AC POWER ENTRY (SCU ASSY 11-0829 N/A, JAPAN; 11-0840 EUROPE)
(MCU ASSY 11-0901 N/A, JAPAN; 11-0900 EUROPE)

PLUG,AC POWER
(N/A + JAPAN - L6-20P)
(EUR IEC-309 16A)
AC LINE BROWN
NEUTRAL BLUE
CHASSIS GRN/YEL

EMI FILTER
AC LINE BROWN 14AWG
NEUTRAL BLUE 14AWG

ROTARY DISCONNECT
MAIN (RED)
BROWN 14
BLUE 14

ROTARY DISCONNECT
AUTOLOADER (BLACK)
BROWN 14
BLUE 14

CIRBKR15A

BROWN 14AWG
BLUE 14AWG
GRN/YEL 14AWG

TO PDB J1
1 2 3
AMPINNERGY 3PIN

TO VLF-TS
AC LINE BROWN
NEUTRAL BLUE
CHASSIS GRN/YEL

REC,AC POWER
N/A + JAPAN - L6-20R)
(EUR IEC-309 16A)

CABLE ASSY 10-4361A PDE 24VPSU AC
TO PDB PS1 (J5)
1 2 3 4
AC LINE BROWN 18 TEW L1
NEUTRAL BLUE 18 TEW L2
KEYING PIN
CHASSIS GREEN/YEL 18 TR-64 GND
1X4 MATE N LOK FM PINS

POWER SUPPLY
24V, 200W
VICOR FLATPAK
13-4750

CABLE ASSY 10-4363A PDE-24VDC
+24V RED 16 +24V
24V RTN BLACK 16 24V RTN
TO PDB 24V SUPP (J10)
1 2 3
1X3 MOLEX FM PINS

CABLE ASSY 10-4362A PDE 48VDC
TO PDB PS2 (J4)
CABLE ASSY 10-4360A PDE 48VPSU AC
1 2 3 4
AC LINE BROWN 14 TEW L1
NEUTRAL BLUE 14 TEW L2
CHASSIS GREEN/YEL 14 TEW GND
KEYING PIN
1X4 MATE N LOK FM PINS

POWER SUPPLY
48V 400W

13-4832

+48V SAFE BROWN 16 +48V SAFE
BLACK 16 48V SAFE RTN
BROWN 16 +48V SAFE
BLACK 16 48V SAFE RTN
48V SAFE RTN
TO PDE 48V SUPP (J6)
1 2 3 4 5 6
2X3 MOLEX FM PINS

TO 10-4889
1 2

TO PDB PS3 (J3)
1 2 3 4
KEYING PIN
AC LINE BROWN 14 TEW L1
NEUTRAL BLUE 14 TEW L2
CHASSIS GRN/YEL 14 TEW GND
1X4 MATE N LOK FM PINS
CABLE ASSY 10-4754A SSR 24VPSU AC

POWER SUPPLY
24V, 200W
VICOR FLATPAK
13-4750

CABLE ASSY 10-4648B SSR MOTOR POWER
+24V SAFE RED 16AWG
24V SAFE RTN BLACK 16AWG
10-4962A
1 2
1 2
10-4876A
RED 16AWG
BLACK 16AWG

1 2 3 4 5 6 7 8 9 10 11 12
1 2 3 4 5 6 7 8 9 10 11 12
RED 16
BLK 16
10-4917 MODULE #2

TO 10-4729
AND GENINE1 J21
TO 10-4705
AND GENINE1 J2
TO 10-4705
AND GENINE1 J2

INSIDE SSR UNIT
15-3359
SSR MOTOR ON
SENSE RELAY
SLIP SHEET PINCH ROLL MOTOR
DC MOTOR
10-4756
1 2
1 2
1 2
PLUG SSR MOTOR
INTO THE APPROPRIATE
CONNECTOR FOR
MACHINE DIRECTION

1 2 3 4 5 6 7 8 9 10 11 12
TO SSR
ACTUATORS,
SENSORS,
AND SAFETY
SWITCHES
4A

TO PDB PUMP (J9)
CABLE ASSY 10-4364A PDE BLOWER
1 2 3 4 5
AC LINE BROWN 18
NEUTRAL BLUE 18
CHASSIS GREEN/YEL 18
KEYING PIN
N/C
1X5 MATE N LOK FM PINS
1 2 3 4 5
1X5 MATE N LOK FM PINS

1 2 3 4 5
BLOWER GND CABLE 10-4688A
AMATEK BLOWER

POWER WIRING IN THIS SECTION
CAB ASSY 10-4746A

CABLE ASSY 10-4741A MOTOR POWER
TO PDB J15 SAFE SPARE
1 2 3 4 5
AC LINE 14AWG BRN L
NEUTRAL 14AWG BLU N
KEY PIN
CHASSIS 14AWG GRN/YLW CHASSIS
N/C
CONN,PLUG,5PIN,MATE-N-LOK

3PH INVERTER
U RED 18 - TEW L1
V BLK 18 - TEW L2
W BLU 18 - TEW L3
CHASSIS

CONTACTOR,DIL EM-01-G
15-3445
1 L1 2 T1
3 L2 4 T2
5 L3 6 T3
21 NC 22
A1 + A2 -

CONTACTOR,DIL EM-01-G
15-3445
1 L1 2 T1 W1
3 L2 4 T2 W2
5 L3 6 T3 W3
21 NC 22
A1 + A2 -

RED 16 TEW L1
BLK 16 TEW L2
BLU 16 TEW L3
GRN/YELL 14 CHASSIS
M1
MTR AC 3PH

CABLE ASSY 10-4752A RELAY CONTACTS
TO GNE1 DIG IN1
1 2
SENS14.C(SAFETY LOOP)
SENS14.E(SAFETY LOOP)
1X2 MINIFIT FM PINS

CAB ASSY 10-4745A RELAY COIL
CONTACTOR COIL+
CONTACTOR COIL -
1 2 3 4 5 6
TO MCU
SAFETY
INTERFACE
BOARD J5
2X3,FM PINS,MATE-N-LOK

B ADDED REV BLOCK, OTHER CORRECTIONS AND CHANGES

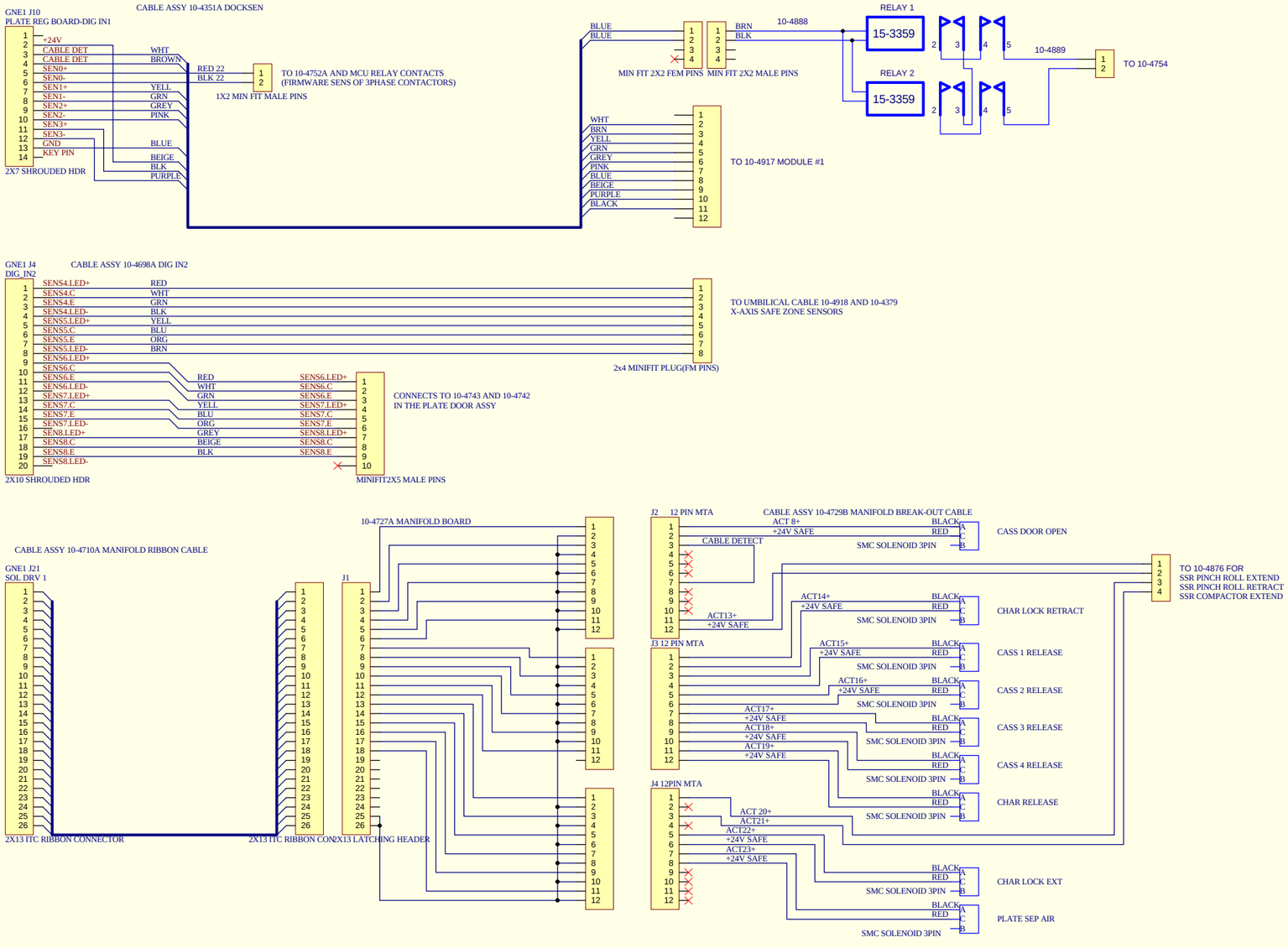
REV	ECO	DATE	DRAWING CHANGES BY	APPROVED BY
B	E382	2001 DEC 14	P YUEN	P YUEN

creo

MCU - VAL AUTOLOADER
AC POWER CIRCUITRY

P:\INBASKET\E382\VAL schematics.DDB - Documents\72-3658A-B-SD01 AC POWER.SCH

DESIGNED BY:	DOCUMENT NUMBER:	LAST ECO:
W COETZEE	72-3658A-B-SD01	SEE REV BLOCK
DRAWN BY:	LAST REVISED BY:	APPROVED BY:
D KAHLE	SEE REV BLOCK	SEE REV BLOCK
DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
2000:04:24	SEE REV BLOCK	1 of 6



B ADDED REV BLOCK, OTHER CORRECTIONS AND CHANGES

REV	ECO	DATE	DRAWING CHANGES BY	APPROVED BY
B	E382	2001 DEC 14	P YUEN	P YUEN

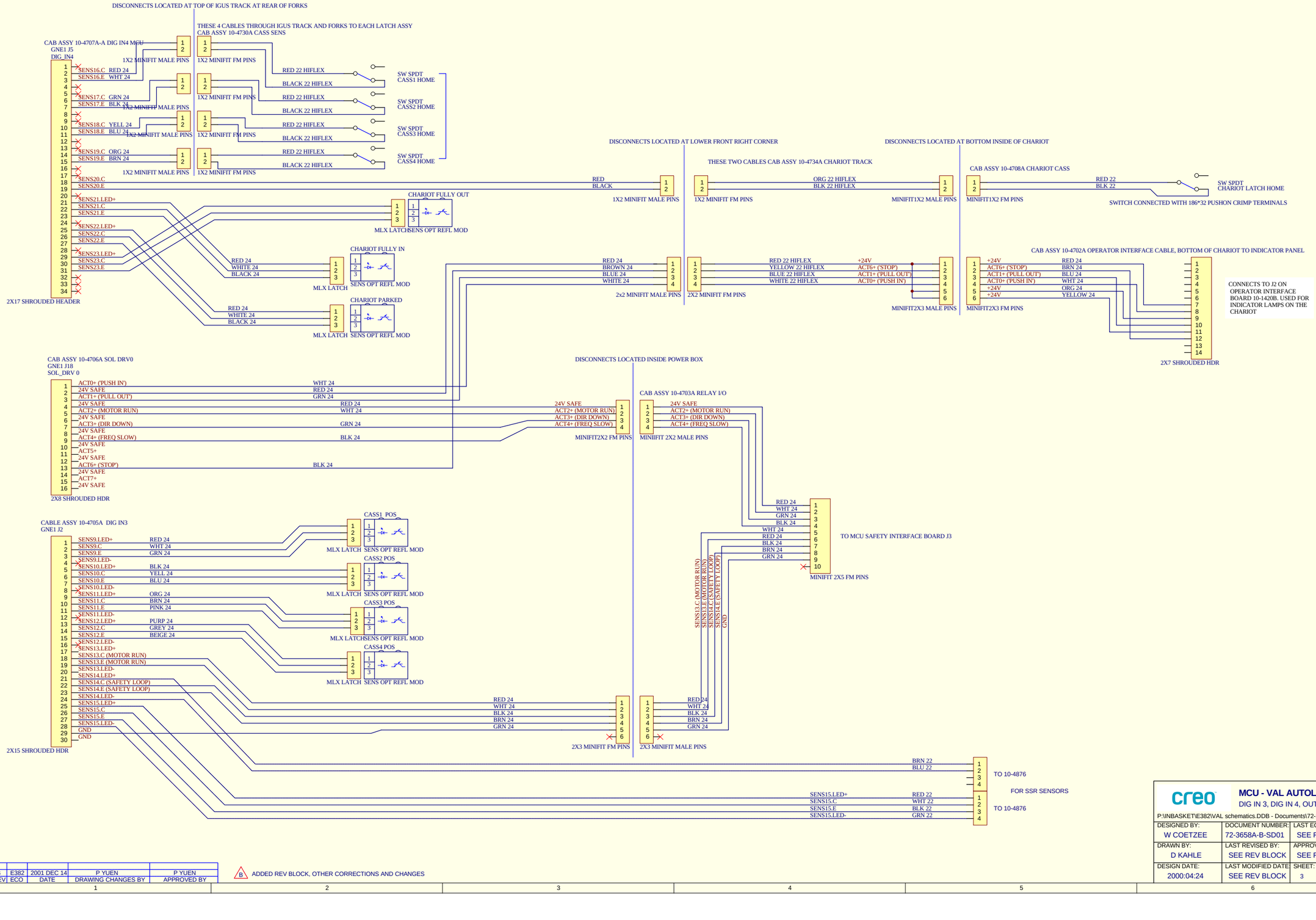
creo

MCU - VAL AUTOLOADER

DIG IN 1 2

P:\INBASKET\E382\VAL schematics.DDB - Documents\72-3658A-B-SD01 DIG IN 1 2.SCH

DESIGNED BY:	DOCUMENT NUMBER:	LAST ECO:
W COETZEE	72-3658A-B-SD01	SEE REV BLOCK
DRAWN BY:	LAST REVISED BY:	APPROVED BY:
D KAHLE	SEE REV BLOCK	SEE REV BLOCK
DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
2000:04:24	SEE REV BLOCK	2 of 6



REV	ECO	DATE	DRAWING CHANGES BY	APPROVED BY
B	E382	2001 DEC 14	P YUEN	P YUEN

B ADDED REV BLOCK, OTHER CORRECTIONS AND CHANGES

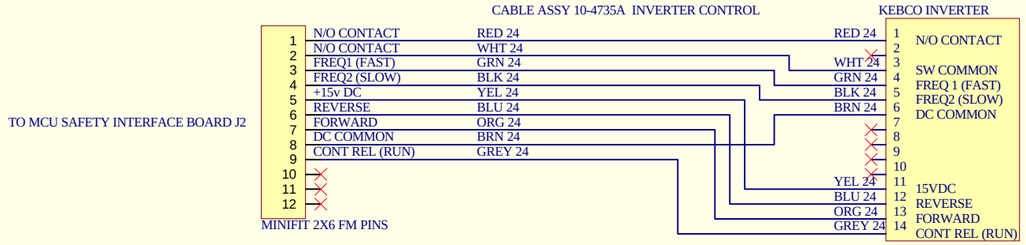
creo

MCU - VAL AUTOLOADER

DIG IN 3, DIG IN 4, OUTPUTS

P:\INBASKET\E382\VAL schematics.DDB - Documents\72-3658A-B-SD01 DIG IN 3 4 OUTPUTS.SCH

DESIGNED BY:	DOCUMENT NUMBER:	LAST ECO:
W COETZEE	72-3658A-B-SD01	SEE REV BLOCK
DRAWN BY:	LAST REVISED BY:	APPROVED BY:
D KAHLE	SEE REV BLOCK	SEE REV BLOCK
DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
2000:04:24	SEE REV BLOCK	3 of 6



REV	ECO	DATE	DRAWING CHANGES BY	APPROVED BY
B	E382	2001 DEC 14	P YUEN	P YUEN

B ADDED REV BLOCK, OTHER CORRECTIONS AND CHANGES

creo

MCU - VAL AUTOLOADER

MISCELLANEOUS CABLES

P:\INBASKET\E382\VAL schematics.DDB - Documents\72-3658A-B-SD01 OTHER CABLES.SCH

DESIGNED BY:	DOCUMENT NUMBER:	LAST ECO:
W COETZEE	72-3658A-B-SD01	SEE REV BLOCK
DRAWN BY:	LAST REVISED BY:	APPROVED BY:
D KAHLE	SEE REV BLOCK	SEE REV BLOCK
DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
2000:04:24	SEE REV BLOCK	4 of 6

NOTE: These sensors are Sharp GP2A22 modulated opto-reflective sensors.
Pin1 is VCC = 5v,
Pin2 is output.
Pin3 is GND.

CABLE ASSY 10-4742A PLATE DOOR SENS 1

DISCONNECT LOCATED INSIDE SHUTTER DOOR ASSY ON THE LARGE DOOR

S3 - PICKER DOOR CLOSED
SENS6.LED+ RED 24
SENS6.C WHT 24
SENS6.E BLK 24
MLX LATCH

S2A - PLATE DOOR CLOSED
SENS6.LED+ RED 24
SENS7.C WHT 24
SENS6.E BLK 24
MLX LATCH

S2B - PLATE DOOR CLOSED
SENS6.LED+ RED 24
SENS7.C WHT 24
SENS6.E BLK 24
MLX LATCH

S1A - PLATE DOOR OPEN
SENS6.LED+ RED 24
SENS8.C WHT 24
SENS6.E BLK 24
MLX LATCH

S1B - PLATE DOOR OPEN
SENS6.LED+ RED 24
SENS8.C WHT 24
SENS6.E BLK 24
MLX LATCH

2X5 MINIFIT FM PINS

CABLE ASSY 10-4743A PLATE DOOR SENS 2

THIS SECTION SLIPPED THROUGH 3/8" AIR HOSE FOR STRAIN RELIEF

2X5 MINIFIT MALE PINS

RED 22 HIFLEX +5v SENS6.LED+
WHITE 22 HIFLEX picker door open SENS6.C
BLACK 22 HIFLEX gnd SENS6.E
BLUE 22 HIFLEX plate door closed SENS7.C
GREY 22 HIFLEX plate door open SENS8.C

2X5,FM PINS,MINIFITJR

CABLE EXTENDS 150mm BEYOND CORNER OF DOOR ASSY

CABLE ASSY 10-4723A LIMIT SWITCHES

UPPER LIM SW
OMRON ROLLER LEVER SW
15-3172

LOWER LIM SW
OMRON ROLLER LEVER SW
15-3172

TO MCU SAFETY INTERFACE BOARD J1
2X2,FM PINS,MINIFITJR

CABLE ASSY 10-4744 PLATE DOOR SAFETY

SW SAFETY (SPRING) 15-3355 (4PLACES)
L PLATE DOOR SAFETY SW

SW SAFETY (SPRING)
PICKER DOOR SAFETY SW

SW SAFETY (SPRING)
PICKER DOOR SAFETY SW

SW SAFETY (SPRING)
R PLATE DOOR SAFETY SW

RED 22AWG HIFLEX
BLACK 22 AWG HIFLEX

THIS SECTION SLIPPED THROUGH 3/8" AIR HOSE FOR STRAIN RELIEF

CABLE ASSY 10-4770

TO MCU SAFETY INTERFACE BOARD J6
MATE-N-LOK1X2 FM PINS

CABLE ASSY 10-4724A - OPERATOR ACCESS SAFETY

SW
SW,SAFETY,OMRON,F.G.
15-3263

2-24AWG CABLE (RED & BLACK)

TO MCU SAFETY INTERFACE BOARD J9
MATE-N-LOK1X2 FM PINS

10-4726B - CHARIOT DOOR SAFETY SW CABLE

15-3457 CASSETTE
DOWN = LATCHED
UP = UNLATCHED

15-3450 POSITION 2
DOWN = LOAD
UP = PARKED

15-3450 POSITION 1
CLOSED IN PARKED OR LOAD POSITIONS

2-24AWG CABLE (RED & BLACK)

TO MCU SAFETY INTERFACE BOARD J7
MATE-N-LOK1X2 FM PINS

CABLE ASSY 10-4725A SERVICE PANEL SAFETY SW

SW
SW,SAFETY,OMRON,F.G.

2-24AWG CABLE (RED & BLACK)

TO MCU SAFETY INTERFACE BOARD J8
MATE-N-LOK1X2 FM PINS

10-4822A - ROOF SAFETY SW CABLE

NC
x 8

2-24AWG CABLE (RED & BLACK)

TO MCU SAFETY INTERFACE BOARD J10
MATE-N-LOK1X2 FM PINS

B ADDED REV BLOCK, OTHER CORRECTIONS AND CHANGES

REV	ECO	DATE	DRAWING CHANGES BY	APPROVED BY
B	E382	2001 DEC 14	P YUEN	P YUEN

creo

MCU - VAL AUTOLOADER
PLATE DOOR AND SAFETY LOOPS

P:\INBASKET\E382\VAL schematics.DDB - Documents\72-3658A-B-SD01 PLATE DOOR ET AL.SCH

DESIGNED BY:	DOCUMENT NUMBER:	LAST ECO:
W COETZEE	72-3658A-B-SD01	SEE REV BLOCK
DRAWN BY:	LAST REVISED BY:	APPROVED BY:
D KAHLE	SEE REV BLOCK	SEE REV BLOCK
DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
2000:04:24	SEE REV BLOCK	5 of 6

MCU POWER BOX

THIS ASSEMBLY IS 10-4736B JOG BUTTON PANEL

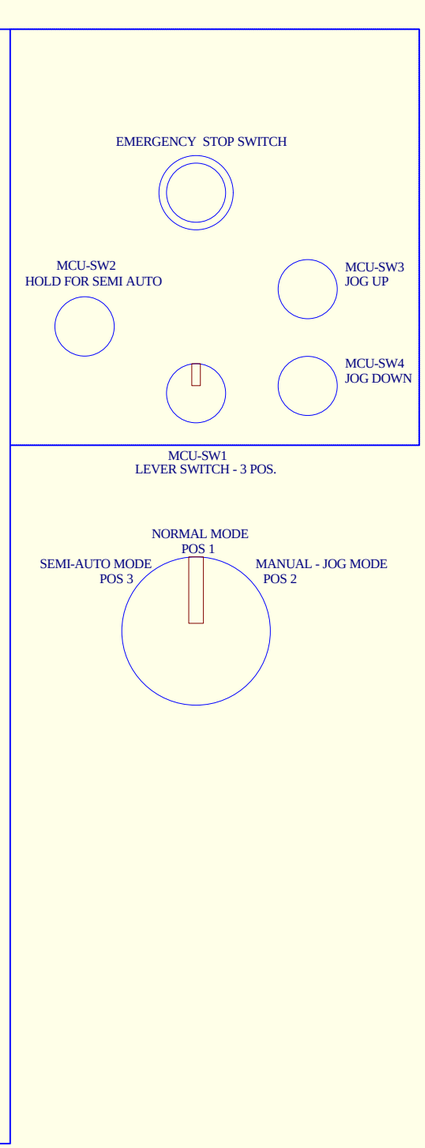
MODES OF OPERATION:

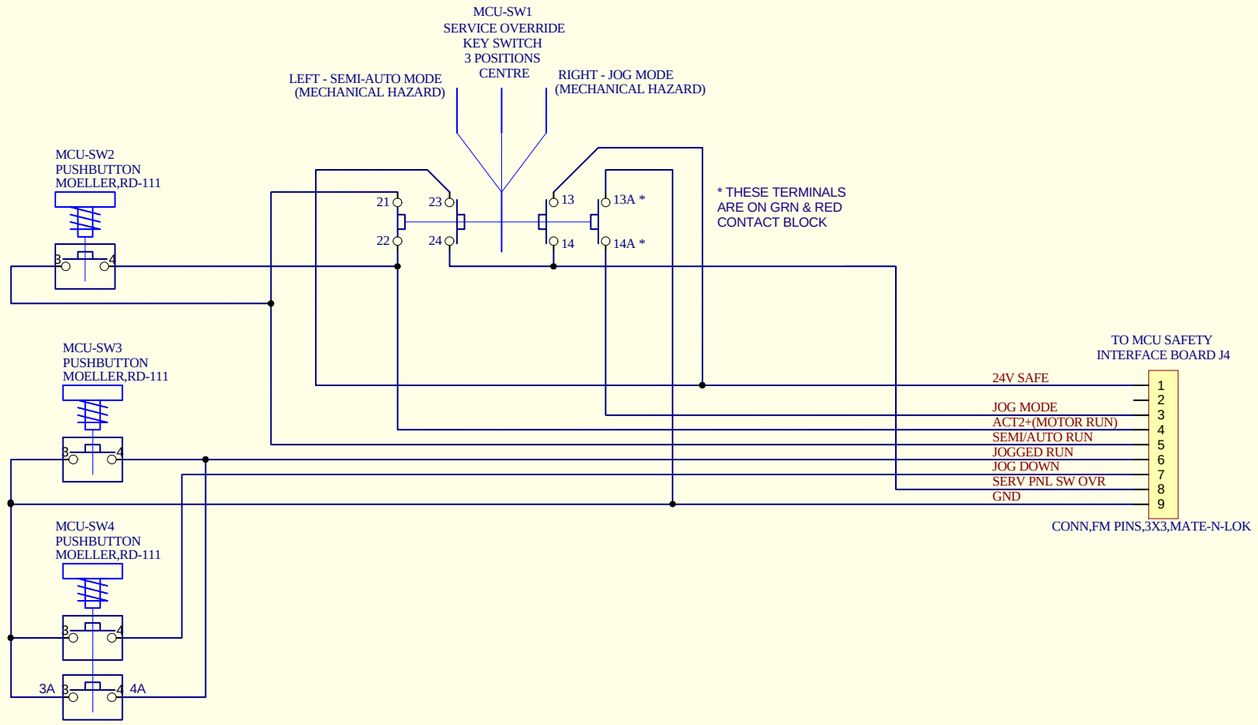
NORMAL MODE:
PUT LEVER SWITCH IN POS. 1
ENSURE ALL 4 MCU DOOR LOOPS ARE CLOSED TO ENABLE THE SAFETY CONTACTOR.
FULLY AUTOMATIC OPERATION WILL RESULT.

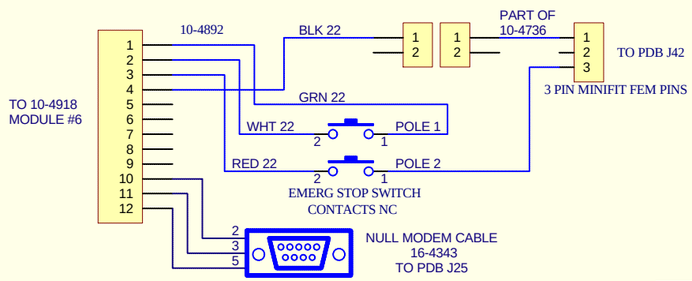
JOG MODE:
PUT LEVER SWITCH IN POS. 2
ENSURE LEFT DOOR, RIGHT DOOR, AND CHARIOT DOOR LOOPS ARE CLOSED.
TO MOVE FORKS UP - PRESS AND HOLD PUSHBUTTON MCU-SW3
TO MOVE FORKS DOWN - PRESS AND HOLD MCU-SW4

PRESSING BOTH WILL RESULT IN THE FORKS MOVING DOWN.

SEMI-AUTOMATIC MODE:
PUT LEVER SWITCH IN POS. 3
ENSURE LEFT DOOR, RIGHT DOOR, AND CHARIOT DOOR LOOPS ARE CLOSED.
PRESS AND HOLD MCU-SW2 WHILE REGULAR AUTOMATIC OPERATION IS BEING CONDUCTED.







REV	ECO	DATE	DRAWING CHANGES BY	APPROVED BY
B	E382	2001 DEC 14	P YUEN	P YUEN

B ADDED REV BLOCK, OTHER CORRECTIONS AND CHANGES

creo

MCU - VAL AUTOLOADER
JOG BUTTON SW PANEL

P:\INBASKET\E382\VAL schematics.DDB - Documents\72-3658A-B-SD01 SW PANEL.SCH

DESIGNED BY:	DOCUMENT NUMBER:	LAST ECO:
W COETZEE	72-3658A-B-SD01	SEE REV BLOCK
DRAWN BY:	LAST REVISED BY:	APPROVED BY:
D KAHLE	SEE REV BLOCK	SEE REV BLOCK
DESIGN DATE:	LAST MODIFIED DATE:	SHEET:
2000:04:24	SEE REV BLOCK	6 of 6