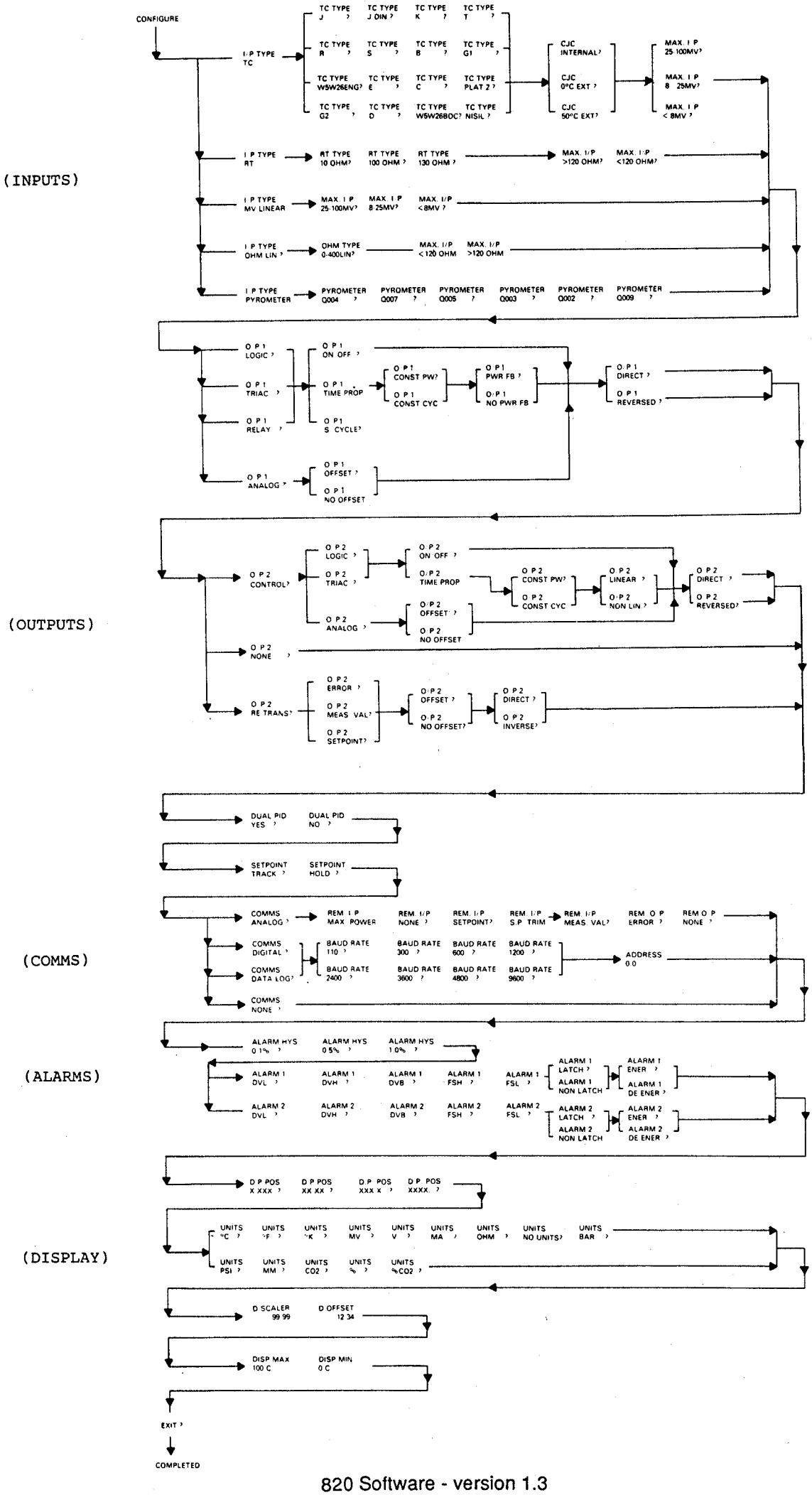
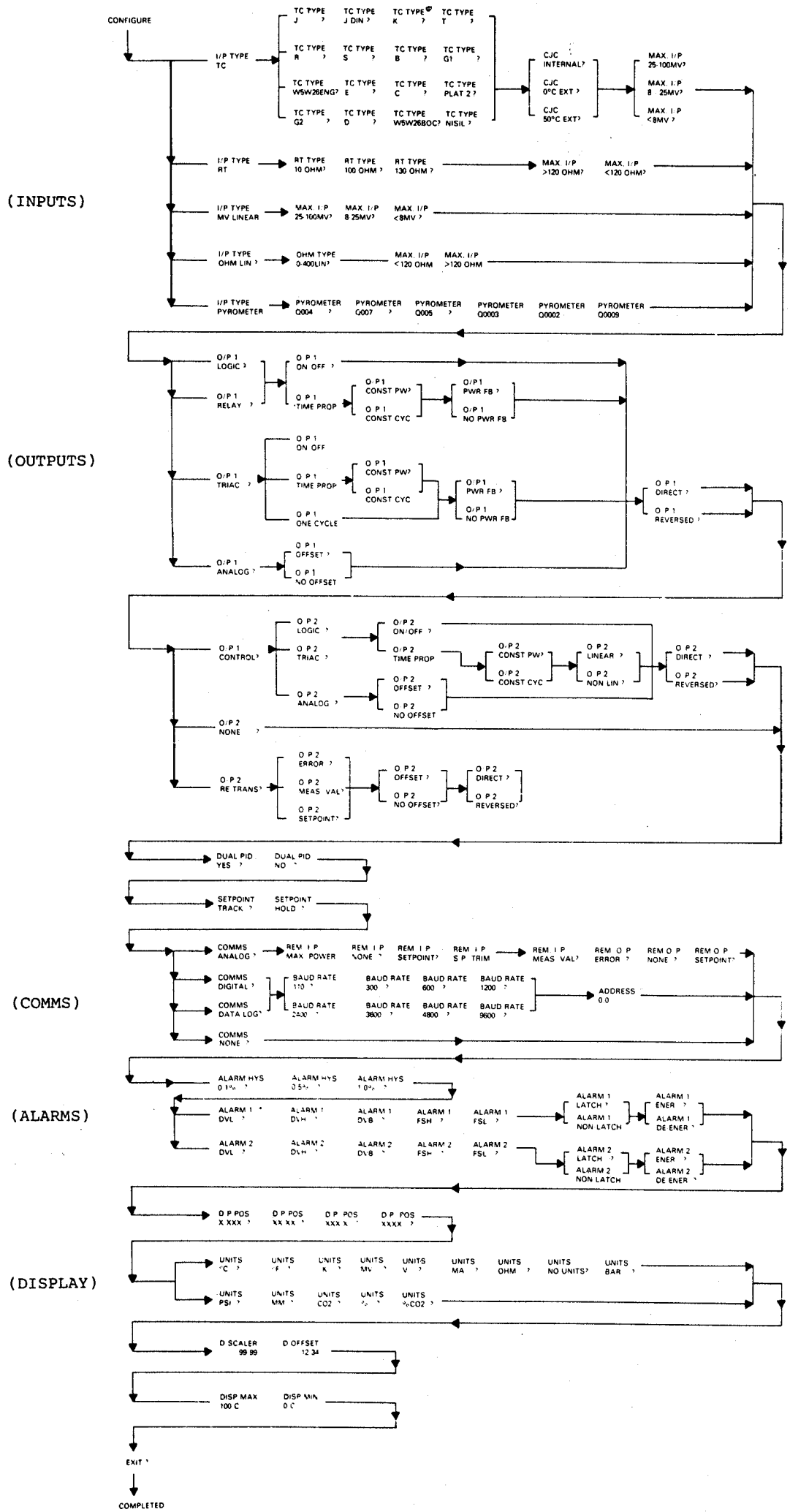
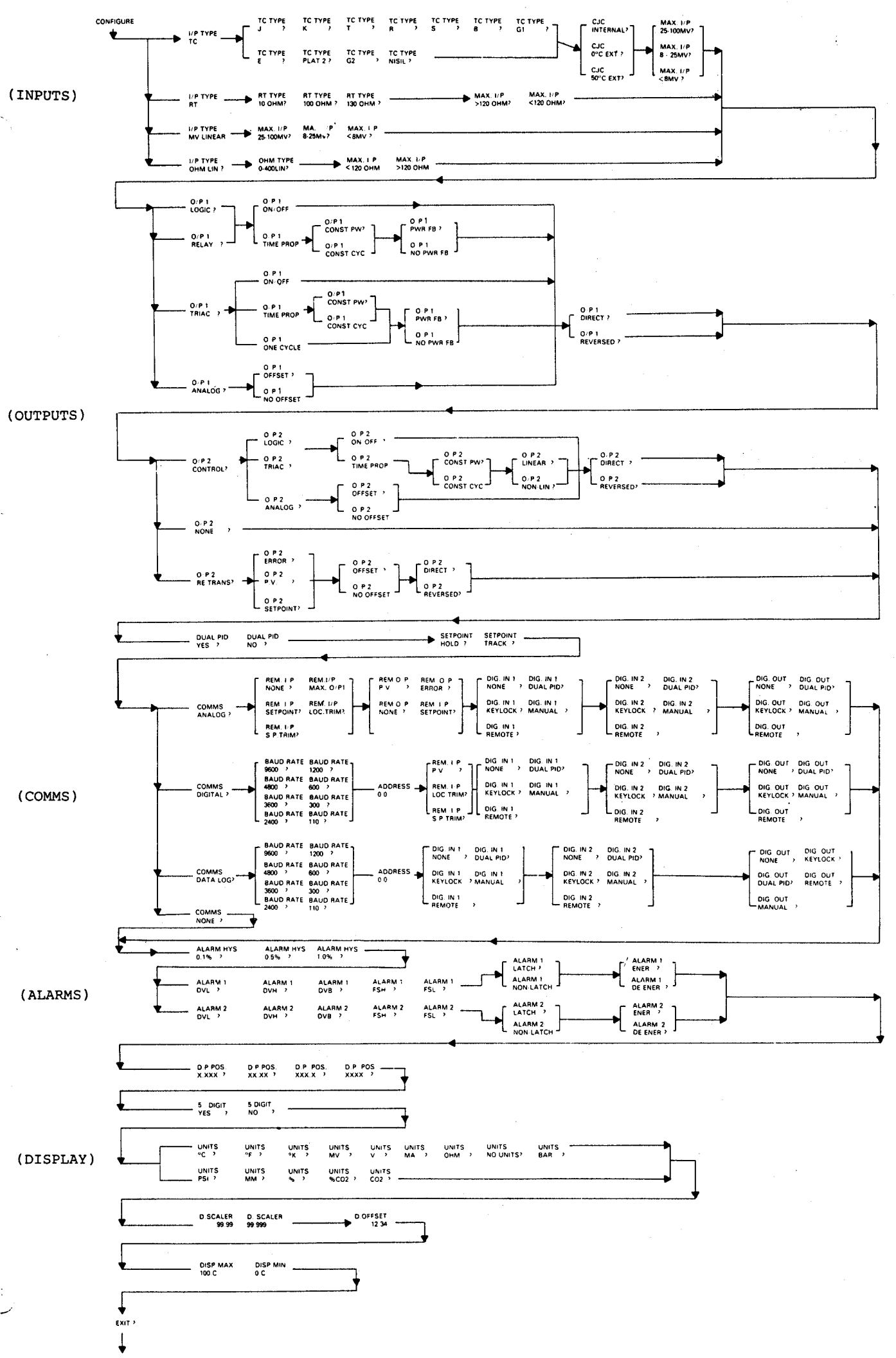
800 SERIES INSTRUMENT
CONFIGURATION AND CALIBRATION

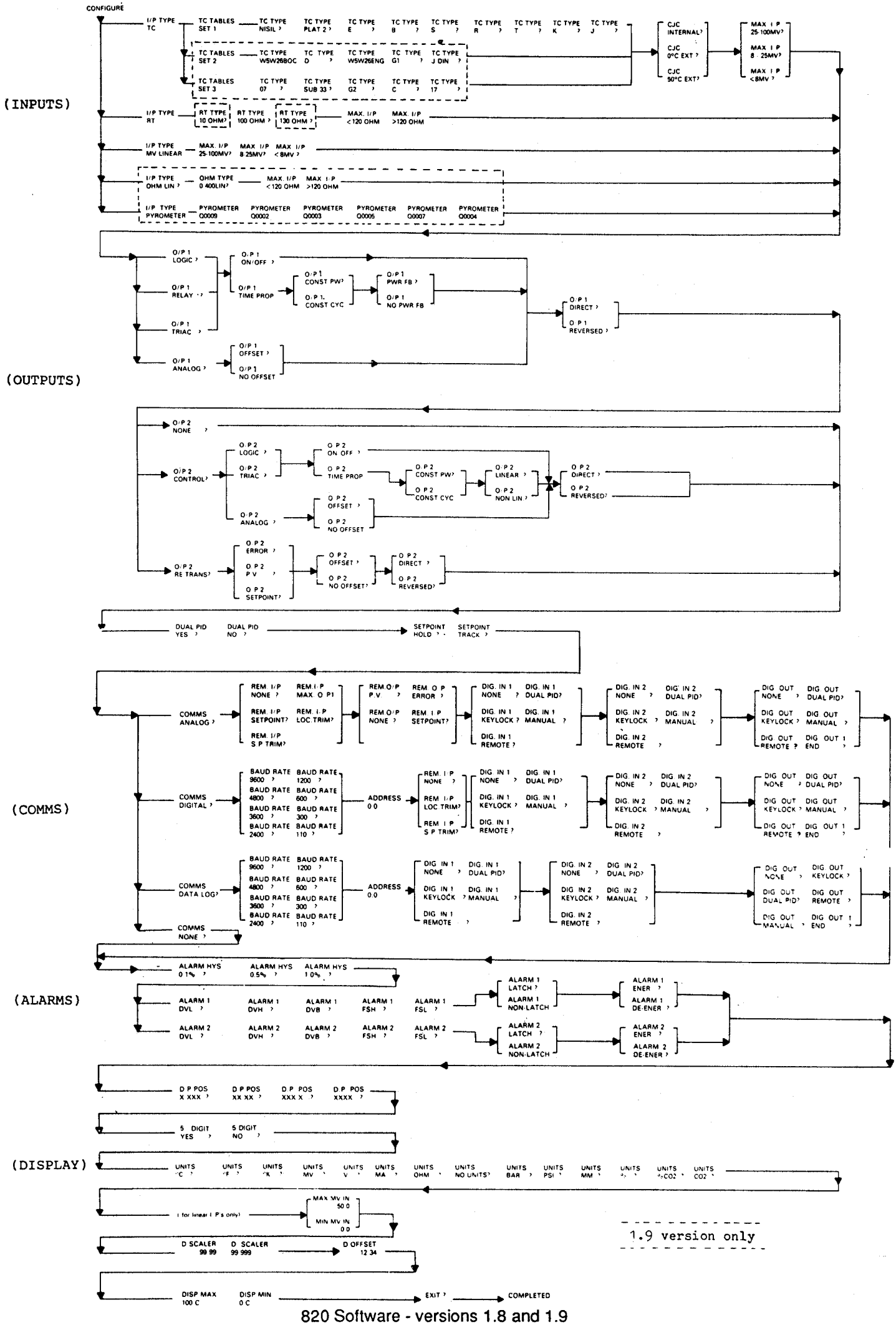
Contents Page

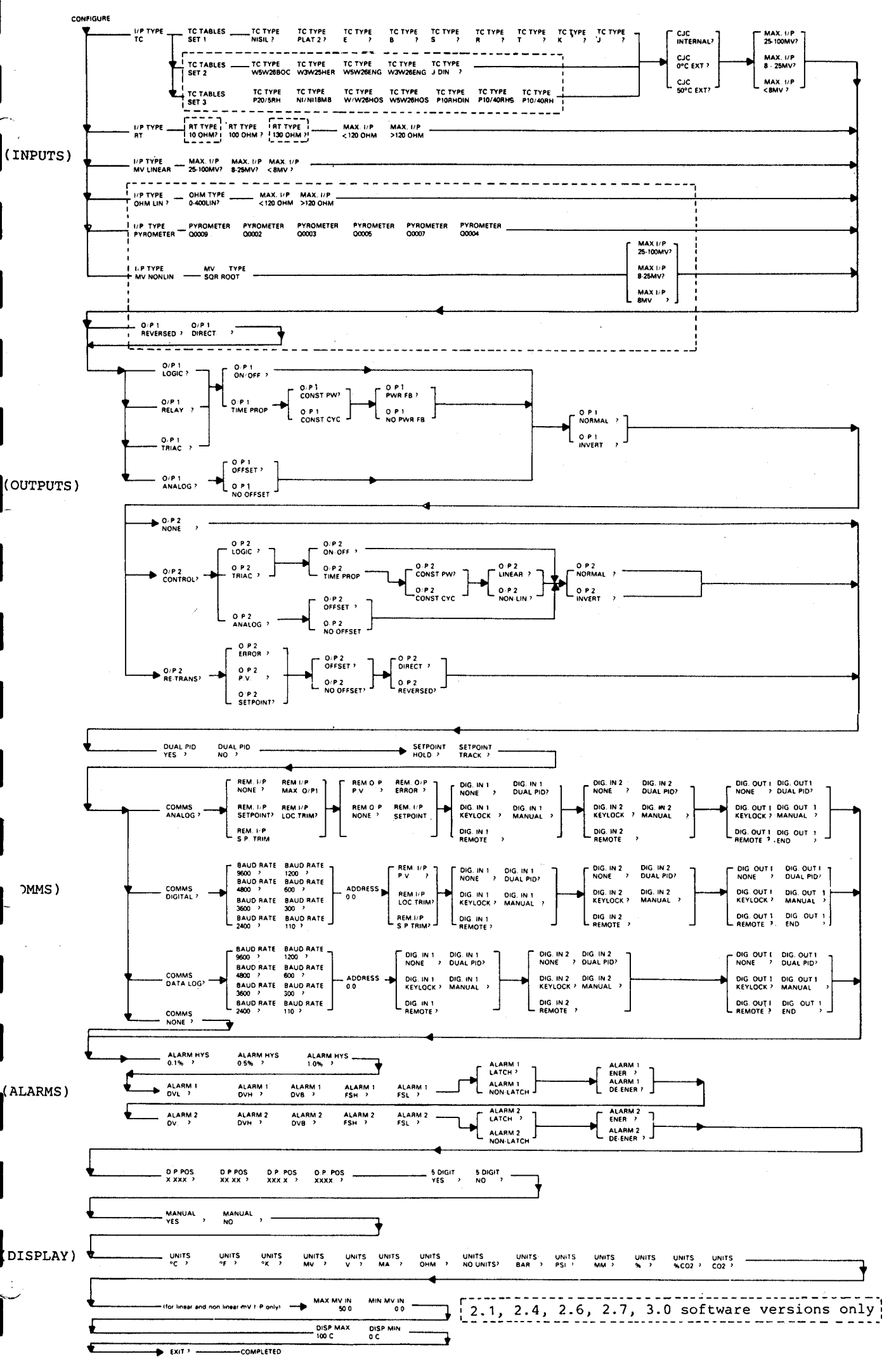
The Configuration of the instrument follows a set sequence covering all the main facilities available. (See flowchart as appropriate). Each question displayed requires a simple answer of YES or NO. As each question is answered you are automatically progressed through the sequences until you have completed the whole configuration.

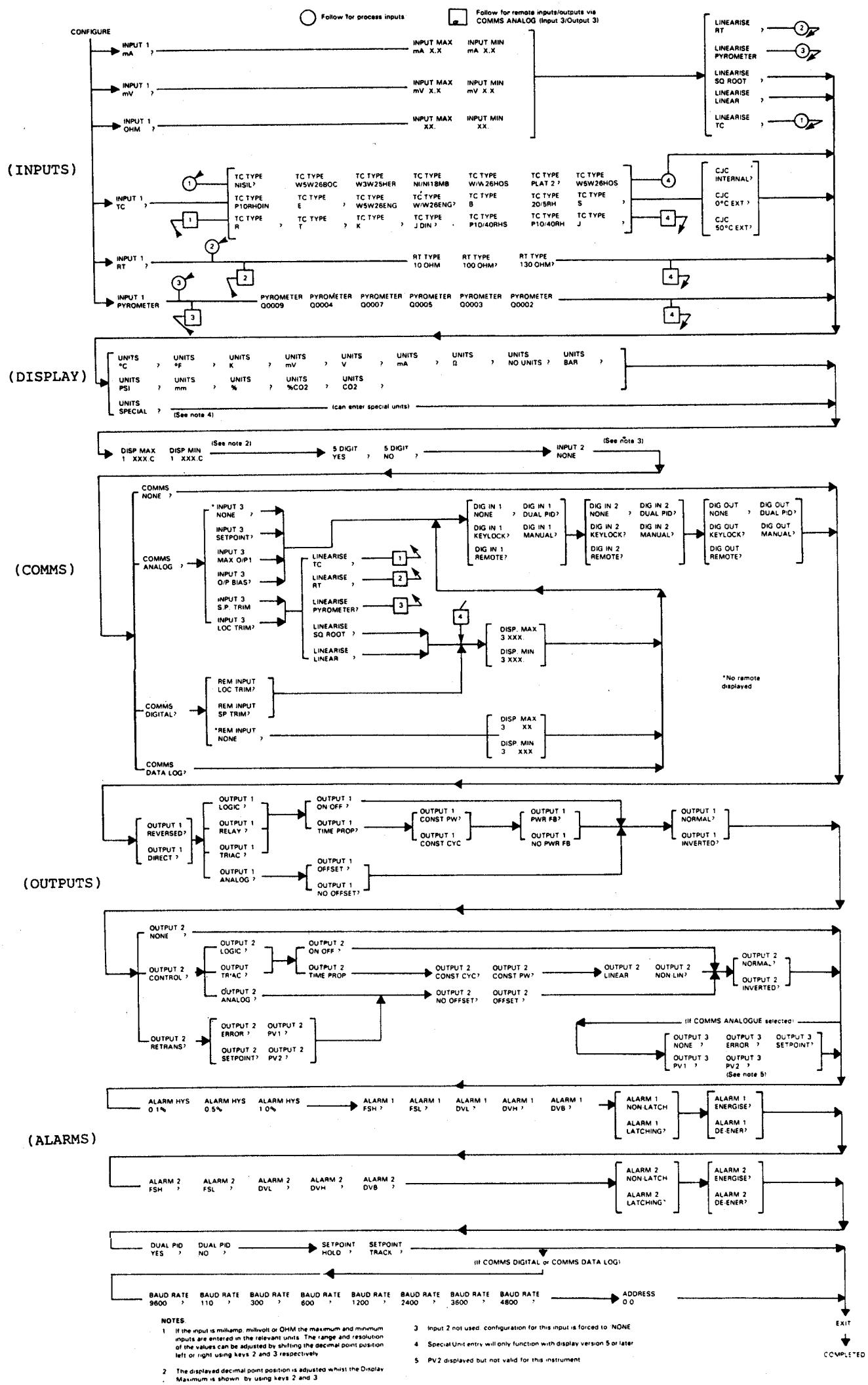

CONFIGURE
(INPUTS)
I/P TYPE TC
TC TYPE J ? TC TYPE J DIN ? TC TYPE K ? TC TYPE T ?
TC TYPE R ? TC TYPE S ? TC TYPE B ? TC TYPE G1 ?
TC TYPE W5W26ENG? TC TYPE E ? TC TYPE C ? TC TYPE PLAT 2 ?
TC TYPE G2 ? TC TYPE D ? TC TYPE W5W26BOC? TC TYPE NISIL ?
CJC INTERNAL?
CJC 0°C EXT ?
CJC 50°C EXT?
MAX. I/P 25-100MV?
MAX. I/P 8-25MV?
MAX. I/P < 8MV ?
I/P TYPE RT
RT TYPE 10 OHM?
RT TYPE 100 OHM ?
RT TYPE 130 OHM ?
MAX. I/P >120 OHM?
MAX. I/P <120 OHM?
I/P TYPE MV LINEAR
MAX. I/P 25-100MV?
MAX. I/P 8-25MV?
MAX. I/P < 8MV ?
I/P TYPE OHM LIN ?
OHM TYPE 0-400LIN?
MAX. I/P < 120 OHM
MAX. I/P >120 OHM
I/P TYPE PYROMETER
PYROMETER Q004 ?
PYROMETER Q007 ?
PYROMETER Q005 ?
PYROMETER Q003 ?
PYROMETER Q002 ?
PYROMETER Q009 ?
O P 1 LOGIC ?
O P 1 TRIAC ?
O P 1 RELAY ?
O P 1 ON OFF ?
O P 1 TIME PROP
O P 1 S CYCLE?
O P 1 CONST PW?
O P 1 CONST CYC
O P 1 PWR FB ?
O P 1 NO PWR FB
O P 1 DIRECT ?
O P 1 REVERSED ?
O P 1 ANALOG ?
O P 1 OFFSET ?
O P 1 NO OFFSET
(OUTPUTS)
O P 2 CONTROL?
O P 2 LOGIC ?
O P 2 TRIAC ?
O P 2 ANALOG ?
O P 2 ON OFF ?
O P 2 TIME PROP
O P 2 OFFSET ?
O P 2 NO OFFSET
O P 2 CONST PW?
O P 2 CONST CYC
O P 2 LINEAR ?
O P 2 NON LIN ?
O P 2 DIRECT ?
O P 2 REVERSED?
O P 2 NONE ?
O P 2 RE TRANS?
O P 2 ERROR ?
O P 2 MEAS VAL?
O P 2 SETPOINT?
O P 2 OFFSET ?
O P 2 NO OFFSET?
O P 2 DIRECT ?
O P 2 INVERSE?
DUAL PID YES ?
DUAL PID NO ?
SETPOINT TRACK ?
SETPOINT HOLD ?
(COMMS)
COMMS ANALOG ?
COMMS DIGITAL ?
COMMS DATA LOG?
COMMS NONE ?
REM I/P MAX POWER
REM I/P NONE ?
REM I/P SETPOINT?
REM I/P S.P TRIM
REM I/P MEAS VAL?
REM O P ERROR ?
REM O P NONE ?
BAUD RATE 110 ?
BAUD RATE 300 ?
BAUD RATE 600 ?
BAUD RATE 1200 ?
BAUD RATE 2400 ?
BAUD RATE 3600 ?
BAUD RATE 4800 ?
BAUD RATE 9600 ?
ADDRESS 0 0
(ALARMS)
ALARM HYS 0.1% ?
ALARM HYS 0.5% ?
ALARM HYS 1.0% ?
ALARM 1 DVL ?
ALARM 1 DVH ?
ALARM 1 DVB ?
ALARM 1 FSH ?
ALARM 1 FSL ?
ALARM 1 LATCH ?
ALARM 1 NON LATCH
ALARM 1 ENER ?
ALARM 1 DE ENER ?
ALARM 2 DVL ?
ALARM 2 DVH ?
ALARM 2 DVB ?
ALARM 2 FSH ?
ALARM 2 FSL ?
ALARM 2 LATCH ?
ALARM 2 NON LATCH
ALARM 2 ENER ?
ALARM 2 DE ENER ?
(DISPLAY)
D P POS X.XXX ?
D P POS XX.XX ?
D P POS XXX.X ?
D P POS XXXX. ?
UNITS °C ?
UNITS °F ?
UNITS °K ?
UNITS MV ?
UNITS V ?
UNITS MA ?
UNITS OHM ?
UNITS NO UNITS?
UNITS BAR ?
UNITS PSI ?
UNITS MM ?
UNITS CO2 ?
UNITS % ?
UNITS %CO2 ?
D SCALER 99.99
D OFFSET 12.34
DISP MAX 100.0
DISP MIN 0.0
EXIT ?
COMPLETED

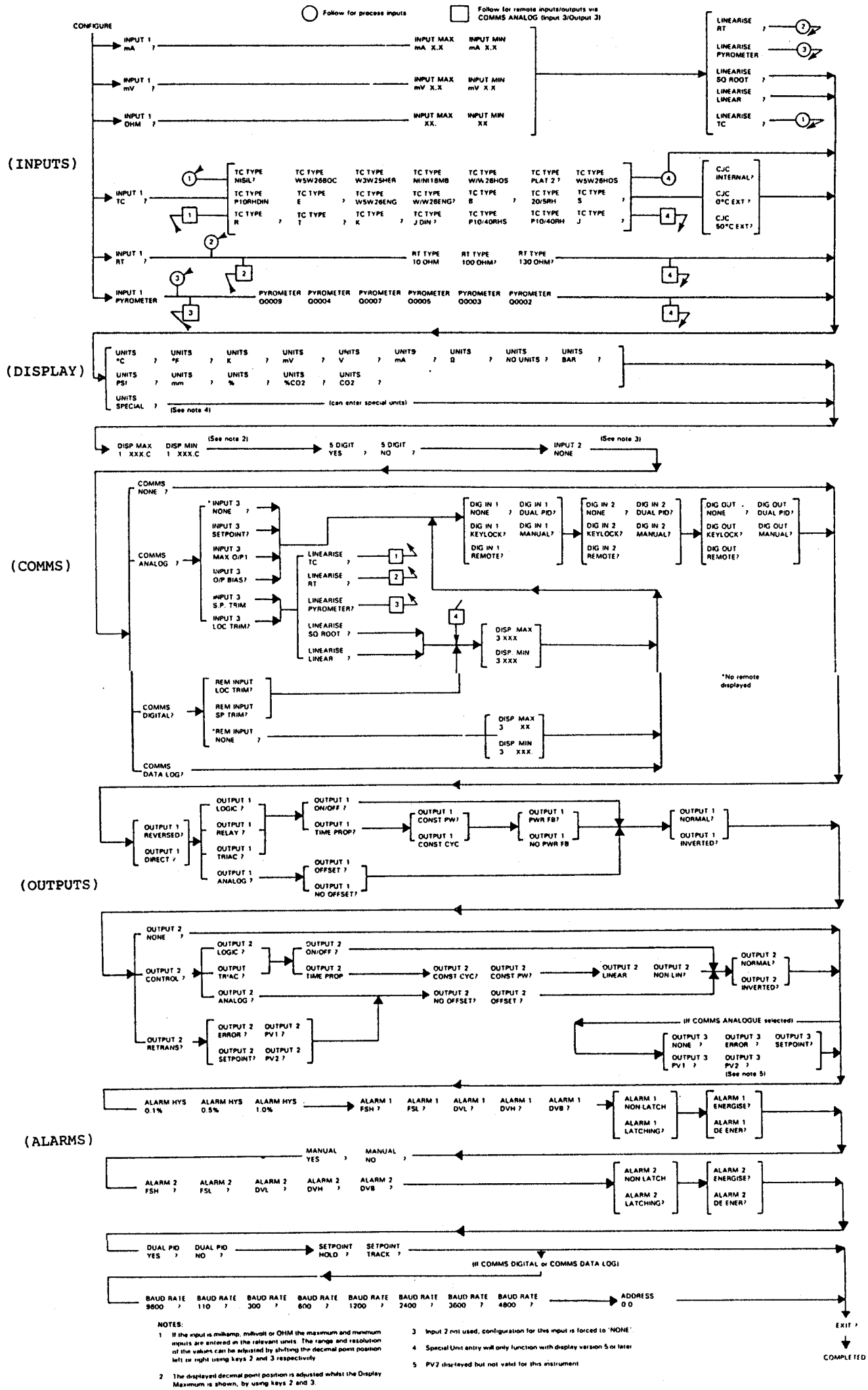

CONFIGURE
(INPUTS)
I/P TYPE TC
TC TYPE J
TC TYPE J DIN
TC TYPE K
TC TYPE T
TC TYPE R
TC TYPE S
TC TYPE B
TC TYPE G1
TC TYPE W5W26ENG
TC TYPE E
TC TYPE C
TC TYPE PLAT 2
TC TYPE G2
TC TYPE D
TC TYPE W5W26BOC
TC TYPE NISIL
CJC INTERNAL
CJC 0°C EXT
CJC 50°C EXT
MAX I/P 25-100MV
MAX I/P 8-25MV
MAX I/P <8MV
I/P TYPE RT
RT TYPE 10 OHM
RT TYPE 100 OHM
RT TYPE 130 OHM
MAX I/P >120 OHM
MAX I/P <120 OHM
I/P TYPE MV LINEAR
MAX I/P 25-100MV
MAX I/P 8-25MV
MAX I/P <8MV
I/P TYPE OHM LIN
OHM TYPE 0-400LIN
MAX I/P <120 OHM
MAX I/P >120 OHM
I/P TYPE PYROMETER
PYROMETER Q004
PYROMETER Q007
PYROMETER Q005
PYROMETER Q0003
PYROMETER Q0002
PYROMETER Q0009
(OUTPUTS)
O/P 1 LOGIC
O/P 1 RELAY
O P 1 ON OFF
O P 1 TIME PROP
O/P 1 CONST PW
O P 1 CONST CYC
O/P 1 PWR FB
O/P 1 NO PWR FB
O/P 1 TRIAC
O P 1 ON OFF
O P 1 TIME PROP
O P 1 CONST PW
O P 1 CONST CYC
O P 1 ONE CYCLE
O/P 1 PWR FB
O/P 1 NO PWR FB
O P 1 DIRECT
O P 1 REVERSED
O/P 1 ANALOG
O P 1 OFFSET
O P 1 NO OFFSET
O/P 1 CONTROL
O P 2 LOGIC
O P 2 TRIAC
O P 2 ANALOG
O/P 2 ON/OFF
O/P 2 TIME PROP
O/P 2 CONST PW
O/P 2 CONST CYC
O P 2 LINEAR
O P 2 NON LIN
O P 2 DIRECT
O P 2 REVERSED
O P 2 OFFSET
O P 2 NO OFFSET
O/P 2 NONE
O P 2 RE TRANS
O P 2 ERROR
O P 2 MEAS VAL
O P 2 SETPOINT
O P 2 OFFSET
O P 2 NO OFFSET
O P 2 DIRECT
O P 2 REVERSED
DUAL PID YES
DUAL PID NO
SETPOINT TRACK
SETPOINT HOLD
(COMMS)
COMMS ANALOG
COMMS DIGITAL
COMMS DATA LOG
COMMS NONE
REM I P MAX POWER
REM I P NONE
REM I P SETPOINT
REM I P S P TRIM
REM I P MEAS VAL
REM O P ERROR
REM O P NONE
REM O P SETPOINT
BAUD RATE 110
BAUD RATE 300
BAUD RATE 600
BAUD RATE 1200
BAUD RATE 2400
BAUD RATE 3600
BAUD RATE 4800
BAUD RATE 9600
ADDRESS 0 0
(ALARMS)
ALARM HYS 0 1%
ALARM HYS 0 5%
ALARM HYS 1 0%
ALARM 1 DVL
ALARM 1 DVH
ALARM 1 DVB
ALARM 1 FSH
ALARM 1 FSL
ALARM 1 LATCH
ALARM 1 NON LATCH
ALARM 1 ENER
ALARM 1 DE ENER
ALARM 2 DVL
ALARM 2 DVH
ALARM 2 DVB
ALARM 2 FSH
ALARM 2 FSL
ALARM 2 LATCH
ALARM 2 NON LATCH
ALARM 2 ENER
ALARM 2 DE ENER
(DISPLAY)
D P POS X XXX
D P POS XX XX
D P POS XXX X
D P POS XXXX
UNITS °C
UNITS °F
UNITS K
UNITS MV
UNITS V
UNITS MA
UNITS OHM
UNITS NO UNITS
UNITS BAR
UNITS PSI
UNITS MM
UNITS CO2
UNITS %
UNITS %CO2
D SCALER 99 99
D OFFSET 12 34
DISP MAX 100 C
DISP MIN 0 C
EXIT
COMPLETED

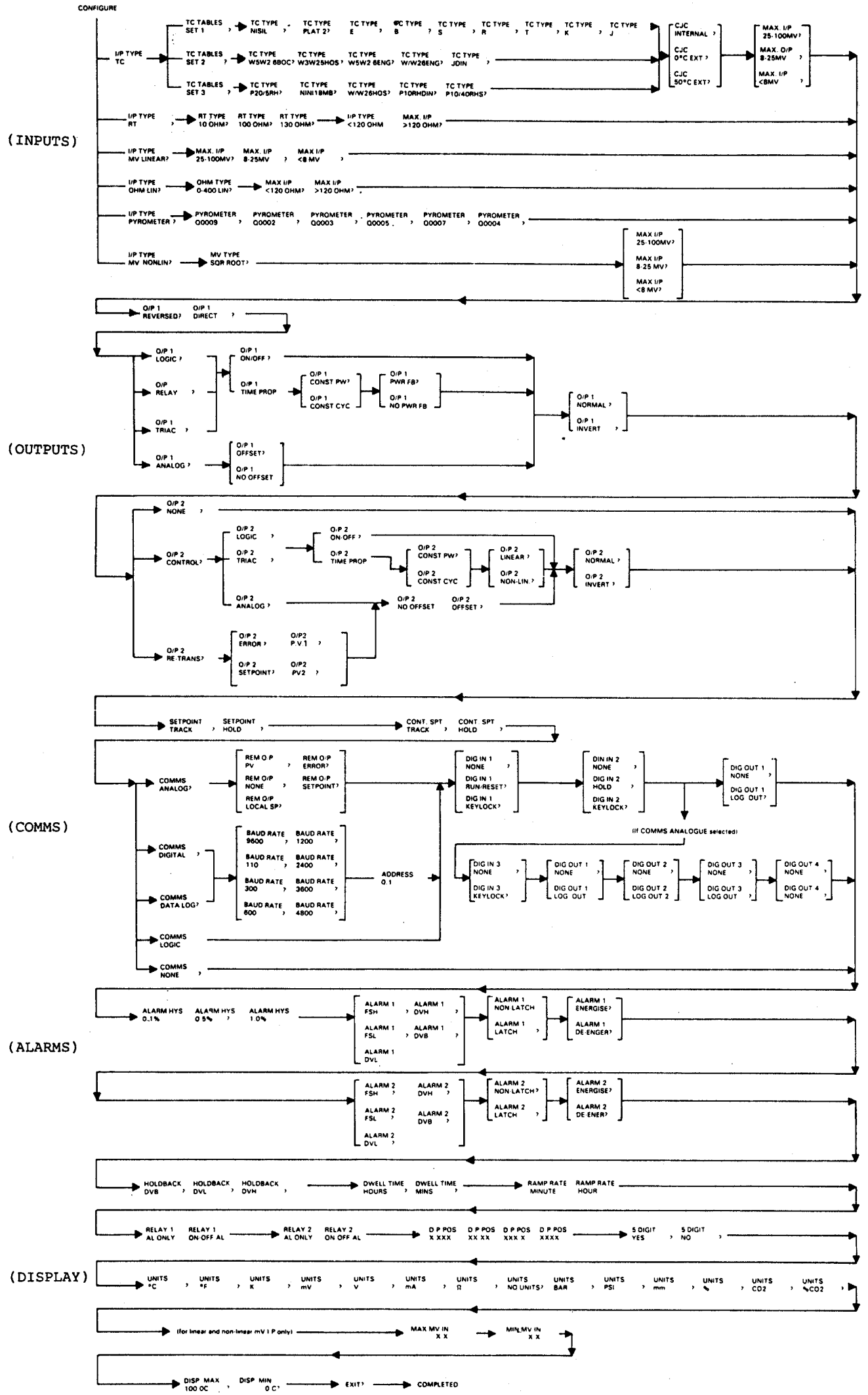

CONFIGURE
(INPUTS)
I/P TYPE TC
TC TYPE J ? TC TYPE K ? TC TYPE T ? TC TYPE R ? TC TYPE S ? TC TYPE B ? TC TYPE G1 ?
TC TYPE E ? TC TYPE PLAT 2 ? TC TYPE G2 ? TC TYPE NISIL ?
CJC INTERNAL? CJC 0°C EXT ? CJC 50°C EXT?
MAX. I/P 25-100MV? MAX. I/P 8 - 25MV? MAX. I/P <8MV ?
I/P TYPE RT
RT TYPE 10 OHM? RT TYPE 100 OHM ? RT TYPE 130 OHM ?
MAX. I/P >120 OHM? MAX. I/P <120 OHM?
I/P TYPE MV LINEAR
MAX. I/P 25-100MV? MA. I/P 8-25Mv? MAX. I/P <8MV ?
I/P TYPE OHM LIN ?
OHM TYPE 0-400LIN?
MAX. I/P <120 OHM
MAX. I/P >120 OHM
(OUTPUTS)
O/P 1 LOGIC ?
O/P 1 RELAY ?
O P 1 ON/OFF
O P 1 TIME PROP
O/P 1 CONST PW?
O/P 1 CONST CYC
O P 1 PWR FB ?
O P 1 NO PWR FB
O/P 1 TRIAC ?
O P 1 ON/OFF
O P 1 TIME PROP
O/P 1 CONST PW?
O/P 1 CONST CYC
O P 1 ONE CYCLE
O P 1 PWR FB ?
O P 1 NO PWR FB
O P 1 DIRECT ?
O/P 1 REVERSED ?
O/P 1 ANALOG ?
O P 1 OFFSET ?
O P 1 NO OFFSET
O/P 2 CONTROL?
O P 2 LOGIC ?
O P 2 TRIAC ?
O P 2 ANALOG ?
O P 2 ON OFF ?
O P 2 TIME PROP
O P 2 CONST PW?
O P 2 CONST CYC
O P 2 LINEAR ?
O P 2 NON-LIN ?
O P 2 OFFSET ?
O P 2 NO OFFSET
O P 2 DIRECT ?
O P 2 REVERSED?
O P 2 NONE ?
O P 2 RE TRANS?
O P 2 ERROR ?
O P 2 P V ?
O P 2 SETPOINT?
O P 2 OFFSET ?
O P 2 NO OFFSET
O P 2 DIRECT ?
O P 2 REVERSED?
DUAL PID YES ?
DUAL PID NO ?
SETPOINT HOLD ?
SETPOINT TRACK ?
(COMMS)
COMMS ANALOG ?
REM. I P NONE ?
REM.I/P MAX. O/P1
REM. I P SETPOINT?
REM. I/P LOC.TRIM?
REM. I P S P TRIM?
REM O P P V ?
REM O P NONE ?
REM O P ERROR ?
REM. I P SETPOINT?
DIG. IN 1 NONE ?
DIG. IN 1 DUAL PID?
DIG. IN 1 KEYLOCK ?
DIG. IN 1 MANUAL ?
DIG. IN 1 REMOTE ?
DIG. IN 2 NONE ?
DIG. IN 2 DUAL PID?
DIG. IN 2 KEYLOCK ?
DIG. IN 2 MANUAL ?
DIG. IN 2 REMOTE ?
DIG. OUT NONE ?
DIG. OUT DUAL PID?
DIG. OUT KEYLOCK ?
DIG. OUT MANUAL ?
DIG. OUT REMOTE ?
COMMS DIGITAL ?
BAUD RATE 9600 ?
BAUD RATE 4800 ?
BAUD RATE 3600 ?
BAUD RATE 2400 ?
BAUD RATE 1200 ?
BAUD RATE 600 ?
BAUD RATE 300 ?
BAUD RATE 110 ?
ADDRESS 0 0
REM. I P P V ?
REM. I P LOC TRIM?
REM. I P S P TRIM?
COMMS DATA LOG?
COMMS NONE ?
(ALARMS)
ALARM HYS 0.1% ?
ALARM HYS 0.5% ?
ALARM HYS 1.0% ?
ALARM 1 OVL ?
ALARM 1 OVH ?
ALARM 1 OVB ?
ALARM 1 FSH ?
ALARM 1 FSL ?
ALARM 1 LATCH ?
ALARM 1 NON-LATCH
ALARM 1 ENER ?
ALARM 1 DE ENER ?
ALARM 2 OVL ?
ALARM 2 OVH ?
ALARM 2 OVB ?
ALARM 2 FSH ?
ALARM 2 FSL ?
ALARM 2 LATCH ?
ALARM 2 NON-LATCH
ALARM 2 ENER ?
ALARM 2 DE ENER ?
(DISPLAY)
D P POS. X.XXX ?
D P POS. XX.XX ?
D.P. POS. XXX.X ?
D.P. POS XXXX ?
5 DIGIT YES ?
5 DIGIT NO ?
UNITS °C ?
UNITS °F ?
UNITS °K ?
UNITS MV ?
UNITS V ?
UNITS MA ?
UNITS OHM ?
UNITS NO UNITS?
UNITS BAR ?
UNITS PSI ?
UNITS MM ?
UNITS % ?
UNITS %CO2 ?
UNITS CO2 ?
D SCALER 99.99
D. SCALER 99.999
D OFFSET 12.34
DISP MAX 100 C
DISP MIN 0 C
EXIT ?
COMPLETED

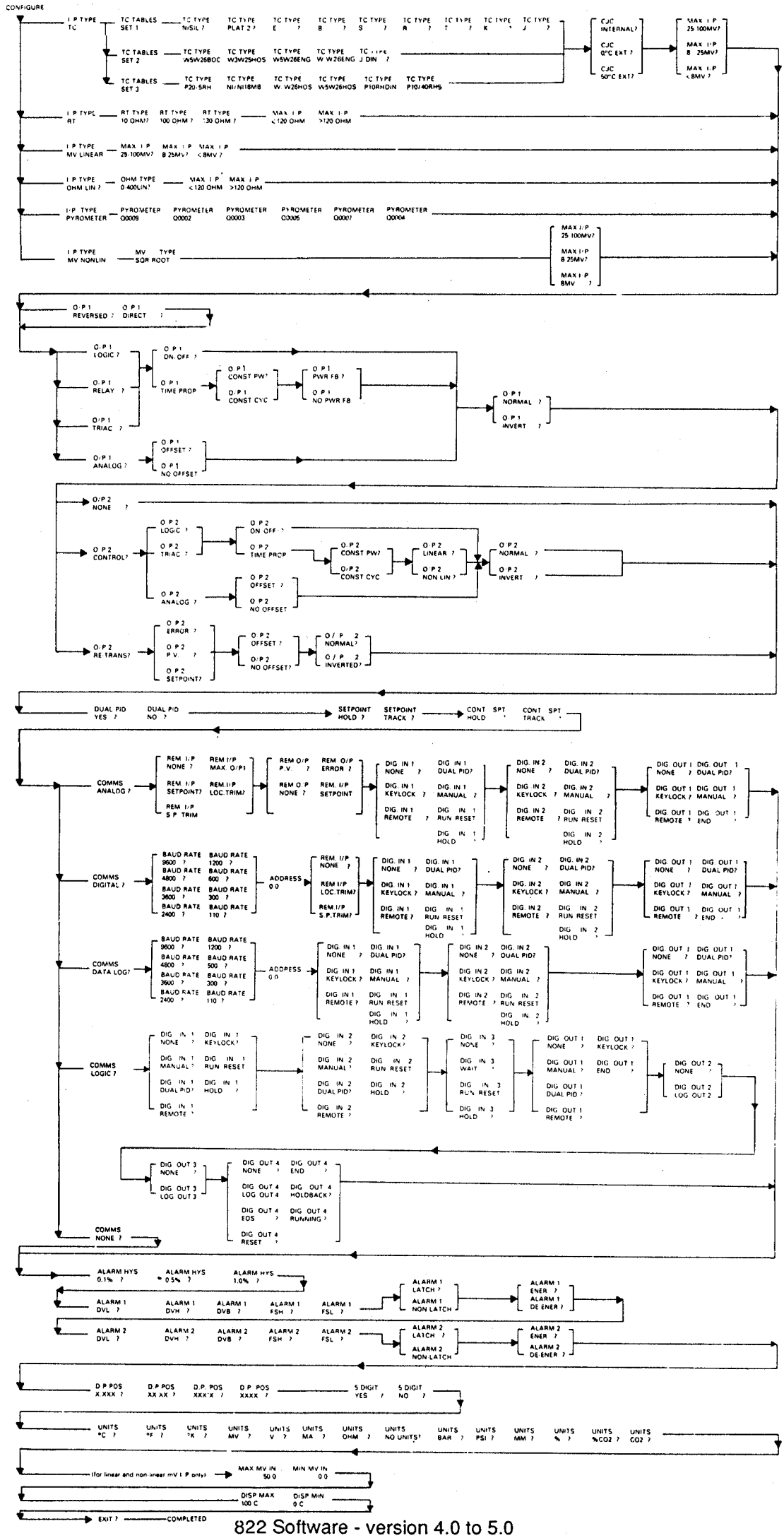

CONFIGURE
(INPUTS)
I/P TYPE TC
TC TABLES SET 1
TC TYPE NISIL ?
TC TYPE PLAT 2 ?
TC TYPE E ?
TC TYPE B ?
TC TYPE S ?
TC TYPE R ?
TC TYPE T ?
TC TYPE K ?
TC TYPE J ?
TC TABLES SET 2
TC TYPE W5W26BOC
TC TYPE D ?
TC TYPE W5W26ENG
TC TYPE G1 ?
TC TYPE J DIN ?
TC TABLES SET 3
TC TYPE 07 ?
TC TYPE SUB 33 ?
TC TYPE G2 ?
TC TYPE C ?
TC TYPE 17 ?
CJC INTERNAL?
CJC 0°C EXT ?
CJC 50°C EXT?
MAX I P 25-100MV?
MAX I P 8-25MV?
MAX I P <8MV ?
I/P TYPE RT
RT TYPE 10 OHM?
RT TYPE 100 OHM ?
RT TYPE 130 OHM ?
MAX. I/P <120 OHM
MAX. I/P >120 OHM
I/P TYPE MV LINEAR
MAX. I/P 25-100MV?
MAX I/P 8-25MV?
MAX I/P <8MV ?
I/P TYPE OHM LIN ?
OHM TYPE 0 400LIN?
MAX. I/P <120 OHM
MAX. I P >120 OHM
I/P TYPE PYROMETER
PYROMETER Q0009
PYROMETER Q0002
PYROMETER Q0003
PYROMETER Q0005
PYROMETER Q0007
PYROMETER Q0004
(OUTPUTS)
O/P 1 LOGIC ?
O/P 1 RELAY ?
O/P 1 TRIAC ?
O/P 1 ANALOG ?
O/P 1 ON/OFF ?
O/P 1 TIME PROP
O/P 1 CONST PW?
O/P 1 CONST CYC
O/P 1 PWR FB ?
O/P 1 NO PWR FB
O/P 1 OFFSET ?
O/P 1 NO OFFSET
O/P 1 DIRECT ?
O P 1 REVERSED ?
O/P 2 NONE ?
O/P 2 CONTROL?
O/P 2 RE TRANS?
O P 2 LOGIC ?
O/P 2 TRIAC ?
O/P 2 ANALOG ?
O P 2 ON OFF ?
O P 2 TIME PROP
O P 2 CONST CYC
O P 2 CONST PW?
O P 2 LINEAR ?
O P 2 NON LIN ?
O P 2 OFFSET ?
O P 2 NO OFFSET
O P 2 DIRECT ?
O P 2 REVERSED?
O P 2 ERROR ?
O P 2 P V ?
O P 2 SETPOINT?
O P 2 OFFSET ?
O P 2 NO OFFSET?
O P 2 DIRECT ?
O P 2 REVERSED?
DUAL PID YES ?
DUAL PID NO ?
SETPOINT HOLD ?
SETPOINT TRACK ?
(COMMS)
COMMS ANALOG ?
COMMS DIGITAL ?
COMMS DATA LOG?
COMMS NONE ?
REM. I/P NONE ?
REM. I/P SETPOINT?
REM. I/P S P TRIM?
REM I/P MAX. O P1
REM. I P LOC TRIM?
REM. I P SETPOINT?
REM O/P P.V. ?
REM O/P NONE ?
REM. O P ERROR ?
BAUD RATE 9600 ?
BAUD RATE 4800 ?
BAUD RATE 3600 ?
BAUD RATE 2400 ?
BAUD RATE 1200 ?
BAUD RATE 600 ?
BAUD RATE 300 ?
BAUD RATE 110 ?
ADDRESS 0 0
DIG. IN 1 NONE ?
DIG. IN 1 KEYLOCK ?
DIG. IN 1 REMOTE ?
DIG. IN 1 DUAL PID?
DIG. IN 1 MANUAL ?
DIG. IN 2 NONE ?
DIG. IN 2 KEYLOCK ?
DIG. IN 2 REMOTE ?
DIG. IN 2 DUAL PID?
DIG. IN 2 MANUAL ?
DIG OUT NONE ?
DIG OUT KEYLOCK ?
DIG OUT REMOTE ?
DIG OUT DUAL PID?
DIG OUT MANUAL ?
DIG OUT 1 END ?
(ALARMS)
ALARM HYS 0 1% ?
ALARM HYS 0.5% ?
ALARM HYS 1 0% ?
ALARM 1 DVL ?
ALARM 1 DVH ?
ALARM 1 DVB ?
ALARM 1 FSH ?
ALARM 1 FSL ?
ALARM 2 DVL ?
ALARM 2 DVH ?
ALARM 2 DVB ?
ALARM 2 FSH ?
ALARM 2 FSL ?
ALARM 1 LATCH ?
ALARM 1 NON-LATCH
ALARM 2 LATCH ?
ALARM 2 NON-LATCH
ALARM 1 ENER ?
ALARM 1 DE-ENER ?
ALARM 2 ENER ?
ALARM 2 DE-ENER ?
(DISPLAY)
D P POS X XXX ?
D P POS XX XX ?
D P POS XXX X ?
D P POS XXXX ?
5 DIGIT YES ?
5 DIGIT NO ?
UNITS °C ?
UNITS °F ?
UNITS °K ?
UNITS MV ?
UNITS V ?
UNITS MA ?
UNITS OHM ?
UNITS NO UNITS?
UNITS BAR ?
UNITS PSI ?
UNITS MM ?
UNITS %CO2 ?
UNITS CO2 ?
(for linear I P's only)
MAX MV IN 50 0
MIN MV IN 0 0
D SCALER 99 99
D SCALER 99 999
D OFFSET 12 34
DISP MAX 100 C
DISP MIN 0 C
EXIT ?
COMPLETED
1.9 version only

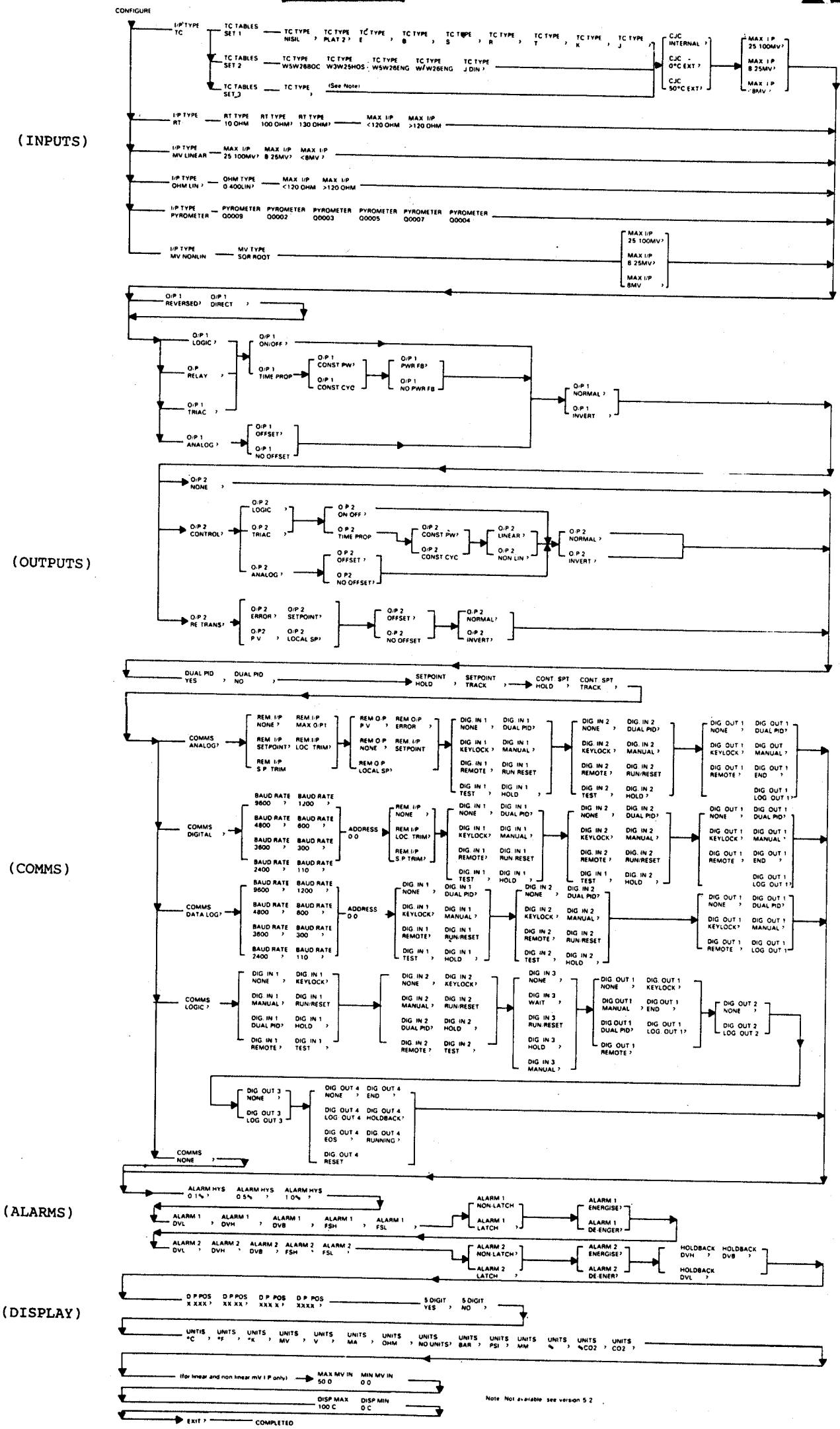

CONFIGURE
(INPUTS)
I/P TYPE TC
TC TABLES SET 1
TC TABLES SET 2
TC TABLES SET 3
TC TYPE NISIL ?
TC TYPE PLAT 2 ?
TC TYPE E ?
TC TYPE B ?
TC TYPE S ?
TC TYPE R ?
TC TYPE T ?
TC TYPE K ?
TC TYPE J ?
TC TYPE W5W26BOC
TC TYPE W3W25HER
TC TYPE W5W26ENG
TC TYPE W3W26ENG
TC TYPE J DIN ?
TC TYPE P20/5RH
TC TYPE NI/NI18MB
TC TYPE W/W26HOS
TC TYPE W5W26HOS
TC TYPE P10RHDIN
TC TYPE P10/40RH5
TC TYPE P10/40RH
CJC INTERNAL?
CJC 0°C EXT ?
CJC 50°C EXT?
MAX. I/P 25-100MV?
MAX. I/P 8 - 25MV?
MAX. I/P <8MV ?
I/P TYPE RT
RT TYPE 10 OHM?
RT TYPE 100 OHM ?
RT TYPE 130 OHM ?
MAX. I/P <120 OHM
MAX. I/P >120 OHM
I/P TYPE MV LINEAR
MAX. I/P 25-100MV?
MAX. I/P 8-25MV?
MAX. I/P <8MV ?
I/P TYPE OHM LIN ?
OHM TYPE 0-400LIN?
MAX. I/P <120 OHM
MAX. I/P >120 OHM
I/P TYPE PYROMETER
PYROMETER Q0009
PYROMETER Q0002
PYROMETER Q0003
PYROMETER Q0005
PYROMETER Q0007
PYROMETER Q0004
I/P TYPE MV NONLIN
MV TYPE SQR ROOT
MAX I/P 25-100MV?
MAX I/P 8-25MV?
MAX I/P 8MV ?
O/P 1 REVERSED ?
O/P 1 DIRECT ?
(OUTPUTS)
O/P 1 LOGIC ?
O/P 1 RELAY ?
O/P 1 TRIAC ?
O/P 1 ON/OFF ?
O/P 1 TIME PROP
O/P 1 CONST PW?
O/P 1 CONST CYC
O/P 1 PWR FB ?
O/P 1 NO PWR FB
O/P 1 NORMAL ?
O/P 1 INVERT ?
O/P 1 ANALOG ?
O/P 1 OFFSET ?
O/P 1 NO OFFSET
O/P 2 NONE ?
O/P 2 CONTROL?
O/P 2 LOGIC ?
O/P 2 TRIAC ?
O/P 2 ANALOG ?
O/P 2 ON/OFF ?
O/P 2 TIME PROP
O/P 2 CONST PW?
O/P 2 CONST CYC
O/P 2 LINEAR ?
O/P 2 NON-LIN ?
O/P 2 OFFSET ?
O/P 2 NO OFFSET
O/P 2 NORMAL ?
O/P 2 INVERT ?
O/P 2 RE-TRANS?
O/P 2 ERROR ?
O/P 2 P.V. ?
O/P 2 SETPOINT?
O/P 2 OFFSET ?
O/P 2 NO OFFSET?
O/P 2 DIRECT ?
O/P 2 REVERSED?
DUAL PID YES ?
DUAL PID NO ?
SETPOINT HOLD ?
SETPOINT TRACK ?
(COMMS)
COMMS ANALOG ?
COMMS DIGITAL ?
COMMS DATA LOG?
COMMS NONE ?
REM. I/P NONE ?
REM I/P MAX O/P1
REM. I/P SETPOINT?
REM I/P LOC TRIM?
REM. I/P S.P. TRIM
REM O/P P.V ?
REM O/P NONE ?
REM. O/P ERROR ?
REM. I/P SETPOINT
BAUD RATE 9600 ?
BAUD RATE 4800 ?
BAUD RATE 3600 ?
BAUD RATE 2400 ?
BAUD RATE 1200 ?
BAUD RATE 600 ?
BAUD RATE 300 ?
BAUD RATE 110 ?
ADDRESS 0 0
REM. I/P P.V ?
REM I/P LOC TRIM?
REM.I/P S.P TRIM?
DIG. IN 1 NONE ?
DIG. IN 1 KEYLOCK ?
DIG. IN 1 REMOTE ?
DIG. IN 1 DUAL PID?
DIG. IN 1 MANUAL ?
DIG. IN 2 NONE ?
DIG. IN 2 KEYLOCK ?
DIG. IN 2 REMOTE ?
DIG. IN 2 DUAL PID?
DIG. IN 2 MANUAL ?
DIG. OUT 1 NONE ?
DIG. OUT 1 KEYLOCK ?
DIG. OUT 1 REMOTE ?
DIG. OUT 1 DUAL PID?
DIG. OUT 1 MANUAL ?
DIG. OUT 1 END ?
(ALARMS)
ALARM HYS 0.1% ?
ALARM HYS 0.5% ?
ALARM HYS 1.0% ?
ALARM 1 DVL ?
ALARM 1 DVH ?
ALARM 1 DVB ?
ALARM 1 FSH ?
ALARM 1 FSL ?
ALARM 1 LATCH ?
ALARM 1 NON-LATCH
ALARM 1 ENER ?
ALARM 1 DE-ENER ?
ALARM 2 DV ?
ALARM 2 DVH ?
ALARM 2 DVB ?
ALARM 2 FSH ?
ALARM 2 FSL ?
ALARM 2 LATCH ?
ALARM 2 NON-LATCH
ALARM 2 ENER ?
ALARM 2 DE-ENER ?
(DISPLAY)
D.P POS X.XXX ?
D.P POS XX.XX ?
D.P. POS XXX.X ?
D.P. POS XXXX ?
5 DIGIT YES ?
5 DIGIT NO ?
MANUAL YES ?
MANUAL NO ?
UNITS °C ?
UNITS °F ?
UNITS °K ?
UNITS MV ?
UNITS V ?
UNITS MA ?
UNITS OHM ?
UNITS NO UNITS?
UNITS BAR ?
UNITS PSI ?
UNITS MM ?
UNITS % ?
UNITS %CO2 ?
UNITS CO2 ?
(for linear and non linear mV I/P only)
MAX MV IN 50 0
MIN MV IN 0 0
DISP MAX 100 C
DISP MIN 0 C
EXIT ?
COMPLETED
2.1, 2.4, 2.6, 2.7, 3.0 software versions only

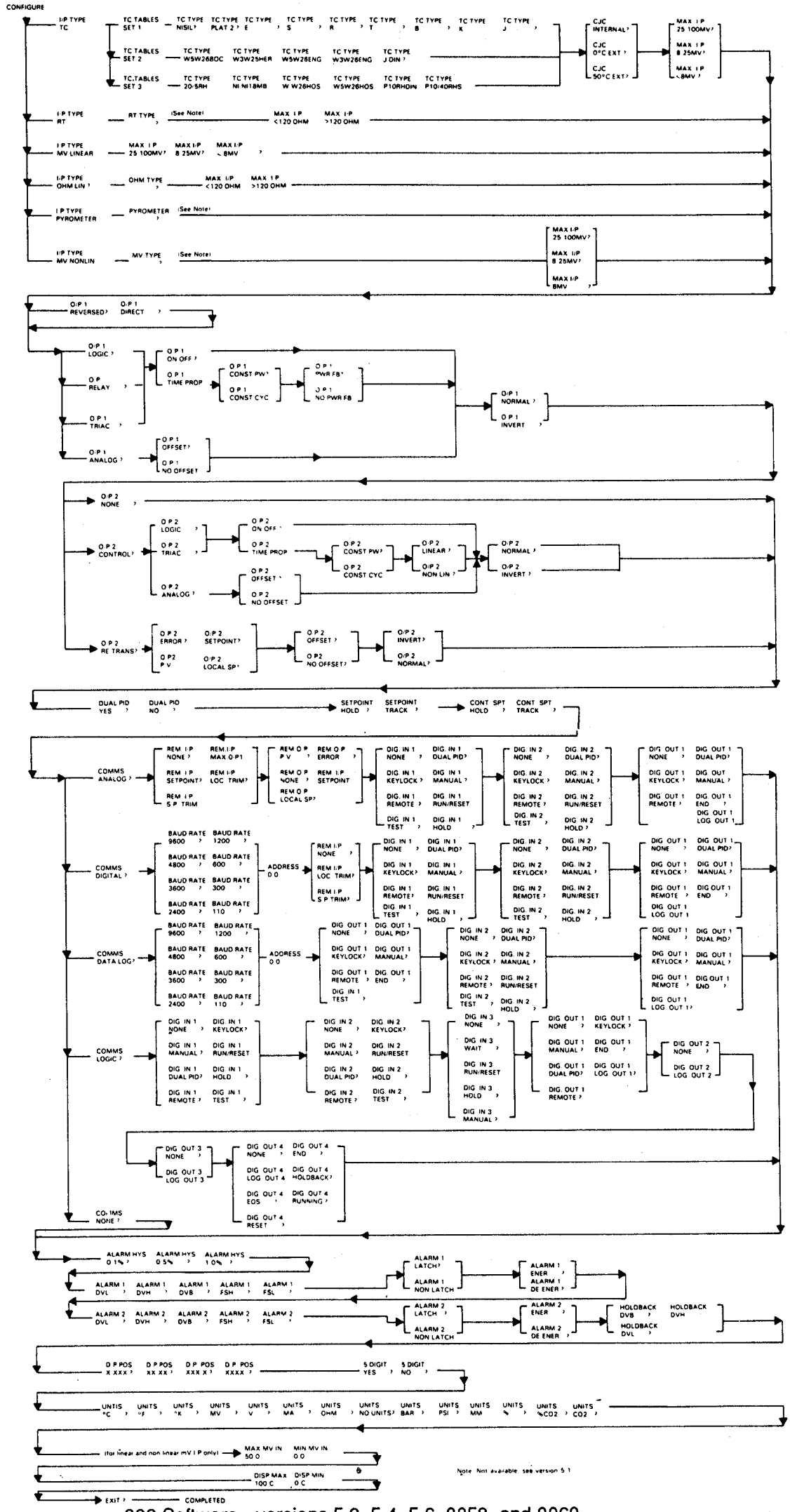

Follow for process inputs
Follow for remote inputs/outputs via COMMS ANALOG (Input 3/Output 3)
CONFIGURE
(INPUTS)
(DISPLAY)
(COMMS)
(OUTPUTS)
(ALARMS)
INPUT 1 mA
INPUT 1 mV
INPUT 1 OHM
INPUT MAX mA X.X
INPUT MIN mA X.X
INPUT MAX mV X.X
INPUT MIN mV X.X
INPUT MAX XX.
INPUT MIN XX.
LINEARISE RT
LINEARISE PYROMETER
LINEARISE SQ ROOT
LINEARISE LINEAR
LINEARISE TC
INPUT 1 TC
TC TYPE NISIL?
TC TYPE W5W26BOC
TC TYPE W3W25HER
TC TYPE NI/NI18MB
TC TYPE W/W26HOS
TC TYPE PLAT 2?
TC TYPE W5W26HOS
TC TYPE P10RHOIN
TC TYPE E
TC TYPE W5W26ENG
TC TYPE W/W26ENG?
TC TYPE B
TC TYPE 20/5RH
TC TYPE S
TC TYPE R
TC TYPE T
TC TYPE K
TC TYPE J DIN
TC TYPE P10/40RHS
TC TYPE P10/40RH
TC TYPE J
CJC INTERNAL?
CJC 0°C EXT?
CJC 50°C EXT?
INPUT 1 RT
RT TYPE 10 OHM
RT TYPE 100 OHM?
RT TYPE 130 OHM?
INPUT 1 PYROMETER
PYROMETER Q0009
PYROMETER Q0004
PYROMETER Q0007
PYROMETER Q0005
PYROMETER Q0003
PYROMETER Q0002
UNITS °C
UNITS °F
UNITS K
UNITS mV
UNITS V
UNITS mA
UNITS Ω
UNITS NO UNITS
UNITS BAR
UNITS PSI
UNITS mm
UNITS %
UNITS %CO2
UNITS CO2
UNITS SPECIAL
(See note 4)
(can enter special units)
DISP MAX 1 XXX.C
DISP MIN 1 XXX.C
(See note 2)
5 DIGIT YES
5 DIGIT NO
INPUT 2 NONE
(See note 3)
COMMS NONE
COMMS ANALOG
COMMS DIGITAL?
COMMS DATA LOG?
*INPUT 3 NONE
INPUT 3 SETPOINT?
INPUT 3 MAX O/P1
INPUT 3 O/P BIAS?
INPUT 3 S.P. TRIM
INPUT 3 LOC TRIM?
LINEARISE TC
LINEARISE RT
LINEARISE PYROMETER?
LINEARISE SQ ROOT
LINEARISE LINEAR
DISP. MAX 3 XXX.
DISP. MIN 3 XXX.
DIG IN 1 NONE
DIG IN 1 DUAL PID?
DIG IN 1 KEYLOCK?
DIG IN 1 MANUAL?
DIG IN 1 REMOTE?
DIG IN 2 NONE
DIG IN 2 DUAL PID?
DIG IN 2 KEYLOCK?
DIG IN 2 MANUAL?
DIG IN 2 REMOTE?
DIG OUT NONE
DIG OUT DUAL PID?
DIG OUT KEYLOCK?
DIG OUT MANUAL?
DIG OUT REMOTE?
*No remote displayed
REM INPUT LOC TRIM?
REM INPUT SP TRIM?
*REM INPUT NONE
DISP. MAX 3 XX
DISP. MIN 3 XXX
OUTPUT 1 REVERSED?
OUTPUT 1 DIRECT?
OUTPUT 1 LOGIC?
OUTPUT 1 RELAY?
OUTPUT 1 TRIAC?
OUTPUT 1 ANALOG?
OUTPUT 1 ON/OFF?
OUTPUT 1 TIME PROP?
OUTPUT 1 CONST PW?
OUTPUT 1 CONST CYC
OUTPUT 1 PWR FB?
OUTPUT 1 NO PWR FB
OUTPUT 1 NORMAL?
OUTPUT 1 INVERTED?
OUTPUT 1 OFFSET?
OUTPUT 1 NO OFFSET?
OUTPUT 2 NONE
OUTPUT 2 CONTROL?
OUTPUT 2 RETRANS?
OUTPUT 2 LOGIC?
OUTPUT TRIAC?
OUTPUT 2 ANALOG?
OUTPUT 2 ON/OFF?
OUTPUT 2 TIME PROP
OUTPUT 2 CONST CYC?
OUTPUT 2 CONST PW?
OUTPUT 2 NO OFFSET?
OUTPUT 2 OFFSET?
OUTPUT 2 LINEAR
OUTPUT 2 NON-LIN?
OUTPUT 2 NORMAL?
OUTPUT 2 INVERTED?
OUTPUT 2 ERROR?
OUTPUT 2 PV1?
OUTPUT 2 SETPOINT?
OUTPUT 2 PV2?
(If COMMS ANALOGUE selected)
OUTPUT 3 NONE?
OUTPUT 3 ERROR?
OUTPUT 3 SETPOINT?
OUTPUT 3 PV1?
OUTPUT 3 PV2?
(See note 5)
ALARM HYS 0.1%
ALARM HYS 0.5%
ALARM HYS 1.0%
ALARM 1 FSH?
ALARM 1 FSL?
ALARM 1 DVL?
ALARM 1 DVH?
ALARM 1 DVB?
ALARM 1 NON-LATCH
ALARM 1 LATCHING?
ALARM 1 ENERGISE?
ALARM 1 DE-ENER?
ALARM 2 FSH?
ALARM 2 FSL?
ALARM 2 DVL?
ALARM 2 DVH?
ALARM 2 DVB?
ALARM 2 NON-LATCH
ALARM 2 LATCHING
ALARM 2 ENERGISE?
ALARM 2 DE-ENER?
DUAL PID YES
DUAL PID NO
SETPOINT HOLD
SETPOINT TRACK
(If COMMS DIGITAL or COMMS DATA LOG)
BAUD RATE 9600
BAUD RATE 110
BAUD RATE 300
BAUD RATE 600
BAUD RATE 1200
BAUD RATE 2400
BAUD RATE 3600
BAUD RATE 4800
ADDRESS 0 0
EXIT
COMPLETED
NOTES
1 If the input is millamp, millivolt or OHM the maximum and minimum inputs are entered in the relevant units. The range and resolution of the values can be adjusted by shifting the decimal point position left or right using keys 2 and 3 respectively
2 The displayed decimal point position is adjusted whilst the Display Maximum is shown by using keys 2 and 3
3 Input 2 not used, configuration for this input is forced to NONE
4 Special Unit entry will only function with display version 5 or later
5 PV2 displayed but not valid for this instrument

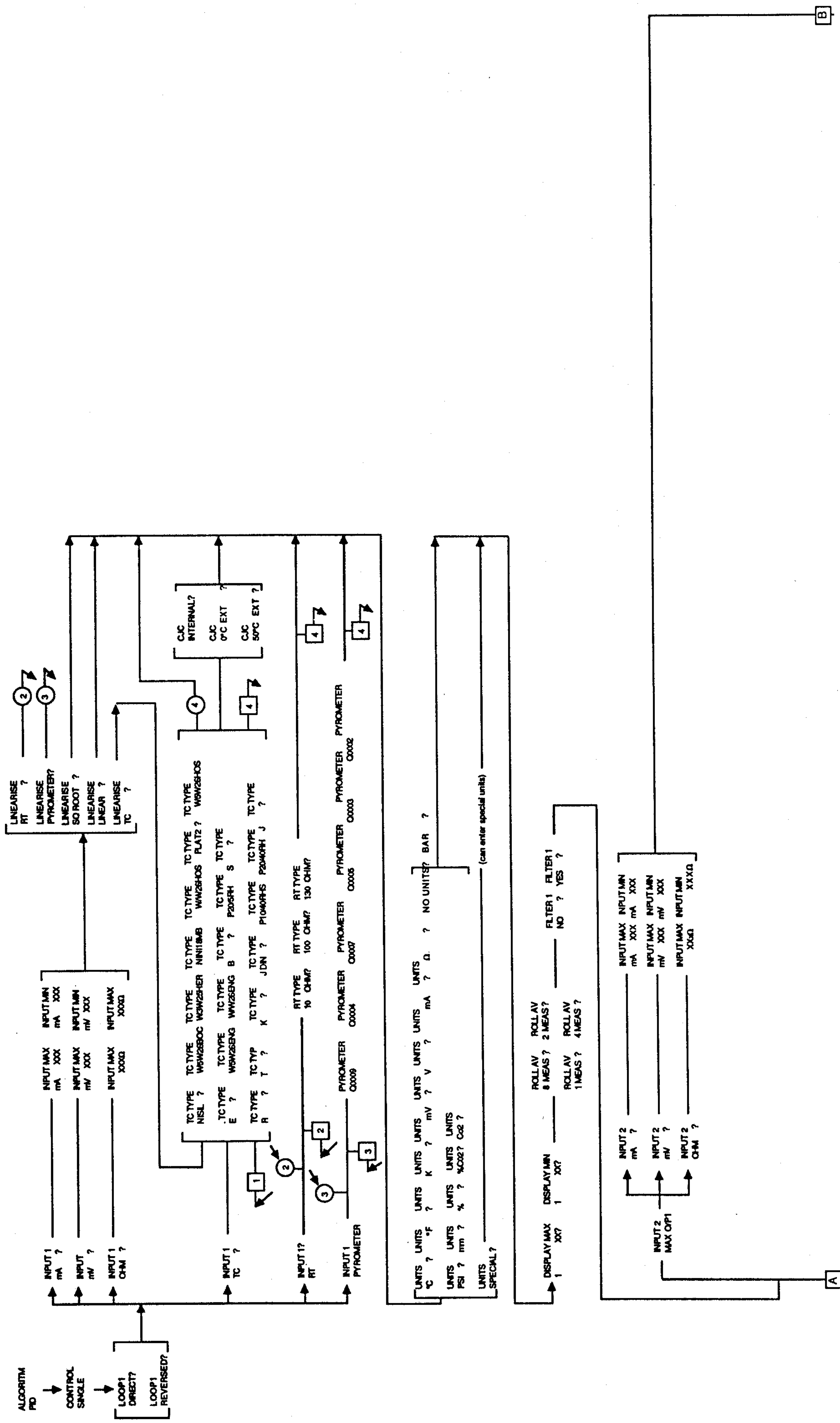

Follow for process inputs
Follow for remote inputs/outputs via COMMS ANALOG (Input 3/Output 3)
CONFIGURE
(INPUTS)
(DISPLAY)
(COMMS)
(OUTPUTS)
(ALARMS)
INPUT 1 mA ?
INPUT 1 mV ?
INPUT 1 OHM ?
INPUT 1 TC ?
INPUT 1 RT ?
INPUT 1 PYROMETER
INPUT MAX mA X.X
INPUT MIN mA X.X
INPUT MAX mV X.X
INPUT MIN mV X.X
INPUT MAX XX.
INPUT MIN XX
LINEARISE RT ?
LINEARISE PYROMETER
LINEARISE SQ ROOT ?
LINEARISE LINEAR ?
LINEARISE TC ?
TC TYPE NISIL?
TC TYPE W5W26BOC
TC TYPE W3W25HER
TC TYPE NI/NI18MB
TC TYPE W/W26HOS
TC TYPE PLAT 2 ?
TC TYPE W5W26HOS
TC TYPE P10RHDIN
TC TYPE E ?
TC TYPE W5W26ENG
TC TYPE W/W26ENG?
TC TYPE B ?
TC TYPE 20/5RH
TC TYPE S ?
TC TYPE R ?
TC TYPE T ?
TC TYPE K ?
TC TYPE J DIN ?
TC TYPE P10/40RHS
TC TYPE P10/40RH
TC TYPE J ?
CJC INTERNAL?
CJC 0°C EXT ?
CJC 50°C EXT?
RT TYPE 10 OHM
RT TYPE 100 OHM?
RT TYPE 130 OHM?
PYROMETER Q0009
PYROMETER Q0004
PYROMETER Q0007
PYROMETER Q0005
PYROMETER Q0003
PYROMETER Q0002
UNITS °C ?
UNITS °F ?
UNITS K ?
UNITS mV ?
UNITS V ?
UNITS mA ?
UNITS Ω ?
UNITS NO UNITS ?
UNITS BAR ?
UNITS PSI ?
UNITS mm ?
UNITS % ?
UNITS %CO2 ?
UNITS CO2 ?
UNITS SPECIAL ?
(See note 4)
(can enter special units)
DISP MAX 1 XXX.C
DISP MIN 1 XXX.C
(See note 2)
5 DIGIT YES ?
5 DIGIT NO ?
INPUT 2 NONE
(See note 3)
COMMS NONE ?
COMMS ANALOG ?
COMMS DIGITAL?
COMMS DATA LOG?
*INPUT 3 NONE ?
INPUT 3 SETPOINT?
INPUT 3 MAX O/P1
INPUT 3 O/P BIAS?
INPUT 3 S.P. TRIM
INPUT 3 LOC TRIM?
LINEARISE TC ?
LINEARISE RT ?
LINEARISE PYROMETER?
LINEARISE SQ ROOT ?
LINEARISE LINEAR ?
DISP MAX 3 XXX
DISP MIN 3 XXX
DIG IN 1 NONE ?
DIG IN 1 DUAL PID?
DIG IN 1 KEYLOCK?
DIG IN 1 MANUAL?
DIG IN 1 REMOTE?
DIG IN 2 NONE ?
DIG IN 2 DUAL PID?
DIG IN 2 KEYLOCK?
DIG IN 2 MANUAL?
DIG IN 2 REMOTE?
DIG OUT NONE ?
DIG OUT DUAL PID?
DIG OUT KEYLOCK?
DIG OUT MANUAL?
DIG OUT REMOTE?
*No remote displayed
REM INPUT LOC TRIM?
REM INPUT SP TRIM?
*REM INPUT NONE ?
DISP MAX 3 XX
DISP MIN 3 XXX
OUTPUT 1 REVERSED?
OUTPUT 1 DIRECT ?
OUTPUT 1 LOGIC ?
OUTPUT 1 RELAY ?
OUTPUT 1 TRIAC ?
OUTPUT 1 ANALOG ?
OUTPUT 1 ON/OFF ?
OUTPUT 1 TIME PROP?
OUTPUT 1 OFFSET ?
OUTPUT 1 NO OFFSET?
OUTPUT 1 CONST PW?
OUTPUT 1 CONST CYC
OUTPUT 1 PWR FB?
OUTPUT 1 NO PWR FB
OUTPUT 1 NORMAL?
OUTPUT 1 INVERTED?
OUTPUT 2 NONE ?
OUTPUT 2 CONTROL ?
OUTPUT 2 RETRANS?
OUTPUT 2 LOGIC ?
OUTPUT TRIAC ?
OUTPUT 2 ANALOG ?
OUTPUT 2 ON/OFF ?
OUTPUT 2 TIME PROP
OUTPUT 2 CONST CYC?
OUTPUT 2 CONST PW?
OUTPUT 2 NO OFFSET?
OUTPUT 2 OFFSET ?
OUTPUT 2 LINEAR
OUTPUT 2 NON LIN?
OUTPUT 2 NORMAL?
OUTPUT 2 INVERTED?
OUTPUT 2 ERROR ?
OUTPUT 2 PV1 ?
OUTPUT 2 SETPOINT?
OUTPUT 2 PV2 ?
(If COMMS ANALOGUE selected)
OUTPUT 3 NONE ?
OUTPUT 3 ERROR ?
OUTPUT 3 SETPOINT?
OUTPUT 3 PV1 ?
OUTPUT 3 PV2 ?
(See note 5)
ALARM HYS 0.1%
ALARM HYS 0.5%
ALARM HYS 1.0%
ALARM 1 FSH ?
ALARM 1 FSL ?
ALARM 1 DVL ?
ALARM 1 DVH ?
ALARM 1 DVB ?
ALARM 1 NON LATCH
ALARM 1 LATCHING?
ALARM 1 ENERGISE?
ALARM 1 DE ENER?
MANUAL YES ?
MANUAL NO ?
ALARM 2 FSH ?
ALARM 2 FSL ?
ALARM 2 DVL ?
ALARM 2 DVH ?
ALARM 2 DVB ?
ALARM 2 NON LATCH
ALARM 2 LATCHING?
ALARM 2 ENERGISE?
ALARM 2 DE ENER?
DUAL PID YES ?
DUAL PID NO ?
SETPOINT HOLD ?
SETPOINT TRACK ?
(If COMMS DIGITAL or COMMS DATA LOG)
BAUD RATE 9600 ?
BAUD RATE 110 ?
BAUD RATE 300 ?
BAUD RATE 600 ?
BAUD RATE 1200 ?
BAUD RATE 2400 ?
BAUD RATE 3600 ?
BAUD RATE 4800 ?
ADDRESS 0 0
EXIT ?
COMPLETED
NOTES:
1 If the input is millamp, millivolt or OHM the maximum and minimum inputs are entered in the relevant units. The range and resolution of the values can be adjusted by shifting the decimal point position left or right using keys 2 and 3 respectively
2 The displayed decimal point position is adjusted whilst the Display Maximum is shown, by using keys 2 and 3.
3 Input 2 not used, configuration for this input is forced to 'NONE'
4 Special Unit entry will only function with display version 5 or later
5 PV2 displayed but not valid for this instrument


CONFIGURE
(INPUTS)
I/P TYPE TC
TC TABLES SET 1
TC TABLES SET 2
TC TABLES SET 3
TC TYPE NISIL
TC TYPE PLAT 2?
TC TYPE E
TC TYPE B
TC TYPE S
TC TYPE R
TC TYPE T
TC TYPE K
TC TYPE J
TC TYPE W5W2 68OC?
TC TYPE W3W25HOS?
TC TYPE W5W2 6ENG?
TC TYPE W/W26ENG?
TC TYPE JDIN
TC TYPE P20/5RH?
TC TYPE NINI18MB?
TC TYPE W/W26HOS?
TC TYPE P10RHDIN?
TC TYPE P10/40RHS?
CJC INTERNAL
CJC 0°C EXT?
CJC 50°C EXT?
MAX. I/P 25-100MV?
MAX. O/P 8-25MV
MAX. I/P <8MV
I/P TYPE RT
RT TYPE 10 OHM?
RT TYPE 100 OHM?
RT TYPE 130 OHM?
I/P TYPE <120 OHM
MAX. I/P >120 OHM?
I/P TYPE MV LINEAR?
MAX. I/P 25-100MV?
MAX. I/P 8-25MV
MAX I/P <8 MV
I/P TYPE OHM LIN?
OHM TYPE 0-400 LIN?
MAX I/P <120 OHM?
MAX I/P >120 OHM?
I/P TYPE PYROMETER ?
PYROMETER Q0009
PYROMETER Q0002
PYROMETER Q0003
PYROMETER Q0005
PYROMETER Q0007
PYROMETER Q0004
I/P TYPE MV NONLIN?
MV TYPE SQR ROOT?
MAX I/P 25-100MV?
MAX I/P 8-25 MV?
MAX I/P <8 MV?
(OUTPUTS)
O/P 1 REVERSED?
O/P 1 DIRECT
O/P 1 LOGIC
O/P RELAY
O/P 1 TRIAC
O/P 1 ANALOG ?
O/P 1 ON/OFF ?
O/P 1 TIME PROP
O/P 1 CONST PW?
O/P 1 CONST CYC
O/P 1 PWR FB?
O/P 1 NO PWR FB
O/P 1 OFFSET?
O/P 1 NO OFFSET
O/P 1 NORMAL ?
O/P 1 INVERT
O/P 2 NONE
O/P 2 CONTROL?
O/P 2 RE-TRANS?
O/P 2 LOGIC
O/P 2 TRIAC
O/P 2 ANALOG ?
O/P 2 ON-OFF ?
O/P 2 TIME PROP
O/P 2 CONST PW?
O/P 2 CONST CYC
O/P 2 LINEAR ?
O/P 2 NON-LIN ?
O/P 2 NO OFFSET
O/P 2 OFFSET ?
O/P 2 NORMAL ?
O/P 2 INVERT ?
O/P 2 ERROR ?
O/P2 P.V.1
O/P 2 SETPOINT?
O/P2 PV2
SETPOINT TRACK
SETPOINT HOLD
CONT. SPT TRACK
CONT. SPT HOLD
(COMMS)
COMMS ANALOG?
COMMS DIGITAL
COMMS DATA LOG?
COMMS LOGIC
COMMS NONE
REM O/P PV
REM O/P ERROR?
REM O/P NONE
REM O/P SETPOINT?
REM O/P LOCAL SP?
BAUD RATE 9600
BAUD RATE 1200
BAUD RATE 110
BAUD RATE 2400
BAUD RATE 300
BAUD RATE 3600
BAUD RATE 600
BAUD RATE 4800
ADDRESS 0.1
DIG IN 1 NONE
DIG IN 1 RUN/RESET?
DIG IN 1 KEYLOCK?
DIN IN 2 NONE
DIG IN 2 HOLD
DIG IN 2 KEYLOCK?
DIG OUT 1 NONE
DIG OUT 1 LOG OUT?
(If COMMS ANALOGUE selected)
DIG IN 3 NONE
DIG IN 3 KEYLOCK?
DIG OUT 1 NONE
DIG OUT 1 LOG OUT
DIG OUT 2 NONE
DIG OUT 2 LOG OUT 2
DIG OUT 3 NONE
DIG OUT 3 LOG OUT
DIG OUT 4 NONE
DIG OUT 4 NONE
(ALARMS)
ALARM HYS 0.1%
ALARM HYS 0.5%
ALARM HYS 1.0%
ALARM 1 FSH
ALARM 1 DVH
ALARM 1 FSL
ALARM 1 DVB
ALARM 1 DVL
ALARM 1 NON LATCH
ALARM 1 LATCH
ALARM 1 ENERGISE?
ALARM 1 DE-ENGER?
ALARM 2 FSH
ALARM 2 DVH
ALARM 2 FSL
ALARM 2 DVB
ALARM 2 DVL
ALARM 2 NON-LATCH?
ALARM 2 LATCH
ALARM 2 ENERGISE?
ALARM 2 DE-ENER?
HOLDBACK DVB
HOLDBACK DVL
HOLDBACK DVH
DWELL TIME HOURS
DWELL TIME MINS
RAMP RATE MINUTE
RAMP RATE HOUR
(DISPLAY)
RELAY 1 AL ONLY
RELAY 1 ON-OFF AL
RELAY 2 AL ONLY
RELAY 2 ON-OFF AL
D P POS X.XXX
D P POS XX.XX
D P POS XXX.X
D P POS XXXX
5 DIGIT YES
5 DIGIT NO
UNITS °C
UNITS °F
UNITS K
UNITS mV
UNITS V
UNITS mA
UNITS Ω
UNITS NO UNITS?
UNITS BAR
UNITS PSI
UNITS mm
UNITS %
UNITS CO2
UNITS %CO2
(for linear and non-linear mV I P only)
MAX MV IN X.X
MIN MV IN X.X
DISP MAX 100 OC
DISP MIN 0 C?
EXIT?
COMPLETED

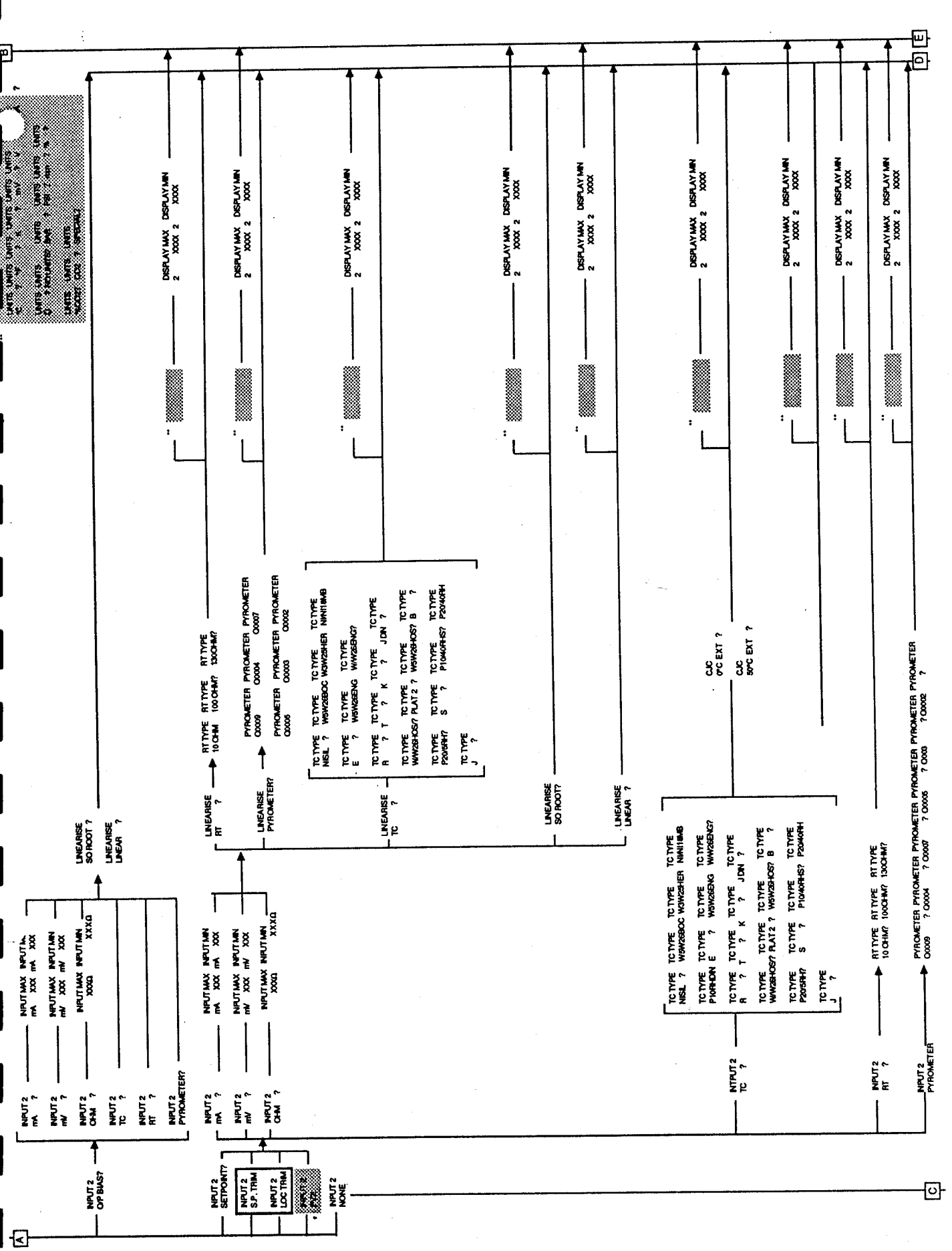

CONFIGURE
(INPUTS)
(OUTPUTS)
(COMMS)
(ALARMS)
(DISPLAY)

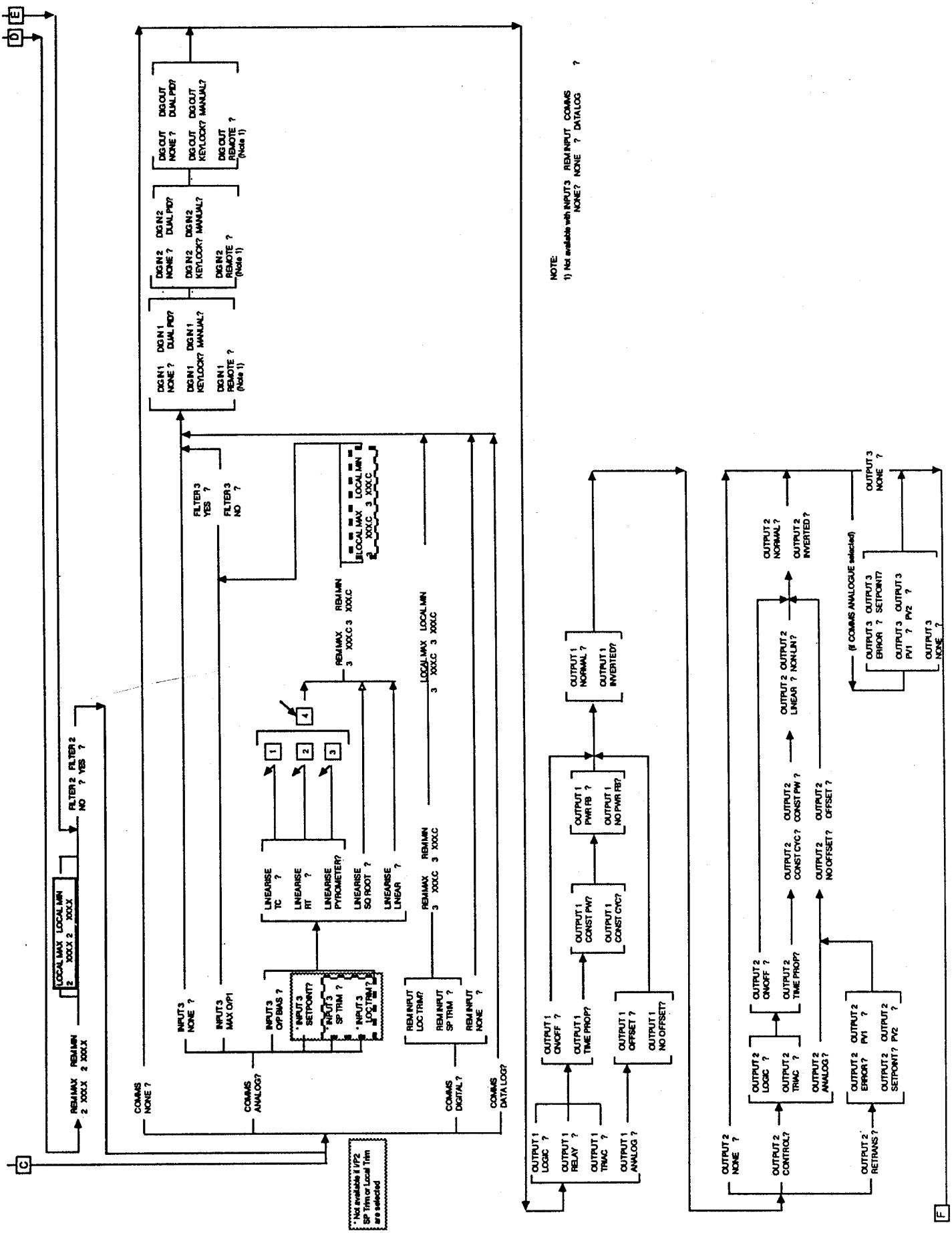

CONFIGURE
(INPUTS)
(OUTPUTS)
(COMMS)
(ALARMS)
(DISPLAY)
I/P TYPE TC
TC TABLES SET 1
TC TABLES SET 2
TC TABLES SET 3
TC TYPE NISIL
TC TYPE PLAT 2
TC TYPE E
TC TYPE B
TC TYPE S
TC TYPE R
TC TYPE T
TC TYPE K
TC TYPE J
TC TYPE W5W26BOC
TC TYPE W3W25HOS
TC TYPE W5W26ENG
TC TYPE W/W26ENG
TC TYPE J DIN
(See Note)
CJC INTERNAL
CJC - 0°C EXT
CJC 50°C EXT
MAX I/P 25 100MV
MAX I/P 8 25MV
MAX I/P 8MV
I/P TYPE RT
RT TYPE 10 OHM
RT TYPE 100 OHM
RT TYPE 130 OHM
MAX I/P <120 OHM
MAX I/P >120 OHM
I/P TYPE MV LINEAR
MAX I/P 25 100MV
MAX I/P 8 25MV
MAX I/P <8MV
I/P TYPE OHM LIN
OHM TYPE 0 400LIN
MAX I/P <120 OHM
MAX I/P >120 OHM
I/P TYPE PYROMETER
PYROMETER Q0009
PYROMETER Q0002
PYROMETER Q0003
PYROMETER Q0005
PYROMETER Q0007
PYROMETER Q0004
I/P TYPE MV NONLIN
MV TYPE SQR ROOT
MAX I/P 25 100MV
MAX I/P 8 25MV
MAX I/P 8MV
O/P 1 REVERSED
O/P 1 DIRECT
O/P 1 LOGIC
O/P RELAY
O/P 1 TRIAC
O/P 1 ANALOG
O/P 1 ON/OFF
O/P 1 TIME PROP
O/P 1 CONST PW
O/P 1 CONST CYC
O/P 1 PWR FB
O/P 1 NO PWR FB
O/P 1 OFFSET
O/P 1 NO OFFSET
O/P 1 NORMAL
O/P 1 INVERT
O/P 2 NONE
O/P 2 CONTROL
O/P 2 LOGIC
O/P 2 TRIAC
O/P 2 ANALOG
O/P 2 ON OFF
O/P 2 TIME PROP
O/P 2 CONST CYC
O/P 2 CONST PW
O/P 2 OFFSET
O/P 2 NO OFFSET
O/P 2 LINEAR
O/P 2 NON LIN
O/P 2 NORMAL
O/P 2 INVERT
O/P 2 RE TRANS
O/P 2 ERROR
O/P 2 SETPOINT
O/P 2 P V
O/P 2 LOCAL SP
O/P 2 OFFSET
O/P 2 NO OFFSET
O/P 2 NORMAL
O/P 2 INVERT
DUAL PID YES
DUAL PID NO
SETPOINT HOLD
SETPOINT TRACK
CONT SPT HOLD
CONT SPT TRACK
COMMS ANALOG
REM I/P NONE
REM I/P MAX O/P1
REM I/P SETPOINT
REM I/P LOC TRIM
REM I/P S P TRIM
REM O/P P V
REM O/P ERROR
REM O/P NONE
REM O/P SETPOINT
REM O/P LOCAL SP
DIG IN 1 NONE
DIG IN 1 DUAL PID
DIG IN 1 KEYLOCK
DIG IN 1 MANUAL
DIG IN 1 REMOTE
DIG IN 1 RUN RESET
DIG IN 1 TEST
DIG IN 1 HOLD
DIG IN 2 NONE
DIG IN 2 DUAL PID
DIG IN 2 KEYLOCK
DIG IN 2 MANUAL
DIG IN 2 REMOTE
DIG IN 2 RUN/RESET
DIG IN 2 TEST
DIG IN 2 HOLD
DIG OUT 1 NONE
DIG OUT 1 DUAL PID
DIG OUT 1 KEYLOCK
DIG OUT 1 MANUAL
DIG OUT 1 REMOTE
DIG OUT 1 END
DIG OUT 1 LOG OUT 1
COMMS DIGITAL
BAUD RATE 9600
BAUD RATE 4800
BAUD RATE 3600
BAUD RATE 2400
BAUD RATE 1200
BAUD RATE 600
BAUD RATE 300
BAUD RATE 110
ADDRESS 0 0
COMMS DATA LOG
COMMS LOGIC
DIG IN 1 KEYLOCK
DIG IN 1 RUN/RESET
DIG IN 1 HOLD
DIG IN 1 TEST
DIG IN 2 KEYLOCK
DIG IN 2 RUN/RESET
DIG IN 2 HOLD
DIG IN 2 TEST
DIG IN 3 NONE
DIG IN 3 WAIT
DIG IN 3 RUN/RESET
DIG IN 3 HOLD
DIG IN 3 MANUAL
DIG OUT 1 KEYLOCK
DIG OUT 1 END
DIG OUT 1 LOG OUT 1
DIG OUT 2 NONE
DIG OUT 2 LOG OUT 2
DIG OUT 3 NONE
DIG OUT 3 LOG OUT 3
DIG OUT 4 NONE
DIG OUT 4 END
DIG OUT 4 LOG OUT 4
DIG OUT 4 HOLDBACK
DIG OUT 4 EOS
DIG OUT 4 RUNNING
DIG OUT 4 RESET
COMMS NONE
ALARM HYS 0.1%
ALARM HYS 0.5%
ALARM HYS 1.0%
ALARM 1 DVL
ALARM 1 DVH
ALARM 1 DVB
ALARM 1 FSH
ALARM 1 FSL
ALARM 1 NON-LATCH
ALARM 1 LATCH
ALARM 1 ENERGISE
ALARM 1 DE-ENER
ALARM 2 DVL
ALARM 2 DVH
ALARM 2 DVB
ALARM 2 FSH
ALARM 2 FSL
ALARM 2 NON-LATCH
ALARM 2 LATCH
ALARM 2 ENERGISE
ALARM 2 DE-ENER
HOLDBACK DVH
HOLDBACK DVB
HOLDBACK DVL
D P POS X.XXX
D P POS XX.XX
D P POS XXX.X
D P POS XXXX
5 DIGIT YES
5 DIGIT NO
UNITS °C
UNITS °F
UNITS °K
UNITS MV
UNITS V
UNITS MA
UNITS OHM
UNITS NO UNITS
UNITS BAR
UNITS PSI
UNITS MM
UNITS %
UNITS %CO2
UNITS CO2
(for linear and non linear mV I P only)
MAX MV IN 50 0
MIN MV IN 0 0
DISP MAX 100 C
DISP MIN 0 C
EXIT
COMPLETED
Note Not available see version 5 2

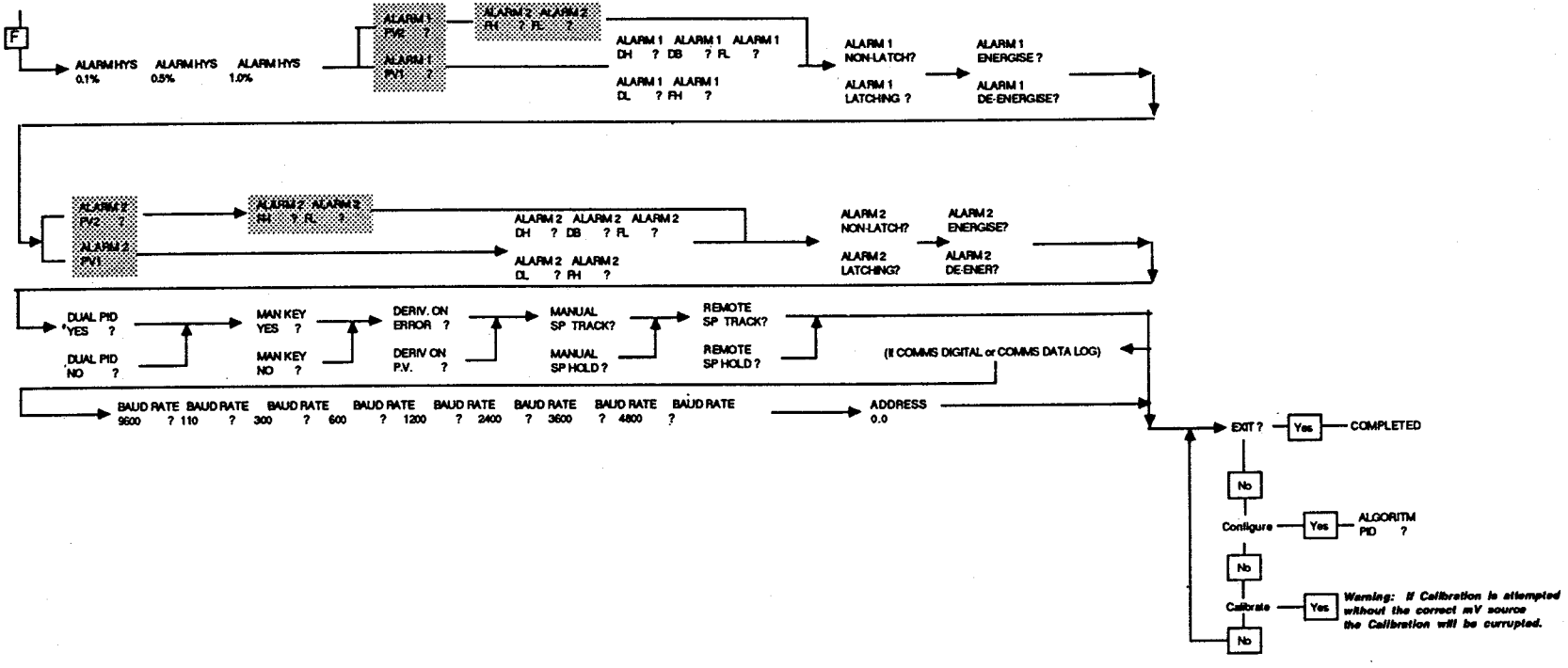

CONFIGURE
(INPUTS)
(OUTPUTS)
(COMMS)
(ALARMS)
(DISPLAY)
I/P TYPE TC
TC TABLES SET 1
TC TABLES SET 2
TC TABLES SET 3
TC TYPE NISIL
TC TYPE PLAT 2
TC TYPE E
TC TYPE S
TC TYPE R
TC TYPE T
TC TYPE B
TC TYPE K
TC TYPE J
TC TYPE W5W26BOC
TC TYPE W3W25HER
TC TYPE W5W26ENG
TC TYPE W3W26ENG
TC TYPE J OIN
TC TYPE 20-5RH
TC TYPE NI NI18MB
TC TYPE W W26HOS
TC TYPE W5W26HOS
TC TYPE P10RHDIN
TC TYPE P10/40RHS
CJC INTERNAL
CJC 0°C EXT
CJC 50°C EXT
MAX I/P 25 100MV
MAX I/P 8 25MV
MAX I/P <8MV
I/P TYPE RT
RT TYPE
(See Note)
MAX I/P <120 OHM
MAX I/P >120 OHM
I/P TYPE MV LINEAR
MAX I/P 25 100MV
MAX I/P 8 25MV
MAX I/P <8MV
I/P TYPE OHM LIN
OHM TYPE
MAX I/P <120 OHM
MAX I/P >120 OHM
I/P TYPE PYROMETER
PYROMETER
(See Note)
I/P TYPE MV NONLIN
MV TYPE
(See Note)
MAX I/P 25 100MV
MAX I/P 8 25MV
MAX I/P 8MV
O/P 1 REVERSED
O/P 1 DIRECT
O/P 1 LOGIC
O/P RELAY
O/P 1 TRIAC
O/P 1 ANALOG
O/P 1 ON OFF
O/P 1 TIME PROP
O/P 1 CONST PW
O/P 1 CONST CYC
O/P 1 PWR FB
O/P 1 NO PWR FB
O/P 1 OFFSET
O/P 1 NO OFFSET
O/P 1 NORMAL
O/P 1 INVERT
O/P 2 NONE
O/P 2 CONTROL
O/P 2 LOGIC
O/P 2 TRIAC
O/P 2 ANALOG
O/P 2 ON OFF
O/P 2 TIME PROP
O/P 2 CONST PW
O/P 2 CONST CYC
O/P 2 OFFSET
O/P 2 NO OFFSET
O/P 2 LINEAR
O/P 2 NON LIN
O/P 2 NORMAL
O/P 2 INVERT
O/P 2 RE TRANS
O/P 2 ERROR
O/P 2 PV
O/P 2 SETPOINT
O/P 2 LOCAL SP
O/P 2 OFFSET
O/P 2 NO OFFSET
O/P 2 INVERT
O/P 2 NORMAL
DUAL PID YES
DUAL PID NO
SETPOINT HOLD
SETPOINT TRACK
CONT SPT HOLD
CONT SPT TRACK
COMMS ANALOG
REM I/P NONE
REM I/P MAX O/P1
REM I/P SETPOINT
REM I/P LOC TRIM
REM I/P S P TRIM
REM O/P PV
REM O/P ERROR
REM O/P NONE
REM I/P SETPOINT
REM O/P LOCAL SP
DIG IN 1 NONE
DIG IN 1 DUAL PID
DIG IN 1 KEYLOCK
DIG IN 1 MANUAL
DIG IN 1 REMOTE
DIG IN 1 RUN/RESET
DIG IN 1 TEST
DIG IN 1 HOLD
DIG IN 2 NONE
DIG IN 2 DUAL PID
DIG IN 2 KEYLOCK
DIG IN 2 MANUAL
DIG IN 2 REMOTE
DIG IN 2 RUN/RESET
DIG IN 2 TEST
DIG IN 2 HOLD
DIG OUT 1 NONE
DIG OUT 1 DUAL PID
DIG OUT 1 KEYLOCK
DIG OUT 1 MANUAL
DIG OUT 1 REMOTE
DIG OUT 1 END
DIG OUT 1 LOG OUT 1
COMMS DIGITAL
BAUD RATE 9600
BAUD RATE 1200
BAUD RATE 4800
BAUD RATE 600
BAUD RATE 3600
BAUD RATE 300
BAUD RATE 2400
BAUD RATE 110
ADDRESS 0 0
REM I/P NONE
REM I/P LOC TRIM
REM I/P S P TRIM
COMMS DATA LOG
DIG OUT 1 NONE
DIG OUT 1 DUAL PID
DIG OUT 1 KEYLOCK
DIG OUT 1 MANUAL
DIG OUT 1 REMOTE
DIG OUT 1 END
DIG IN 1 TEST
COMMS LOGIC
DIG IN 1 NONE
DIG IN 1 KEYLOCK
DIG IN 1 MANUAL
DIG IN 1 RUN/RESET
DIG IN 1 DUAL PID
DIG IN 1 HOLD
DIG IN 1 REMOTE
DIG IN 1 TEST
DIG IN 2 NONE
DIG IN 2 KEYLOCK
DIG IN 2 MANUAL
DIG IN 2 RUN/RESET
DIG IN 2 DUAL PID
DIG IN 2 HOLD
DIG IN 2 REMOTE
DIG IN 2 TEST
DIG IN 3 NONE
DIG IN 3 WAIT
DIG IN 3 RUN/RESET
DIG IN 3 HOLD
DIG IN 3 MANUAL
DIG OUT 1 NONE
DIG OUT 1 KEYLOCK
DIG OUT 1 MANUAL
DIG OUT 1 END
DIG OUT 1 DUAL PID
DIG OUT 1 LOG OUT 1
DIG OUT 1 REMOTE
DIG OUT 2 NONE
DIG OUT 2 LOG OUT 2
DIG OUT 3 NONE
DIG OUT 3 LOG OUT 3
DIG OUT 4 NONE
DIG OUT 4 END
DIG OUT 4 LOG OUT 4
DIG OUT 4 HOLDBACK
DIG OUT 4 EOS
DIG OUT 4 RUNNING
DIG OUT 4 RESET
COMMS NONE
ALARM HYS 0.1%
ALARM HYS 0.5%
ALARM HYS 1.0%
ALARM 1 DVL
ALARM 1 DVH
ALARM 1 DVB
ALARM 1 FSH
ALARM 1 FSL
ALARM 1 LATCH
ALARM 1 NON LATCH
ALARM 1 ENER
ALARM 1 DE ENER
ALARM 2 DVL
ALARM 2 DVH
ALARM 2 DVB
ALARM 2 FSH
ALARM 2 FSL
ALARM 2 LATCH
ALARM 2 NON LATCH
ALARM 2 ENER
ALARM 2 DE ENER
HOLDBACK DVB
HOLDBACK DVL
HOLDBACK DVH
D P POS X XXX
D P POS XX XX
D P POS XXX X
D P POS XXXX
5 DIGIT YES
5 DIGIT NO
UNITS °C
UNITS °F
UNITS °K
UNITS MV
UNITS V
UNITS MA
UNITS OHM
UNITS NO UNITS
UNITS BAR
UNITS PSI
UNITS MM
UNITS %
UNITS %CO2
UNITS CO2
(for linear and non linear mV I P only)
MAX MV IN 50 0
MIN MV IN 0 0
DISP MAX 100 C
DISP MIN 0 C
EXIT
COMPLETED
Note: Not available, see version 5.1

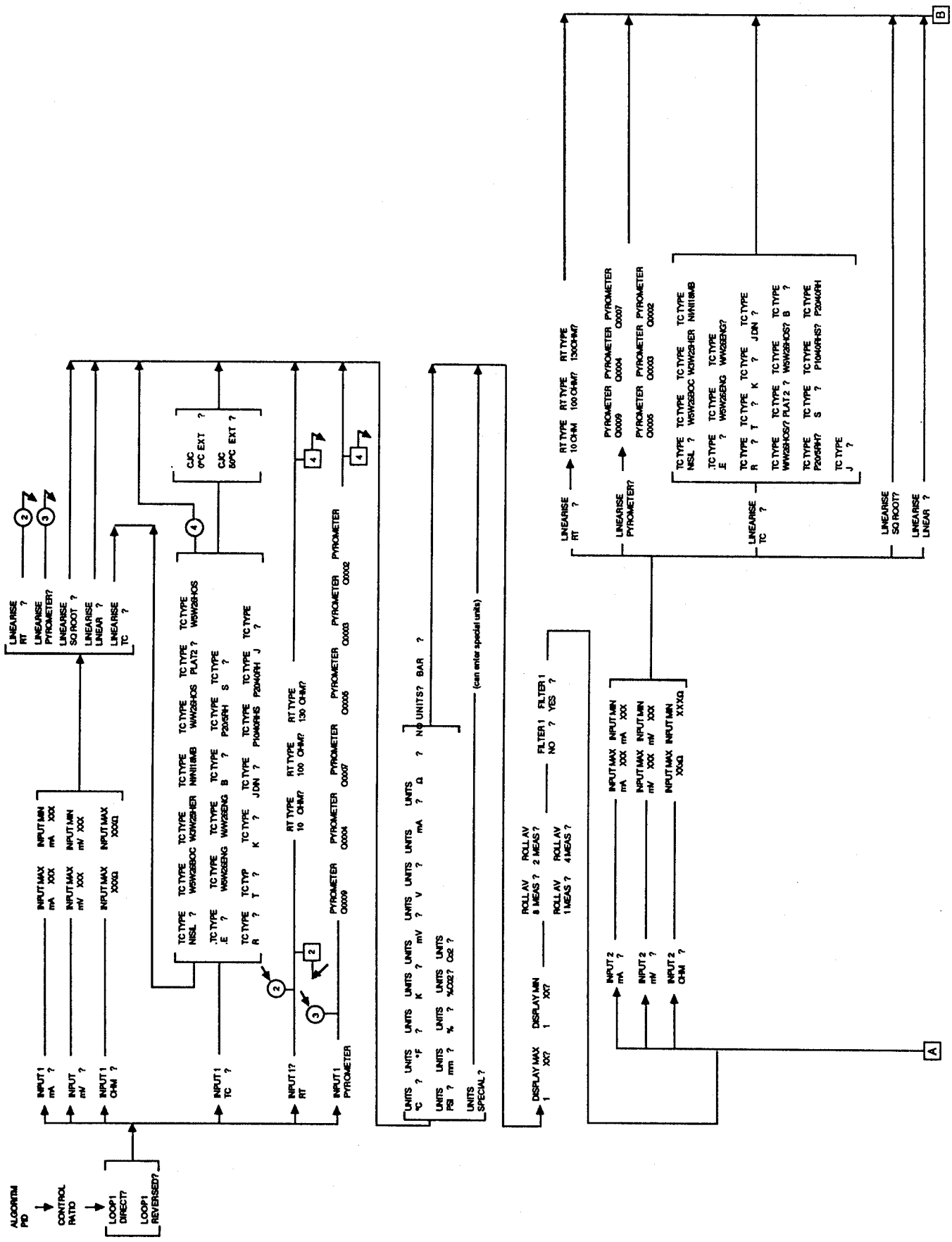


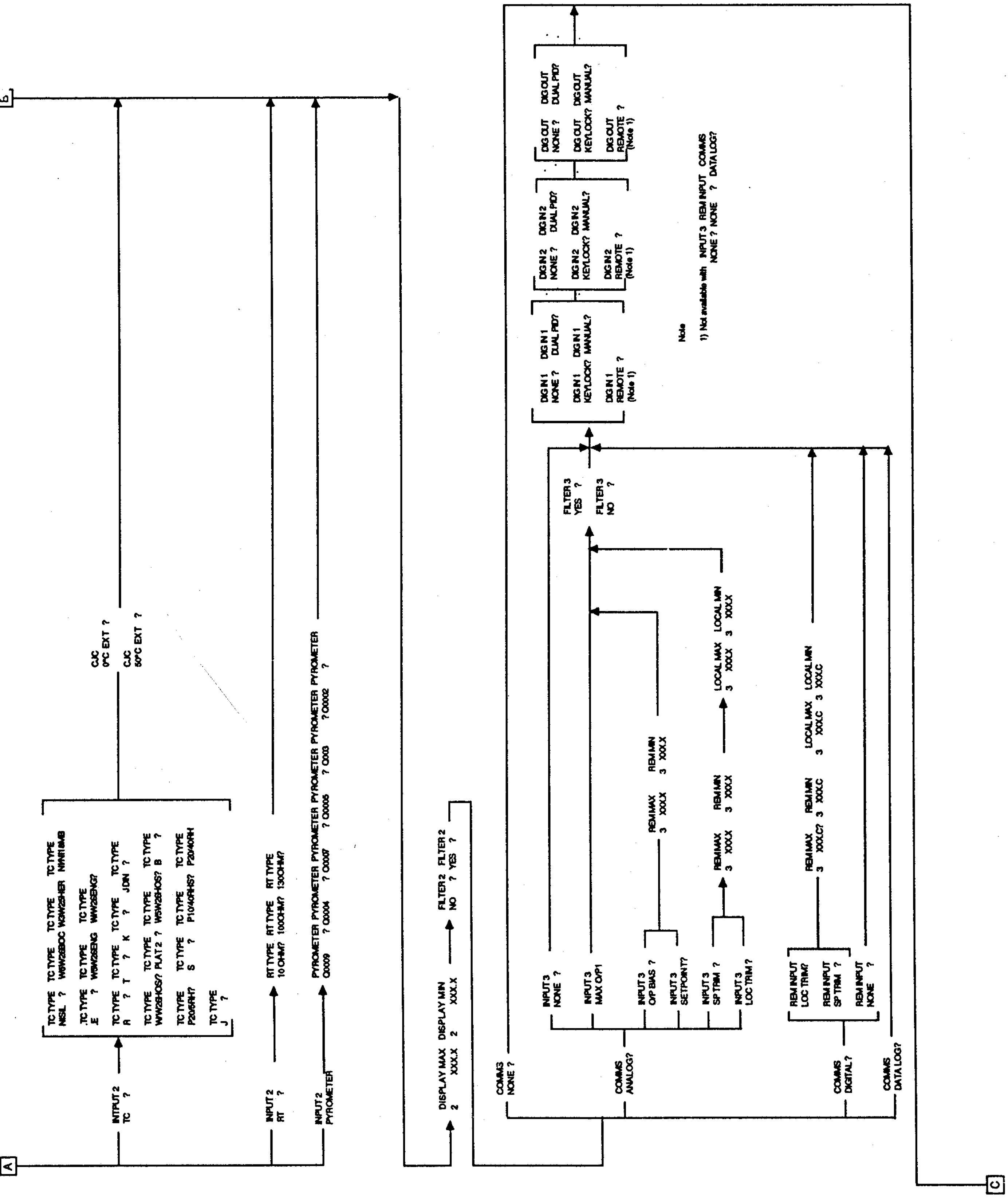
ALGORITHM PID
CONTROL SINGLE
LOOP1 DIRECT?
LOOP1 REVERSED?
INPUT 1 mA ?
INPUT mV ?
INPUT 1 OHM ?
INPUT 1 TC ?
INPUT 1? RT
INPUT 1 PYROMETER
INPUT MAX mA XXX
INPUT MIN mA XXX
INPUT MAX mV XXX
INPUT MIN mV XXX
INPUT MAX XXXΩ
LINEARISE RT ?
LINEARISE PYROMETERY?
LINEARISE SQ ROOT ?
LINEARISE LINEAR ?
LINEARISE TC ?
TC TYPE NSL ?
TC TYPE E ?
TC TYPE R ?
TC TYP T ?
TC TYPE K ?
TC TYPE J DIN ?
TC TYPE B ?
TC TYPE S ?
TC TYPE J ?
CJC INTERNAL?
CJC 0°C EXT ?
CJC 50°C EXT ?
RT TYPE 10 OHM?
RT TYPE 100 OHM?
RT TYPE 130 OHM?
PYROMETER C0009
PYROMETER C0004
PYROMETER C0007
PYROMETER C0005
PYROMETER C0003
PYROMETER C0002
UNITS °C ?
UNITS °F ?
UNITS K ?
UNITS mV ?
UNITS V ?
UNITS mA ?
UNITS Ω ?
NO UNITS?
BAR ?
UNITS PSI ?
UNITS mm ?
UNITS % ?
UNITS %CO2 ?
UNITS Co2 ?
UNITS SPECIAL ?
(can enter special units)
DISPLAY MAX XX? 1
DISPLAY MIN XX? 1
ROLL AV 8 MEAS ?
ROLL AV 2 MEAS?
ROLL AV 1 MEAS ?
ROLL AV 4 MEAS ?
FILTER 1 NO ?
FILTER 1 YES ?
INPUT 2 MAX O/P1
INPUT 2 mA ?
INPUT 2 mV ?
INPUT 2 OHM ?
INPUT MAX mA XXX
INPUT MIN mA XXX
INPUT MAX mV XXX
INPUT MIN mV XXX
INPUT MAX XXXΩ
INPUT MIN XXXΩ
A
B

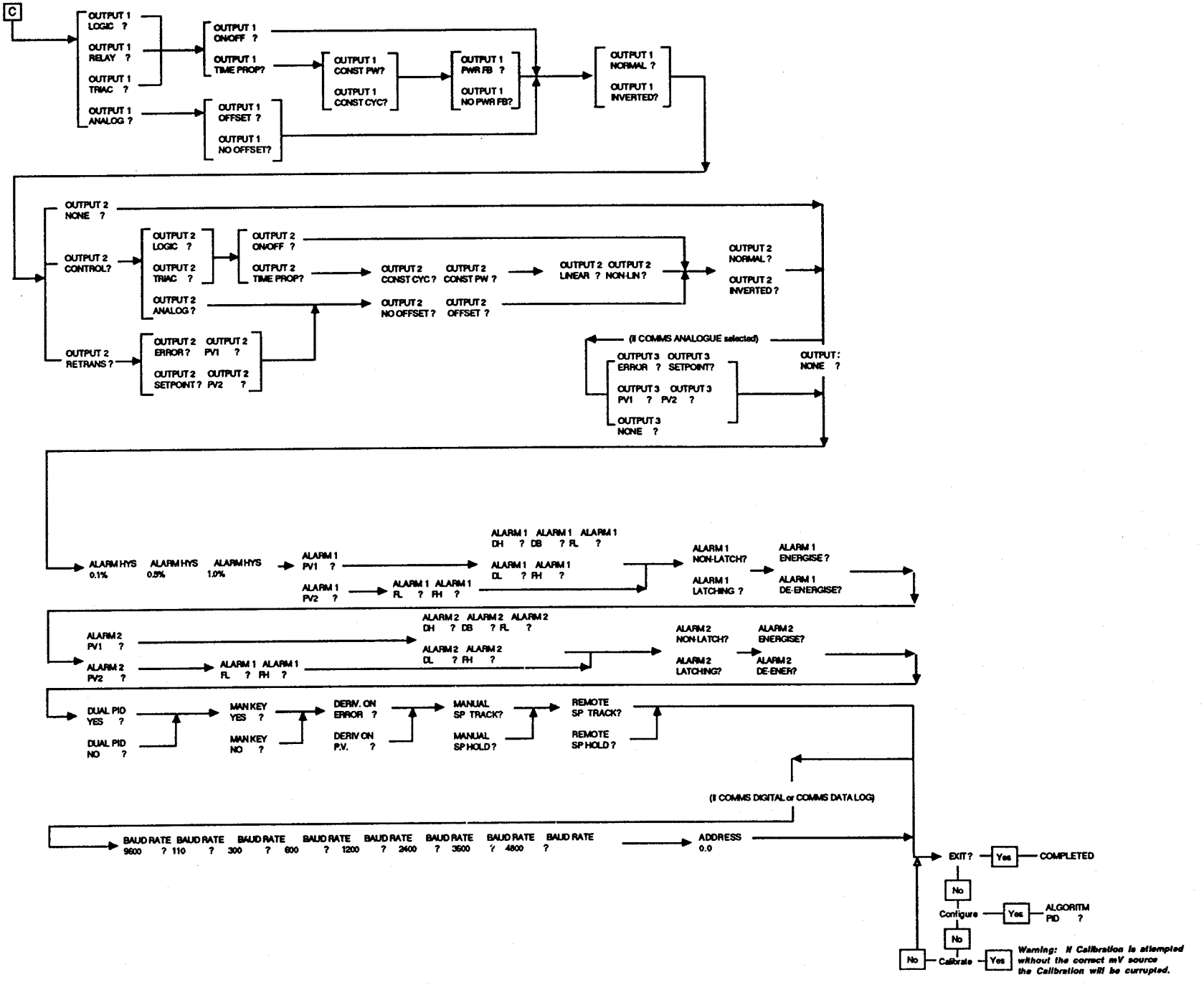

INPUT 2 OP BIAS?
INPUT 2 SETPOINT?
INPUT 2 S.P. TRIM
INPUT 2 LOC TRIM
INPUT 2 NONE
INPUT 2 mA ?
INPUT 2 mV ?
INPUT 2 OHM ?
INPUT 2 TC ?
INPUT 2 RT ?
INPUT 2 PYROMETER?
INPUT MAX XXXX
INPUT MIN XXX
LINEARISE SQ ROOT ?
LINEARISE LINEAR ?
LINEARISE RT ?
LINEARISE PYROMETER?
LINEARISE TC ?
RT TYPE 10 OHM
RT TYPE 100 OHM?
RT TYPE 1300 OHM?
PYROMETER 0.0009
PYROMETER 0.0004
PYROMETER 0.0007
PYROMETER 0.0005
PYROMETER 0.0003
PYROMETER 0.0002
TC TYPE NISIL ?
TC TYPE E ?
TC TYPE R ? T ? K ? JDN ?
TC TYPE WW26BOC
TC TYPE W3W26HER
TC TYPE NIMI18MB
TC TYPE W5W26ENG
TC TYPE WW26ENG?
TC TYPE WW26HOS? PLAT 2 ?
TC TYPE W5W26HOS? B ?
TC TYPE P20/5RH?
TC TYPE S ?
TC TYPE P1040RHS?
TC TYPE P20/40RH
TC TYPE J ?
CJC 0°C EXT ?
CJC 50°C EXT ?
DISPLAY MAX XXXX
DISPLAY MIN XXXX
2

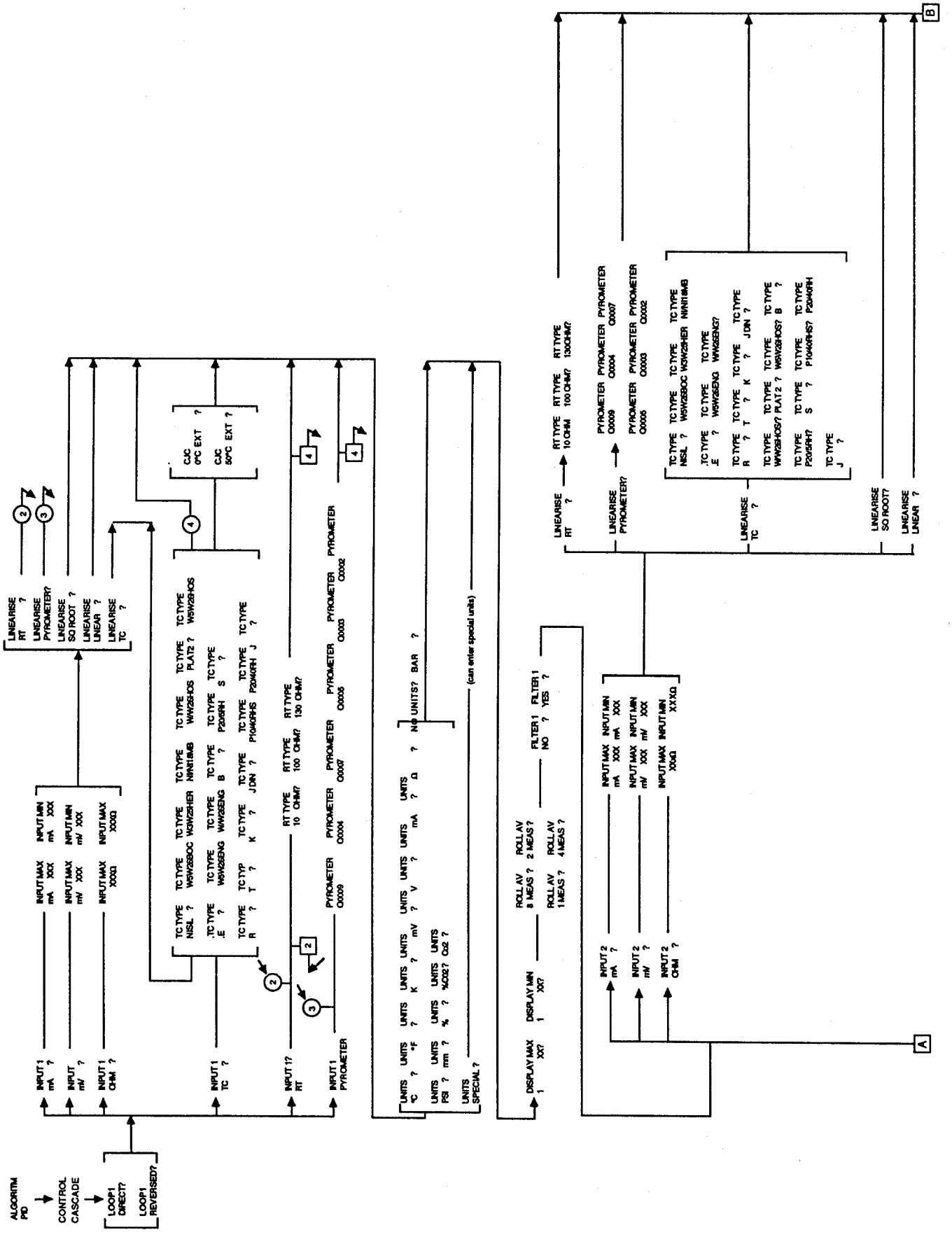

E
D
C
F
LOCAL MAX LOCAL MIN
2 XXX.X 2 XXX.X
REM MAX REM MIN
2 XXX.X 2 XXX.X
FILTER 2 FILTER 2
NO ? YES ?
COMMS NONE ?
COMMS ANALOG?
COMMS DIGITAL ?
COMMS DATA LOG?
INPUT 3 NONE ?
INPUT 3 MAX O/P1
INPUT 3 O/P BIAS ?
* INPUT 3 SETPOINT?
* INPUT 3 SP TRIM ?
* INPUT 3 LOC TRIM ?
REM INPUT LOC TRIM?
REM INPUT SP TRIM ?
REM INPUT NONE ?
FILTER 3 YES ?
FILTER 3 NO ?
LINEARISE TC ?
LINEARISE RT ?
LINEARISE PYROMETER?
LINEARISE SQ ROOT ?
LINEARISE LINEAR ?
REM MAX 3 XXX.C
REM MIN 3 XXX.C
LOCAL MAX 3 XXX.C
LOCAL MIN 3 XXX.C
DIG IN 1 NONE ?
DIG IN 1 KEYLOCK?
DIG IN 1 DUAL PID?
DIG IN 1 MANUAL?
DIG IN 1 REMOTE ? (Note 1)
DIG IN 2 NONE ?
DIG IN 2 KEYLOCK?
DIG IN 2 DUAL PID?
DIG IN 2 MANUAL?
DIG IN 2 REMOTE ? (Note 1)
DIG OUT NONE ?
DIG OUT KEYLOCK?
DIG OUT DUAL PID?
DIG OUT MANUAL?
DIG OUT REMOTE ? (Note 1)
NOTE:
1) Not available with INPUT 3 NONE? REM INPUT NONE ? COMMS DATALOG ?
* Not available if I/P2 SP Trim or Local Trim are selected
OUTPUT 1 LOGIC ?
OUTPUT 1 RELAY ?
OUTPUT 1 TRIAC ?
OUTPUT 1 ANALOG ?
OUTPUT 1 ON/OFF ?
OUTPUT 1 TIME PROP?
OUTPUT 1 CONST PW?
OUTPUT 1 CONST CYC?
OUTPUT 1 OFFSET ?
OUTPUT 1 NO OFFSET?
OUTPUT 1 PWR FB ?
OUTPUT 1 NO PWR FB?
OUTPUT 1 NORMAL ?
OUTPUT 1 INVERTED?
OUTPUT 2 NONE ?
OUTPUT 2 CONTROL?
OUTPUT 2 LOGIC ?
OUTPUT 2 TRIAC ?
OUTPUT 2 ANALOG ?
OUTPUT 2 ERROR?
OUTPUT 2 SETPOINT?
OUTPUT 2 RETRANS ?
OUTPUT 2 PV1 ?
OUTPUT 2 PV2 ?
OUTPUT 2 ON/OFF ?
OUTPUT 2 TIME PROP?
OUTPUT 2 CONST CYC ?
OUTPUT 2 CONST PW ?
OUTPUT 2 OFFSET ?
OUTPUT 2 NO OFFSET ?
OUTPUT 2 LINEAR ?
OUTPUT 2 NON-LIN ?
OUTPUT 2 NORMAL ?
OUTPUT 2 INVERTED ?
(if COMMS ANALOGUE selected)
OUTPUT 3 ERROR ?
OUTPUT 3 SETPOINT?
OUTPUT 3 PV1 ?
OUTPUT 3 PV2 ?
OUTPUT 3 NONE ?
OUTPUT 3 NONE ?

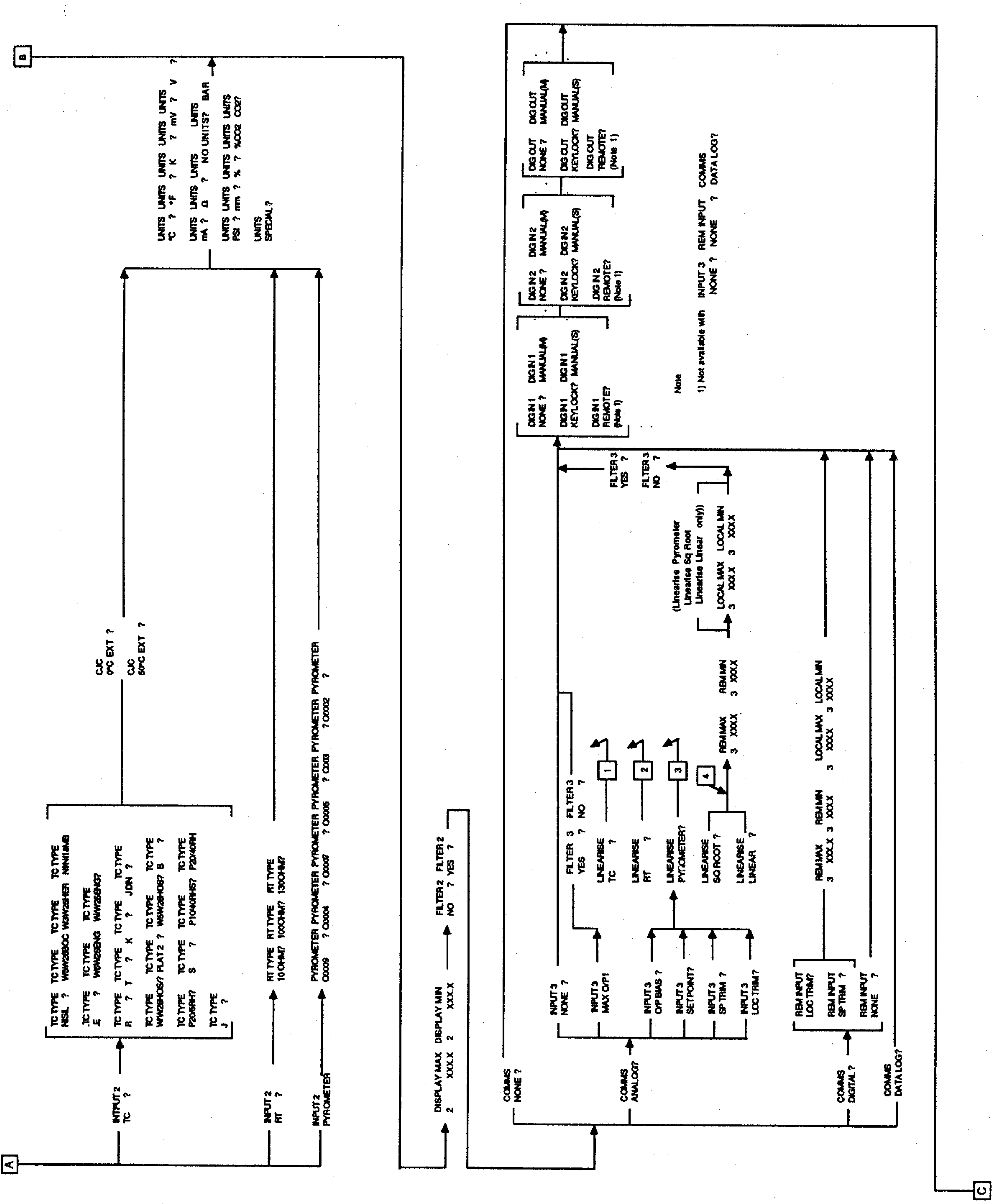

F
ALARM HYS 0.1%
ALARM HYS 0.5%
ALARM HYS 1.0%
ALARM 1 PV< ?
ALARM 1 PV1 ?
ALARM 2 AL2H ? AL2L ?
ALARM 1 DH ? DB ? AL ?
ALARM 1 DL ? FH ?
ALARM 1 NON-LATCH?
ALARM 1 LATCHING ?
ALARM 1 ENERGISE ?
ALARM 1 DE-ENERGISE?
ALARM 2 PV2 ?
ALARM 2 PV1
ALARM 2 AL2H ? AL2L ?
ALARM 2 DH ? DB ? AL ?
ALARM 2 DL ? FH ?
ALARM 2 NON-LATCH?
ALARM 2 LATCHING?
ALARM 2 ENERGISE?
ALARM 2 DE-ENER?
DUAL PID YES ?
DUAL PID NO ?
MAN KEY YES ?
MAN KEY NO ?
DERIV. ON ERROR ?
DERIV ON P.V. ?
MANUAL SP TRACK?
MANUAL SP HOLD ?
REMOTE SP TRACK?
REMOTE SP HOLD ?
(If COMMS DIGITAL or COMMS DATA LOG)
BAUD RATE 9600 ? 110 ? 300 ? 600 ? 1200 ? 2400 ? 3600 ? 4800 ?
ADDRESS 0.0
EXIT ?
Yes
COMPLETED
No
Configure
Yes
ALGORITM PID ?
No
Calibrate
Yes
Warning: If Calibration is attempted without the correct mV source the Calibration will be corrupted.
No


ALGORITM
PID
CONTROL
RATIO
LOOP1
DIRECT?
LOOP1
REVERSED?
INPUT 1
mA ?
INPUT
mV ?
INPUT 1
OHM ?
INPUT 1
TC ?
INPUT 1?
RT
INPUT 1
PYROMETER
INPUT MAX
mA XXX
INPUT MIN
mA XXX
INPUT MAX
mV XXX
INPUT MIN
mV XXX
INPUT MAX
XXXΩ
INPUT MAX
XXXΩ
TC TYPE
NISL ?
TC TYPE
W5W26OC
TC TYPE
W20W25HER
TC TYPE
NIMI18MB
TC TYPE
WW26HOS
TC TYPE
PLAT2 ?
TC TYPE
W5W26HOS
.TC TYPE
.E ?
TC TYPE
W5W26ENG
TC TYPE
WW26ENG
TC TYPE
B ?
TC TYPE
P20SRH
TC TYPE
S ?
TC TYP
R ? T ? K ?
TC TYPE
J ?
TC TYPE
P10M0RHS
TC TYPE
P20M0RH
RT TYPE
10 OHM?
RT TYPE
100 OHM?
RT TYPE
130 OHM?
PYROMETER
Q0009
PYROMETER
Q0004
PYROMETER
Q0005
PYROMETER
Q0003
PYROMETER
Q0002
CJC
0°C EXT ?
CJC
50°C EXT ?
UNITS
°C ? °F ?
UNITS
K ? mV ? V ?
UNITS
mA ? Ω ?
UNITS
PSI ? mm ?
UNITS
% ? %CO2?
UNITS
O2 ?
UNITS
SPECIAL ?
NO UNITS? BAR ?
(can enter special units)
DISPLAY MAX
1 XX?
DISPLAY MIN
1 XX?
ROLL AV
8 MEAS ?
ROLL AV
2 MEAS ?
ROLL AV
1 MEAS ?
ROLL AV
4 MEAS ?
FILTER 1
NO ? YES ?
FILTER 1
NO ? YES ?
INPUT 2
mA ?
INPUT 2
mV ?
INPUT 2
OHM ?
INPUT MAX
mA XXX
INPUT MIN
mA XXX
INPUT MAX
mV XXX
INPUT MIN
mV XXX
INPUT MAX
XXXΩ
INPUT MIN
XXXΩ
LINEARISE
RT ?
LINEARISE
PYROMETER?
LINEARISE
SQ ROOT ?
LINEARISE
LINEAR ?
LINEARISE
TC ?
RT TYPE
10 OHM
RT TYPE
100 OHM
RT TYPE
130 OHM?
PYROMETER
Q0009
PYROMETER
Q0004
PYROMETER
Q0007
PYROMETER
Q0005
PYROMETER
Q0003
PYROMETER
Q0002
TC TYPE
NISL ?
TC TYPE
W5W26OC
TC TYPE
W20W25HER
TC TYPE
NIMI18MB
.TC TYPE
.E ?
TC TYPE
W5W26ENG
TC TYPE
WW26ENG
TC TYPE
R ? T ? K ?
TC TYPE
J ?
TC TYPE
WW26HOS?
TC TYPE
PLAT2 ?
TC TYPE
W5W26HOS?
TC TYPE
B ?
TC TYPE
P20SRH?
TC TYPE
S ?
TC TYPE
P10M0RHS?
TC TYPE
P20M0RH
A
B

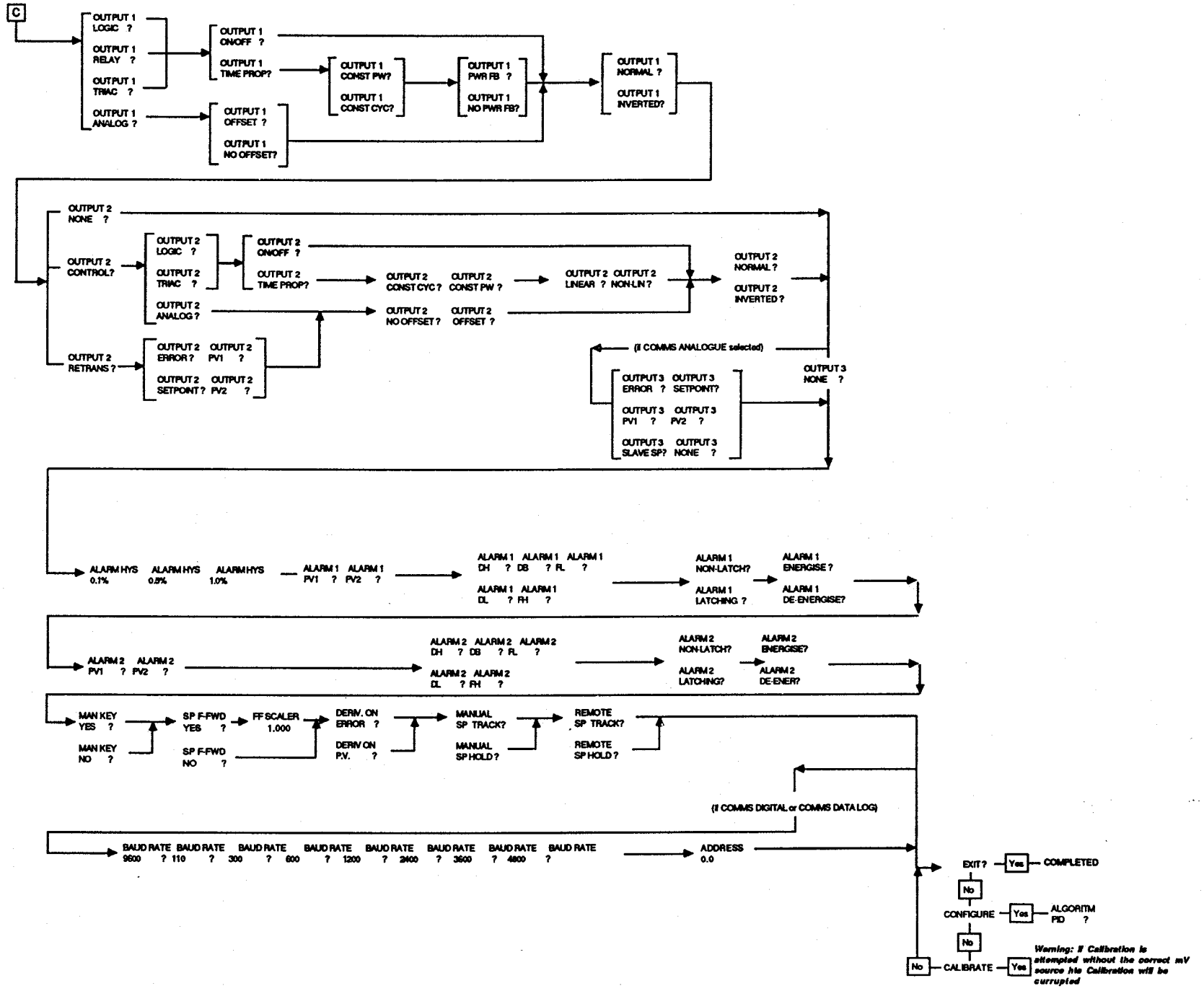

A
B
C
INPUT 2 TC ?
INPUT 2 RT ?
INPUT 2 PYROMETER
CJC 0°C EXT ?
CJC 50°C EXT ?
RT TYPE 10 OHM?
RT TYPE 100OHM?
RT TYPE 130OHM?
DISPLAY MAX 2 XXX.X
DISPLAY MIN 2 XXX.X
FILTER 2 NO ?
FILTER 2 YES ?
COMMS NONE ?
COMMS ANALOG?
COMMS DIGITAL ?
COMMS DATA LOG?
INPUT 3 NONE ?
INPUT 3 MAX O/P1
INPUT 3 O/P BIAS ?
INPUT 3 SETPOINT?
INPUT 3 SP TRIM ?
INPUT 3 LOC TRIM ?
REM INPUT LOC TRIM?
REM INPUT SP TRIM ?
REM INPUT NONE ?
REM MAX 3 XXX.X
REM MIN 3 XXX.X
LOCAL MAX 3 XXX.X
LOCAL MIN 3 XXX.X
FILTER 3 YES ?
FILTER 3 NO ?
DIG IN 1 NONE ?
DIG IN 1 DUAL PID?
DIG IN 1 KEYLOCK?
DIG IN 1 MANUAL?
DIG IN 1 REMOTE ?
(Note 1)
DIG IN 2 NONE ?
DIG IN 2 DUAL PID?
DIG IN 2 KEYLOCK?
DIG IN 2 MANUAL?
DIG IN 2 REMOTE ?
(Note 1)
DIG OUT NONE ?
DIG OUT DUAL PID?
DIG OUT KEYLOCK?
DIG OUT MANUAL?
DIG OUT REMOTE ?
(Note 1)
Note
1) Not available with INPUT 3 NONE ? REM INPUT NONE ? COMMS DATA LOG?

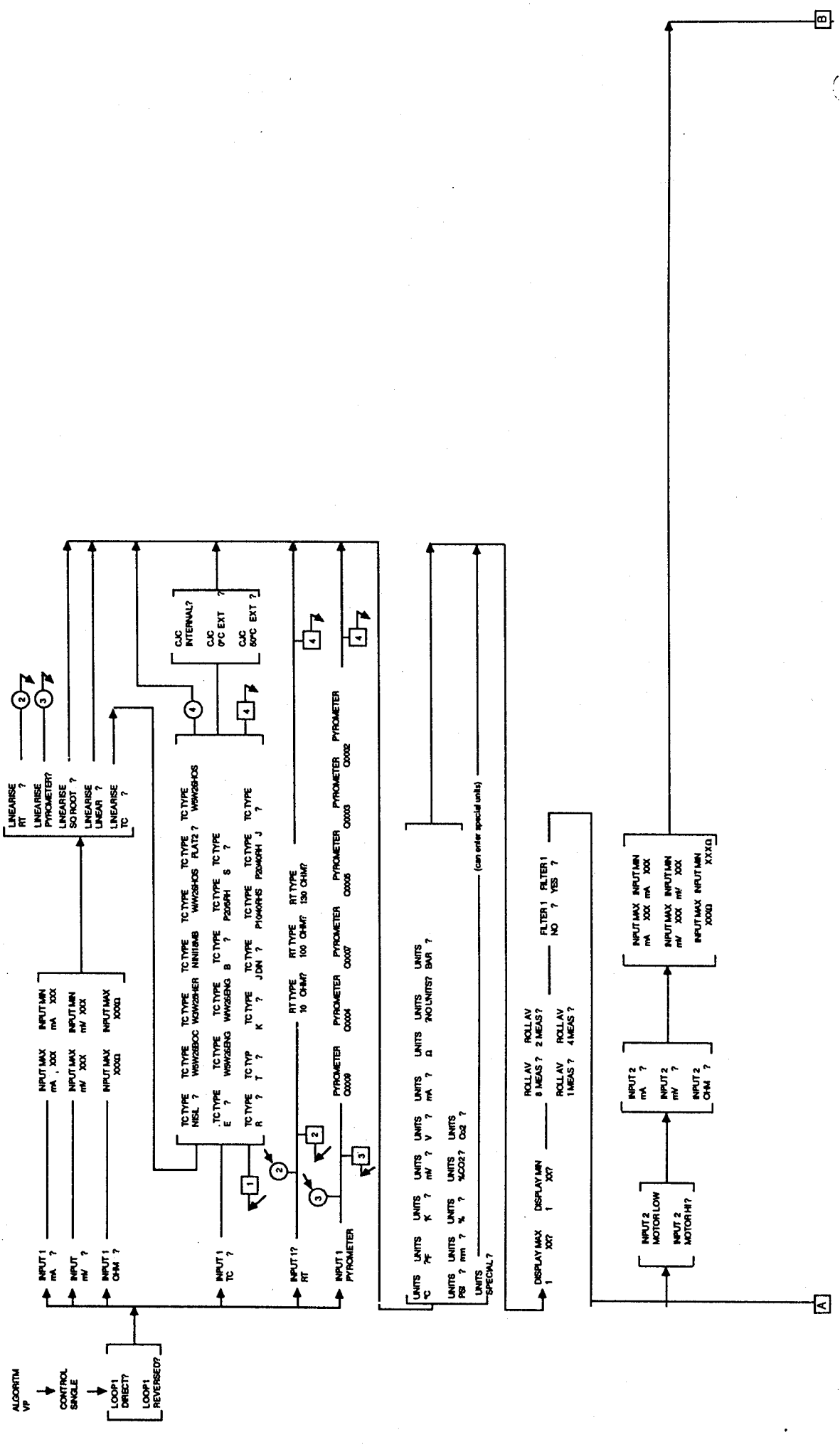

C
OUTPUT 1 LOGIC ?
OUTPUT 1 RELAY ?
OUTPUT 1 TRIAC ?
OUTPUT 1 ANALOG ?
OUTPUT 1 ON/OFF ?
OUTPUT 1 TIME PROP?
OUTPUT 1 CONST PW?
OUTPUT 1 CONST CYC?
OUTPUT 1 PWR FB ?
OUTPUT 1 NO PWR FB?
OUTPUT 1 OFFSET ?
OUTPUT 1 NO OFFSET?
OUTPUT 1 NORMAL ?
OUTPUT 1 INVERTED?
OUTPUT 2 NONE ?
OUTPUT 2 CONTROL?
OUTPUT 2 LOGIC ?
OUTPUT 2 TRIAC ?
OUTPUT 2 ANALOG ?
OUTPUT 2 ON/OFF ?
OUTPUT 2 TIME PROP?
OUTPUT 2 CONST CYC ?
OUTPUT 2 CONST PW ?
OUTPUT 2 NO OFFSET ?
OUTPUT 2 OFFSET ?
OUTPUT 2 LINEAR ?
OUTPUT 2 NON-LIN ?
OUTPUT 2 NORMAL ?
OUTPUT 2 INVERTED ?
OUTPUT 2 RETRANS ?
OUTPUT 2 ERROR ?
OUTPUT 2 PV1 ?
OUTPUT 2 SETPOINT ?
OUTPUT 2 PV2 ?
(If COMMS ANALOGUE selected)
OUTPUT 3 ERROR ?
OUTPUT 3 SETPOINT?
OUTPUT 3 PV1 ?
OUTPUT 3 PV2 ?
OUTPUT 3 NONE ?
OUTPUT: NONE ?
ALARM HYS 0.1%
ALARM HYS 0.5%
ALARM HYS 1.0%
ALARM 1 PV1 ?
ALARM 1 PV2 ?
ALARM 1 FL ?
ALARM 1 FH ?
ALARM 1 DH ?
ALARM 1 DB ?
ALARM 1 FL ?
ALARM 1 DL ?
ALARM 1 FH ?
ALARM 1 NON-LATCH?
ALARM 1 LATCHING ?
ALARM 1 ENERGISE ?
ALARM 1 DE-ENERGISE?
ALARM 2 PV1 ?
ALARM 2 PV2 ?
ALARM 2 FL ?
ALARM 2 FH ?
ALARM 2 DH ?
ALARM 2 DB ?
ALARM 2 FL ?
ALARM 2 DL ?
ALARM 2 FH ?
ALARM 2 NON-LATCH?
ALARM 2 LATCHING?
ALARM 2 ENERGISE?
ALARM 2 DE-ENER?
DUAL PID YES ?
DUAL PID NO ?
MAN KEY YES ?
MAN KEY NO ?
DERIV. ON ERROR ?
DERIV ON P.V. ?
MANUAL SP TRACK?
MANUAL SP HOLD ?
REMOTE SP TRACK?
REMOTE SP HOLD ?
(If COMMS DIGITAL or COMMS DATA LOG)
BAUD RATE 9600 ?
BAUD RATE 110 ?
BAUD RATE 300 ?
BAUD RATE 600 ?
BAUD RATE 1200 ?
BAUD RATE 2400 ?
BAUD RATE 3600 ?
BAUD RATE 4800 ?
BAUD RATE ?
ADDRESS 0.0
EXIT?
Yes
COMPLETED
No
Configure
Yes
ALGORITM PID ?
No
Calibrate
Yes
No
Warning: If Calibration is attempted without the correct mV source the Calibration will be corrupted.

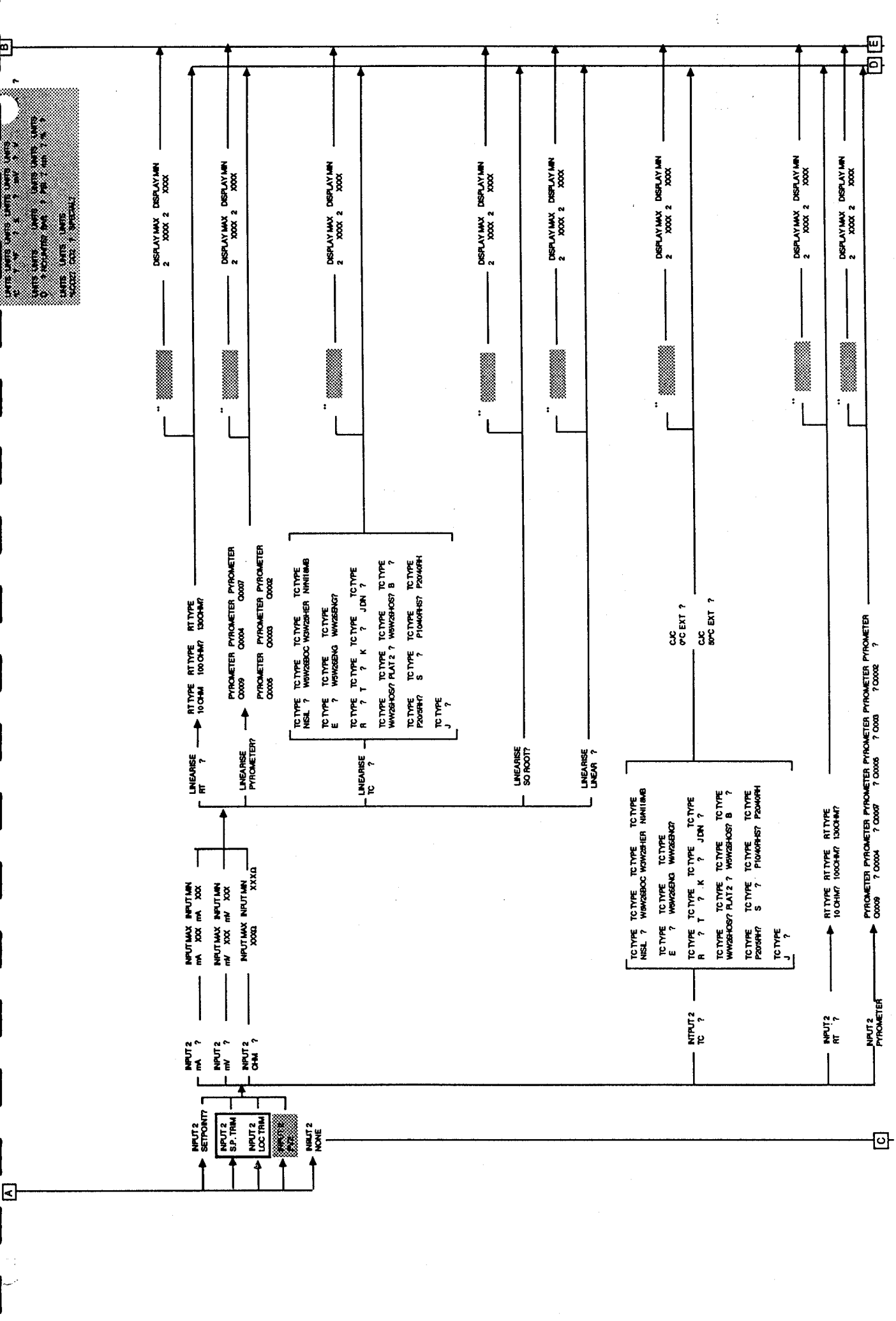

ALGORITM PID
CONTROL CASCADE
LOOP1 DIRECT?
LOOP1 REVERSED?
INPUT 1 mA ?
INPUT MAX mA XXX
INPUT MIN mA XXX
INPUT mV ?
INPUT MAX mV XXX
INPUT MIN mV XXX
INPUT 1 OHM ?
INPUT MAX XXXΩ
INPUT 1 TC ?
TC TYPE NiSL ? W5W26BOC W3W26HER NiNi18MB
TC TYPE .E ? W5W26ENG WW26ENG B ? TC TYPE P20/5RH S ?
TC TYP R ? T ? K ? TC TYPE J.DIN ? TC TYPE P10/40RHS TC TYPE P2/40RH J ?
CJC 0°C EXT ?
CJC 50°C EXT ?
INPUT 1? RT
RT TYPE 10 OHM? RT TYPE 100 OHM? RT TYPE 130 OHM?
INPUT 1 PYROMETER
PYROMETER O0009 PYROMETER O0004 PYROMETER O0007 PYROMETER O0005 PYROMETER O0003 PYROMETER O0002
LINEARISE RT ?
LINEARISE PYROMETER?
LINEARISE SQ ROOT ?
LINEARISE LINEAR ?
LINEARISE TC ?
UNITS °C ? °F ? K ? mV ? V ? mA ? Ω ?
UNITS PSI ? mm ? % ? %CO2? Co2 ?
UNITS SPECIAL ?
N/A UNITS? BAR ?
(can enter special units)
DISPLAY MAX 1 XX?
DISPLAY MIN 1 XX?
ROLL AV 8 MEAS ? ROLL AV 2 MEAS ?
ROLL AV 1 MEAS ? ROLL AV 4 MEAS ?
FILTER 1 NO ? FILTER 1 YES ?
INPUT 2 mA ?
INPUT 2 mV ?
INPUT 2 OHM ?
INPUT MAX mA XXX INPUT MIN mA XXX
INPUT MAX mV XXX INPUT MIN mV XXX
INPUT MAX XXXΩ INPUT MIN XXXΩ
A
B

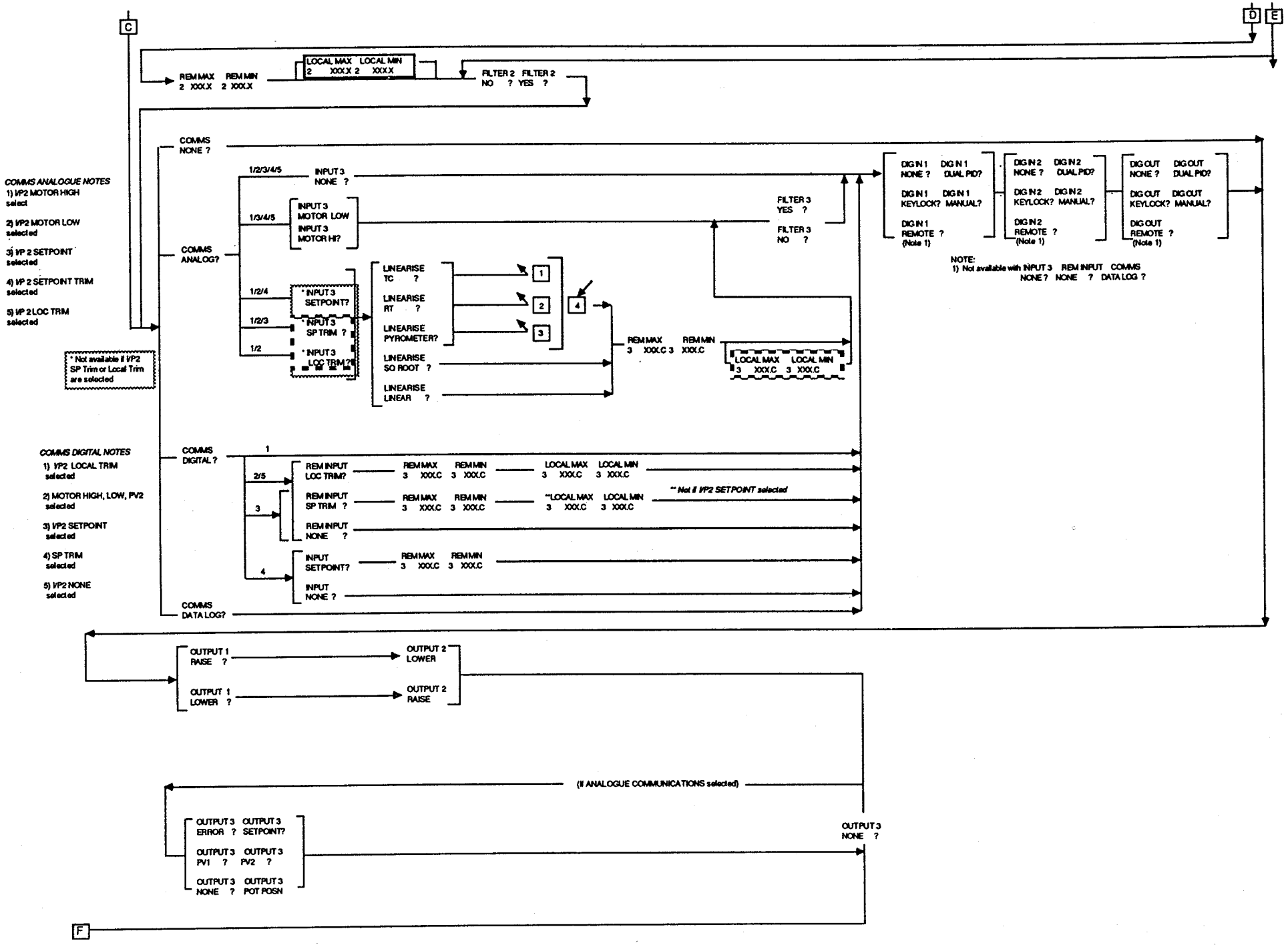


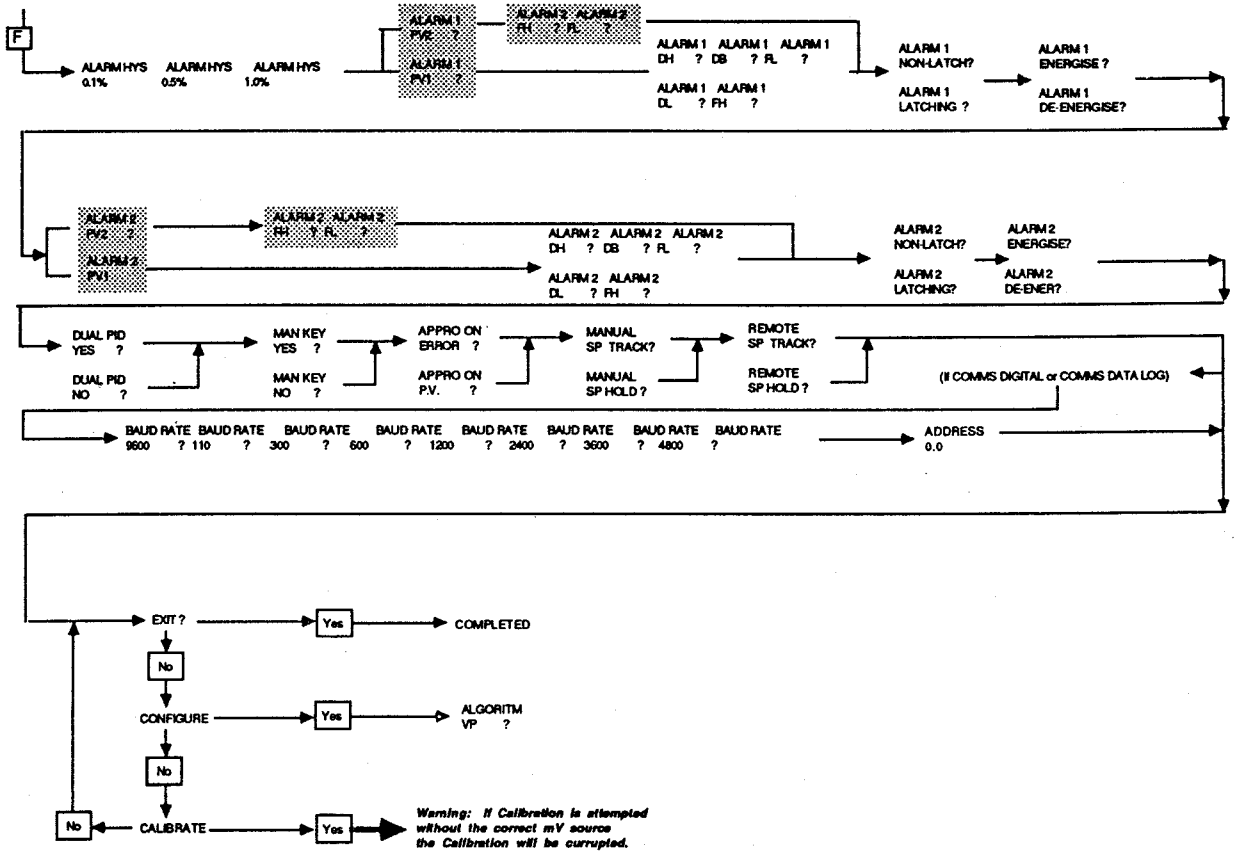
B
A
C
INTPUT 2 TC ?
TC TYPE NISIL ?
TC TYPE W5W26BOC
TC TYPE W26W25HER
TC TYPE NiNi18MB
TC TYPE E ?
TC TYPE W6W26ENG
TC TYPE W6W26ENG?
TC TYPE R ?
TC TYPE T ?
TC TYPE K ?
TC TYPE JDIN ?
TC TYPE WW26HOS? PLAT 2 ?
TC TYPE W5W26HOS? B ?
TC TYPE P2040RH? S ?
TC TYPE P1040RHS?
TC TYPE P2040RH
TC TYPE J ?
CJC 0°C EXT ?
CJC 50°C EXT ?
UNITS °C ?
UNITS °F ?
UNITS K ?
UNITS mV ?
UNITS V ?
UNITS mA ?
UNITS Ω ?
UNITS NO UNITS?
UNITS BAR
UNITS PSI ?
UNITS mm ?
UNITS % ?
UNITS %CO2
UNITS CO2?
UNITS SPECIAL?
INPUT 2 RT ?
RT TYPE 10 OHM?
RT TYPE 100OHM?
RT TYPE 130OHM?
INPUT 2 PYROMETER
PYROMETER Q0009 ?
PYROMETER Q0004 ?
PYROMETER Q0007 ?
PYROMETER Q0005 ?
PYROMETER Q003 ?
PYROMETER Q0002 ?
DISPLAY MAX 2 XXX.X
DISPLAY MIN 2 XXX.X
FILTER 2 NO ?
FILTER 2 YES ?
COMMS NONE ?
COMMS ANALOG?
COMMS DIGITAL ?
COMMS DATA LOG?
INPUT 3 NONE ?
INPUT 3 MAX O/P1
INPUT 3 O/P BIAS ?
INPUT 3 SETPOINT?
INPUT 3 SP TRIM ?
INPUT 3 LOC TRIM ?
FILTER 3 YES ?
FILTER 3 NO ?
LINEARISE TC ?
LINEARISE RT ?
LINEARISE PYROMETER?
LINEARISE SQ ROOT ?
LINEARISE LINEAR ?
1
2
3
4
REM MAX 3 XXX.X
REM MIN 3 XXX.X
(Linearise Pyrometer Linearise Sq Root Linearise Linear only))
LOCAL MAX 3 XXX.X
LOCAL MIN 3 XXX.X
REM INPUT LOC TRIM?
REM INPUT SP TRIM ?
REM INPUT NONE ?
DIG IN 1 NONE ?
DIG IN 1 MANUAL(M)
DIG IN 1 KEYLOCK?
DIG IN 1 MANUAL(S)
DIG IN 1 REMOTE? (Note 1)
DIG IN 2 NONE ?
DIG IN 2 MANUAL(M)
DIG IN 2 KEYLOCK?
DIG IN 2 MANUAL(S)
DIG IN 2 REMOTE? (Note 1)
DIG OUT NONE ?
DIG OUT MANUAL(M)
DIG OUT KEYLOCK?
DIG OUT MANUAL(S)
DIG OUT REMOTE? (Note 1)
Note
1) Not available with INPUT 3 NONE ? REM INPUT NONE ? COMMS DATA LOG?

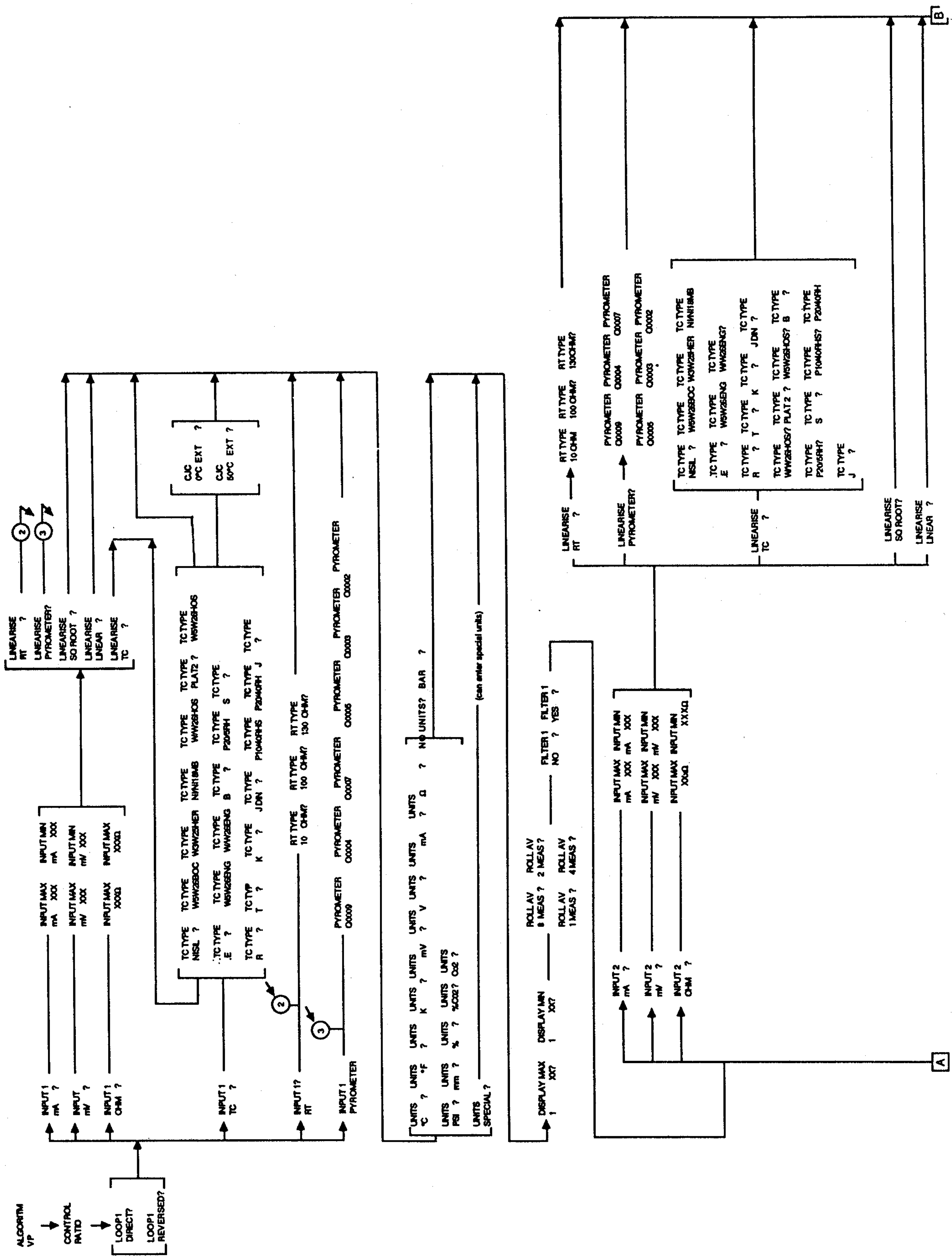

C
OUTPUT 1 LOGIC ?
OUTPUT 1 RELAY ?
OUTPUT 1 TRIAC ?
OUTPUT 1 ANALOG ?
OUTPUT 1 ON/OFF ?
OUTPUT 1 TIME PROP?
OUTPUT 1 OFFSET ?
OUTPUT 1 NO OFFSET?
OUTPUT 1 CONST PW?
OUTPUT 1 CONST CYC?
OUTPUT 1 PWR FB ?
OUTPUT 1 NO PWR FB?
OUTPUT 1 NORMAL ?
OUTPUT 1 INVERTED?
OUTPUT 2 NONE ?
OUTPUT 2 CONTROL?
OUTPUT 2 RETRANS ?
OUTPUT 2 LOGIC ?
OUTPUT 2 TRIAC ?
OUTPUT 2 ANALOG ?
OUTPUT 2 ON/OFF ?
OUTPUT 2 TIME PROP?
OUTPUT 2 CONST CYC ?
OUTPUT 2 CONST PW ?
OUTPUT 2 NO OFFSET ?
OUTPUT 2 OFFSET ?
OUTPUT 2 LINEAR ?
OUTPUT 2 NON-LIN ?
OUTPUT 2 NORMAL ?
OUTPUT 2 INVERTED ?
OUTPUT 2 ERROR ?
OUTPUT 2 PV1 ?
OUTPUT 2 SETPOINT ?
OUTPUT 2 PV2 ?
(If COMMS ANALOGUE selected)
OUTPUT 3 ERROR ?
OUTPUT 3 SETPOINT?
OUTPUT 3 PV1 ?
OUTPUT 3 PV2 ?
OUTPUT 3 SLAVE SP?
OUTPUT 3 NONE ?
ALARM HYS 0.1%
ALARM HYS 0.5%
ALARM HYS 1.0%
ALARM 1 PV1 ?
ALARM 1 PV2 ?
ALARM 1 DH ?
ALARM 1 DB ?
ALARM 1 RL ?
ALARM 1 DL ?
ALARM 1 FH ?
ALARM 1 NON-LATCH?
ALARM 1 LATCHING ?
ALARM 1 ENERGISE ?
ALARM 1 DE-ENERGISE?
ALARM 2 PV1 ?
ALARM 2 PV2 ?
ALARM 2 DH ?
ALARM 2 DB ?
ALARM 2 RL ?
ALARM 2 DL ?
ALARM 2 FH ?
ALARM 2 NON-LATCH?
ALARM 2 LATCHING?
ALARM 2 ENERGISE?
ALARM 2 DE-ENER?
MAN KEY YES ?
MAN KEY NO ?
SP F-FWD YES ?
SP F-FWD NO ?
FF SCALER 1.000
DERIV. ON ERROR ?
DERIV ON P.V. ?
MANUAL SP TRACK?
MANUAL SP HOLD ?
REMOTE SP TRACK?
REMOTE SP HOLD ?
(If COMMS DIGITAL or COMMS DATA LOG)
BAUD RATE 9600 ?
BAUD RATE 110 ?
BAUD RATE 300 ?
BAUD RATE 600 ?
BAUD RATE 1200 ?
BAUD RATE 2400 ?
BAUD RATE 3600 ?
BAUD RATE 4800 ?
BAUD RATE ?
ADDRESS 0.0
EXIT?
Yes
COMPLETED
No
CONFIGURE
Yes
ALGORITM PID ?
No
No
CALIBRATE
Yes
Warning: If Calibration is attempted without the correct mV source his Calibration will be currupted

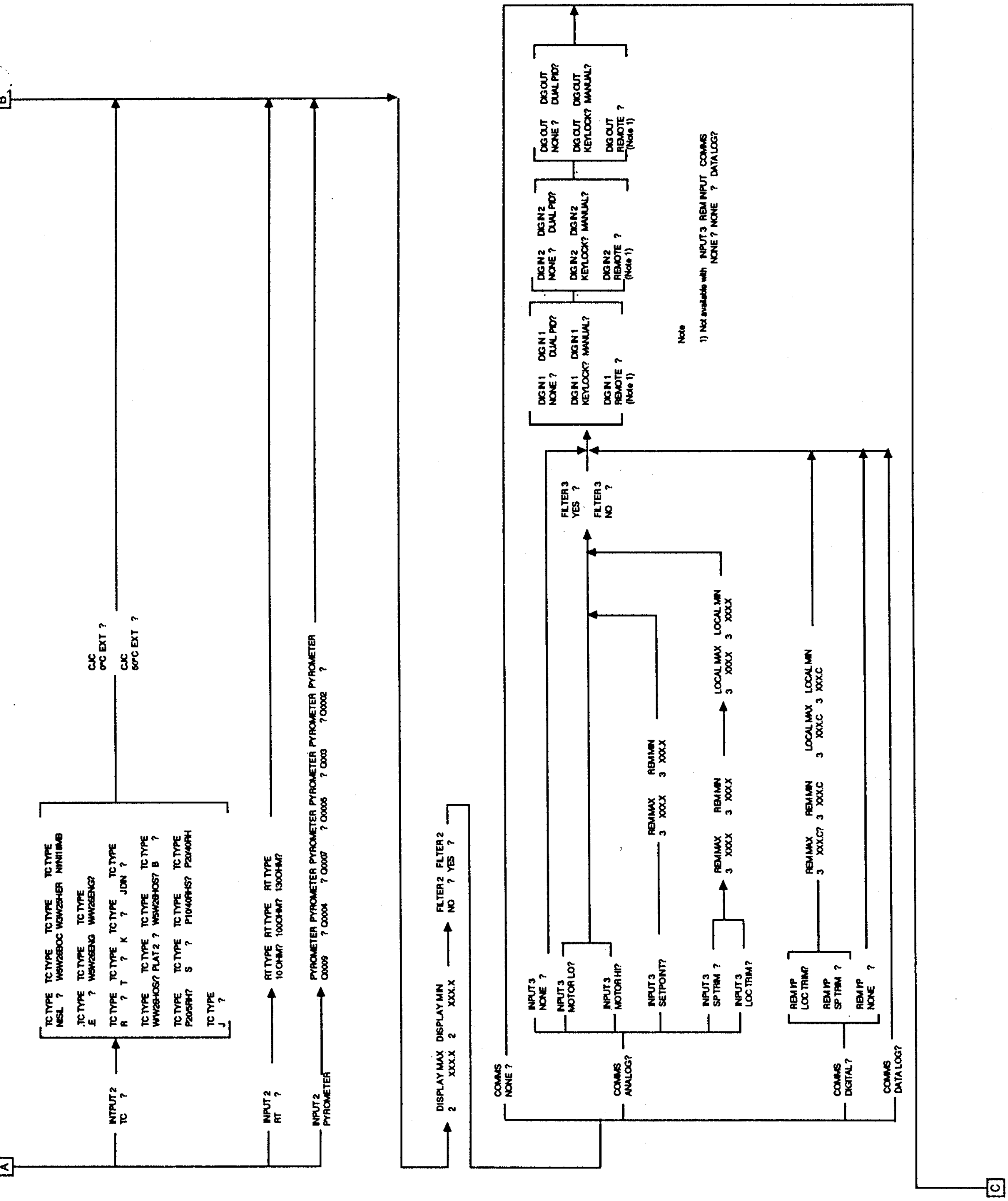

ALGORITM VP
CONTROL SINGLE
LOOP1 DIRECT?
LOOP1 REVERSED?
INPUT 1 mA ?
INPUT mV ?
INPUT 1 OHM ?
INPUT 1 TC ?
INPUT 1? RT
INPUT 1 PYROMETER
INPUT MAX mA XXX
INPUT MIN mA XXX
INPUT MAX mV XXX
INPUT MIN mV XXX
INPUT MAX XXXX
INPUT MIN XXXX
TC TYPE NISL ?
TC TYPE E ?
TC TYPE R ? T ?
TC TYPE W5W26BOC
TC TYPE W5W26HER
TC TYP K ?
TC TYPE W5W26ENG
TC TYPE NINI18M8
TC TYPE B ?
TC TYPE JDIN ?
TC TYPE P10R40RHS
TC TYPE W5W26HOS
TC TYPE P20R40RH
TC TYPE FLAT2 ?
TC TYPE S ?
TC TYPE P20R40RH
TC TYPE W5W26HOS
TC TYPE J ?
RT TYPE 10 OHM?
RT TYPE 100 OHM?
RT TYPE 130 OHM?
PYROMETER 00009
PYROMETER 00004
PYROMETER 00007
PYROMETER 00005
PYROMETER 00003
PYROMETER 00002
LINEARISE RT ?
LINEARISE PYROMETER?
LINEARISE SQ ROOT ?
LINEARISE LINEAR ?
LINEARISE TC ?
CJC INTERNAL?
CJC 0°C EXT ?
CJC 50°C EXT ?
UNITS °C °F
UNITS K ? V ? mV ? mA ? Ω
UNITS %CO2 ? Co2 ?
UNITS %NO UNITS? BAR ?
UNITS RSI ? mm ? % ?
UNITS SPECIAL?
(can enter special units)
DISPLAY MAX XX? 1
DISPLAY MIN XX? 1
ROLL AV 8 MEAS ?
ROLL AV 2 MEAS ?
ROLL AV 1 MEAS ?
ROLL AV 4 MEAS ?
FILTER 1 NO ?
FILTER 1 YES ?
INPUT 2 MOTOR LOW
INPUT 2 MOTOR HI?
INPUT 2 mA ?
INPUT 2 mV ?
INPUT 2 OHM ?
INPUT MAX mA XXX
INPUT MIN mA XXX
INPUT MAX mV XXX
INPUT MIN mV XXX
INPUT MAX XXXX
INPUT MIN XXXΩ
A
B


INPUT 2 SETPOINT?
INPUT 2 S.P. TRIM
INPUT 2 LOC TRIM
INPUT 2 PYR
INPUT 2 NONE
INPUT 2 mA ?
INPUT 2 mV ?
INPUT 2 OHM ?
INPUT MAX mA XXX
INPUT MIN mA XXX
INPUT MAX mV XXX
INPUT MIN mV XXX
INPUT MAX XXXΩ
INPUT MIN XXXΩ
LINEARISE RT ?
RT TYPE 10 OHM
RT TYPE 100 OHM
RT TYPE 1300 OHM?
LINEARISE PYROMETER?
PYROMETER Q0009
PYROMETER Q0004
PYROMETER Q0007
PYROMETER Q0005
PYROMETER Q0003
PYROMETER Q0002
LINEARISE TC ?
TC TYPE NISIL ?
TC TYPE W5W26BOC
TC TYPE W5W26HER
TC TYPE NIN118MB
TC TYPE E ?
TC TYPE W5W26ENG
TC TYPE WW26ENG?
TC TYPE R ? T ? K ?
TC TYPE J ?
TC TYPE WW26HOS?
TC TYPE PLAT 2 ?
TC TYPE W5W26HOS?
TC TYPE B ?
TC TYPE P20/5RH?
TC TYPE S ?
TC TYPE P10/40RHS?
TC TYPE P20/40RH
LINEARISE SQ ROOT?
LINEARISE LINEAR ?
DISPLAY MAX 2 XXXX
DISPLAY MIN XXXX
INPUT 2 TC ?
INPUT 2 RT ?
INPUT 2 PYROMETER
CJC 0°C EXT ?
CJC 50°C EXT ?
RT TYPE 10 OHM?
RT TYPE 100 OHM?
RT TYPE 1300 OHM?
PYROMETER Q0009
PYROMETER Q0004
PYROMETER Q0007
PYROMETER Q0005
PYROMETER Q0003
PYROMETER Q0002
A
B
C
D
E

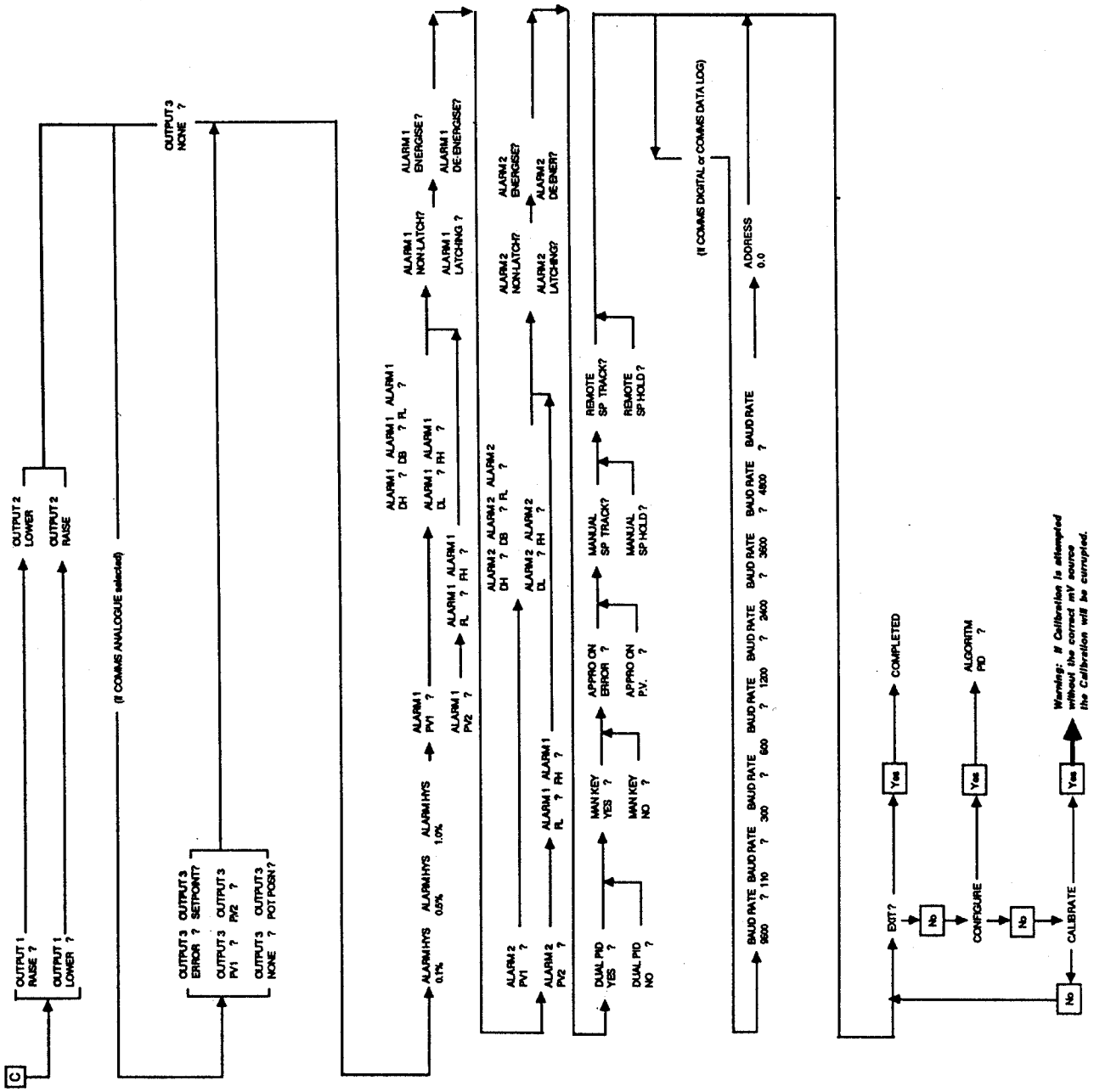

C
D
E
F
REM MAX 2 XXX.X
REM MIN 2 XXX.X
LOCAL MAX 2 XXX.X
LOCAL MIN 2 XXX.X
FILTER 2 NO ?
FILTER 2 YES ?
COMMS NONE ?
COMMS ANALOG?
COMMS DIGITAL ?
COMMS DATA LOG?
1/2/3/4/5
INPUT 3 NONE ?
1/3/4/5
INPUT 3 MOTOR LOW
INPUT 3 MOTOR HI?
1/2/4
* INPUT 3 SETPOINT?
1/2/3
* INPUT 3 SP TRIM ?
1/2
* INPUT 3 LOC TRIM ?
LINEARISE TC ?
LINEARISE RT ?
LINEARISE PYROMETER?
LINEARISE SQ ROOT ?
LINEARISE LINEAR ?
REM MAX 3 XXX.C
REM MIN 3 XXX.C
LOCAL MAX 3 XXX.C
LOCAL MIN 3 XXX.C
FILTER 3 YES ?
FILTER 3 NO ?
DIG IN 1 NONE ?
DIG IN 1 DUAL PID?
DIG IN 1 KEYLOCK?
DIG IN 1 MANUAL?
DIG IN 1 REMOTE ? (Note 1)
DIG IN 2 NONE ?
DIG IN 2 DUAL PID?
DIG IN 2 KEYLOCK?
DIG IN 2 MANUAL?
DIG IN 2 REMOTE ? (Note 1)
DIG OUT NONE ?
DIG OUT DUAL PID?
DIG OUT KEYLOCK?
DIG OUT MANUAL?
DIG OUT REMOTE ? (Note 1)
NOTE:
1) Not available with INPUT 3 NONE ? REM INPUT NONE ? COMMS DATA LOG ?
* Not available if VP2 SP Trim or Local Trim are selected
COMMS ANALOGUE NOTES
1) VP2 MOTOR HIGH select
2) VP2 MOTOR LOW selected
3) VP 2 SETPOINT selected
4) VP 2 SETPOINT TRIM selected
5) VP 2 LOC TRIM selected
COMMS DIGITAL NOTES
1) VP2 LOCAL TRIM selected
2) MOTOR HIGH, LOW, PV2 selected
3) VP2 SETPOINT selected
4) SP TRIM selected
5) VP2 NONE selected
2/5
REM INPUT LOC TRIM?
3
REM INPUT SP TRIM ?
REM INPUT NONE ?
4
INPUT SETPOINT?
INPUT NONE ?
** LOCAL MAX 3 XXX.C
** LOCAL MIN 3 XXX.C
** Not if VP2 SETPOINT selected
OUTPUT 1 RAISE ?
OUTPUT 2 LOWER
OUTPUT 1 LOWER ?
OUTPUT 2 RAISE
(If ANALOGUE COMMUNICATIONS selected)
OUTPUT 3 ERROR ?
OUTPUT 3 SETPOINT?
OUTPUT 3 PV1 ?
OUTPUT 3 PV2 ?
OUTPUT 3 NONE ?
OUTPUT 3 POT POSN
OUTPUT 3 NONE ?


F
ALARM HYS 0.1%
ALARM HYS 0.5%
ALARM HYS 1.0%
ALARM 1 PV2 ?
ALARM 1 PV1 ?
ALARM 1 DH ? DB ? FL ?
ALARM 1 DL ? FH ?
ALARM 1 NON-LATCH?
ALARM 1 LATCHING ?
ALARM 1 ENERGISE ?
ALARM 1 DE-ENERGISE?
ALARM 2 PV2 ?
ALARM 2 PV1
ALARM 2 DH ? DB ? FL ?
ALARM 2 DL ? FH ?
ALARM 2 NON-LATCH?
ALARM 2 LATCHING?
ALARM 2 ENERGISE?
ALARM 2 DE-ENER?
DUAL PID YES ?
DUAL PID NO ?
MAN KEY YES ?
MAN KEY NO ?
APPRO ON ERROR ?
APPRO ON P.V. ?
MANUAL SP TRACK?
MANUAL SP HOLD ?
REMOTE SP TRACK?
REMOTE SP HOLD ?
(If COMMS DIGITAL or COMMS DATA LOG)
BAUD RATE 9600 ? 110 ? 300 ? 600 ? 1200 ? 2400 ? 3600 ? 4800 ?
ADDRESS 0.0
EXIT ?
Yes
COMPLETED
No
CONFIGURE
Yes
ALGORITM VP ?
No
No
CALIBRATE
Yes
Warning: If Calibration is attempted without the correct mV source the Calibration will be corrupted.


ALGORITM VP
CONTROL RATIO
LOOP1 DIRECT?
LOOP1 REVERSED?
INPUT 1 mA ?
INPUT mV ?
INPUT 1 OHM ?
INPUT 1 TC ?
INPUT 1? RT
INPUT 1 PYROMETER
LINEARISE RT ?
LINEARISE PYROMETER?
LINEARISE SQ ROOT ?
LINEARISE LINEAR ?
LINEARISE TC ?
CJC 0°C EXT ?
CJC 50°C EXT ?
(can enter special units)
DISPLAY MAX XX?
DISPLAY MIN XX?
FILTER 1 NO ?
FILTER 1 YES ?
INPUT 2 mA ?
INPUT 2 mV ?
INPUT 2 OHM ?
A
B



A
B
C
INPUT 2 TC ?
INPUT 2 RT ?
INPUT 2 PYROMETER
TC TYPE NISIL ?
TC TYPE W5W26OC
TC TYPE W3W25HER
TC TYPE NINI18MB
TC TYPE E ?
TC TYPE W5W26ENG
TC TYPE WW26ENG?
TC TYPE R ?
TC TYPE T ?
TC TYPE K ?
TC TYPE JDIN ?
TC TYPE WW26HOS? PLAT 2 ?
TC TYPE W5W26HOS? B ?
TC TYPE P20/5RH?
TC TYPE S ?
TC TYPE P10/40RHS?
TC TYPE P20/40RH
TC TYPE J ?
CJC 0°C EXT ?
CJC 50°C EXT ?
RT TYPE 10 OHM?
RT TYPE 100OHM?
RT TYPE 130OHM?
PYROMETER Q0009 ?
PYROMETER Q0004 ?
PYROMETER Q0007 ?
PYROMETER Q0005 ?
PYROMETER Q003 ?
PYROMETER Q0002 ?
DISPLAY MAX 2 XXX.X
DISPLAY MIN 2 XXX.X
FILTER 2 NO ?
FILTER 2 YES ?
COMMS NONE ?
COMMS ANALOG?
COMMS DIGITAL ?
COMMS DATA LOG?
INPUT 3 NONE ?
INPUT 3 MOTOR LO?
INPUT 3 MOTOR HI?
INPUT 3 SETPOINT?
INPUT 3 SP TRIM ?
INPUT 3 LOC TRIM ?
REM MAX 3 XXX.X
REM MIN 3 XXX.X
LOCAL MAX 3 XXX.X
LOCAL MIN 3 XXX.X
REM I/P LOC TRIM?
REM I/P SP TRIM ?
REM I/P NONE ?
REM MAX 3 XXX.C?
REM MIN 3 XXX.C
LOCAL MAX 3 XXX.C
LOCAL MIN 3 XXX.C
FILTER 3 YES ?
FILTER 3 NO ?
DIG IN 1 NONE ?
DIG IN 1 DUAL PID?
DIG IN 1 KEYLOCK?
DIG IN 1 MANUAL?
DIG IN 1 REMOTE ? (Note 1)
DIG IN 2 NONE ?
DIG IN 2 DUAL PID?
DIG IN 2 KEYLOCK?
DIG IN 2 MANUAL?
DIG IN 2 REMOTE ? (Note 1)
DIG OUT NONE ?
DIG OUT DUAL PID?
DIG OUT KEYLOCK?
DIG OUT MANUAL?
DIG OUT REMOTE ? (Note 1)
Note
1) Not available with INPUT 3 NONE ? REM INPUT NONE ? COMMS DATA LOG?


C
OUTPUT 1 RAISE ?
OUTPUT 1 LOWER ?
OUTPUT 2 LOWER
OUTPUT 2 RAISE
(If COMMS ANALOGUE selected)
OUTPUT 3 NONE ?
OUTPUT 3 ERROR ? SETPOINT?
OUTPUT 3 PV1 ? PV2 ?
OUTPUT 3 NONE ? POT POSN ?
ALARM HYS 0.1%
ALARM HYS 0.5%
ALARM HYS 1.0%
ALARM 1 PV1 ?
ALARM 1 PV2 ?
ALARM 1 ALARM 1 RL ? FH ?
ALARM 1 ALARM 1 DH ? DB ? RL ?
ALARM 1 ALARM 1 DL ? FH ?
ALARM 2 PV1 ?
ALARM 2 PV2 ?
ALARM 2 ALARM 2 DH ? DB ? RL ?
ALARM 2 ALARM 2 DL ? FH ?
DUAL PID YES ?
DUAL PID NO ?
MAN KEY YES ?
MAN KEY NO ?
APPRO ON ERROR ?
APPRO ON P.V. ?
MANUAL SP TRACK?
MANUAL SP HOLD ?
REMOTE SP TRACK?
REMOTE SP HOLD ?
ALARM 1 NON-LATCH?
ALARM 1 LATCHING ?
ALARM 1 ENERGISE ?
ALARM 1 DE-ENERGISE?
ALARM 2 NON-LATCH?
ALARM 2 LATCHING?
ALARM 2 ENERGISE?
ALARM 2 DE-ENER?
(If COMMS DIGITAL or COMMS DATA LOG)
ADDRESS 0.0
BAUD RATE
BAUD RATE 9600 ? 110 ? 300 ? 600 ? 1200 ? 2400 ? 3600 ? 4800 ?
EXIT?
Yes
COMPLETED
No
CONFIGURE
ALGORITM PID ?
CALIBRATE
Warning: If Calibration is attempted without the correct mV source the Calibration will be corrupted.

GLOSSARY OF INSTRUMENTS DISPLAYS

ADDRESS	Gives the instrument a unique address for multi drop communications
ALARM HYS	Selects the hysterisis (or deadband) required to clear an alarm. Settable between 0.1% and 1% of the display range.
ALARM DVL	Selects a low deviation alarm monitoring the deviation of measured value, 0% to 10%, below setpoint.
ALARM DVH	Selects a high deviation alarm, 0% to 10% above setpoint.
ALARM DVB	Selects a symmetrical (band) alarm monitoring the deviation, +/- 1% to +/- 10%, either side of setpoint. To prevent the controller being held permanently in alarm the minimum setting is 1% away from setpoint.
ALARM FSH	Selects a full scale high alarm (absolute alarm) which goes into alarm above the alarm setting, display minimum to display maximum.
ALARM FSL	Selects a full scale low alarm which goes into alarm below the alarm setting, display minimum to display maximum.
ALARM LATCH	If the condition that caused the alarm clears, the alarm signal will stay latched until acknowledged.
ALARM NON-LATCH	When the condition that caused the alarm is cleared the alarm signal will be removed.
ALARM ENER	Causes the relay to be energised when in an alarm state.
ALARM DE-ENER	Causes the relay to be de-energised when in an alarm state. (Fail safe mode).
ALGORITHM PID	Indicates Proportional, Integral and Derivative algorithm
ALGORITHM VP	Indicates Valve Positioner algorithm (825 VP)
ANALOGUE	Isolated dc output
APPRO ON ERROR	Valve Positioner approach calculated on error
APPRO ON PV	Valve Positioner approach calulated on Process Variable.
AUTO	Automatic signifies that the instrument is in closed loop control mode.
BAUD RATE	Defines the bit rate (in bits per second) for serial communications.
CHECK CONFIG	Check configuration is a diagnostic message which is displayed when the configuration procedure has not been completed.
CHECK CALIB	Check calibration is a diagnostic message which indicates that calibration has not been completed.
CJC INTERNAL	Internal cold junction compensation.
CJC 50°C EXT	User has option of providing external cold junction compensation at 0°C or 50°C.

CONTROL SINGLE	Indicates single loop control
CONTROL RATIO	Indicates ratio loop control
COMMS ANALOGUE	Refers to remote analogue inputs and retransmission signals. An analogue communications board must be fitted for the analogue configured signals to be active.
COMMS DIGITAL	Refers to serial digital communication via the digital communications board. Communication is bi-direction half-duplex. A digital communications board must be fitted for the digital configured signals to be active.
COMMS DATALOG	Provides undirectional serial digital communication from the instrument to a printer or dumb terminal.
COMMS LOGIC	Refer to the digital input and output signals when the instrument is operating as a programmer. A logic I/O board must be fitted for the digital signals to be active.
CONST PW	Constant pulse width is a mode of operation for time proportioned outputs where the lesser of the on or off times is always a fixed pulse duration (as in single cycle firing).
CONST CYC	Constant cycle time is the normal time proportioned mode, where the total on + off period remains constant and both the on and off times vary to achieve the demanded output level.
CONT. SPT SETPOINT	Enables the Controller setpoint to track the current setpoint when the instrument is operating as programmer.
CONT. SPT HOLD	In this mode the Controller setpoint is held at its original value when the instrument is operating as a programmer.
CUTBACK HI	The high cutback point defines the point above setpoint which the output is held at its minimum limit.
CUTBACK LO	The low point defines the point below setpoint, below which the output is held at its maximum limit.
CYCLE T.	Cycle time defines the on-off period for time proportioned outputs (channel 1).
DEADBAND	The dead band is applicable to on/off control only and defines the hysterisis between output off and on points.
DERIV T	Derivative time defines time over which the error signal must be ramped at a constant rate 0 to 100% to give a 100% change in output. In practice, since the controller has derivative filtering to minimise the effects of noise in the control loop, the change in output would be reduced to 25%.
5 DIGIT	Provides a 5 digit display of setpoint or measured value on the lower display.
D SCALER	Display scaler is a scaling factor (multiplier) on the input millivolts which gives a wide variety of display ranges for any given input. This should be set to 1.00 for linearised inputs otherwise the displays will be meaningless.
D. OFFSET	Display offset provides offset on the displayed value giving more flexibility for displayed ranges in conjunction with the display scaler. Displayed value = D.Scaler x Input + D.Offset.

D.P. POS	Decimal Point position may be set after any of the 4 digits.
DIG. IN KEYLOCK	Configures the digital input to lock (inhibit) the front panel keys.
DIG. IN REMOTE	Configures the digital input to switch from local to remote.
DIG. IN DUAL PID	Configures the digital input to switch setpoint 1 to setpoint 2 and select the second set of PID parameter values.
DIG. IN MANUAL	Configures the digital input to switch from auto function to manual.
DIG.IN RUN/RESET	Configures the digital input to reset to running program if the contacts are closed, to controller mode or causes a program to run, if the contacts are open. (822 only).
DIG. IN HOLD	Configures a digital input to put a running program into a hold state. (822 only).
DIG. IN WAIT	Configures a digital input to enable program segments to finish and pass control to the next segment of the program. (822 only).
DIG. OUT KEYLOCK	The digital output is configured to drive a remote LED to indicate the condition of the parameter switch set by digital input.
DIG. OUT REMOTE	The digital output is configured to drive a remote LED to indicate the condition of the parameter switch set by digital input.
DIG. OUT DUAL PID	The digital output is configured to drive a remote LED to indicate the condition of the parameter switch set by digital input.
DIG. OUT MANUAL	The digital output is configured to drive a remote LED to indicate the condition of the parameter switch set by digital input.
DIG. OUT EOS	This program controlled digital signal indicates that an end of a program segment has been reached. (822 only).
DIG. OUT END	This program controlled digital signal indicates that an end of a program has been reached. (822 only).
DIG. OUT HOLDBACK	This program controlled digital signal indicates that a holdback has been placed on a program segment. (822 only).
DIG. OUT RESET	This program controlled digital signal indicates that a program has been reset. (822 only).
DIG. OUT RUNNING	This controlled digital signal indicates that a program is running. (822 only).
DIG. OUT LOG. OUT	This is a program controlled logic output signal. (822 only). Note: If digital inputs are actioned via communications and not via the instrument front keys, the digital output signals, will be incorporated.
DIRECT	A direct output is defined as one that provides a positive control output when the process value is greater than the setpoint an a negative control if less than setpoint.
DISP. MAX XXX.C	Defines the maximum upper limit for the setpoints and alarms etc. and the display range from which the absolute value of proportional band is calculated. In 820 software versions 7.0 onwards the decimal point is also set when setting the

display maximum. Press key 2 to move the decimal point to the left or key 3 to move to the right, then set the display maximum with the up/down keys; press key 6 to enter.

DUAL PID	Two sets of control parameters are available which are selected according to whether setpoint 2 has been selected. This feature is generally used where good control is required at two widely different setpoints.
H: C D BAND	Heat cool deadband defines a dead space between the proportional bands of output 1 and output 2., where neither output is on. Note that a negative heat-cool deadband implies an overlap of the two output proportional bands.
INVERT	An inverted acting output is defined as one which decreases from maximum to zero for increasing output requested. (Software versions 2.0 onwards). NOTE: Pre software version 1.5 the meaning of DIRECT operation for output 1 was inverted. From software versions 1.5 to 1.9 the NORMAL and INVERT were known as DIRECT AND REVERSED.
INV.P.BAR	Indicates that the sense of the power bar has been reversed if selected, so that a full power bar will indicate 0% power.
I/P TYPE	Type of sensor used as input.
INPUT MAX XX INPUT MIN XX	Process inputs - the range and resolution of the values can be adjusted by moving the decimal point position left or right by pressing key 2 or 3 respectively.
INPUT 3	This is the remote analogue input which can be linearised and have a maximum and minimum settings.
INPUT 3 MOTOR LO	Valve Positioner potentiometer position low limit
INPUT 3 MOTOR HI	Valve Positioner potentiometer position high limit
I/P BREAK 1 NO SENSOR PWR	Thermocouple break power is an event of the thermocouple break, the input exceeding the setpoint high limit by 5% or being 5% below display minimum.
LINEARISE	Allows process inputs to be linearised.
LOG RATE	Log rate is only applicable to data logging applications and determines the period between log messages settable between 1 and 20 minutes.
LOGIC	Isolated 10mA logic signal.
MANUAL	Indicating the state of the MANUAL operation of the instrument. This permits the MANUAL key to be disabled.
MANUAL PWR	Manual signifies that the instrument is in open loop mode. The operator can directly control the output (power) using the up/down keys.
MAN. RESET	If integral action is switched off (by setting integral time to zero) the proportional band can be manually preset.
MAX O/P PWR	Maximum output 1 is the high limit setting for that output. This may be set between 0 and 100%.

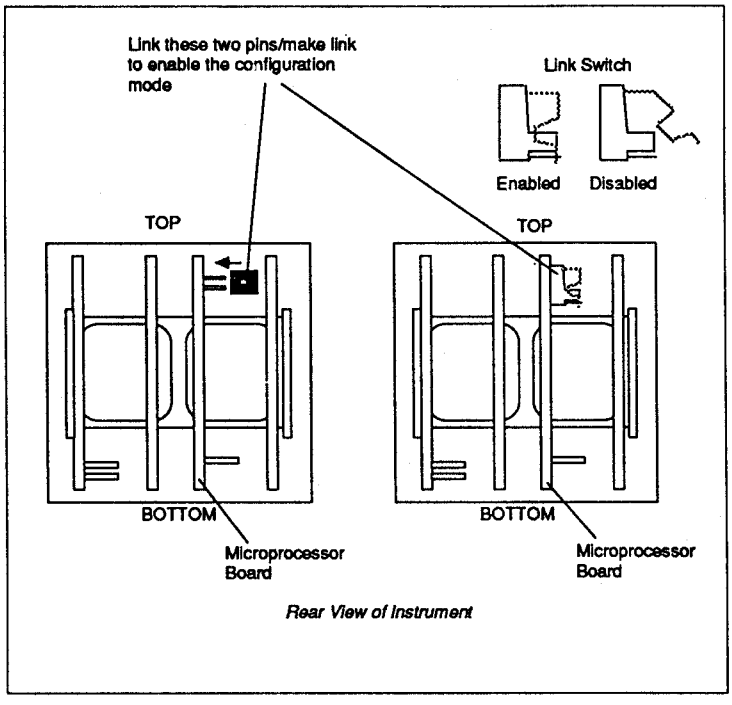
MAX O/P 2 PWR	Maximum output 2 is the maximum limit for the second output. This is a negative number in the range 0 to 99.9% indicating the reversed sense of the second output.
MAX I/P 25-100MV MAX I/P 8-25MV MAX I/P <8MV	Refers to maximum millivolt input selected for calibration purposes. Consult sensor tables to determine this input range. For example, select the millivolts applicable to the maximum sensor value which is to be used over the range 0°C to 500°C. The millivolt value is 27.388, therefore select the MAX I/P 25-100mV for this sensor.
MAX I/P <120 OHM MAX I/P >120 OHM	Refers to resistance input of sensor selected for calibration purposes. E.g. for resistance thermometer of 1090 ohms, select the max I/P >120 ohm value.
MAX MV IN	Defines input state for linear and non-linear millivolt inputs. After input scaling has been determined the maximum must not exceed 100mV.
MIN MV IN	After input scaling has been determined the minimum input that can be applied is -7.5mV.
MOTOR LOW	Indicates potentiometer position lower range I/P limit
MOTOR HIGH	Indicates potentiometer position higher I/P limit
NORMAL	A normal acting output is defined as one which increases from zero to maximum with increasing output requested. (Software versions 2.0 onwards).
NO OFFSET	Applicable only to analogue outputs. The minimum output is zero.
OFFSET	An output offset is only applicable to analogue outputs. This permits the output to be software configured to give 20% output as the minimum output e.g. 4-20mA.
ON/OFF	Refers to the control action which switches off at setpoint and back on at a user - defined point below setpoint - see Deadband.
ONE CYCLE	A time proportioned output where the minimum on or off interval is one mains cycle.
OUTPUT 1	Refers to main output.
OUTPUT 3	This is the remote analogue output.
OUTPUT 3 POT POSN	Indicates potentiometer position retrans signal - for external use
O/P BIAS	Adjustable between -99.8% and 100.0%. Provides a means of implimenting feedforward control or decoupling two interactive loops. Permits real time adjustments to be added directly to the output of the control algorithm. This parameter is coupled to the remote analogue input such that an external hardware lead/lag network may be used to impliment an appropriate analogue feedforward network. An example of the use of this feature would be an extruder where the line is set up at a slow extrusion speed and it is required to change rapidly to full speed with minimal loss of product. An increase in line speed results in an increase in work heat which causes the nozzle temperature to rise and ultimately the controller will take this change out. The response of the loop to this disturbance will be limited by the integral time and may well result in an unacceptable loss of product. The instrument provides the facility to feed into the controller output a predetermined bias which can vary with time and be triggered by line speed changes such that an improved response to this external predictable disturbance can be achieved.

O/P BIAS	Provides a means of implimenting feedforward control or decoupling two interactive loops. Permits real time adjustments to be added directly to the output of the control algorithm. This parameter is included in the commissioning to allow it to be reset to zero should it be left in an offset state by a communications master.
O/P 2 CONTROL	Output 2 is the second output which is generally off while output 1 is on and only becomes operational for measured values which are high enough to cause output 1 to be off.
O/P 2 LINEAR	Normally output 1 and output 2 give a linearly proportional change in output for changes demanded by the control algorithm.
O/P 2 NON-LINEAR	Output 2 can be configured to give a non-linear relationship between demanded and actual output. This can be useful to compensate in applications where this output power transducer is non-linear e.g. water cooling.
O/P 2 RE-TRANS	Re-transmission of an analogue signal representing either Error, Measured Value or setpoint on the output 2 channel.
O/P 2 ERROR	Refers to the difference (error) between setpoint and measured value that is re-transmitted on output 2.
O/P 2 MEAS. VAL	Re-transmission of the measured value on output 2.
O/P 2 SETPOINT	Retransmission of the setpoint on output 2.
PROPBAND	Proportional band defines the percentage of display range over which the controller output varies linearly from 0 to 100% output (channel 1).
PWR FB	Power feedback is a useful internal control loop which senses the mains supply to the instrument and feeds an appropriate scaler into the output routine to give rapid compensation of supply variations. This is only applicable for electrically driven heater loads.
REL COOL	Relative cool gain gives the facility to vary the propband (=100/gain) of the second (cool) channel. Relative to that of the primary (heat) channel.
RELAY	264V ac Relay switched output.
REM. I/P MAX. O/P 1	Configures the remote input via the Communications board as a maximum limit.
REM. I/P LOC. TRIM	Configures the remote input as full scale remote setpoint with range defined by the display maximum and display minimum settings. The local setpoint is limited to +/- 10% of this range.
REM I/P SETPOINT	Configures the remote input as a setpoint which may be selected instead of the local setpoint by switching at the rear terminal or via keypad.
REM I/P S.P TRIM	Configures the remote input as trim to the local setpoint. The trim is + or - 10% of the display range and 50% input corresponds to zero trim.
REM. O/P P.V.	Configures the remote output to give retransmission of linearised process value.
REM. O/P ERROR	Configures the remote output to give retransmission of error signal. The range is + or - 100% of the Proportional Band and 50% output corresponds to zero error.
REM. O/P SETPOINT	Configures the remote output to give retransmission of the setpoint.

REVERSED	An inverted output is defined as one that provides a positive control output when the process value is less than the setpoint and a negative control output if greater than setpoint.
SETPOINT TRACK	Setpoint track mode defines what happens to the setpoint in manual operation. In this case the setpoint is forced to track measured value so that the output does not bump when switching back to auto. When selected with a remote setpoint the local setpoint tracks the remote setpoint.
SETPOINT HOLD	In this mode the setpoint is held at its original value while the controller is switched to manual. Switching back to auto may cause a proportional output bump if the measured value differs from the held setpoint.
SETPOINT HI	Setpoint high is a user settable maximum limit on the setpoint value.
SETPOINT LO	Setpoint low provides a user settable minimum limit on the setpoint value. High and low limits may be identical in order to lock the setpoint.
TC TABLES SETS	Inputs sub-divided into three sets.
TC TYPE J	Variant of sensor type determines the linearisation. Options available.
TIME PROP	Refers to the time proportioned outputs, where the ON to (ON+OFF) ratio varies linearity in proportion to the demanded output level.
TRIAC	264V ac Triac switched output.
UNITS	Select the displayed units.
UNITS SPECIAL	820 software version 7.0 onwards, provides the facility to select special units (up to 5 digits). E.g. To enter AB20% Press key 6 to enter SPECIAL UNITS. Press key 5 to scroll through list. When A is displayed press key 6 to enter. Press key 2 to move to left. Press key 5 until B is displayed. Press key 6 to enter Press key 2 to move to the left Press key 5 until 2 is displayed Press key 6 to enter Press key 2 to move to left Press key 5 until 0 is displayed Press key 6 to enter Press key 2 to move to left Press key 5 until % is displayed Press key 6 to enter Press key 2 to move to left Press key 5 until % is displayed Press key 6 to enter. AB20% will now appear as the special units.

Appendix 1
Access to the Configuration Mode

To obtain access to the Configuration Mode proceed as follows:
1) Switch off the supply to the instrument.
2) Withdraw the instrument from the sleeve as detailed in the installation booklet.
3) Short together the pins, or make the link on the rear of the Microprocessor board, (see diagram below).
4) Insert the instrument into the sleeve as detailed in the installation booklet.
5) Switch on the power supply to the instrument.



Rear View of Instrument

NOTE:

If an instrument is to be reconfigured check appendix 1 for the correct hardware requirements applicable to the new configuration.

On completion switch off the power supply to the instrument, withdraw the instrument from the sleeve and remove the shortening link on the microprocessor board. Refit the instrument into the sleeve.

Appendix 2.
Organisation of the Configuration Mode

The instrument has initially been configured and calibrated to the customer's requirements at the factory.

Since the user is more likely to want to recalibrate the instrument, rather than to completely reconfigure, 'CALIBRATE' is the first question asked*.

* If the instrument is configured for Digital Comms or Data Logger the ADDRESS is stated first. This enables the user to set or change the address only and then exit.

To answer questions displayed, press Key 6 for YES, or Key 5 for NO.

Notes:

(1) If an input range is altered in the configuration section you must NOT exit. The instrument has to be recalibrated for the new input range now selected.

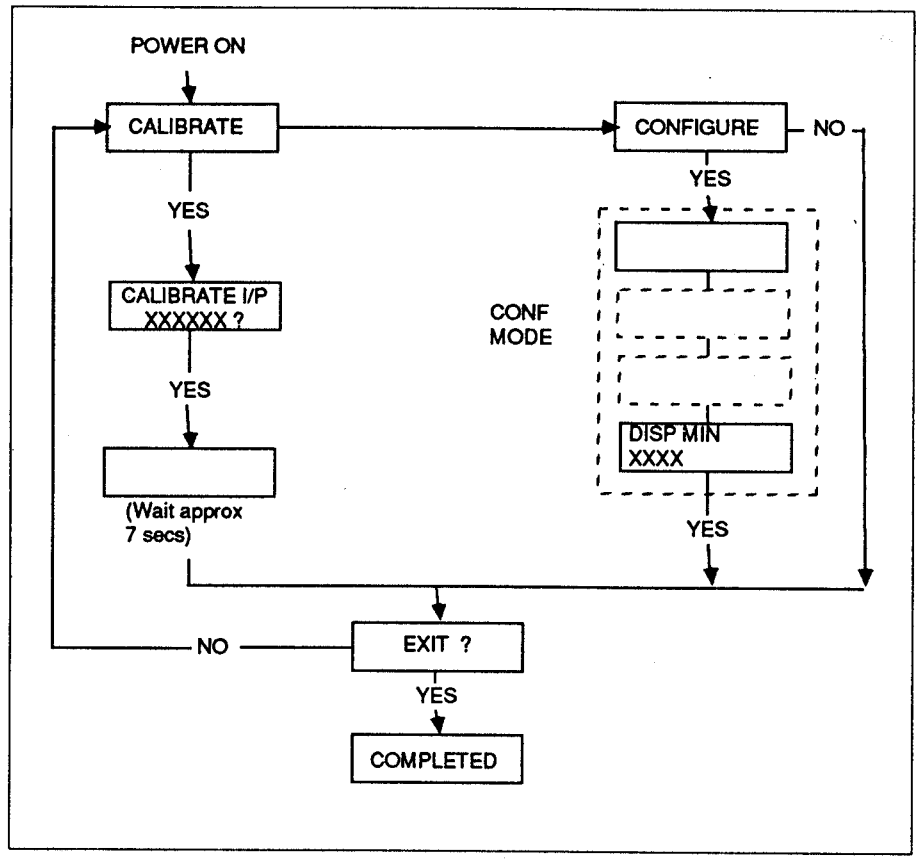
(2) Do NOT switch off the instrument until COMPLETED is displayed, signifying that all settings, changes, calibration, etc. have been actioned and accepted. If the instrument is switched off before COMPLETED is displayed, the checksum of the configuration in the memory will default, CHECK CONFIG will appear in the Operator Mode, and the whole of the configuration has to be repeated.

(3) If a security code has been previously entered in the instrument, during the Commissioning Mode, that code will be displayed under the COMPLETED message.
N.B. This is a useful facility which provides the only identification of any security code previously entered and maybe forgotten.

(4) With software versions 1.8 onwards the trim calibration can be carried out independent of the main calibration.

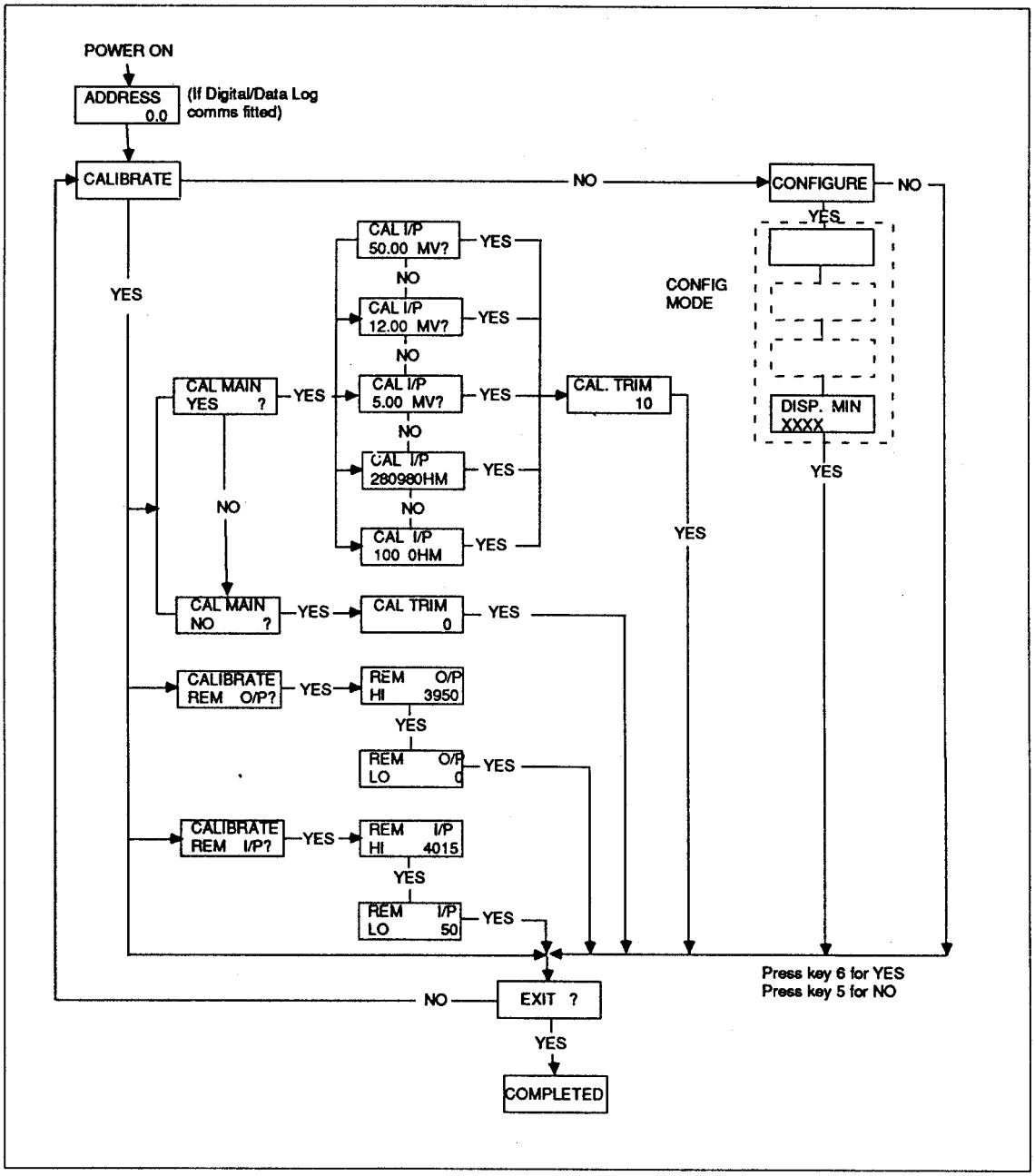
Appendix 3.
Calibration

A. Software versions up to 1.7 (820)



CALIBRATE	This is displayed when power is applied. Press the 'YES' key (6) if required.
CAL I/P	Signifying the input required to calibrate the instrument for the sensor selected in the configuration of the instrument. The instrument auto-calibrates its own zero point and this requested input is used to calibrate a point about the mid-range. Apply the requested input to the rear terminals (see calibration table at the end of this appendix). Press the 'YES' key (6).
?	The display will blank for approximately 7 seconds whilst calibration is being automatically carried out.
EXIT ?	Showing that correct calibration has been carried out and asking if you want to exit or not. Press the 'YES' key (6) to exit.
	N.B. If the display stays blank for longer than 10 seconds the input to the rear terminals is incorrect. Switch power off, check the input and connections, and repeat the above procedure. Ignore any upper display indications during calibration.
COMPLETED XXXX	Indicating that calibration has been completed. Disconnect the calibration input source from the rear terminals. Switch the power off. Note: XXXX is the security number if applicable.

B. *Software versions 1.8 to 3.0 (820), 4.0 to 5.4(822), 1.0 (821)*



ADDRESS X.X	The ADDRESS is asked for first if digital comms or Data Logger configured. Set the address using the UP/DOWN keys. Press key 6 to enter.
CALIBRATE	This is displayed first if the instrument is not configured for Digital comms or Data Logger. This is necessary to calibrate the instrument if the input has been changed. Press the 'YES' key (6) if required.
CAL MAIN	Asking if you want to calibrate the main input source. If yes press key 6, if no press key 5.
CAL I/P	This calibration input will depend on the input type and the range selected in the configuration mode. Apply the requested input to the rear terminals and press the 'YES' key (6).
?	The display will blank for a few seconds whilst calibration is being automatically carried out.

CAL TRIM

This permits the instrument to be offset to match a given calibration source when internal cold junction compensation is required. To set the offset proceed as follows:-

Compensating cable, as appropriate to the sensor that has been configured for the instrument, must be used in this procedure. Set the input source to zero and the amount of offset from zero will be indicated on the top display.
Set the estimated amount of micro-volts, by means of the up/down keys, and enter by pressing key 6. Note the amount of offset indicated on the top display. Continue to alter the trim by means of the up/down keys, pressing key 6 after each change, until the offset is zero and press key 6 again to enter. The trim is adjustable between -200 µV and +200 µV.

CALIBRATE REM O/P?

This is displayed if analogue communications is fitted.
For a remote output the count out to the communications board is carried out using the up/down and enter keys. Since the remote output has 12 bit resolution the maximum count is 4095 and the minimum is zero. The maximum count (HI) is set first by adjusting the count around 4000 until the output is correct. The minimum output (LO) is obtained by adjusting the count around 50 (or 800 for 20% offset). Consequently a large offset zero can be selected by setting the zero count high, but at the expense of output resolution. Setting near zero for the 'maximum' output and near 4000 for the 'minimum' reverses the sense of the output.

CALIBRATE REM I/P?

This is displayed if analogue communications is fitted.
Apply the maximum input and the lower display will indicate the maximum (HI) as a count, let it settle and enter by pressing key 6. Apply the minimum input and the minimum (LO) input is displayed, let it settle and enter by pressing key 6. A reverse acting input can be achieved by applying the maximum input when the minimum is demanded and vice-versa.

EXIT ?

Showing that correct calibration has been carried out and asking if you want to exit or not. Press the 'YES' key (6) to exit.

N.B. If the display stays blank for longer than 10 seconds the input to the rear terminals is incorrect. Switch power off, check the input and connections, and repeat the above procedure. Ignore any upper display indications during calibration.

COMPLETED XXXX

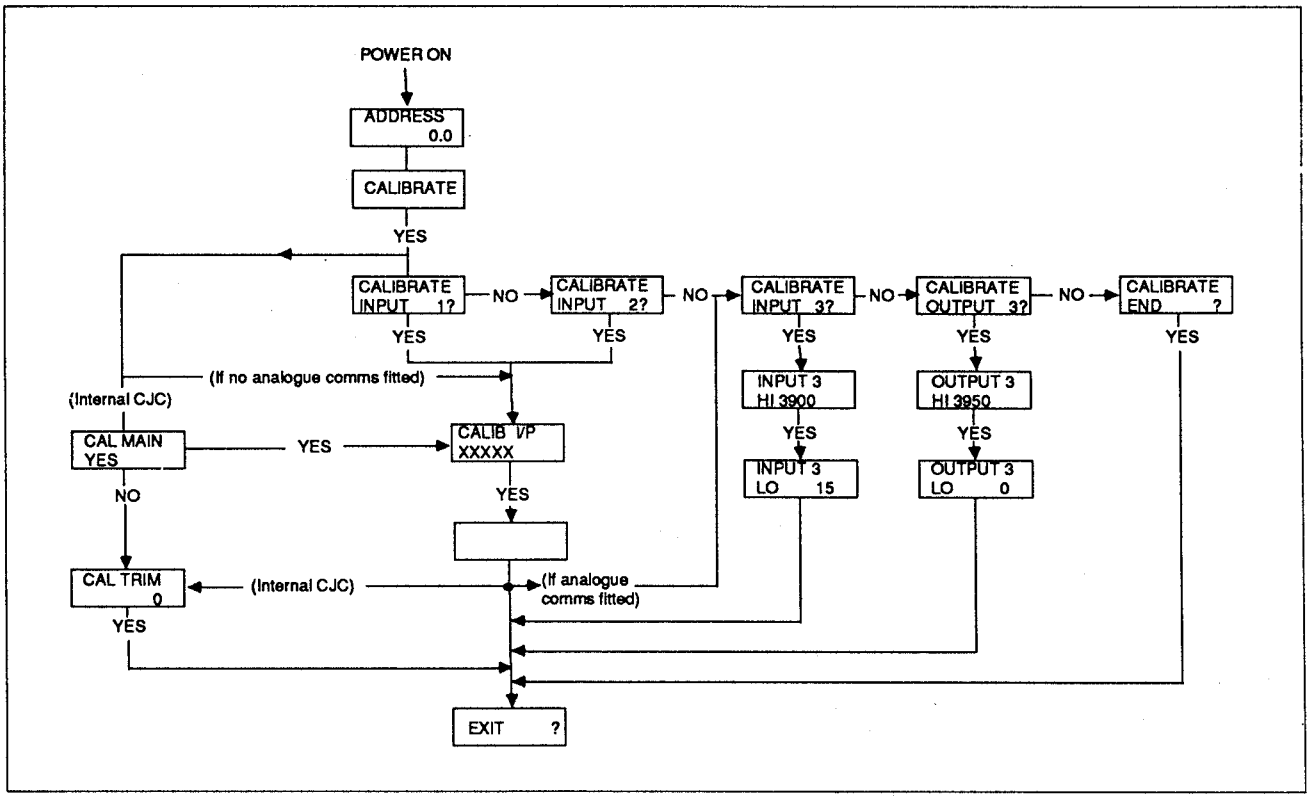
Indicating that calibration has been completed. Disconnect the calibration input source from the rear terminals. Switch the power off. Note XXXX is the security number if applicable.

Calibration Table

INSTRUMENT		CALIBRATION	
Input	Range	Input	Connections
TC	< 8mV 8 - 25mV 25 - 100mV	5,00mV 12.00mV 50.00mV	+ to 25, - to 27
RTD	< 120Ω > 120Ω	100Ω (0°C) 280.98Ω (500C)	25 and 26
Linear mV	< 8mV 8 - 25mV 25 - 100mV	5.00mV 12.00mV 50.00mV	+ to 25, - to 27
Linear ohm	< 120Ω > 120Ω	100.0Ω 280.98Ω	25 and 26
Pyrometer		50.00m	+ to 25, - to 27

Notes:
1. For thermocouple instruments copper wire MUST be used to connect the input for calibration purposes.
2. The mV source does not require compensating, just straight millivolts.

C. Software Versions 7.0 onwards



(1) The requested calibration input will depend on the input type and the range selected in configuration mode.

(2) OUTPUT 3 (if analogue communications is fitted)
For remote output the operator manually changes the count out to the comms. board using the raise/lower and enter keys. Since the remote output has 12 bit resolution the maximum possible count is 4095 and the minimum is zero. The operator first adjusts the maximum output by adjusting the count around 4000 until the output is correct. Then the minimum output is obtained by adjusting the count around 50 (or the minimum output is obtained by adusting the count around 50 (or 800 for 20% offset). Consequently a large offset zero can be selected by setting the zero count high, but at the expense of lost output resolution. Setting near zero for the 'maximum' output and near 4000 for the 'minimum' reverses the sense of the output.

(3) INPUT 3 (If analogue communications is fitted)
When calibrating the input the operator applies the minimum input (say 4mA) when instructed by the lower display and then the maximum input (say 20 mA) in the same way, so that all calibration is message driven. Note that a reverse acting input can be achieved by applying the maximum input when minimum is demanded and vice-versa,

(4) CAL.TRIM
This permits the instrument to be offset to match a given calibration source or thermocouple when internal cold junction compensation is required. The user enters the number of microvolts estimated to achieve the required temperature offset, and the top display alters by the temperature offset corresponding to this trim. When a satisfactory calibration has been achieved a second push of the enter key completes the operation. This procedure must be followed using the compensating cable, The trim is adjustable between -200 μV and +200 μV.

Appendix 4
Diagnostic Displays

The diagnostic scroll resides 'below' the configuration read scroll and is used to display parameters not otherwise accessable through the display. Access the DIAGNOSTIC MODE by pressing keys 1 and 6 simultaneously.

When the banner "—DIAGNOSTIC MODE——LEVEL 4" appears, press key 6 to enter and scroll through the displays.

The current displays available are:

1) The version numbers of the main software, display software and if fitted/configured the communications soft ware.
   e.g. S/W. VERS. Main software version 7.0, disp[lay version 5 and 7.0-5-6 communications version 6.

2) The integral and derivative contributions to the output = - 2
   e.g I1 = 50.00 Integral output = 50 and Derivative output = - 2
   D1 = 2.000

3) If there is a 2nd control loop, such as in the 825 Cascade version, the Integral and Derivative outputs for this other loop (I2 and D2 not to be confused with comms. mnemonics).

4) If power feedback is enabled, the scaler used on the output of the PID.
   e.g. PF=1.000 Scaler = 1

5) The number of hardware resets is shown as e.g. HW = number of resets.
   When the software detects there is something wrong it causes a software reset, which automatically forces a hardware reset and is shown as SW = number of resets.

   e.g. HW = 000012 12 hardware rests, 2 of which were caused by theSW
   SW=000002 as part of its fault recovery strategy.

6) Codes indicating the reason for the last 6 resets caused by software. These are 2 digit numbers with the most recent following the "-" and the oldest in the bottom right corner. The meaning for the codes are listed below.

   e.g. SF=123400 Most recent code 12.00 indicates no code, i.e
   000000 only 2 failures detected.

7) The number of times the display and comms. micros have reset since the instrument was configured.

   e.g. DR=000014 Display has reset 14 times and the comms. 12
   CR=000012 times.

820/825 SOFTWARE FAILURE CODES

11 - Stack pointer incorrect for Background.
12 - Stack underflow (Background).
13 - Stack overflow (Background).
19 - Other Background failure.
20 - Checksum failure on reading Commissioning Parameter
21 - Attempt to write a Commissioning Parameter to a non-commissioning area or not starting on a 4-byte boundary.
22 - Stack pointer incorrect whilst writing Commissioning parameter.
25 - Stack pointer error whilst writing non-commissioning parameter.
26 - RAM address error whilst writing non-commissioning parameter
27 - Number of bytes error whilst writing non-commissioning parameter.
28 - RAM address whilst reading non-commissioning parameter
29 - Attempt to write to Configuration RAM when not in Configuration mode.
33 - Block Write failure, e.g. not config. or byte count error.
31 - End of A/D integration and previous conversion not processed. This could be a failure of the hardware.
35 - Attempt to block clear External RAM whilst not in Configuration mode.
40 - Execution off end of code.
41 - Stack pointer incorrect for 250µS watchdog.
42 - Program counter incorrect before entering 250µS watchdog.