

LP1 ORANGE
OUTPUT 115VAC
(or 240VDC optional)
WITH SPURIOUS OPERATION
SAFETY
"ON" WHEN LD18 IS "ON"

LP2 ORANGE
OUTPUT 115VAC
(or 240VDC optional)
WITHOUT SPURIOUS OPERATION SAFETY
5 INITS "ON" WHEN LD19 TURNS "ON"
5 INITS "OFF" -- INITIATE "EAL STOP"

LD34 ORANGE
+/- 24VDC
INTERNAL
DC POWER
SUPPLY
NORMALLY "ON"

LD33 ORANGE
+48VDC
INTERNAL
DC POWER
SUPPLY
NORMALLY "ON"

LD31 ORANGE
+5VDC
INTERNAL
DC POWER
SUPPLY
NORMALLY "ON"

LD30 ORANGE
+6.3VDC
INTERNAL
DC POWER
SUPPLY
NORMALLY "ON"

LD32 ORANGE
24 VDC ISOLATED
INTERNAL
DC POWER
SUPPLY
NORMALLY "ON"

LD1 YELLOW
LD2 GREEN
LD3 YELLOW
LD4 GREEN
LD5 YELLOW
LD6 GREEN
LD7 YELLOW
LD8 GREEN
LD9 RED
LD10 RED
LD11 YELLOW
LD12 YELLOW
LD13 YELLOW
LD14 YELLOW
LD15 YELLOW
LD16 RED
LD17 RED

LD18 GREEN
LD19 GREEN
LD20 YELLOW
LD21 YELLOW
LD22 YELLOW
LD23 YELLOW
LD24 YELLOW
LD25 ORANGE
LD26 YELLOW
LD27 YELLOW
LD28 YELLOW

SV1
SV2
SV3
SV4
SWS
EHR
MAJOR
FAULT
MINOR
FAULT
SPECIAL

"OUTPUT ENABLE"
(IGNAL FROM
CONTROL BOARD)
"ON" AFTER INITIATION
"ON" AFTER INITIATION
THE RUNNING PROGRAM

"OUTPUT ENABLE"
"ON" WHEN
INITIATED
"ON" AS LD18 IS "ON"
"ON" AS LD19 IS "ON"

"ON" or "OFF"
ACCORDING TO
RUNNING
PROGRAM
"WATER
SAVER
VALVE"
"ON" TURNS "ON"
WHEN ED18
TURNS "ON"
"ON" STAYS "ON"
FOR 1 MINUTE
AFTER ED18
TURNS "OFF"

"RELAY
OUTPUT"
ONE FLASH
OF THE
RELAYING
PROGRAM
"RELAY
AT
FAULT
OCCURRENCE"

LD28 RED
SCR FIRE
"ON" DURING SCR
FIRING ONLY

TS1
SCR TEMP.
SENSOR
TT1
WELD TEMP.
TEMP. SENSOR

PS1
PS2
PS3
PS4
PSS

ES1
EMERGENCY
STOP
NW1
NO WELD

1FS1
or BP1
2FS1
or BP2
1FS2
or BP4
2FS2
or BP8
1FS3
or BP16
2FS3
or BP32
FS4
or BP64
INIT

INPUTS
"INITIATION
GROUP"
"ON" WHEN
INITIATED

INPUTS
"SAFETY
GROUP #1"
NORMALLY "ON"

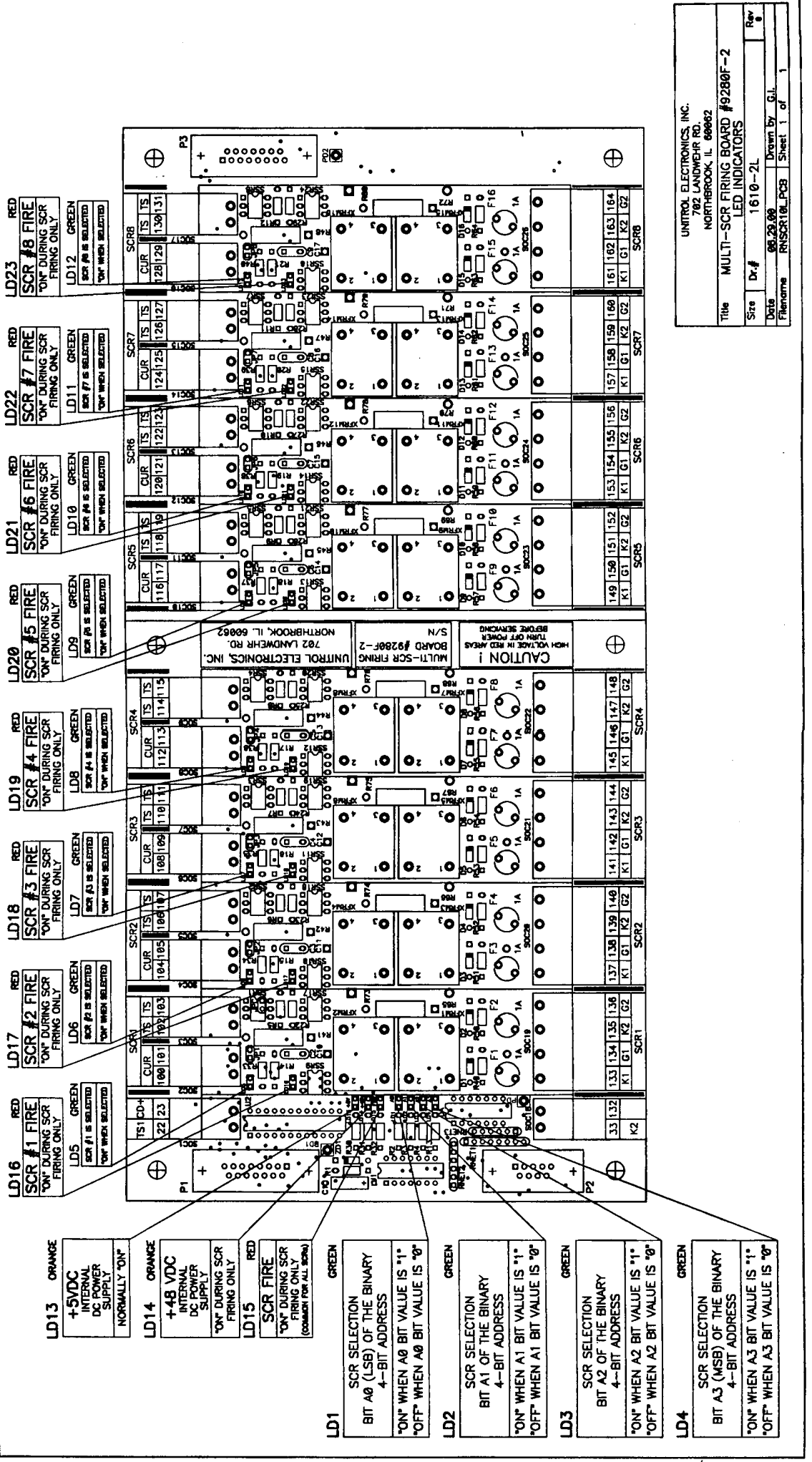
INPUTS
"WELDER
STATUS
SWITCHES"
"ON" WHEN
INITIATED

INPUTS
"SAFETY
GROUP #2"
NORMALLY "ON"

CAUTION
HIGH VOLTAGE IN RELAY AREAS
TURN OFF POWER BEFORE SERVICING

UNIVERSAL ELECTRONICS, INC.
702 LAMONETH RD.
MONTROSE, PA 15864
THE ABOVE INFORMATION IS UNCLASSIFIED EXCEPT WHERE SHOWN OTHERWISE
ED & M/CNO LAMP INDICATORS

DATE 12-18-82
DRAWN BY G.L.
FILENAME 0258594.FCS
Sheet 1 of 1
REV 4
Number #1764-AC



LD13 ORANGE
+5VDC
INTERNAL
DC POWER
SUPPLY
NORMALLY "ON"

LD14 ORANGE
+48 VDC
INTERNAL
DC POWER
SUPPLY
"ON" DURING SCR
FIRING ONLY

LD15 RED
SCR FIRE
"ON" DURING SCR
FIRING ONLY
(COMMON FOR ALL SCRs)

LD1 GREEN
SCR SELECTION
BIT A0 (LSB) OF THE BINARY
4-BIT ADDRESS
"ON" WHEN A0 BIT VALUE IS "1"
"OFF" WHEN A0 BIT VALUE IS "0"

LD2 GREEN
SCR SELECTION
BIT A1 OF THE BINARY
4-BIT ADDRESS
"ON" WHEN A1 BIT VALUE IS "1"
"OFF" WHEN A1 BIT VALUE IS "0"

LD3 GREEN
SCR SELECTION
BIT A2 OF THE BINARY
4-BIT ADDRESS
"ON" WHEN A2 BIT VALUE IS "1"
"OFF" WHEN A2 BIT VALUE IS "0"

LD4 GREEN
SCR SELECTION
BIT A3 (MSB) OF THE BINARY
4-BIT ADDRESS
"ON" WHEN A3 BIT VALUE IS "1"
"OFF" WHEN A3 BIT VALUE IS "0"

LD23 RED
SCR #8 FIRE
"ON" DURING SCR
FIRING ONLY
LD12 GREEN
SCR #8 IS SELECTED
"ON" WHEN SELECTED

LD22 RED
SCR #7 FIRE
"ON" DURING SCR
FIRING ONLY
LD11 GREEN
SCR #7 IS SELECTED
"ON" WHEN SELECTED

LD21 RED
SCR #6 FIRE
"ON" DURING SCR
FIRING ONLY
LD10 GREEN
SCR #6 IS SELECTED
"ON" WHEN SELECTED

LD20 RED
SCR #5 FIRE
"ON" DURING SCR
FIRING ONLY
LD9 GREEN
SCR #5 IS SELECTED
"ON" WHEN SELECTED

LD19 RED
SCR #4 FIRE
"ON" DURING SCR
FIRING ONLY
LD8 GREEN
SCR #4 IS SELECTED
"ON" WHEN SELECTED

LD18 RED
SCR #3 FIRE
"ON" DURING SCR
FIRING ONLY
LD7 GREEN
SCR #3 IS SELECTED
"ON" WHEN SELECTED

LD17 RED
SCR #2 FIRE
"ON" DURING SCR
FIRING ONLY
LD6 GREEN
SCR #2 IS SELECTED
"ON" WHEN SELECTED

LD16 RED
SCR #1 FIRE
"ON" DURING SCR
FIRING ONLY
LD5 GREEN
SCR #1 IS SELECTED
"ON" WHEN SELECTED

SCR	TS	S
SCR8	128	131

SCR	TS	S
SCR7	124	127

SCR	TS	S
SCR6	120	123

SCR	TS	S
SCR5	116	119

SCR	TS	S
SCR4	112	115

SCR	TS	S
SCR3	108	111

SCR	TS	S
SCR2	104	107

SCR	TS	S
SCR1	100	103

SCR	TS	S
SCR8	161	164

SCR	TS	S
SCR7	157	160

SCR	TS	S
SCR6	153	156

SCR	TS	S
SCR5	149	152

SCR	TS	S
SCR4	145	148

SCR	TS	S
SCR3	141	144

SCR	TS	S
SCR2	137	140

SCR	TS	S
SCR1	133	136

UNITROL ELECTRONICS, INC.
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CAUTION!
HIGH VOLTAGE IN RED AREAS
TURN OFF POWER

LP1 ORANGE
OUTPUT 115VAC
 WITHOUT SPURIOUS OPERATION SAFETY
 a) TURNS "ON" WHEN LD19 TURNS "ON".
 (LD19 IS POSITIONED ON POWER SUPPLY & I/O BOARD).
 b) STAYS "ON" PERMANENTLY.
 (TO TURN "OFF" - INITIATE "EM. STOP")

DS9 ORANGE
 +24VDC
 INTERNAL
 DC POWER
 SUPPLY
 NORMALLY "ON"

DS11 ORANGE
 +5VDC
 INTERNAL
 DC POWER
 SUPPLY
 NORMALLY "ON"

LD10 RED
 VALVE SV6
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD9 RED
 VALVE SV5
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD11 RED
 VALVE SV7
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD12 RED
 VALVE SV8
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD13 (OPTIONAL) RED
 VALVE SV9
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD14 (OPTIONAL) RED
 VALVE SV10
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD15 (OPTIONAL) RED
 VALVE SV11
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD16 (OPTIONAL) RED
 VALVE SV12
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD17 (OPTIONAL) RED
 VALVE SV13
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD18 (OPTIONAL) RED
 VALVE SV14
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD19 (OPTIONAL) RED
 VALVE SV15
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD20 (OPTIONAL) RED
 VALVE SV16
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD21 (OPTIONAL) RED
 VALVE SV17
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD22 (OPTIONAL) RED
 VALVE SV18
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD23 (OPTIONAL) RED
 VALVE SV19
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD24 (OPTIONAL) RED
 VALVE SV20
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD25 (OPTIONAL) RED
 VALVE SV21
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD26 (OPTIONAL) RED
 VALVE SV22
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD27 (OPTIONAL) RED
 VALVE SV23
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD28 (OPTIONAL) RED
 VALVE SV24
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD29 (OPTIONAL) RED
 VALVE SV25
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD30 (OPTIONAL) RED
 VALVE SV26
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD31 (OPTIONAL) RED
 VALVE SV27
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD32 (OPTIONAL) RED
 VALVE SV28
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD33 (OPTIONAL) RED
 VALVE SV29
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD34 (OPTIONAL) RED
 VALVE SV30
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD35 (OPTIONAL) RED
 VALVE SV31
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD36 (OPTIONAL) RED
 VALVE SV32
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD37 (OPTIONAL) RED
 VALVE SV33
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD38 (OPTIONAL) RED
 VALVE SV34
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD39 (OPTIONAL) RED
 VALVE SV35
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD40 (OPTIONAL) RED
 VALVE SV36
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD41 (OPTIONAL) RED
 VALVE SV37
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD42 (OPTIONAL) RED
 VALVE SV38
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD43 (OPTIONAL) RED
 VALVE SV39
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD44 (OPTIONAL) RED
 VALVE SV40
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD45 (OPTIONAL) RED
 VALVE SV41
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD46 (OPTIONAL) RED
 VALVE SV42
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD47 (OPTIONAL) RED
 VALVE SV43
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD48 (OPTIONAL) RED
 VALVE SV44
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD49 (OPTIONAL) RED
 VALVE SV45
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

LD50 (OPTIONAL) RED
 VALVE SV46
 OUTPUT 115VAC
 "ON" WHEN VALVE IS "ON"
 "OFF" WHEN VALVE IS "OFF"

YELLOW

GREEN

GREEN

GREEN

ORANGE

ORANGE

ORANGE

ORANGE

RED

LD5, LD6, LD7

PRESSURE TRANSDUCER OUTPUT STATUS INITIATION
 SELECTABLE BY GROUP ADDRESS
 (AT PRESENT ALL PRESSURE TRANSDUCERS
 HAVE GROUP ADDRESS "2" AND
 LD5, LD6, LD7 ARE NOT USED)

"ON" DURING INITIATION PULSE
 (THE "ON" PULSE MAY BE TOO SHORT
 TO BE NOTICEABLE)

**"ON"/"OFF" PRESSURE TRANSDUCER OUTPUT
 STATUS CONTROL SIGNAL**

"ON" BEFORE ANY PRESSURE TRANSDUCER
 OUTPUT HAD TO BE TURNED "ON".
 "OFF" BEFORE ANY PRESSURE TRANSDUCER
 OUTPUT HAD TO BE TURNED "OFF".

**PRESSURE TRANSDUCER "1"
 IS SELECTED**

"ON" WHEN SELECTED

**PRESSURE TRANSDUCER "2"
 IS SELECTED**

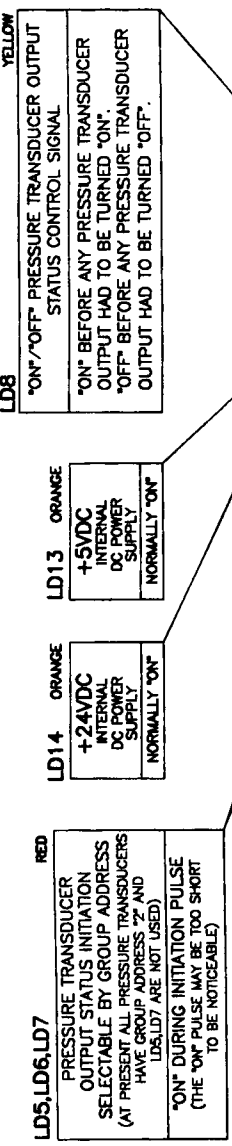
"ON" WHEN SELECTED

**PRESSURE TRANSDUCER "3"
 IS SELECTED**

"ON" WHEN SELECTED

**PRESSURE TRANSDUCER "4"
 IS SELECTED**

"ON" WHEN SELECTED



**PRESSURE TRANSDUCER
 SELECTION**
 BIT A0 (LSB) OF THE BINARY
 4-BIT ADDRESS

"ON" FOR SHORT TIME IF
 A0 BIT VALUE IS "1"

VALVE SV5 STATUS
 (VALVES AND TRANSDUCERS
 HAVE COMMON ADDRESS/DATA
 MUX(d) BUS)

"ON" WHEN SV5 IS "OFF"
 "OFF" WHEN SV5 IS "ON"

**PRESSURE TRANSDUCER
 SELECTION**
 BIT A1 OF THE BINARY
 4-BIT ADDRESS

"ON" FOR SHORT TIME IF
 A1 BIT VALUE IS "1"

VALVE SV6 STATUS
 (VALVES AND TRANSDUCERS
 HAVE COMMON ADDRESS/DATA
 MUX(d) BUS)

"ON" WHEN SV6 IS "OFF"
 "OFF" WHEN SV6 IS "ON"

**PRESSURE TRANSDUCER
 SELECTION**
 BIT A2 OF THE BINARY
 4-BIT ADDRESS

"ON" FOR SHORT TIME IF
 A2 BIT VALUE IS "1"

VALVE SV7 STATUS
 (VALVES AND TRANSDUCERS
 HAVE COMMON ADDRESS/DATA
 MUX(d) BUS)

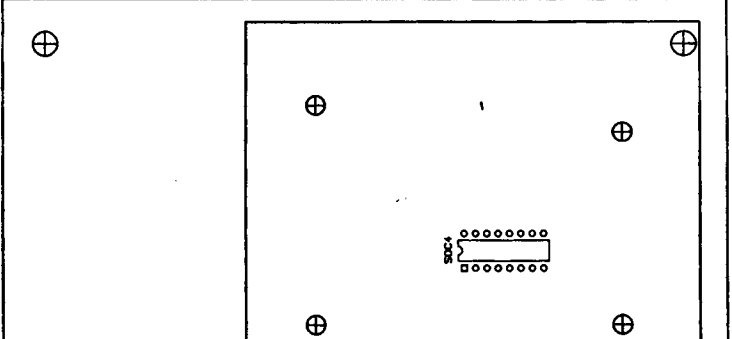
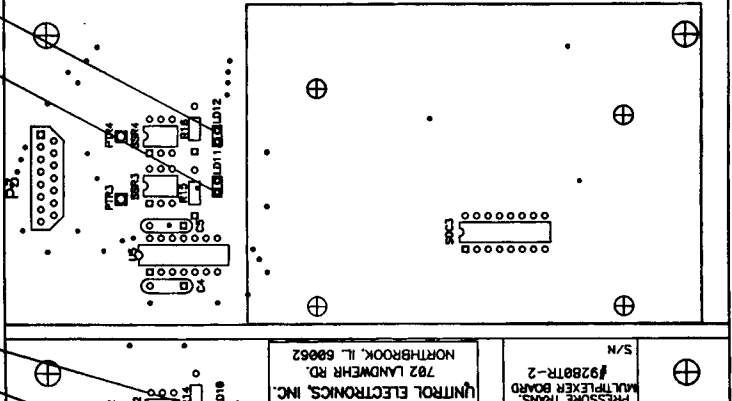
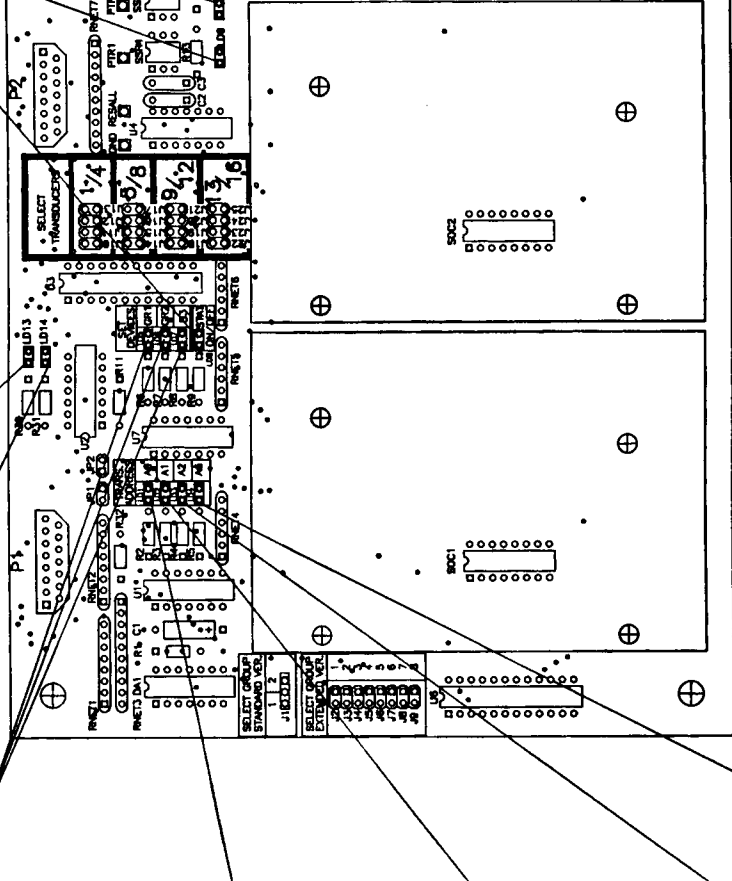
"ON" WHEN SV7 IS "OFF"
 "OFF" WHEN SV7 IS "ON"

**PRESSURE TRANSDUCER
 SELECTION**
 BIT A3 (MSB) OF THE BINARY
 4-BIT ADDRESS

"ON" FOR SHORT TIME IF
 A3 BIT VALUE IS "1"

VALVE SV8 STATUS
 (VALVES AND TRANSDUCERS
 HAVE COMMON ADDRESS/DATA
 MUX(d) BUS)

"ON" WHEN SV8 IS "OFF"
 "OFF" WHEN SV8 IS "ON"



UNITROL ELECTRONICS, INC.
 702 LANDWEHR RD.
 NORTHBROOK, ILL. 60062

Title: PRESSURE TRANSDUCER MULTIPLEXER
 BOARD #9280TR-2
 LED INDICATORS

Size: Number #1619-TR2
 Date: 06.31.66 Drawn by: G.L.

Filename: RPRESSAL.PCB Sheet 1 of 1