23 = 0.0 integral gain for PID motor control – not used
H24 = 0.00 differential gain for PID motor control – not used
H25 = 0.5 S feed back filter / sample time for PID motor control – not used
H26 = 0 deactivate PTC thermistor mode for over load relay – not used
H27 = 1.60 V PTC thermistor trip level for overload relay – not used
H28 = 0.0 Hz droop rate between motors driving a common load – nnot used
H29 = not used
H30 = 0 disable serial communications
H31 = 1 RS-485 address – not used
H32 = 2 on comm error retry for H33 set time before stop – not used
H33 = 2.0 S retry time for H32 – not used
H34 = 1 set baud rate to 9600 – not used
H35 = 0 set word length to 8 bits – not used
H36 = 0 set parity to none – not used
H37 = 0 set 2 stop bits – not used

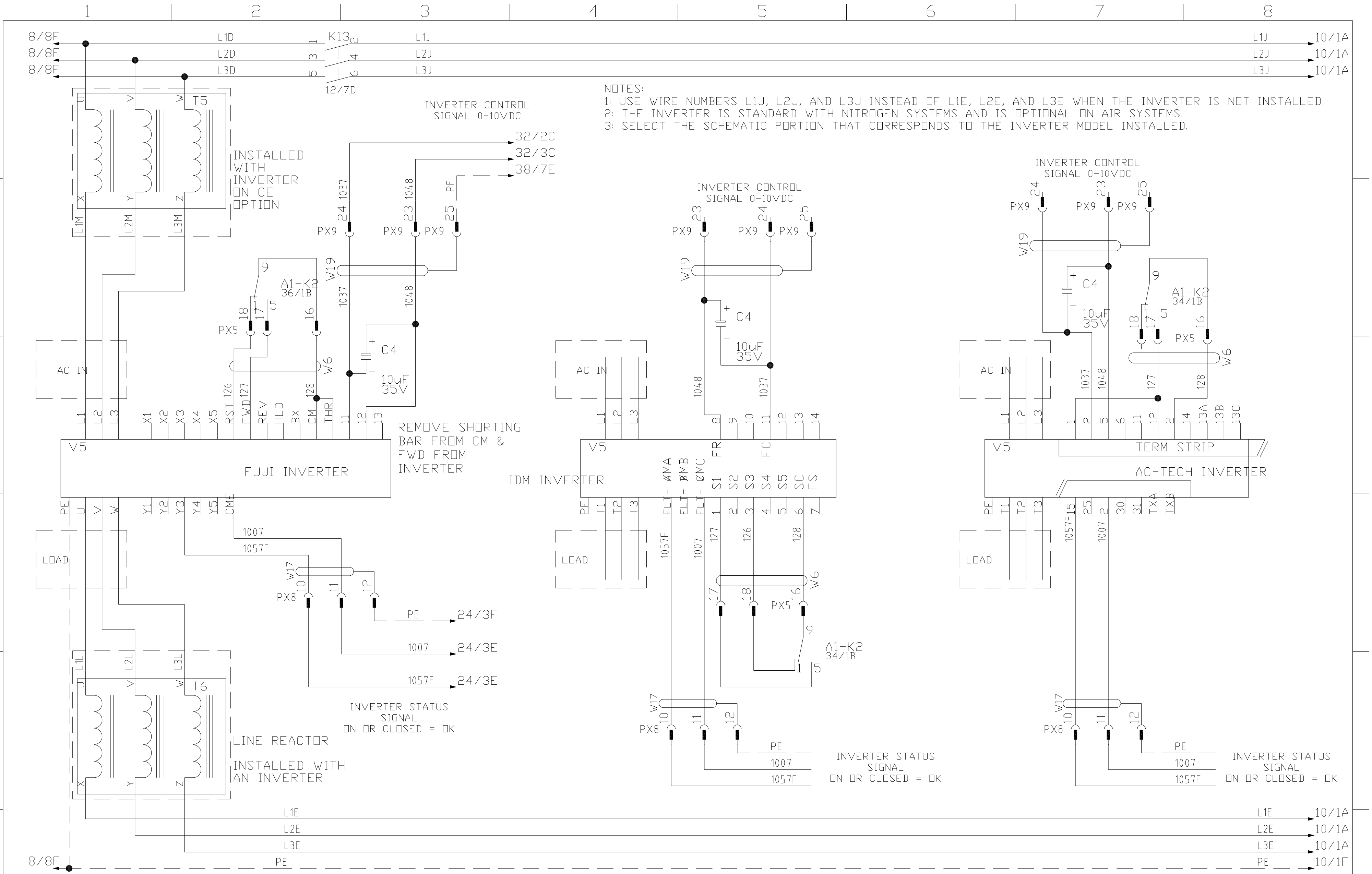
H38 = 0 disable comm failure detection – not used
H39 = 0.01 S response time to host comm – not used
A01 = 60 Hz motor 2 max frequency – not used
A02 = 60 Hz motor 2 base frequency – not used
A03 = 230 V motor 2 rated voltage – not used
A04 = 230 V motor 2 max. voltage – not used
A05 = 2.0 motor 2 torque boost – not used
A06 = 1 motor 2 overload relay mode selsec – not used
A07 = default (18.60) motor 2 overload relay set level – not used
A08 = 5 motor 2 overload relay delay time – not used
A09 = 0 disable motor 2 torque vector control – not used
A10 = 4 motor 2 number of poles – not used
A11 = default (7.5) motor 2 rated torque – not used
A12 = default (18.60) motor 2 rated current – not used
A13 = 0 disable motor 2 start up motor tuning – not used
A14 = 0 disable motor 2 continuous motor tuning – not used
A15 = default (6.23) motor 2 no load current – not used
A16 = default (2.65) motor 2 motor constant – not used
A17 = default (28.91) motor 2 impedance matching – not used
A18 = 0.00 Hz motor 2 slip compensation – not used

Function values for the ABB inverters ACS501-00X-X V-S part number 138310X:
Never used or programmed.

Connections:
13830XX = Fuji / GE inverters FRN00_G9D-_UX / D55XXX
13036XX = Magnetek / IDM inverters GPD-XXX / PC3 380-480V
13037XX = Magnetek / IDM inverters GPD-XXX / PC3 200-240V
13798XX = IDM mini-inverters CIMR-PCU-XXXX
14514XX = IDM mini-inverters CIMR-J7CU-XXXX
14514XX = AC Tech series SCF
1465101 = Fuji / GE inverters 6KP11XXXXXX1A1 / D66XXX

Wire number Vs Connection:

	L1-in	L2-in	L3-in	G/Y	L1-out	L2-out	L3-out	126 / 59A	127 / 58	128 / 59	1037 / 57	1048 / 56	1057F / 85	1007/1051
13830XX	L1	L2	L3	PE	U	V	W	RST	FWD	CM+ THR	11	12	Y3	CME
13036XX	L1	L2	L3	GND	T1	T2	T3	3	1	6	11+G	8	FLTA	FLTC
13037XX	L1	L2	L3	GND	T1	T2	T3	3	1	6	11+G	8	FLTA	FLTC
13798XX	L1	L2	L3	PE	T1	T2	T3	3	1	6	11	8	FLTA	FLTC
14514XX – IDM	L1	L2	L3	PE	T1	T2	T3	S3	S1	SC	FC	FR	MA	MC
14514XX – AC Tech	L1	L2	L3	PE	T1	T2	T3	-	1&12	2	2	5	15	2
1465101	L1	L2	L3	PE	U	V	W	X6	FWD	CM	11	12	Y3	CMY



Vitronics Soltec

/ /		L. Mod. 20/10/1998	CIRCUIT DIAGRAM XPM-SERIES UL	THREE PHASE FAN CONTROLS	9/41 Previous: 8	Next: 10
/ /		In Cha.			4119900 REV. E	=DFS +DFZ
/ /		Verif.				9
ECN	Date	Name Std.	DIN			

TABLE 1
MAXIMUM MOTOR QTY'S PER 15A 3 POLE CIRCUIT BREAKER

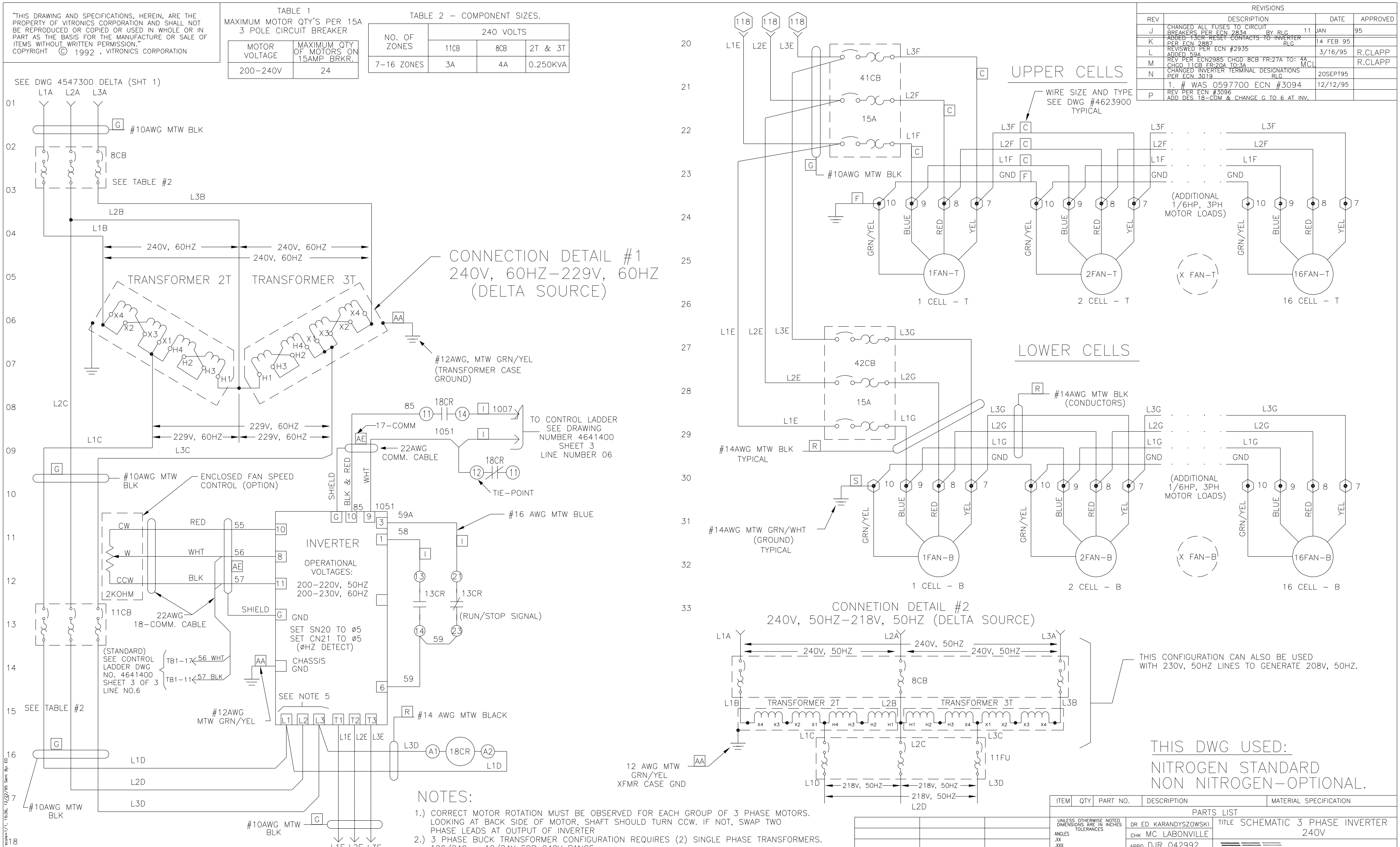
MOTOR VOLTAGE	MAXIMUM QTY OF MOTORS ON 15AMP BRKR.
200–240V	24

TABLE 2 – COMPONENT SIZES.

NO. OF ZONES	240 VOLTS		
	11CB	8CB	2T & 3T
7–16 ZONES	3A	4A	0.250KVA

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
J	CHANGED ALL FUSES TO CIRCUIT BREAKERS PER ECN 2834 BY RLG	11 JAN 95	
K	ADDED 13CR RESET CONTACTS TO INVERTER PER ECN 2887 RLG	14 FEB 95	
L	REVISWED PER ECN #2935 ADDED 59A	3/16/95	R.CLAPP
M	REV PER ECN2985 CHGD 8CB FR:27A TO: 4A CHGD 11CB FR:20A TO:3A MCL		R.CLAPP
N	CHANGED INVERTER TERMINAL DESIGNATIONS PER ECN 3019 RLG	20SEPT95	
	1. # WAS 0597700 ECN #3094	12/12/95	
P	REV PER ECN #3096 ADD DES 18–COM & CHANGE G TO 6 AT INV.		



THIS DWG USED:

NITROGEN STANDARD
NON NITROGEN–OPTIONAL.

NOTES:

1.) CORRECT MOTOR ROTATION MUST BE OBSERVED FOR EACH GROUP OF 3 PHASE MOTORS. LOOKING AT BACK SIDE OF MOTOR, SHAFT SHOULD TURN CCW. IF NOT, SWAP TWO PHASE LEADS AT OUTPUT OF INVERTER
2.) 3 PHASE BUCK TRANSFORMER CONFIGURATION REQUIRES (2) SINGLE PHASE TRANSFORMERS. 120/240 – 12/24V FOR 240V RANGE
3.) DO NOT CONNECT MORE THAN TWO WIRES IN SPRING LOADED TERMINAL BLOCKS WHEN INTERCONNECTING 3 PHASE LINES FROM MOTOR TO THE NEXT.
4.) USE CONNECTION DETAIL #1 BUCK FROM 240V, 60HZ. USE CONNECTION DETAIL #2 TO BUCK FROM 240V, 50 HZ.
5.) INVERTER DRIVE INPUTS L1, L2, & L3 ARE NOT TO BE CONNECTED TO A 3ø NEUTRAL LINE.

ITEM	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION

PARTS LIST

		A4649501
		UNITHERM
CSD REF	NEXT ASSY	USED ON
APPLICATION		

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES
TOLERANCES
ANGLES
.XX
.XXX
MATERIAL:

DR ED KARANDYSZOWSKI
CHK MC LABONVILLE
APPD DJR 042992
APPD

TITLE SCHEMATIC 3 PHASE INVERTER 240V

VITRONICS CORPORATION
NEWMARKET NH 03857

SIZE D | PRODUCT CODE. | DRAWING NO. 4597700 | REV. P
SCALE NONE | DATE 122292 | SHEET 1 OF 1

TABLE 1
MAXIMUM MOTOR QTY'S PER 15A 3 POLE CIRCUIT BREAKER

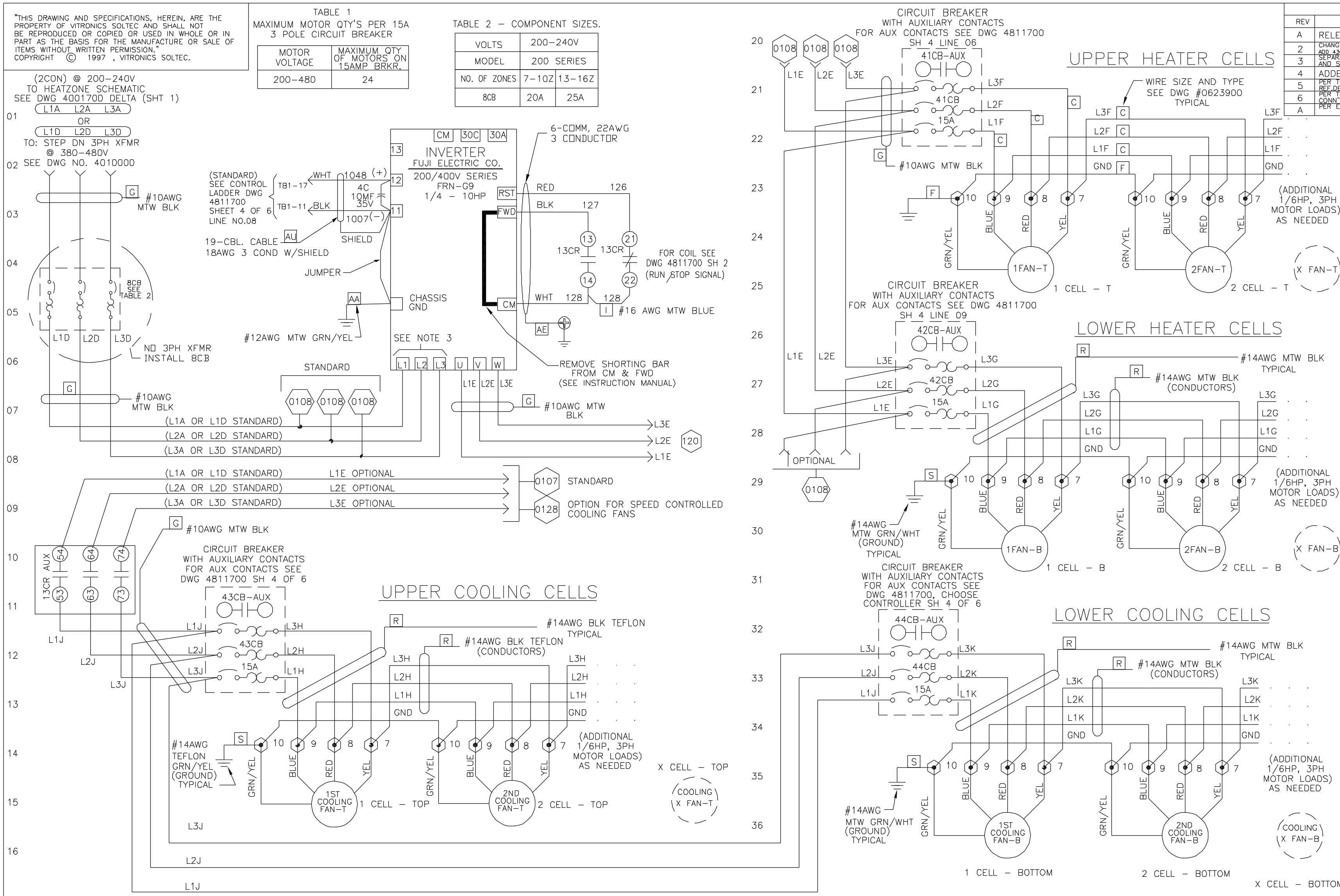
MOTOR VOLTAGE	MAXIMUM QTY OF MOTORS ON 15AMP BRKR.
200-480	24

TABLE 2 - COMPONENT SIZES.

VOLTS	200-240V	
MODEL	200 SERIES	
NO. OF ZONES	7-10Z	13-16Z
8CB	20A	25A

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
A	RELEASE PROTOTYPE	041497	
2	CHANGE 19-COMM TO 19-CBL & 22AWG TO 18A ADD 43CB FOR COOL CELLS FOR TOP & BOTTOM CELLS	4/16/96	
3	SEPARATED 43CB FROM 42CB, ADDED 13CR AUX AND SHOWN SUPPLY FROM INPUTS OF INVERTER	6/7/96	
4	ADDED 44CB MCL	10/19/96	
5	PER TDA1578C CHANGED TABLE 2, ADDED REF.DE54C CORRECTED LINE#7 L1A&L3A BYMCL	012197	R.CLAPP
6	PER TDA1578D CHANGED WIRE TYPE MCL CONN'TG TO INVERTER WIRE 126,127 TO COMM.		
A	PER ECN3264 CREATED CARD BY MCL	03/16/96	



NOTES:

1.) CORRECT MOTOR ROTATION MUST BE OBSERVED FOR EACH GROUP OF 3 PHASE MOTORS. LOOKING AT BACK SIDE OF MOTOR, SHAFT SHOULD TURN CCW. IF NOT, SWAP TWO PHASE LEADS AT OUTPUT OF INVERTER

2.) DO NOT CONNECT MORE THAN TWO WIRES IN SPRING LOADED TERMINAL BLOCKS WHEN INTERCONNECTING 3 PHASE LINES FROM MOTOR TO THE NEXT.

3.) INVERTER DRIVE INPUTS L1, L2, & L3 ARE NOT TO BE CONNECTED TO A 3Ø NEUTRAL LINE.

4.) 3PH FANS - SEE CELL WIRING DIAGRAM DWG #4001500.

ITEM	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION

PARTS LIST

	PRINT PACKAG	SELECT SERIES
CSD REF	NEXT ASSY	USED ON
	APPLICATION	

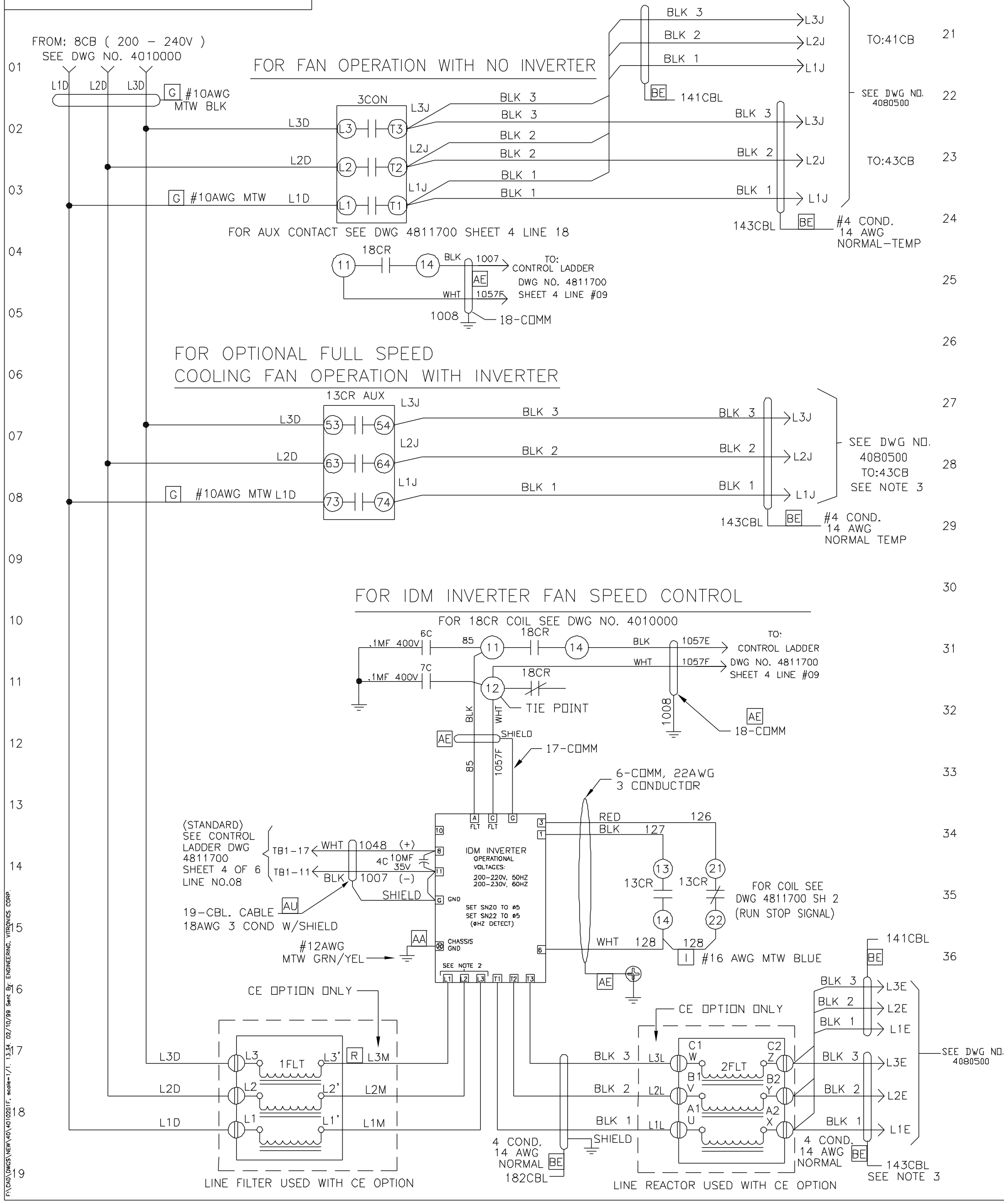
UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES TOLERANCES ANGLES .XX .XXX
MATERIAL:
DR MCLABONVILLE
CHK
APPD R.CLAPP
APPD
FINISH:

TITLE SCHEMATIC 3 PH INVERTER FUJI W/ 220V FANS

Vitronics Soltec
Our reliability is your productivity
A DOVER TECHNOLOGIES COMPANY

SIZE	PRODUCT CODE.	DRAWING NO.	REV.
D	SCH	4010200	A

SCALE NONE DATE 04/14/97 SHEET 01 OF 01



REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
4	ADDED 44CB MCL	10/19/96	
5	PER TDA1578C CHANGED TABLE 2, ADDED REF.DES4C CORRECTED LINE#7 L1A&L3A BYMCL	012197	
6	PER TDA1578D CHANGED WIRE TYPE CONN'TG TO INVERTER WIRE 126,127 TO COMM.		
A	PER ECN3264 CREATED CARD BY MCL	03/16/96	
B	PER ECN3282 ADDED 18CR CHGD VALUES IN TABLE 2 MCL		
B1	PER TDA BYMCL ADDED THE FILTER FOR CE MACHINE.		
B2	PER TDA BYMCL CHGD SPEED CONTROLLED COOL FANS		
C	PER ECN 3412 IMPLEMENTED B1 & B2 BY MCL		
D	PER ECN3434-2 BY REC REDUCED TO ALL FAN CONTROL CIRCUITS	01/08/98	
E	PER ECN3486 BY MCL CHGD TABLE 1 TO INDICATE MAX OF FANS	04/16/98	
F	PER ECN3595 BY REC CHG INVERTER FROM FUJI/GE TO IDM	02/05/99	

TABLE 1 - COMPONENT SIZES.

VOLTS	200-240V			
INVERTER MODEL	200 SERIES			
MACHINE SIZE	5-7Z	10Z	13Z	16Z
NO. OF FANS	14 MAX	20 MAX	26 MAX	32 MAX
INVERTER HP	3HP	5HP	5HP	7.5HP

NOTES:

1.) CORRECT MOTOR ROTATION MUST BE OBSERVED FOR EACH GROUP OF 3 PHASE MOTORS. LOOKING AT BACK SIDE OF MOTOR, SHAFT SHOULD TURN CCW. IF NOT, SWAP TWO PHASE LEADS AT OUTPUT OF INVERTER

2.) INVERTER DRIVE INPUTS L1, L2, & L3 ARE NOT TO BE CONNECTED TO A 3ø NEUTRAL LINE.

3.) 143 CABLE IS CONNECTED TO 2FLT IS STANDARD. CONNECTION TO 13CR INSTEAD OF 2 FLT IS OPTION.

ITEM	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION

PARTS LIST

CSD REF	PRINT PACKAG NEXT ASSY	SELECT SERIES USED ON
APPLICATION		

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES
TOLERANCES
ANGLES
.XX
.XXX
MATERIAL:

DR MCLABONVILLE
CHK
APPD R.CLAPP
APPD
FINISH:

TITLE SCHEMATIC 3 PH FAN CONTROL

Vitronics Soltec
Our reliability is your productivity
A DOVER TECHNOLOGIES COMPANY

SIZE	PRODUCT CODE.	DRAWING NO.	REV.
D	SCH	4010200	F

SCALE NONE DATE 01/08/98 SHEET 01 OF 01

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	RELEASED PER ECO #		
B	REVISED	4/13/92	
G	PER ECN2761 – SWITCH FAN YEL & RED & L2 & L3	12OCT94	
H	REPLACED 10,11,12FU WITH 11CB PER ECN 2834 BY RLG	11 JAN 95	
J	ADDED 13CR RESET CONTACTS TO INVERTER PER ECN2887 RLG	14 FEB 95	
K	REVISED PER ECN #2935	3/16/95	R.CLAPP
L	REV PER ECN2985 CHGD 11CB ON 7-10ZN TO A 20A MCL	13JUNE95	R.CLAPP
M	UPDATED INVERTER TERMINAL DESIGNATIONS PER ECN 2997 RLG	23AUG95	R.CLAPP
N	UPDATED INVERTER TERMINAL DESIGNATIONS PER ECN 3019 RLG	23SEPT95	
	# WAS 0597600 ECN #3094	12/12/95	
P	REV PER ECN #3096 ADD DES 18-COM & CHANGE G TO 6 AT INV		

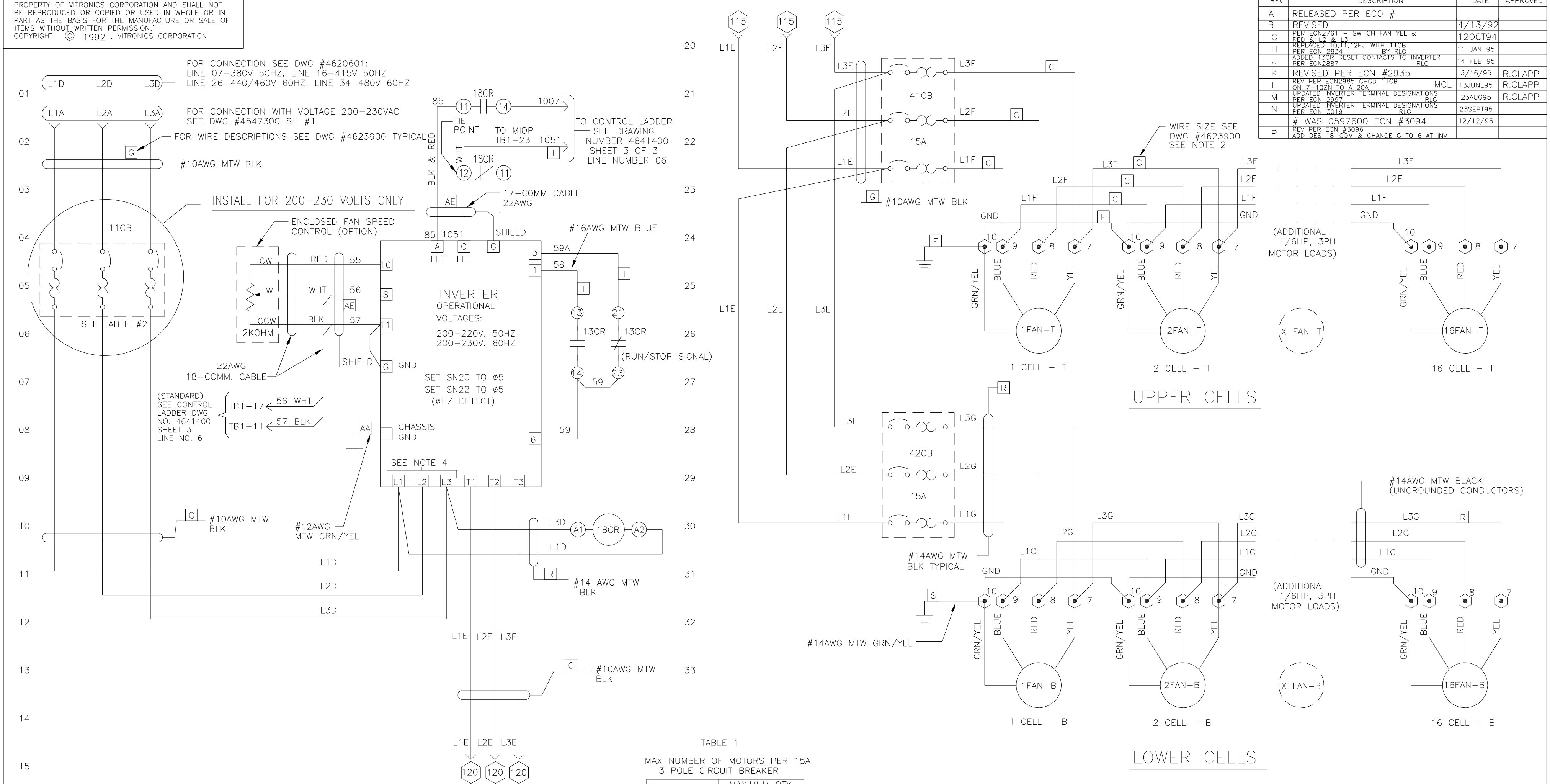


TABLE 1

MAX NUMBER OF MOTORS PER 15A 3 POLE CIRCUIT BREAKER

MOTOR VOLTAGE	MAXIMUM QTY OF MOTORS ON 15AMP BRKR.
200-240V	24

TABLE 2

CIRCUIT BREAKER RATING

NO. OF ZONES	VOLTAGE RANGE 200-230V 11 CB
7 ZONES	20A
10 ZONES	20A
13 ZONES	20A
16 ZONES	20A

THIS DWG USED:

NITROGEN STANDARD
NON NITROGEN - OPTIONAL

NOTES:
1.) CORRECT MOTOR ROTATION MUST BE OBSERVED FOR EACH GROUP OF 3 PHASE MOTORS. LOOKING AT BACK SIDE OF MOTOR, SHAFT SHOULD TURN CCW. IF NOT, SWAP TWO PHASE LEADS AT OUTPUT OF INVERTER.

2.) DO NOT CONNECT MORE THAN TWO WIRES IN SPRING LOADED TERMINAL BLOCKS WHEN INTERCONNECTING 3 PHASE LINES FROM ONE MOTOR TO THE NEXT.

* 3.) INVERTER SYSTEM WILL ONLY OPERATE ON LINES UP TO 220V, 50HZ OR 230V, 60HZ. SEE REFERENCE DRAWING #4620600 FOR APPROPRIATE STEP DOWN TRANSFORMER CONFIGURATION COVERING VOLTAGES 380-480V. FOR 240V MACHINES REFERENCE DRAWING #4597700.

4.) INVERTER DRIVE INPUTS L1, L2 & L3 ARE NOT TO BE CONNECTED TO A 3ø NEUTRAL LINE.

ITEM	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION
PARTS LIST				

		A4649501
		UNITHERM
CSD REF	NEXT ASSY	USED ON
APPLICATION		

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES
TOLERANCES
ANGLES
.XX
.XXX
MATERIAL:

DR ED KARANDYSZOWSKI
CHK MC LABONVILLE
APPD R. CLAPP
APPD

TITLE SCHEMATIC 3 PHASE INVERTER 200-230V/380-480V

VITRONICS CORPORATION
NEWMARKET NH 03857

SIZE	PRODUCT CODE.	DRAWING NO.	REV.
D		4597600	P

SCALE N/A DATE SHEET 1 OF 1

"THIS DRAWING AND SPECIFICATIONS, HEREIN, ARE THE PROPERTY OF VITRONICS SOLTEC AND SHALL NOT BE REPRODUCED OR COPIED OR USED IN WHOLE OR IN PART AS THE BASIS FOR THE MANUFACTURE OR SALE OF ITEMS WITHOUT WRITTEN PERMISSION."

TABLE 1
MAXIMUM MOTOR QTY'S PER 15A 3 POLE CIRCUIT BREAKER

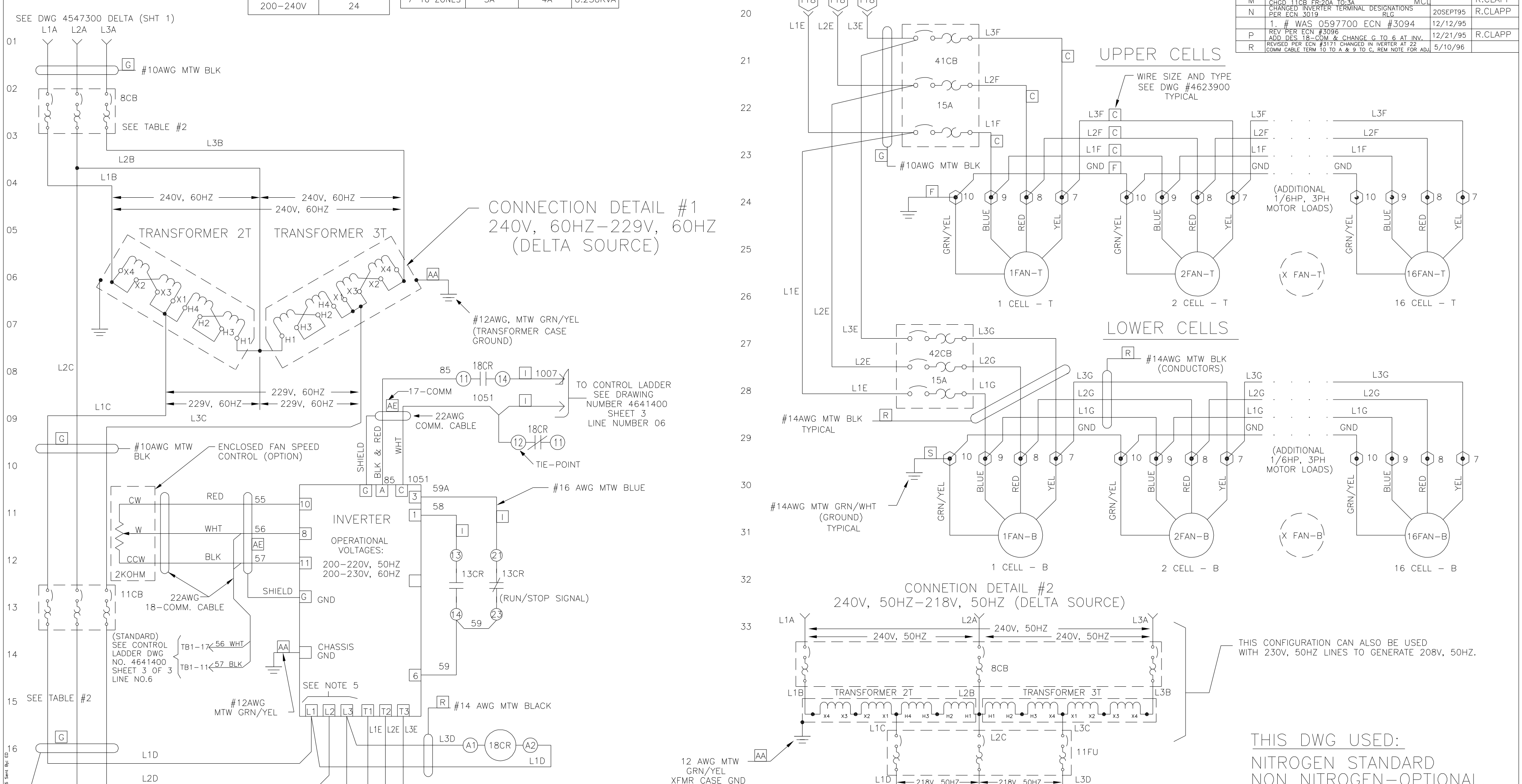
MOTOR VOLTAGE	MAXIMUM QTY OF MOTORS ON 15AMP BRKR.
200-240V	24

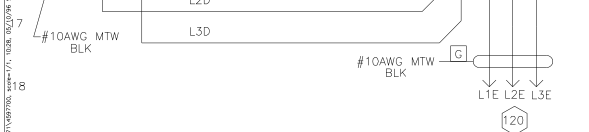
TABLE 2 - COMPONENT SIZES.

NO. OF ZONES	240 VOLTS		
	11CB	8CB	2T & 3T
7-16 ZONES	3A	4A	0.250KVA

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
J	CHANGED ALL FUSES TO CIRCUIT BREAKERS PER ECN 2834 BY RLG	11 JAN	95
K	ADDED 13CR RESET CONTACTS TO INVERTER PER ECN 2887 RLG	14 FEB 95	
L	REVISWED PER ECN #2935 ADDED 59A	3/16/95	R.CLAPP
M	REV PER ECN2985 CHGD 8CB FR:27A TO: 4A CHGD 11CB FR:20A TO:3A MCL		R.CLAPP
N	CHANGED INVERTER TERMINAL DESIGNATIONS PER ECN 3019 RLG	20SEPT95	R.CLAPP
	1. # WAS 0597700 ECN #3094	12/12/95	
P	REV PER ECN #3096 ADD DES 18-COM & CHANGE G TO 6 AT INV.	12/21/95	R.CLAPP
R	REVISED PER ECN #3171 CHANGED IN VERTER AT 22 COMM CABLE TERM 10 TO A & 9 TO C, REM NOTE FOR ADJ	5/10/96	





THIS DWG USED:
NITROGEN STANDARD
NON NITROGEN-OPTIONAL.

NOTES:

1.) CORRECT MOTOR ROTATION MUST BE OBSERVED FOR EACH GROUP OF 3 PHASE MOTORS. LOOKING AT BACK SIDE OF MOTOR, SHAFT SHOULD TURN CCW. IF NOT, SWAP TWO PHASE LEADS AT OUTPUT OF INVERTER
2.) 3 PHASE BUCK TRANSFORMER CONFIGURATION REQUIRES (2) SINGLE PHASE TRANSFORMERS. 120/240 - 12/24V FOR 240V RANGE
3.) DO NOT CONNECT MORE THAN TWO WIRES IN SPRING LOADED TERMINAL BLOCKS WHEN INTERCONNECTING 3 PHASE LINES FROM MOTOR TO THE NEXT.
4.) USE CONNECTION DETAIL #1 BUCK FROM 240V, 60HZ. USE CONNECTION DETAIL #2 TO BUCK FROM 240V, 50 HZ.
5.) INVERTER DRIVE INPUTS L1, L2, & L3 ARE NOT TO BE CONNECTED TO A 3ø NEUTRAL LINE.

CSD REF	NEXT ASSY	USED ON
	A4649501	UNITHERM
	APPLICATION	

ITEM	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION

PARTS LIST

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES TOLERANCES ANGLES .XX .XXX
MATERIAL:
FINISH:
DR ED KARANDYSZOWSKI
CHK MC LABONVILLE
APPD DJR 042992
APPD
TITLE SCHEMATIC 3 PHASE INVERTER 240V
Vitronics Soltec
Our reliability is your productivity
A DOVER TECHNOLOGIES COMPANY
SIZE D | PRODUCT CODE. | DRAWING NO. 4597700 | REV. R
SCALE NONE | DATE 122292 | SHEET 1 OF 1

TABLE 1
MAXIMUM MOTOR QTY'S PER 15A 3 POLE CIRCUIT BREAKER

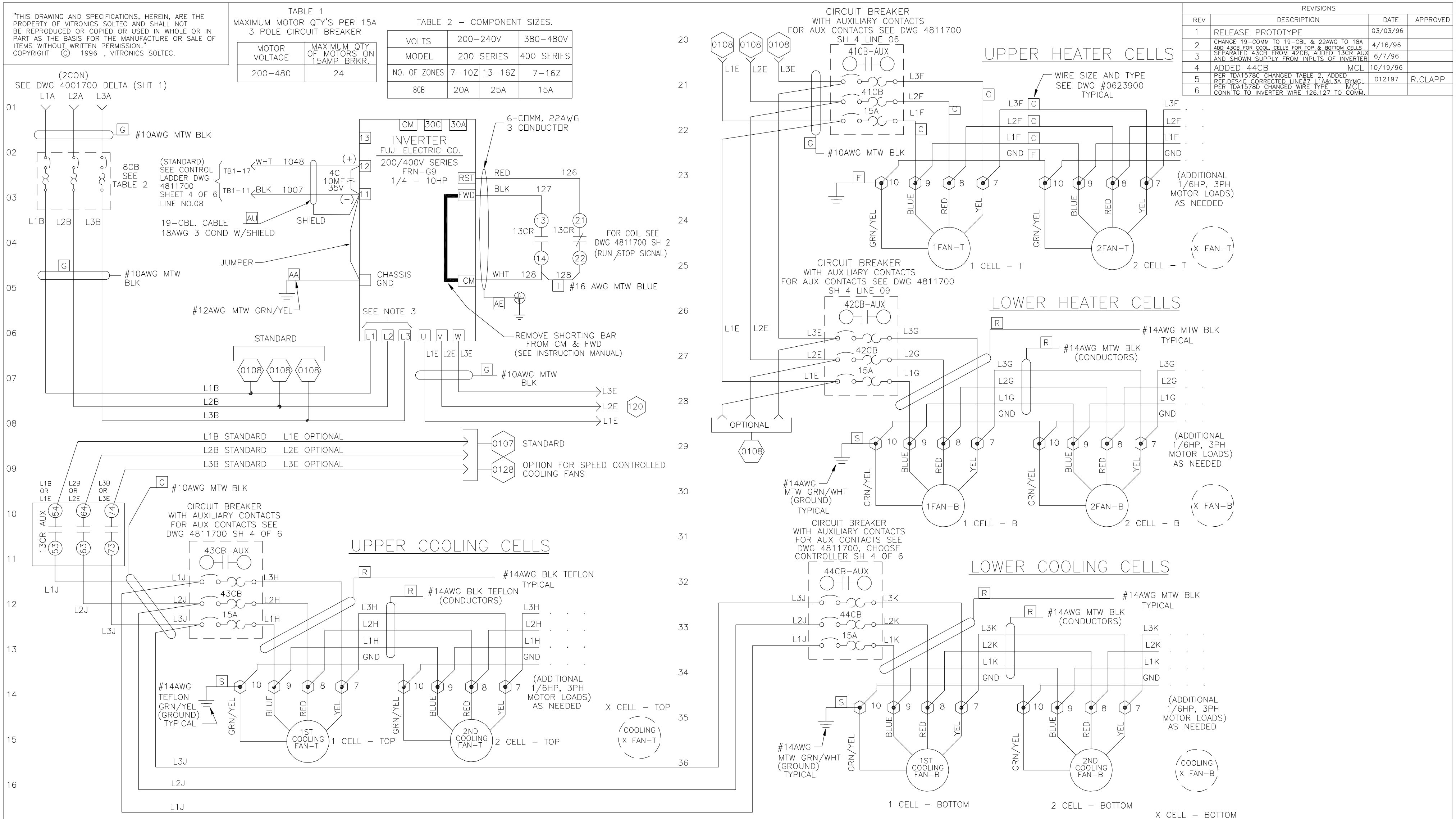
MOTOR VOLTAGE	MAXIMUM QTY OF MOTORS ON 15AMP BRKR.
200-480	24

TABLE 2 - COMPONENT SIZES.

VOLTS	200-240V		380-480V
MODEL	200 SERIES		400 SERIES
NO. OF ZONES	7-10Z	13-16Z	7-16Z
8CB	20A	25A	15A

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
1	RELEASE PROTOTYPE	03/03/96	
2	CHANGE 19-COMM TO 19-CBL & 22AWG TO 18A ADD 43CB FOR COOL CELLS FOR TOP & BOTTOM CELLS	4/16/96	
3	SEPARATED 43CB FROM 42CB, ADDED 13CR AUX AND SHOWN SUPPLY FROM INPUTS OF INVERTER	6/7/96	
4	ADDED 44CB MCL	10/19/96	
5	PER TDA1578C CHANGED TABLE 2, ADDED REF.DES4C CORRECTED LINE#7 L1A&L3A BYMCL	012197	R.CLAPP
6	PER TDA1578D CHANGED WIRE TYPE MCL CONN'TG TO INVERTER WIRE 126,127 TO COMM.		



NOTES:

1.) CORRECT MOTOR ROTATION MUST BE OBSERVED FOR EACH GROUP OF 3 PHASE MOTORS. LOOKING AT BACK SIDE OF MOTOR, SHAFT SHOULD TURN CCW. IF NOT, SWAP TWO PHASE LEADS AT OUTPUT OF INVERTER

2.) DO NOT CONNECT MORE THAN TWO WIRES IN SPRING LOADED TERMINAL BLOCKS WHEN INTERCONNECTING 3 PHASE LINES FROM MOTOR TO THE NEXT.

3.) INVERTER DRIVE INPUTS L1, L2, & L3 ARE NOT TO BE CONNECTED TO A 3Ø NEUTRAL LINE.

4.) 3PH FANS - SEE CELL WIRING DIAGRAM DWG #4001500.

ITEM	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION

PARTS LIST

PRINT PACKAGE	SELECT SERIES	
CSD REF	NEXT ASSY	USED ON
APPLICATION		

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES TOLERANCES ANGLES .XX .XXX
MATERIAL:
FINISH:
DR ED KARANDYSZOWSKI
CHK MCLABONVILLE
APPD R.CLAPP
APPD

TITLE SCHEMATIC 3 PHASE INVERTE FUJI 200 - 480 VAC

Vitronics Soltec
Our reliability is your productivity
A DOVER TECHNOLOGIES COMPANY

SIZE	PRODUCT CODE.	DRAWING NO.	REV.
D	SCH	4814800	6

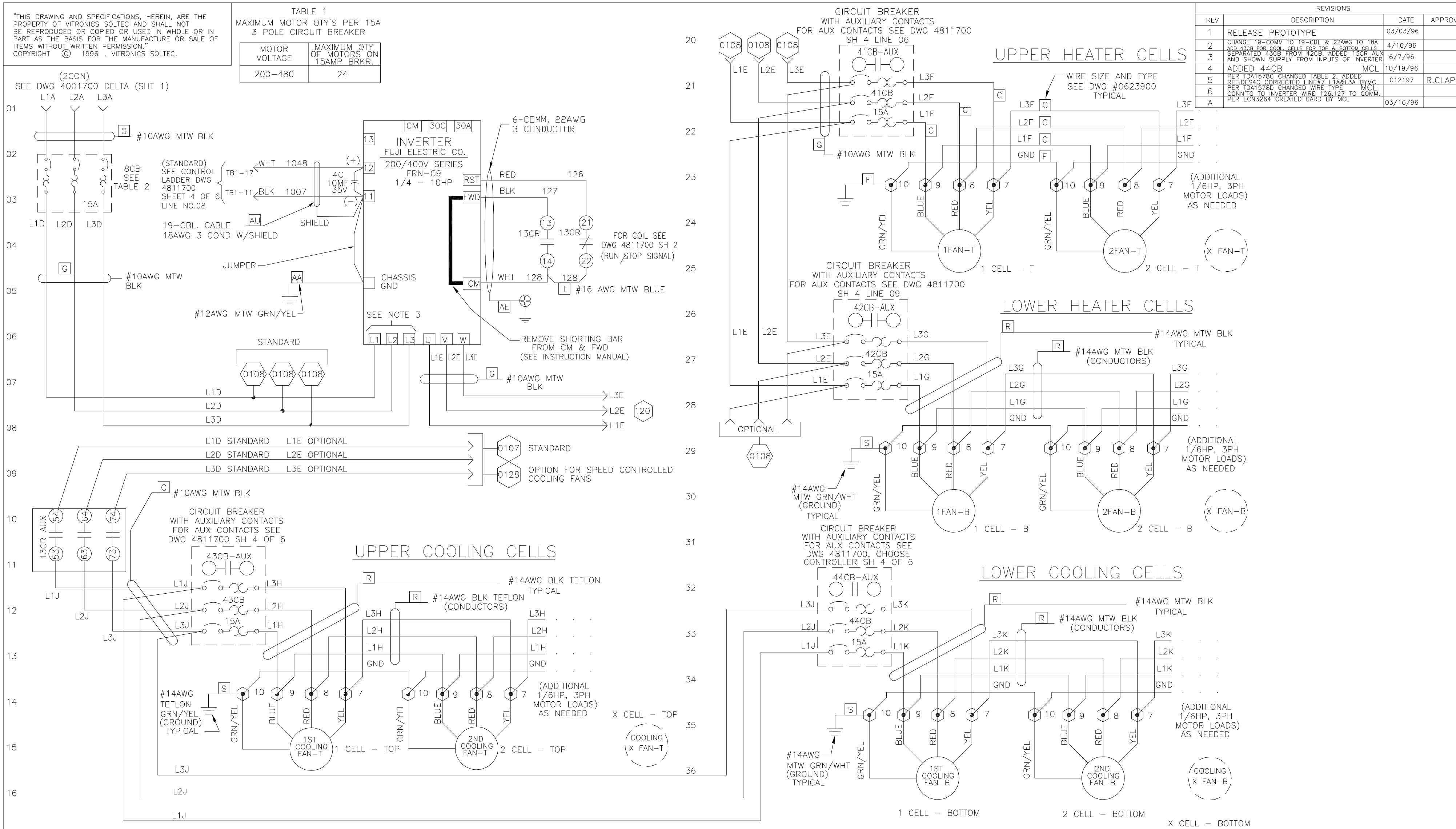
SCALE NONE DATE 03/03/96 SHEET 01 OF 01

TABLE 1
MAXIMUM MOTOR QTY'S PER 15A 3 POLE CIRCUIT BREAKER

MOTOR VOLTAGE	MAXIMUM QTY OF MOTORS ON 15AMP BRKR.
200-480	24

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
1	RELEASE PROTOTYPE	03/03/96	
2	CHANGE 19-COMM TO 19-CBL & 22AWG TO 18A ADD 43CB FOR COOL. CELLS FOR TOP & BOTTOM CELLS	4/16/96	
3	SEPARATED 43CB FROM 42CB, ADDED 13CR AUX AND SHOWN SUPPLY FROM INPUTS OF INVERTER	6/7/96	
4	ADDED 44CB MCL	10/19/96	
5	PER TDA1578C CHANGED TABLE 2, ADDED REF.DES4C CORRECTED LINE#7 L1A&L3A BYMCL	012197	R.CLAPP
6	PER TDA1578D CHANGED WIRE TYPE MCL CONN'TG TO INVERTER WIRE 126,127 TO COMM.		
A	PER ECN3264 CREATED CARD BY MCL	03/16/96	



NOTES:

1.) CORRECT MOTOR ROTATION MUST BE OBSERVED FOR EACH GROUP OF 3 PHASE MOTORS. LOOKING AT BACK SIDE OF MOTOR, SHAFT SHOULD TURN CCW. IF NOT, SWAP TWO PHASE LEADS AT OUTPUT OF INVERTER
2.) DO NOT CONNECT MORE THAN TWO WIRES IN SPRING LOADED TERMINAL BLOCKS WHEN INTERCONNECTING 3 PHASE LINES FROM MOTOR TO THE NEXT.
3.) INVERTER DRIVE INPUTS L1, L2, & L3 ARE NOT TO BE CONNECTED TO A 3Ø NEUTRAL LINE.
4.) 3PH FANS - SEE CELL WIRING DIAGRAM DWG #4001500.

ITEM	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION

PARTS LIST

PRINT PACKAG | SELECT SERIES
CSD REF | NEXT ASSY | USED ON
APPLICATION

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES TOLERANCES
ANGLES
.XX
.XXX
MATERIAL:

DR ED KARANDYSZOWSKI
CHK MCLABONVILLE
APPD R.CLAPP
APPD
FINISH:

TITLE SCHEMATIC 3 PH INVERTER FUJI 380-480 VAC

Vitronics Soltec
Our reliability is your productivity
A DOVER TECHNOLOGIES COMPANY

SIZE	PRODUCT CODE.	DRAWING NO.	REV.
D	SCH	4814800	A

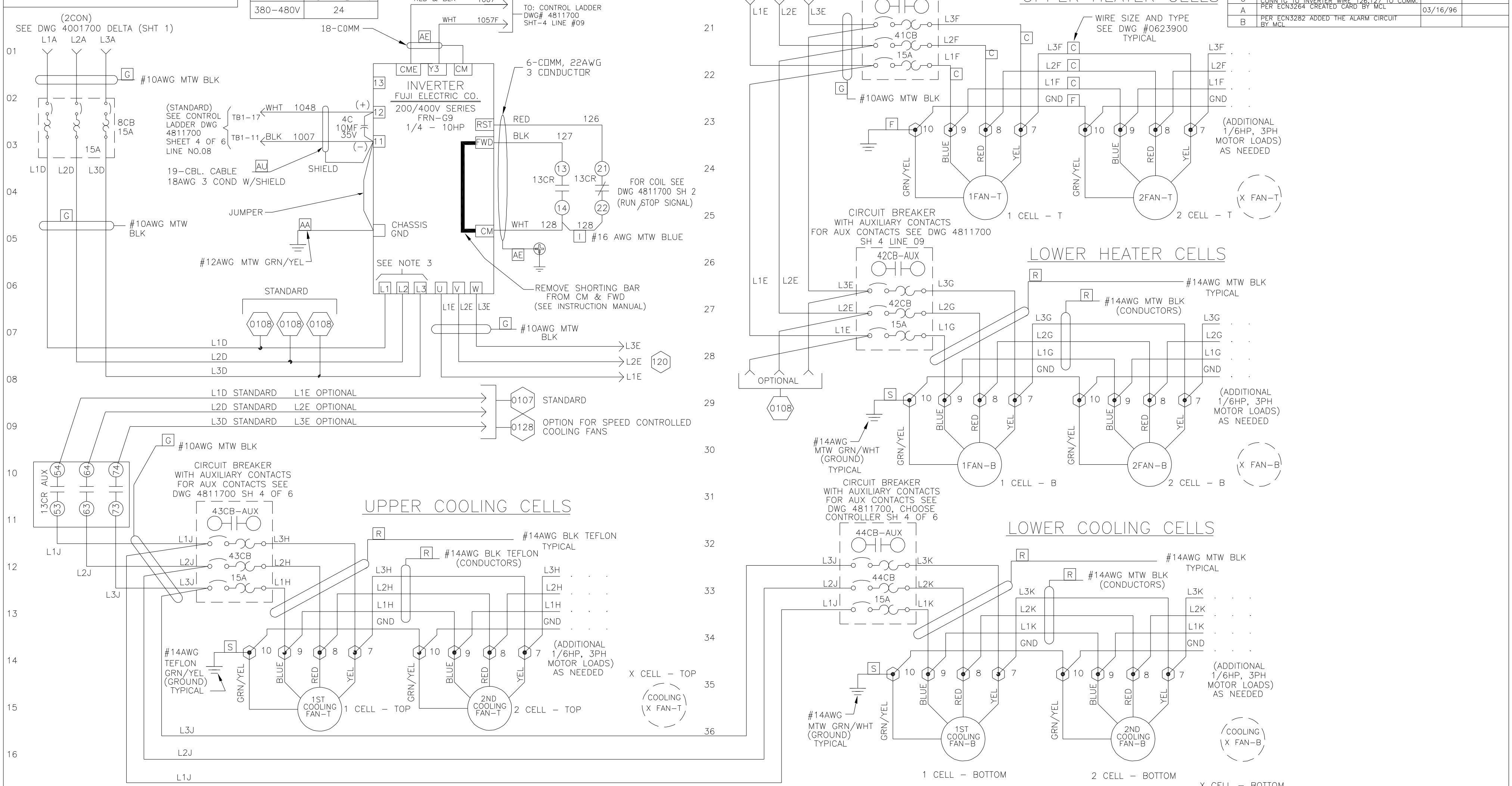
SCALE NONE | DATE 03/03/96 | SHEET 01 OF 01

TABLE 1
MAXIMUM MOTOR QTY'S PER 15A 3 POLE CIRCUIT BREAKER

MOTOR VOLTAGE	MAXIMUM QTY OF MOTORS ON 15AMP BRKR.
380-480V	24

REVISIONS

REV	DESCRIPTION	DATE	APPROVED
4	ADDED 44CB MCL	10/19/96	
5	PER TDA1578C CHANGED TABLE 2, ADDED REF.DES4C CORRECTED LINE#7 L1A&L3A BYMCL	012197	R.CLAPP
6	PER TDA1578D CHANGED WIRE TYPE MCL CONN'TG TO INVERTER WIRE 126,127 TO COMM.		
A	PER ECN3264 CREATED CARD BY MCL	03/16/96	
B	PER ECN3282 ADDED THE ALARM CIRCUIT BY MCL		



NOTES:

1.) CORRECT MOTOR ROTATION MUST BE OBSERVED FOR EACH GROUP OF 3 PHASE MOTORS. LOOKING AT BACK SIDE OF MOTOR, SHAFT SHOULD TURN CCW. IF NOT, SWAP TWO PHASE LEADS AT OUTPUT OF INVERTER
2.) DO NOT CONNECT MORE THAN TWO WIRES IN SPRING LOADED TERMINAL BLOCKS WHEN INTERCONNECTING 3 PHASE LINES FROM MOTOR TO THE NEXT.
3.) INVERTER DRIVE INPUTS L1, L2, & L3 ARE NOT TO BE CONNECTED TO A 3Ø NEUTRAL LINE.
4.) 3PH FANS - SEE CELL WIRING DIAGRAM DWG #4001500.

ITEM	QTY	PART NO.	DESCRIPTION	MATERIAL SPECIFICATION

PARTS LIST

	PRINT PACKAG	SELECT SERIES
CSD REF	NEXT ASSY	USED ON
	APPLICATION	

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES TOLERANCES
ANGLES .XX .XXX
MATERIAL:
FINISH:

DR ED KARANDYSZOWSKI
CHK MCLABONVILLE
APPD R.CLAPP
APPD

TITLE SCHEMATIC 3 PH INVERTER FUJI 380-480 CELL FANS

Vitronics Soltec
Our reliability is your productivity
A DOVER TECHNOLOGIES COMPANY

SIZE D | PRODUCT CODE. SCH | DRAWING NO. 4814800 | REV. B
SCALE NONE | DATE 03/03/96 | SHEET 01 OF 01