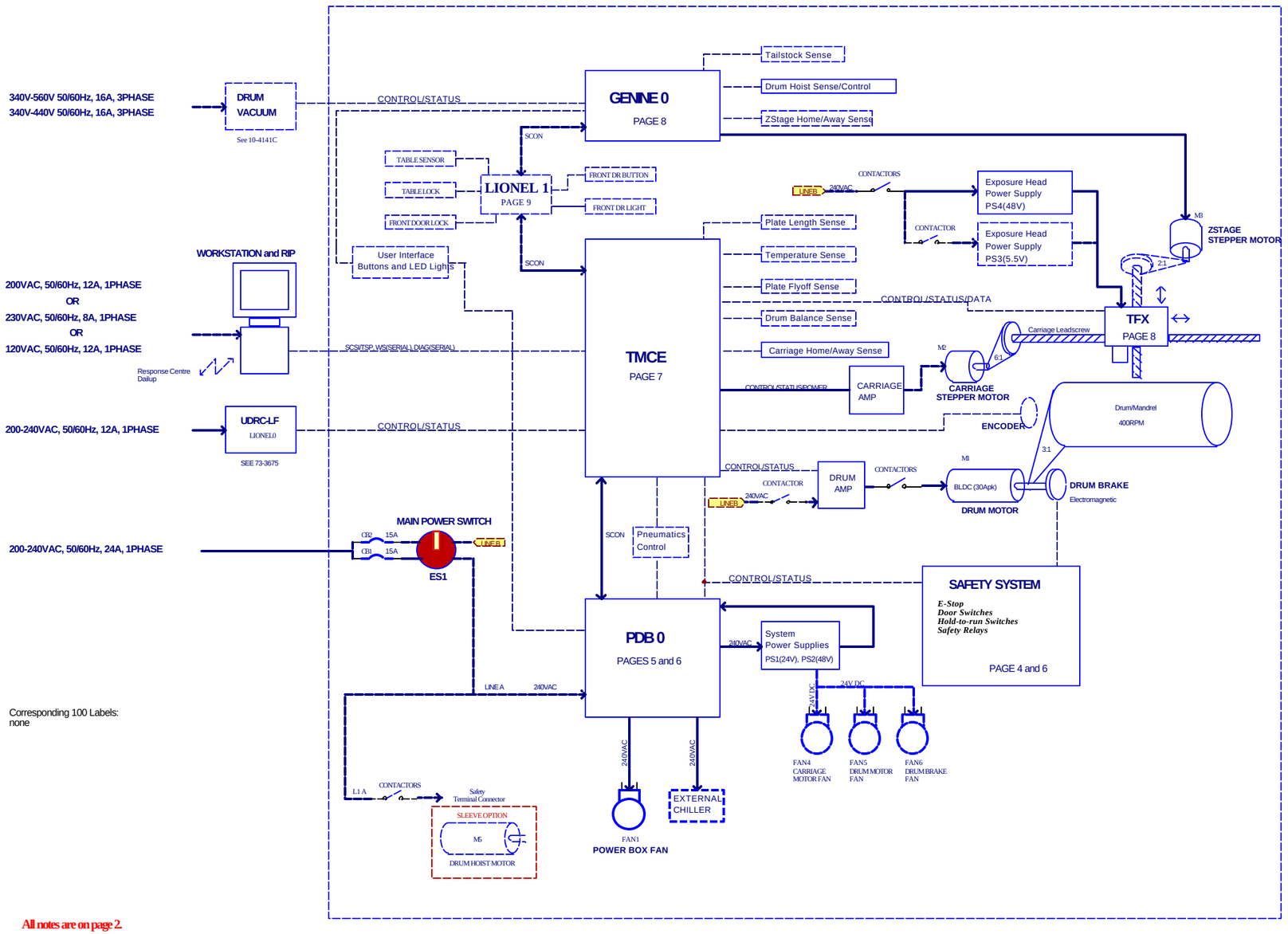
THERMOFLEX II BASE DEVICE ELECTRICAL SYSTEM BLOCK DIAGRAM



Corresponding 100 Labels:
none

All notes are on page 2.

Thermoflex II Safety Block Diagram Page02_EP_Safety_Loop_BD.sch
PAGE 2
SAFETY SYSTEM BLOCK DIAGRAM

Thermoflex II TMCE Wiring Page07_EP_MCE_Wiring.sch
PAGE 7
TURBOMCE WIRING

Thermoflex II Safety Circuit Diagram Page03_EP_Safety_Loop_Circuit.sch
PAGE 3
SAFETY SYSTEM CIRCUIT DIAGRAM

Thermoflex II GENINE0 Wiring Page08_EP_GENINE_Wiring.sch
PAGE 8
GENINE0 WIRING

Thermoflex II Safety Control Module Wiring Page04_EP_SCM_Wiring.sch
PAGE 4
SAFETY CONTROL MODULE(SCM)

Thermoflex II LIONEL1 Wiring Page09_EP_LIONEL1_Wiring.sch
PAGE 9
LIONEL1 WIRING

Thermoflex II Safety Loop Wiring Page05_EP_PDB_Wiring.sch
PAGE 5
PDB0 WIRING (1/2)

Thermoflex II HEAD Wiring Page10_EP_HEAD_Wiring.sch
PAGE 10
EXPOSURE HEAD WIRING

Thermoflex II PDB Wiring Page06_EP_Safety_Loop_Wiring.sch
PAGE 6
PDB0 WIRING (2/2) SAFETY SYSTEM WIRING

Thermoflex II DRUM AMP & MOTOR Wiring Page11_EP_DM-AMP_Wiring.sch
PAGE 11
DRUM AMP & MOTOR WIRING

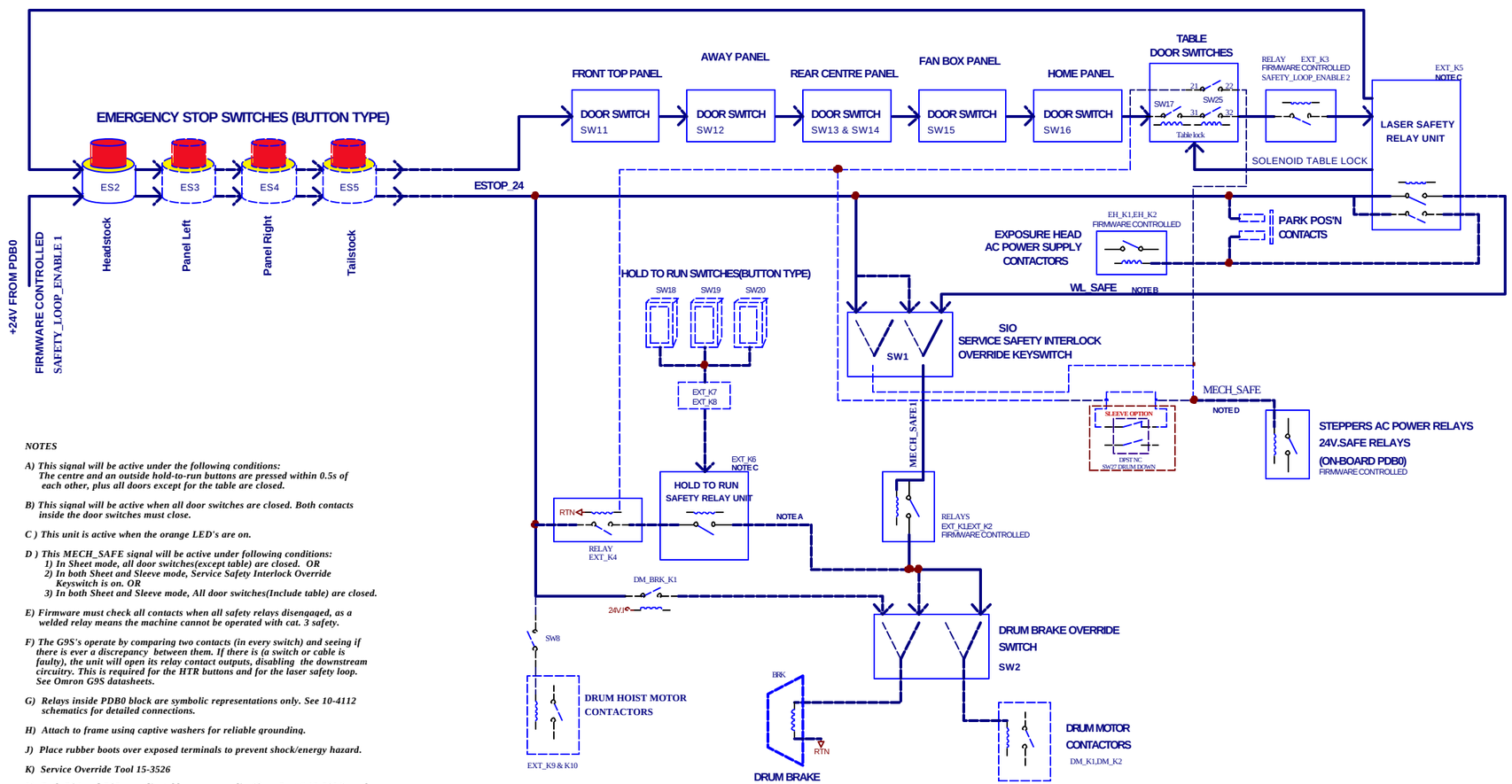
creo

THERMOFLEX II BASE DEVICE SYSTEM BLOCK DIAG.

S:\Projects\WideWeb_Sleeve\Electronics\Wiring_Diagrams\EP\Sleeve_EP_Base_Wiring.ddb - Documents\Page01_EP_Wiring_Diagram.prj

DESIGNED BY:	DOCUMENT NUMBER:	LAST ECO:
J.MALM	73-7318A	PRE-RELEASE
DRAWN BY:	LAST REVISED BY:	APPROVED BY:
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DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
DEC 04 2001	FEB.18, 2004	1 of 11

THERMOFLEX II BASE DEVICE SAFETY SYSTEM BLOCK DIAGRAM



NOTES

A) This signal will be active under the following conditions:
The centre and an outside hold-to-run buttons are pressed within 0.5s of each other, plus all doors except for the table are closed.

B) This signal will be active when all door switches are closed. Both contacts inside the door switches must close.

C) This unit is active when the orange LED's are on.

D) This MECH_SAFE signal will be active under following conditions:
1) In Sheet mode, all door switches(except table) are closed. OR
2) In both Sheet and Sleeve mode, Service Safety Interlock Override Keyswitch is on. OR
3) In both Sheet and Sleeve mode, All door switches(Include table) are closed.

E) Firmware must check all contacts when all safety relays disenqaqed, as a welded relay means the machine cannot be operated with cat. 3 safety.

F) The G9S's operate by comparing two contacts (in every switch) and seeing if there is ever a discrepancy between them. If there is (a switch or cable is faulty), the unit will open its relay contact outputs, disabling the downstream circuitry. This is required for the HTR buttons and for the laser safety loop. See Omron G9S datasheets.

G) Relays inside PDB0 block are symbolic representations only. See 10-4112 schematics for detailed connections.

H) Attach to frame using captive washers for reliable qroundinq.

J) Place rubber boots over exposed terminals to prevent shock/energy hazard.

K) Service Override Tool 15-3526

L) Both PS1 and PS2 are adjustable power supplies(Creo Part # 13-5094), make sure PS1 is set at 24V and PS2 is set at 48V, before put them into machine's Power Box and make connections.

M) TFX logic power is on the WL safety loop because of the focus laser.

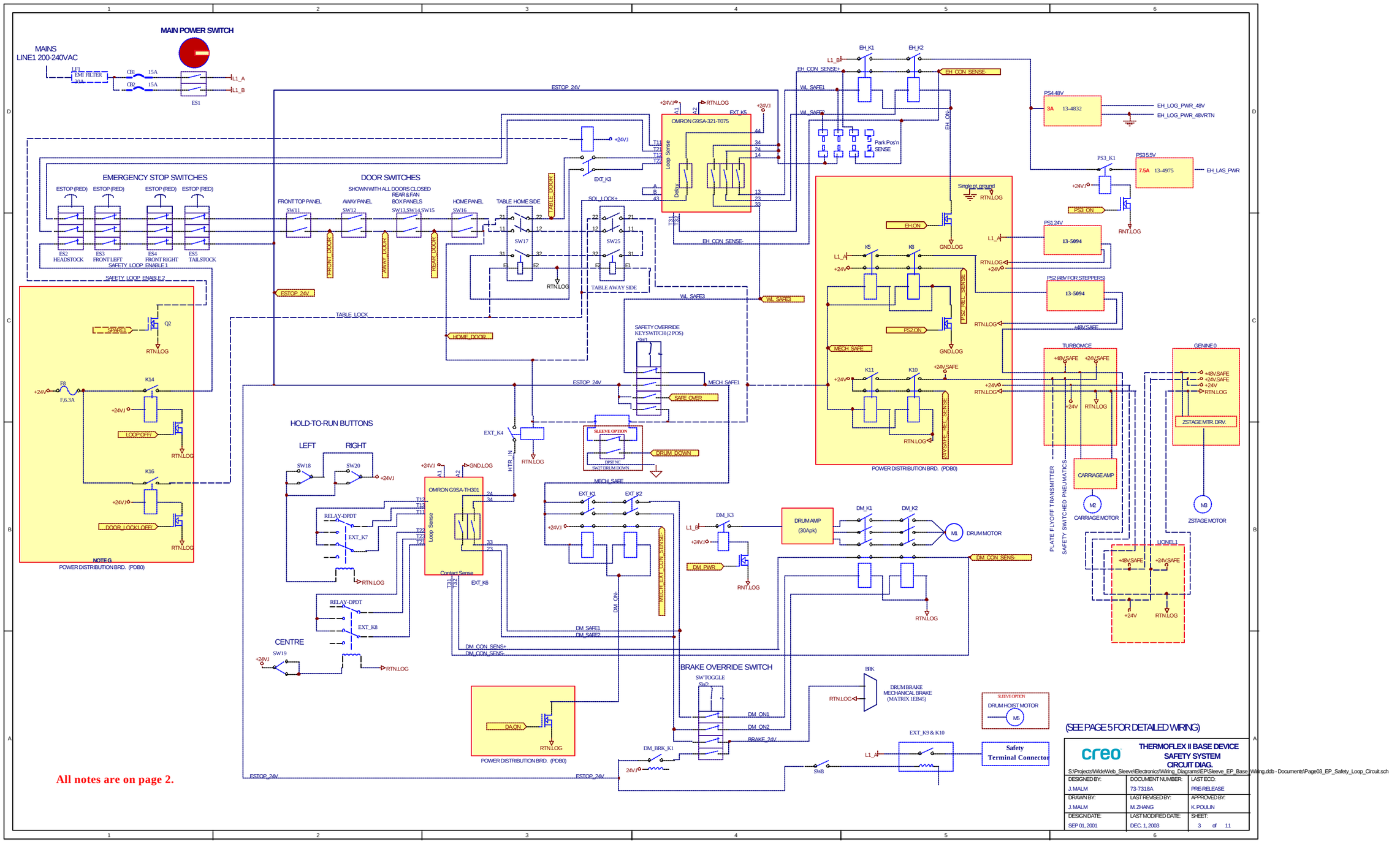
(SEE PAGE 5 FOR DETAILED WIRING)

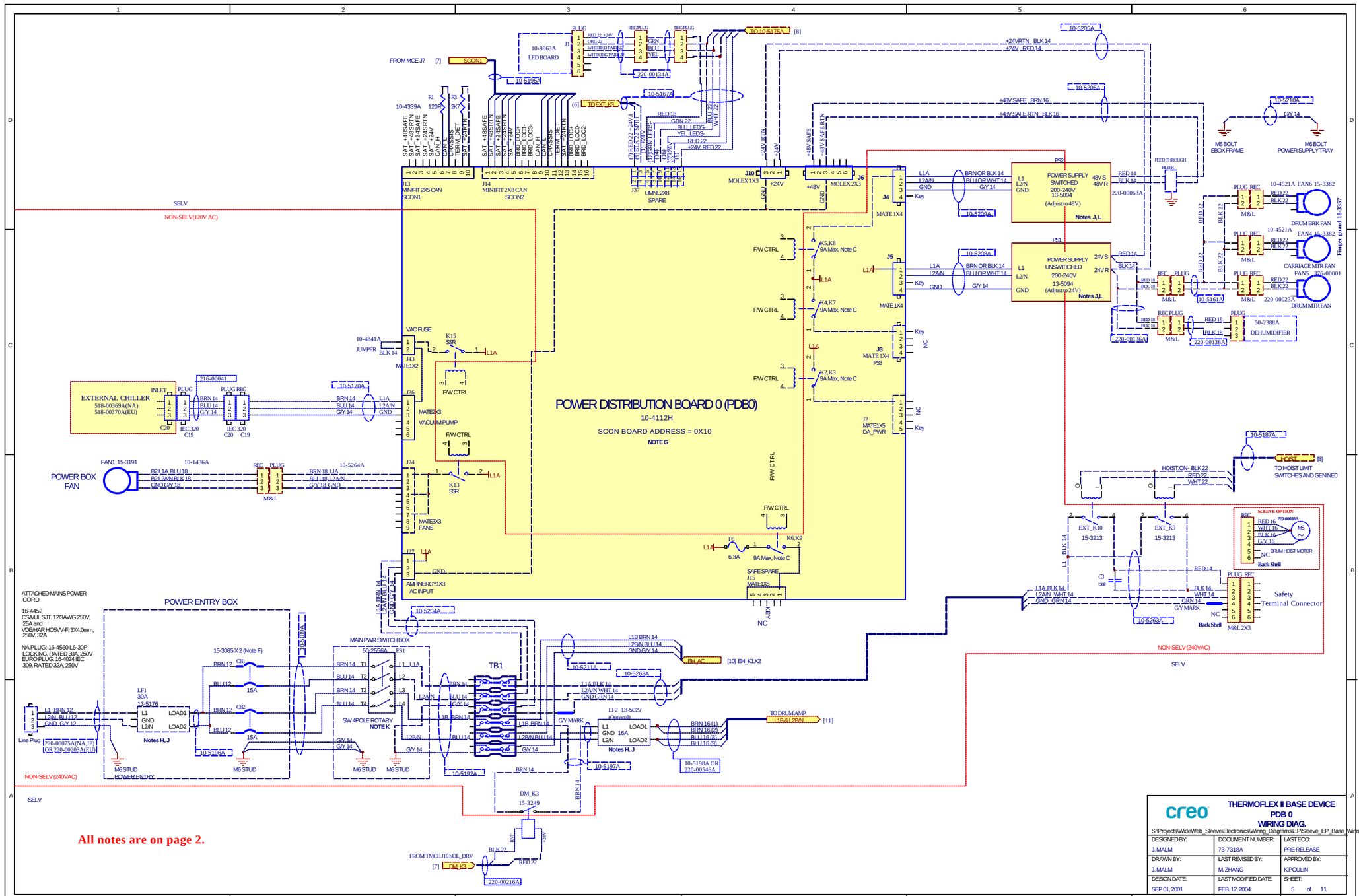
creo

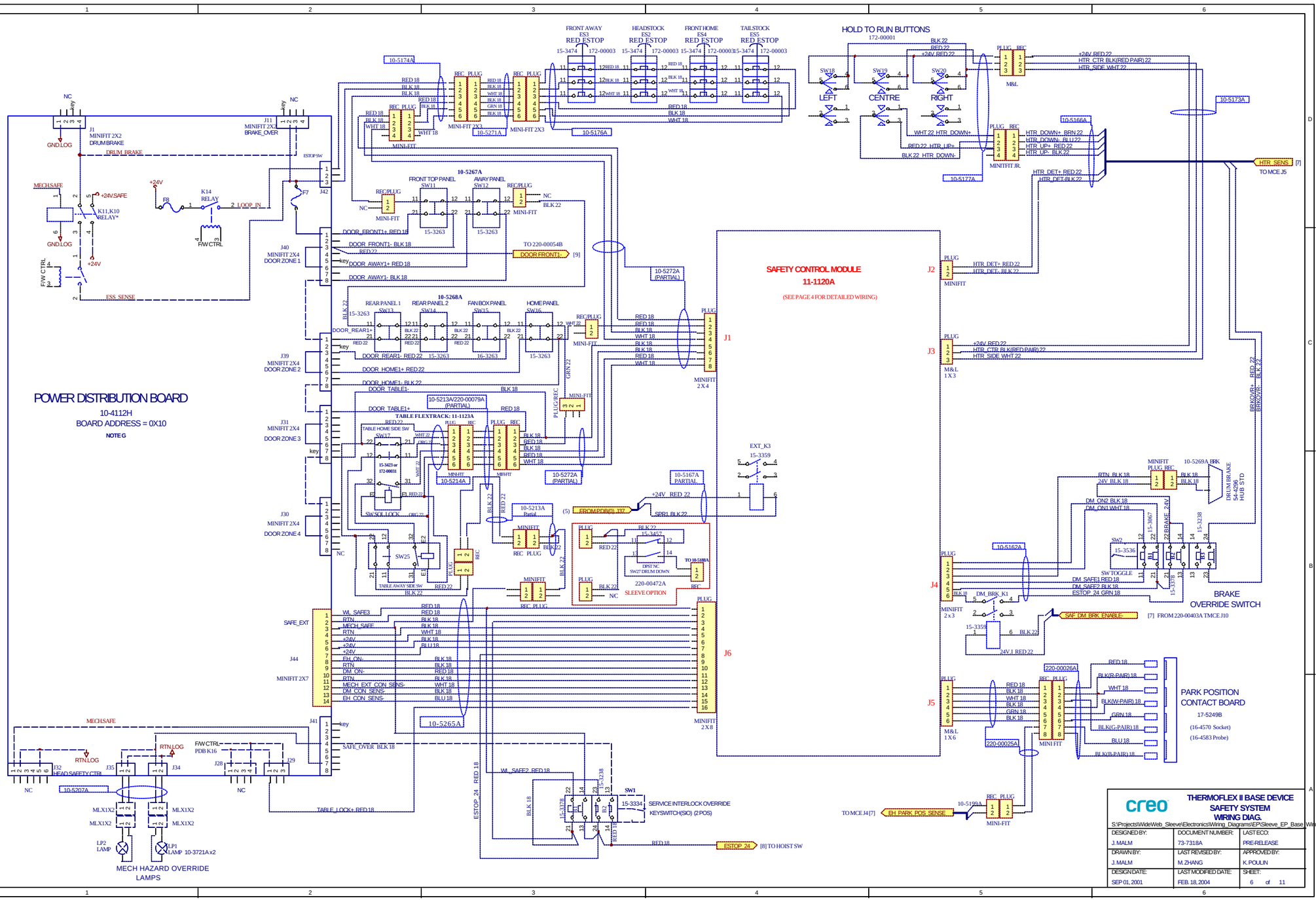
THERMOFLEX II BASE DEVICE SAFETY SYSTEM BLOCK DIAG.

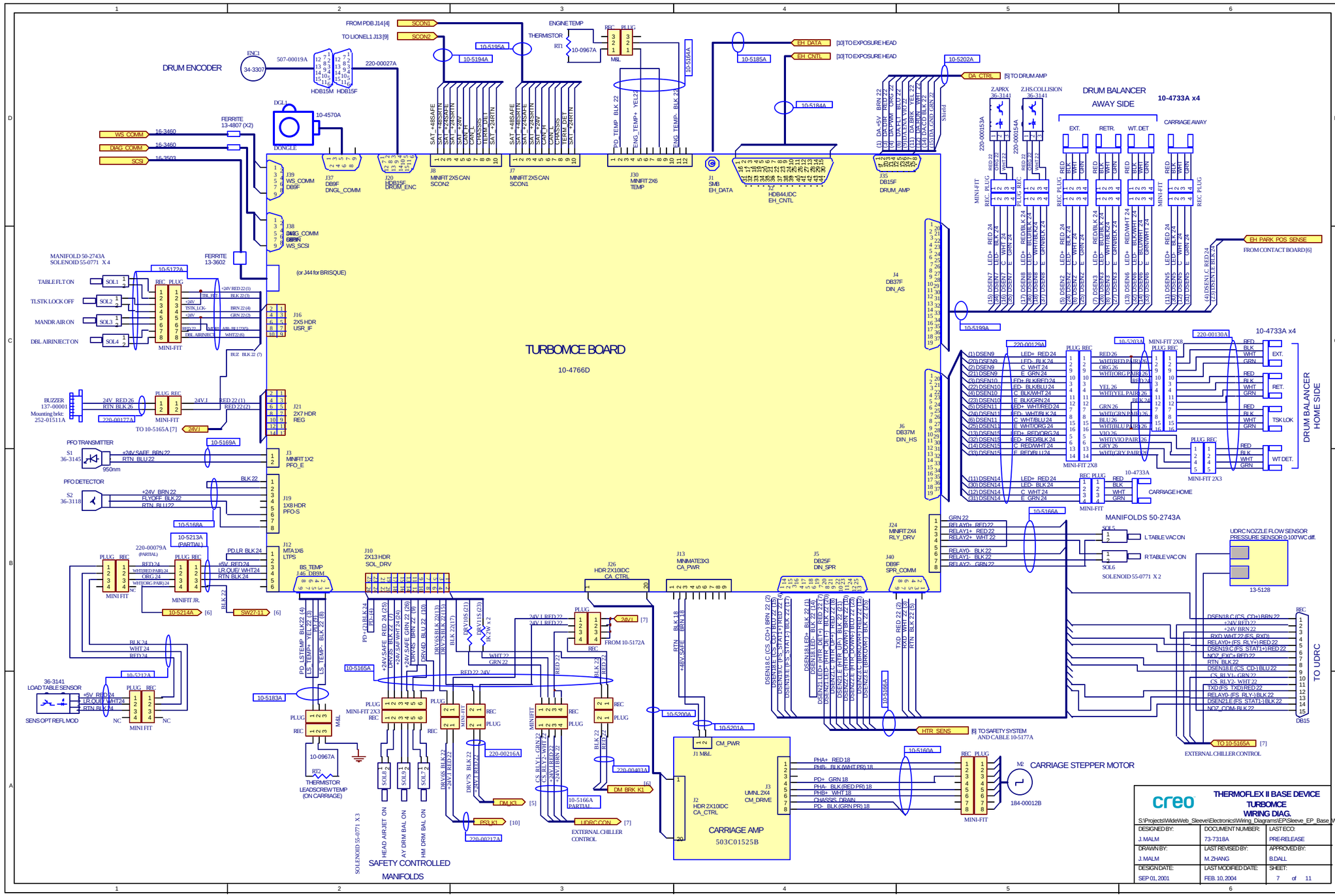
S:\Projects\WideWeb_Sleeve\Electronics\Wiring_Diagrams\EP\Sleeve_EP_Base_Wiring.ddb - Documents\Page02_EP_Safety_Loop_BD.sch

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J.MALM	M.ZHANG	K.POULIN
DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
DEC 04 2001	DEC. 1, 2003	2 of 11


MAIN POWER SWITCH
MAINS
LINE1 200-240VAC
LF1
EMI FILTER
30A
CB1 15A
CB2 15A
L1_A
L1_B
ES1
ESTOP_24V
+24V.I
RTN.LOG
EXT_K5
OMRON G9SA-321-T075
Loop Sense
Delay
Park Pos'n SENSE
EH_K1
EH_K2
EH_CON_SENSE+
EH_CON_SENSE-
WL_SAFE1
WL_SAFE2
EH_ON
PS4 48V
3A 13-4832
EH_LOG_PWR_48V
EH_LOG_PWR_48VRTN
PS3_K1
PS3 5.5V
7.5A 13-4975
EH_LAS_PWR
PS3_ON
EMERGENCY STOP SWITCHES
ESTOP (RED)
ES2 HEADSTOCK
ES3 FRONT LEFT
ES4 FRONT RIGHT
ES5 TAILSTOCK
SAFETY LOOP ENABLE 1
SAFETY LOOP ENABLE 2
DOOR SWITCHES
SHOWN WITH ALL DOORS CLOSED
REAR & FAN BOX PANELS
FRONT TOP PANEL SW11
AWAY PANEL SW12
SW13,SW14,SW15
HOME PANEL SW16
TABLE HOME SIDE
TABLE AWAY SIDE
SW17
SW25
FRONT_DOOR
AWAY_DOOR
REAR_DOOR
TABLE_DOOR
HOME_DOOR
SOL_LOCK+
EXT_K3
TABLE_LOCK
WL_SAFE3
SAFETY OVERRIDE KEYSWITCH (2 POS)
SW1
SAFE_OVER
MECH_SAFE1
MECH_SAFE
Single pt ground
GND.LOG
PS1 24V
13-5094
PS2 (48V FOR STEPPERS)
PS2_REL_SENSE
PS2 ON
K5
K8
K11
K10
+24V
+24V.SAFE
+48V.SAFE
MECH_SAFE
24VSAFE_REL_SENSE
POWER DISTRIBUTION BRD. (PDB0)
TURBOMCE
GENINE 0
ZSTAGE MTR. DRV.
CARRIAGE AMP
CARRIAGE MOTOR
ZSTAGE MOTOR
M2
M3
LIONEL1
PLATE FLYOFF TRANSMITTER
SAFETY SWITCHED PNEUMATICS
SPARE
Q2
F8
F,6.3A
K14
LOOP OFF
K16
DOOR_LOCK1 OFF
NOTE 6
HOLD-TO-RUN BUTTONS
LEFT
RIGHT
CENTRE
SW18
SW20
SW19
RELAY-DPDT
EXT_K7
EXT_K8
OMRON G9SA-TH301
Contact Sense
EXT_K6
HTR_IN
EXT_K4
SLEEVE OPTION
DRUM_DOWN
DPST-NC
SW27 DRUM DOWN
EXT_K1
EXT_K2
DM_K3
DM_PWR
DRUM AMP (30Apk)
DM_K1
DM_K2
M1
DRUM MOTOR
DM_CON_SENS-
DM_ON1
DM_ON2
DM_SAFE1
DM_SAFE2
DM_CON_SENS+
DM_CON_SENS-
MECH_EXT_CON_SENSE
BRAKE OVERRIDE SWITCH
SWTOGGLE
SW2
BRAKE_24V
DM_BRK_K1
SW8
BRK
DRUM BRAKE MECHANICAL BRAKE (MATRIX 1EB45)
EXT_K9 & K10
SLEEVE OPTION
DRUM HOIST MOTOR
M5
Safety Terminal Connector
DA.ON
POWER DISTRIBUTION BRD. (PDB0)
(SEE PAGE 5 FOR DETAILED WIRING)
All notes are on page 2.
creo
THERMOFLEX II BASE DEVICE
SAFETY SYSTEM
CIRCUIT DIAG.
S:\Projects\WideWeb_Sleeve\Electronics\Wiring_Diagrams\EP\Sleeve_EP_Base_Wiring.ddb - Documents\Page\03_EP_Safety_Loop_Circuit.sch
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SHEET: 3 of 11


POWER DISTRIBUTION BOARD 0 (PDB0)
10-4112H
SCON BOARD ADDRESS = 0X10
NOTE G
FROM MCE J7 [7]
SCON1
10-9063A
LED BOARD
10-5145A
10-5167A
10-5175A [8]
10-4339A
R1 120R
R3 2K7
10-5205A
+24VRTN BLK 14
+24V RED 14
10-5206A
+48V SAFE BRN 16
+48V SAFE RTN BLK 16
10-5210A
GY 14
M6 BOLT EBOX FRAME
M6 BOLT POWER SUPPLY TRAY
SAT +48SAFE
SAT +48SRTN
SAT +24SAFE
SAT +24SRTN
SAT +24V
CAN L
CAN H
CHASSIS
TERM DET
SAT +24RTN
BRD LOC1
BRD LOC2
BRD LOC3
RED 18
GRN 22
BLU LEDS
YEL LEDS
RED 22
+24V RED 22
WHT 22
WHT/GRN 22
WHT/ORG 22
J13 MINIFIT 2X5 CAN SCON1
J14 MINIFIT 2X8 CAN SCON2
J37 UMNL2X8 SPARE
J10 MOLEX 1X3
J6 MOLEX 2X3
+24V RTN
+24V
+48V SAFE
+48V SAFE RTN
SELV
NON-SELV(120V AC)
J4 MATE 1X4
J5 MATE 1X4
J3 MATE 1X4 PS3
J2 MATE1X5 DA_PWR
K5,K8 9A Max, Note C
K4,K7 9A Max, Note C
K2,K3 9A Max, Note C
F/W CTRL
L1A
PS2
POWER SUPPLY SWITCHED 200-240V 13-5094 (Adjust to 48V)
Notes J, L
PS1
POWER SUPPLY UNSWITCHED 200-240V 13-5094 (Adjust to 24V)
Notes J,L
L1A BRN OR BLK 14
L2A/N BLU OR WHT 14
GND GY 14
10-5209A
10-5208A
RED 14
BLK 14
220-00063A
FEED THROUGH FLTR
10-4521A FAN6 15-3382
DRUM BRK FAN
10-4521A FAN4 15-3382
CARRIAGE MTR FAN
FAN5 15-00001
DRUM MTR FAN
220-00023A
Finger guard 18-13357
10-5161A
220-00136A
220-00138A
50-2388A
DEHUMIDIFIER
10-4841A JUMPER BLK 14
VAC FUSE
K15 SSR
J43 MATE2X2
J26 MATE2X3 VACUUM PUMP
K13 SSR
J24 MATE3X3 FANS
J27 AMPENERGY1X3 AC INPUT
F6 6.3A
K6,K9 9A Max, Note C
SAFE SPARE
J15 MATE1X5
NC
EXTERNAL CHILLER
518-00369A(NA)
518-00370A(EU)
INLET
PLUG
PLUG REC
216-00041
IEC 320 C19
IEC 320 C20
C20
BRN 14
BLU 14
GY 14
10-5172A
L1A
L2A/N
GND
10-5264A
FAN1 15-3191
POWER BOX FAN
10-1436A
B2 L1A BLU 18
B2 L2A/N BLK 18
GND GY 18
M&L
BRN 18 L1A
BLU 18 L2A/N
GY 18 GND
ATTACHED MAINS POWER CORD
16-4452
CSA/UL SJT, 12/3AWG 250V, 25A and VDE/HAR H05VV-F, 3X4.0mm, 250V, 32A
NA PLUG: 16-4560 L6-30P LOCKING, RATED 30A, 250V
EURO PLUG: 16-4024 IEC 309, RATED 32A, 250V
POWER ENTRY BOX
Line Plug
220-00075A(NA,JP) OR 220-00203A(EU)
LF1 30A 13-5176
L1 BRN 12
L2/N BLU 12
GND GY 12
LOAD1
LOAD2
Notes H, J
CB1
CB2
15A
10-5196A
M6 STUD POWER ENTRY
10-5189A
MAIN PWR SWITCH BOX
50-2556A
ES1
SW 4POLE ROTARY NOTE K
T1
T2
T3
T4
L1
L2
L3
L4
L1A
L2A/N
L1B BRN 14
L2B/N BLU 14
GY 14
GY MARK
TB1
10-5192A
10-5211A
10-5263A
EH_LAC
[10] EH_K1,K2
LF2 13-5027 (Optional)
16A
10-5197A
BRN 16 (1)
BRN 16 (2)
BLU 16 (8)
BLU 16 (9)
10-5198A OR 220-00546A
TO DRUM AMP L1B,L2B/N
[11]
DM_K3 15-3249
FROM TMCE J10 SOL_DRV [7]
DM_K3
220-00216A
BLK 22
RED 22
HOIST
[8]
10-5187A
TO HOIST LIMIT SWITCHES AND GENINE0
HOIST ON- BLK 22
RED 22
WHT 22
EXT_K10 15-3213
EXT_K9 15-3213
C3 6uF
L1 BLK 14
L1A BLK 14
L2A/N WHT 14
GND GRN 14
GRN 14
GY MARK
10-5263A
SLEEVE OPTION
220-00038A
RED 16
WHT 16
BLK 16
G/Y 16
M5
DRUM HOIST MOTOR
Back Shell
Safety Terminal Connector
M&L 2X3
NON-SELV (240VAC)
SELV
All notes are on page 2.
creo
THERMOFLEX II BASE DEVICE
PDB 0
WIRING DIAG.
S:\Projects\WideWeb_Sleeve\Electronics\Wiring_Diagrams\EPSleeve_EP_Base_Wiring.ddb - Documents\Page05_EP_PDB_Wiring.sch
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DESIGN DATE: SEP 01, 2001
LAST MODIFIED DATE: FEB.12, 2004
SHEET: 5 of 11


POWER DISTRIBUTION BOARD
10-4112H
BOARD ADDRESS = 0X10
NOTE G
SAFETY CONTROL MODULE
11-1120A
(SEE PAGE 4 FOR DETAILED WIRING)
HOLD TO RUN BUTTONS
172-00001
LEFT
CENTRE
RIGHT
FRONT AWAY ES3 RED_ESTOP
HEADSTOCK ES2 RED_ESTOP
FRONT HOME ES4 RED_ESTOP
TAILSTOCK ES5 RED_ESTOP
15-3474
172-00003
10-5174A
10-5176A
10-5271A
10-5267A
FRONT TOP PANEL SW11
AWAY PANEL SW12
10-5268A
REAR PANEL 1 SW13
REAR PANEL 2 SW14
FAN BOX PANEL SW15
HOME PANEL SW16
15-3263
16-3263
10-5272A (PARTIAL)
10-5213A/220-00079A (PARTIAL)
TABLE FLEXTRACK: 11-1123A
10-5214A
10-5213A Partial
10-5167A PARTIAL
10-5272A (PARTIAL)
SW17
SW25
SW SOL LOCK
TABLE HOME SIDE SW
TABLE AWAY SIDE SW
15-3423 or 172-00031
EXT_K3
15-3359
SW1
15-3334
SERVICE INTERLOCK OVERRIDE KEYSWITCH(SIO) (2 POS)
SLEEVE OPTION
10-00472A
15-3457
DPST NC SW27 DRUM DOWN
TO 10-5188A
MECH HAZARD OVERRIDE LAMPS
LP1 LAMP 10-3721A x2
LP2 LAMP
MECH.SAFE
RTN.LOG
FW CTRL PDB K16
J1 MINIFIT 2X2 DRUM BRAKE
J11 MINIFIT 2X1 BRAKE_OVER
J42
J40 MINIFIT 2X4 DOOR ZONE 1
J39 MINIFIT 2X4 DOOR ZONE 2
J31 MINIFIT 2X4 DOOR ZONE 3
J30 MINIFIT 2X4 DOOR ZONE 4
J41
J32 HEAD SAFETY CTRL
J35
J34
J28
J29
K14 RELAY
K11,K10 RELAY*
F8
F7
F1
F2
ESTOP SW
ESS_SENSE
+24V.SAFE
+24V
FW CTRL
2_LOOP_IN
DOOR_FRONT1+ RED 18
DOOR_FRONT1- BLK 18
DOOR_AWAY1+ RED 18
DOOR_AWAY1- BLK18
DOOR_REAR1+
DOOR_REAR1- RED 22
DOOR_HOME1+ RED 22
DOOR_HOME1- BLK 22
DOOR_TABLE1-
DOOR_TABLE1+
TABLE_LOCK+ RED 18
SAFE_OVER BLK 18
ESTOP_24 RED 18
WL_SAFE2 RED 18
TO 220-00054B
DOOR FRONT1-
[9]
SAFE_EXT
J44 MINIFIT 2X7
WL_SAFE3
RTN
MECH_SAFE
+24V
EH_ON-
DM_ON-
EH_CON_SENS-
J6
MINIFIT 2 X 8
J1
MINIFIT 2 X 4
J2
J3
J4
J5
M&L 1 X 3
MINIFIT 2 x 3
M&L 1 X 6
MINI FIT
MINIFIT JR.
MINIFIT
MINI-FIT
HTR_SENS
[7]
TO MCE J5
HTR_DET+ RED 22
HTR_DET- BLK 22
+24V. RED 22
HTR_CTR BLK(RED PAIR) 22
HTR_SIDE WHT 22
HTR_DOWN+ BRN 22
HTR_DOWN- BLU 22
HTR_UP+ RED 22
HTR_UP- BLK 22
WHT 22 HTR_DOWN+
RED 22 HTR_UP+
BLK 22 HTR_DOWN-
10-5173A
10-5166A
10-5177A
10-5162A
10-5269A BRK
DRUM BRAKE 54-0296 HUB STD
BRAKE OVERRIDE SWITCH
SW TOGGLE
15-3536
15-3867
15-3238
15-3378
DM_BRK_K1
SAF_DM_BRK_ENABLE
[7] FROM 220-00403A TMCE J10
DM_SAFE1 RED 18
DM_SAFE2 BLK 18
ESTOP_24 GRN 18
DM_ON2 BLK 18
DM_ON1 WHT 18
RTN_BLK 18
24V_BLK 18
PARK POSITION CONTACT BOARD
17-5249B
(16-4570 Socket)
(16-4583 Probe)
220-00026A
220-00025A
10-5199A
TO MCE J4 [7]
EH_PARK_POS_SENSE
creo
THERMOFLEX II BASE DEVICE
SAFETY SYSTEM
WIRING DIAG.
S:\Projects\WideWeb_Sleeve\Electronics\Wiring_Diagrams\EP\Sleeve_EP_Base_Wiring.ddb - Documents\Page06_EP_Safety_Loop_Wiring.sch
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SHEET: 6 of 11


TURBOMCE BOARD
10-4766D
DRUM ENCODER
34-3307
ENC1
507-00019A
220-00027A
HDB15M HDB15F
DGL1
10-4570A
DONGLE
FERRITE 13-4807 (X2)
WS_COMM 16-3460
DIAG_COMM 16-3460
SCSI 16-3503
FROM PDB J14 [4]
TO LIONEL1 J13 [9]
SCON1
SCON2
10-5195A
10-5194A
ENGINE TEMP THERMISTOR RT1 10-0967A
REC PLUG
M6L
10-5164A
10-5185A
EH_DATA
EH_CNTL
[10] TO EXPOSURE HEAD
[10] TO EXPOSURE HEAD
10-5202A
DA_CTRL
[5] TO DRUM AMP
10-5184A
J39 WS_COMM DB9F
J37 DB9F DNGL_COMM
J20 HDB15F DRUM_ENC
J8 MINIFIT 2X5 CAN SCON2
J7 MINIFIT 2X5 CAN SCON1
J30 MINIFIT 2X6 TEMP
J1 SMB EH_DATA
J2 HDB44JDC EH_CNTL
J35 DB15F DRUM_AMP
J38 DIAG_COMM DIAG_SCSI WS_SCSI
FERRITE 13-3602
(or J44 for BRISQUE)
MANIFOLD 50-2743A SOLENOID 55-0771 X 4
10-5172A
TABLE FLT ON
TLSTK LOCK OFF
MANDR AIR ON
DBL AIRINJECT ON
SOL1
SOL2
SOL3
SOL4
MINI-FIT
J16 2X5 HDR USR_IF
BUZZER 137-00001 Mounting brkt: 252-01511A
24V RED 26
RTN BLK 26
220-00177A
TO 10-5165A [7]
24V.I
RED 22 (1)
RED 22 (2)
J21 2X7 HDR REG
PFO TRANSMITTER
S1 36-3145
+24V SAFE BRN 22
RTN BLU 22
950nm
10-5169A
J3 MINIFIT 1X2 PFO_E
PFO DETECTOR
S2 36-3118
+24V BRN 22
FLYOFF BLK 22
RTN BLU 22
J19 1X8 HDR PFO-S
10-5168A
10-5213A (PARTIAL)
220-00079A (PARTIAL)
RED 24
WHT(RED PAIR) 24
ORG 24
WHT(ORG PAIR) 24
PD.LR BLK 24
+5V RED 24
LR.QUE WHT24
RTN BLK 24
J12 MTA 1X6 LTPS
MINI FIT
MINIFIT JR.
10-5214A [6]
SW27-11 [6]
BLK 22
J10 2X13 HDR SOL_DRV
BS_TEMP J46 DB9M
PD_LSTEMP BLK 22 (4)
LS_TEMP+ RED 22 (3)
LS_TEMP- BLK 22 (6)
PD_LR BLK 24
PD_LSTEMP BLK 24
+24V.SAFE RED 24 (25)
DRV.SAFE WHT 24 (24)
+24V.SAFE GRN 22 (26)
DRV.AS BRN 22 (9)
+24V.SAFE BLU 22 (10)
DRV.AD BLU 22 (11)
DRV.SIGN LK 22(12)
DRV.TS BLK 22(13)
BLK 22(17)
DRV.10S (21)
DRV.11S (23)
1K 2W x 2
J26 HDR 2X10IDC CA_CTRL
J13 MINIMATE3X3 CA_PWR
J5 DB25F DIN_SPR
J40 DB9F SPR_COMM
J24 MINIFIT 2X4 RLY_DRV
10-5183A
10-5165A
WHT22
GRN 22
RED 22 24V
24V.I RED 22
24V.I RED 22
24V.I
[7]
FROM 10-5172A
RTN BLK 18
+48V.SAFE BRN 18
10-5200A
10-5201A
CM_PWR
J1 M6L
J2 HDR 2X10IDC CA_CTRL
J3 UMNL 2X4 CM_DRIVE
CARRIAGE AMP 503C01525B
PHA+ RED 18
PHR- BLK (WHT PR) 18
PD+ GRN 18
PHA- BLK (RED PR) 18
PHB+ WHT 18
CHASSIS_DRAIN
PD- BLK (GRN PR) 18
10-5160A
M2 CARRIAGE STEPPER MOTOR
184-00012B
MINI-FIT
J4 DB37F DIN_AS
J6 DB37M DIN_HS
10-5199A
220-00129A
220-00130A
10-5203A
MINI-FIT 2X8
MINI-FIT 2X3
10-4733A x4
DRUM BALANCER HOME SIDE
EXT.
RET.
TSK LCK
WT DET.
10-4733A
CARRIAGE HOME
10-5166A
MANIFOLDS 50-2743A
SOL5
SOL6
L TABLE VAC ON
R TABLE VAC ON
SOLENOID 55-0771 X 2
UDRC NOZZLE FLOW SENSOR
PRESSURE SENSOR 0-100"WC diff.
13-5128
TO UDRC
DB15
EXTERNAL CHILLER CONTROL
TO 10-5165A [7]
HTR_SENS
[5] TO SAFETY SYSTEM AND CABLE 10-5177A
EH_PARK_POS_SENSE
FROM CONTACT BOARD [6]
ZAPRX 36-3141
ZHS.COLLISION 36-3141
220-00015J3A
220-00015J4A
DRUM BALANCER AWAY SIDE
10-4733A x4
CARRIAGE AWAY
36-3141 LOAD TABLE SENSOR
SENS OPT REFL MOD
+5V RED 24
LR.QUE WHT24
RTN BLK 24
10-5212A
10-0967A
RT2
THERMISTOR LEADSCREW TEMP (ON CARRIAGE)
SOLENOID 55-0771 X 3
HEAD AIRJET ON
AY DRM BAL ON
HM DRM BAL ON
SAFETY CONTROLLED MANIFOLDS
SOL2
SOL3
SOL1
DRV.BS BLK 22
+24V.I RED 22
DRV.TS BLK 22
+24V.I RED 22
DM_K3 [5]
PS3_K1 [10]
220-00216A
220-00217A
220-00403A
DM_BRK_K1 [6]
10-5166A PARTIAL
UDRC_CON [7]
EXTERNAL CHILLER CONTROL
creo
THERMOFLEX II BASE DEVICE
TURBOMCE
WIRING DIAG.
S:\Projects\WideWeb_Sleeve\Electronics\Wiring_Diagrams\EPSleeve_EP_Base_Wiring.ddb - Documents\Page07_EP_MCE_Wiring.sch
DESIGNED BY: J.MALM
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LAST REVISED BY: M.ZHANG
APPROVED BY: B.DALL
DESIGN DATE: SEP.01, 2001
LAST MODIFIED DATE: FEB.10,2004
SHEET: 7 of 11

GENINE BOARD 0

10-4227C

BOARD ADDRESS = 0X30

FROM LIONEL1 J9 [5] SCON2

10-5194A

10-5193A

R2 120R

R4 2K

J3 MTA 1X6 ANALOG0

J1 MTA 1X6 ANALOG1

J11 UMNL 2X3 TEMP

J13 DB9F RS232 PORT

J26 MINIFIT 2X8 CAN SCON1

J24 MINIFIT 2X5 CAN SCON2

J6 MTA 1X6 ANALOG2

J20 2X6 HDR HA-1

J4 2X10 HDR DIGITAL-IN2

J2 2X15 HDR DIGITAL-IN3

J18 2X8 HDR SOL-DRV0

J5 2X17 HDR DIGITAL-IN4

J14 2X6 HDR HA-0

J10 2X7 HDR DIGITAL-IN1

J21 2X13 HDR SOL-DRV1

J25 UMNL 2X4 STPR-DRIVE

J27 MINIFIT 2X3 STPR-PWR

J17 2X10 HDR STPR-CNTL

J23 LAMP-OUT MINIFIT 2X4

10-5182A

ZSTAGE STEPPER MOTOR

MTA 1X8

15-3267

10-5188A

SW8 172-00001

10-5265A Pedal

SW10 15-3431 UP LIMIT

DPDT ROCKER

SW9 15-3431 DOWN LIMIT

10-5187A

10-5188A

10-5167A

TO CABLE 10-5167A

MINI FIT

10-5175A

10-5171A

VACUUM BULKHEAD

DB15

10-5178A

DB25

USER INTERFACE BOARD

503-00001A

TBL VAL

TBL FLT

DRUM VAC

SW3 15-3230 CAMLOCK TIGHTENED HS SIDE

SW5 15-3230 MANDREL AIR HS SIDE

SW4 15-3230 ARBOR CLAMPED HS SIDE

SW6 15-3230 MANDREL AIR HOME SIDE

LAMP 36-3160 GRN LENS 15-3229 BUTTON 15-3231

10-4733A X2

10-5181A

10-5270A

SW26 172-00006

10-5163A

10-4733A X 2

TAILSTOCK ENGAGED SENSOR

TAILSTOCK DISENGAGED SENSOR

TAILSTOCK SOLENOID SENSOR 13-5209

38SW

220-00028A

10-4733A x 2

DRUM EXCHANGE UP SENSOR

DRUM EXCHANGE DOWN SENSOR

220-00214A

220-00211A

SOL10 176-00001 LEVER ENABLE

SW2 15-3431 SENS12-C

SPST NC SENS12-E DRUM DISENGAGED SW

FROM 220-00472A

SLEEVE OPTION

10-5187A

FROM SIO SW1 ESTOP 24

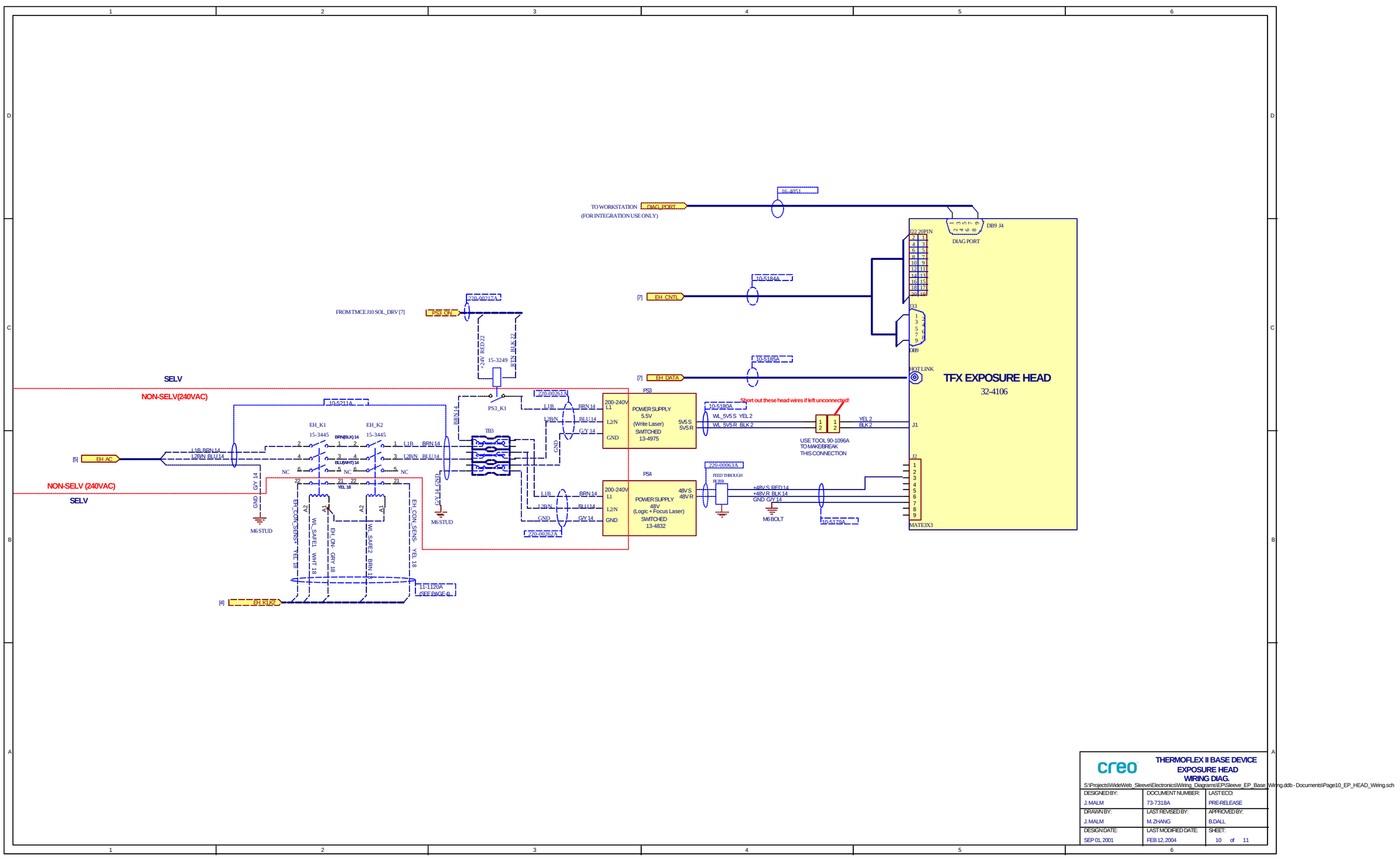
+24V RED 18

HOIST.ON- (LAMP ON0-) BLK 22

HOIST.UNLOCK- (LAMP ON1-) BLK 18

HOIST [8] TO 10-5188A

HOIST [5] TO DRUM HOIST ACTUATOR

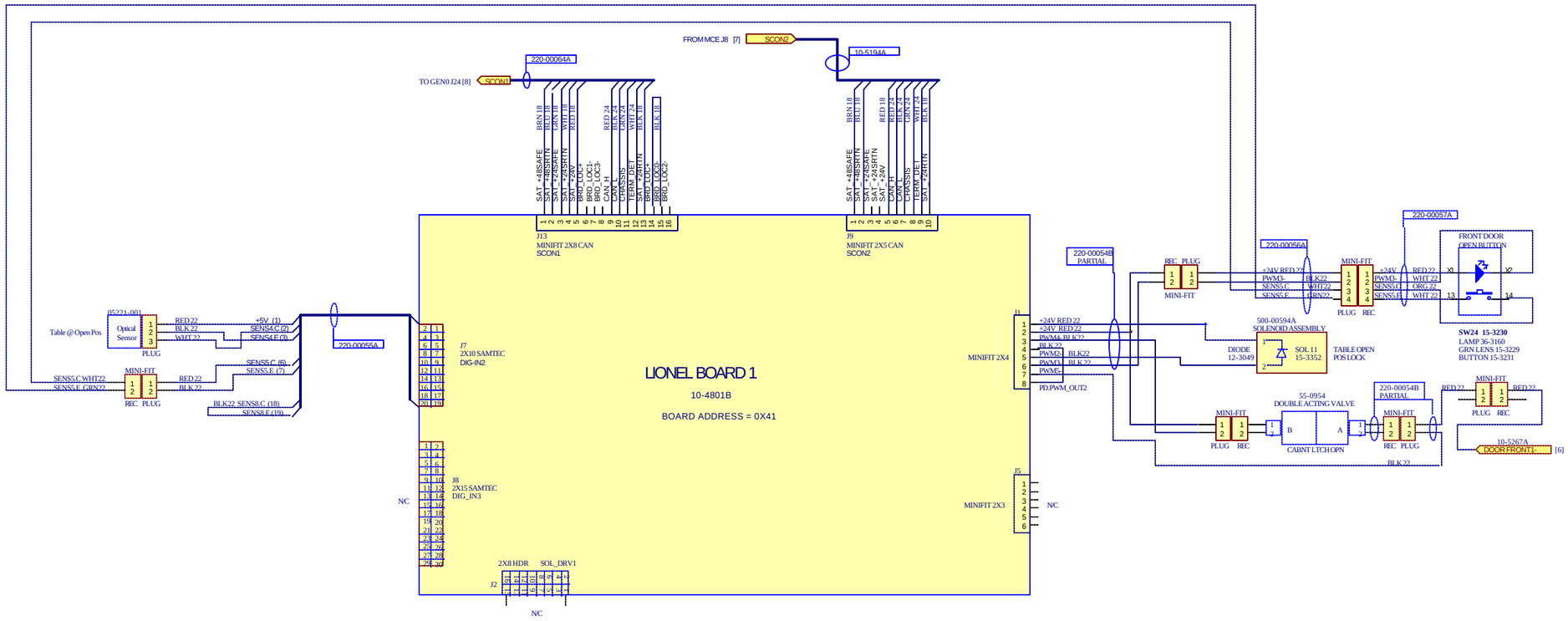


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THERMOFLEX II BASE DEVICE
EXPOSURE HEAD
WIRING DIAG.

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DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
SEP 01, 2001	FEB 12, 2004	10 of 11



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THERMOFLEX II BASE DEVICE LIONEL1 WIRING DIAG.

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DEC.17, 2002	JAN. 26, 2004	9 of 11

SAFETY CONTROL MODULE
11-1120A

J1 REC — 2 x 4 MINIFIT — TO CABLE 10-5272A [6]
RED 18 ESTOP_24
BLK 18 DOOR HOME1-
BLK 18
YEL 18
YEL 18
BLK 18
RED 18 TABLE LOCK+
BLK 18 RTN

J6 REC — 2 X 8 MINI-FIT — TO CABLE 10-5165A [6]
WL_SAFE3
RTN
MECH_SAFE1
RTN
+24V
+24V
+24V
ESTOP_24
EH_ON-
RTN
DM_ON-
RTN
MECH_EXT_CON_SENS-
DM_CON_SENS-
EH_CON_SENS-
TABLE_LOCK+ RED 18

J2 REC — MINIFIT — TO CABLE 10-5166A [7]
HTR DET+ RED 18
HTR DET- BLK 18

J3 REC — 1 x 3 M&L — TO CABLE 10-5173A [6]
+24V RED 18
HTR CTR BLK 1R
HTR SIDE WHT 18

J4 REC — 2 x 3 MINIFIT — TO CABLE 10-5162A [6]
DM_ON2 BLK 18
DM_ON1 WHT 18
RTN BLK 18
DM SAFE1 WHT 18
DM SAFE2 BRN 18
ESTOP 24 RED 18

J5 REC — 1 x 6 M&L — TO CABLE 220-00025A [6]
ESTOP_24 RED 18
ESTOP_24 RED 18
EH_CON_SENS- ORG 18
WL_SAFE1 WHT 18
WL_SAFE2 BRN 18
EH_CON_SENS+ YEL 18

EXT_K3 15-3359 — EXT_K4 15-3359 — EXT_K5 — EXT_K6 — EXT_K7 15-3248 — EXT_K8 15-3248
RELAY, G9SA-321-T075 15-3539
G9SA-TH301 15-3540
RTN BLK 18
RED 18
BLK 18
YEL 18
3 HTR_IN GRY 18
6 RTN BLK 18
VIO 18
GRY 18
ORG 18
BLK 22
WHT 18
BLK 18

10-5167A PARTIAL
+24V RED 22
SPR1 BLK 22
(5) FROM PARTIAL 10-5167A

RNT BLK 22
EXT_K1 15-5162 — EXT_K2 15-5162
MECH_SAFE BRN 18
DM_ON GRY 18
RTN BLK 18
MECH_EXT_CON_SENS YEL 18
DM_CON_SENS YEL 18
ESTOP_24 RED 18
TABLE_LOCK+ RED 18
EH_ON- GRY 18
DM_CON_SENS-
DM_CON_SENS+
DM_ON1 WHT 18
DM_ON2 BRN 18
RTN BLK 18

SELV
NON-SELV(240VAC)
10-5191A
PH1 RED 14
PH2 BLK 14
PH3 WHT 14
FROM 10-5191A [5]
DRUM MOTOR(BLDC)
DM_K1 15-3445 — DM_K2 15-3445
NON-SELV(240VAC)
SELV

EH_K1 15-3445 — EH_K2 15-3445
BRN(BLK) 14
BLU(WHT) 14
BRN 14
BLU(WHT) 14
FROM 10-5211A [10]
NON-SELV(240VAC)
SELV

EH_CON_SENS- YEL 18
EH_CON_SENS+ YEL 18
WL_SAFE1 WHT 18
WL_SAFE2 BRN 18
EH_ON- GRY 18

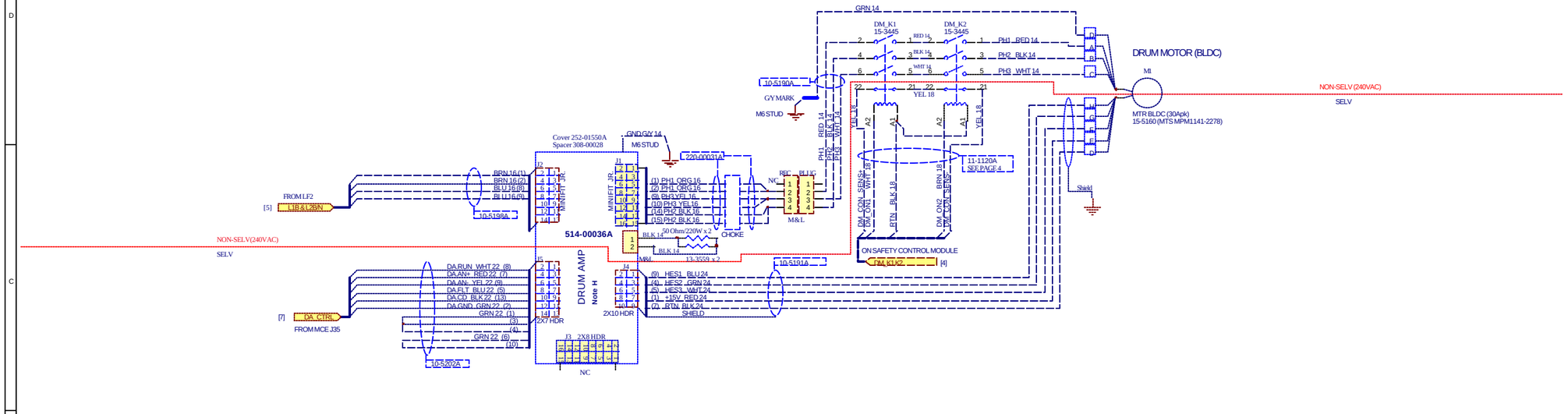
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THERMOFLEX II BASE DEVICE
SAF CTRL MODULE
WIRING DIAG.

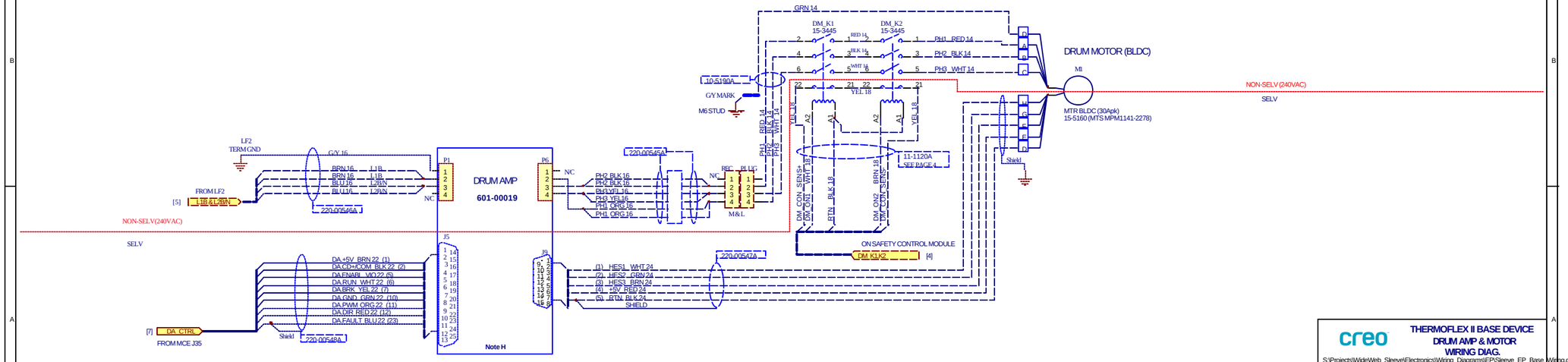
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J.MALM	M.ZHANG	K.POULIN
DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
SEP 01, 2001	DEC. 8, 2003	4 of 11

CREO DRUM DRIVER WIRING



AUTOMOTION DRUM AMP WIRING



creo	THERMOFLEX II BASE DEVICE DRUM AMP & MOTOR WIRING DIAG.	
S:\Projects\WideWeb_Sleeve\Electronics\Wiring_Diagrams\EP\Sleeve_EP_Base_Wiring.ddb - Documents\Page11_EP_DM-AMP_Wiring.sch		
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M.ZHANG	M. ZHANG	B. DALL
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