Series 670 Digital Flow Averaging Array

NOTES:

1. JB1: RUN/PROGRAM JUMPER MUST BE IN RUN FOR NORMAL OPERATION. JUMPING MOMENTARY TO PROGRAM AND BACK TO RUN WILL RESET THE MICROPROCESSOR.

2. J2: FOR CALIBRATION PURPOSE ONLY. JUMPER MUST BE JUMPERED FOR NORMAL OPERATION. REMOVING JUMPER WILL NOT HARM SYSTEM AND IS USEFUL ON THE BENCH TO PREVENT GETTING BURNED FROM THE HOT VELOCITY SENSOR.

3. "TP" DESIGNATION INDICATE "TEST POINT."

<TP12> -2.5VDC REFERENCE (NEG LEAD TO PIN 4)
<TP1> VEL. SENSOR DRIVE CONTROL VOLT., 0 (FULL ON) TO 2.5VDC (SHUT OFF)
<TP11> TEMP SENSOR INPUT TO MUX

1. JB1: RUN MODE

(j1) R.11 PROGRAMMING JACK
(j2) MICROPROCESSOR MODULE

(TP7) P3.3, RXD TO PIN 4, U6 (DIGITAL)
(TP8) P3.4, TXD TO PIN 6 & 11, U6 (DIGITAL)
(TP9) P2.5, DIRECTION SELECT TO PIN L, U6 (DIGITAL)
(TP6) -5VDC SUPPLY, +.5VDC, -.75VDC

CEMS DIGI-BRIDGE BOARD PN: 44-0061
1. "TP" DESIGNATION INDICATES "TEST POINT."  
   "CTRL" ABBREVIATION INDICATES "CONTROLLER"  
   'CBOX' ABBREVIATION INDICATES "COLLECTOR BOX"

△ REMOVE R25 FOR 0–1VDC OUTPUT.
△ CHANGE R31 TO 45.3K FOR 1 TO 10 VDC OUTPUT.
△ R31 IS 20K FOR 0–5VDC OUTPUT.

(TP14) TXD INPUT TO LTC485, PIN 4, U10 TO CBOX
(TP13) DIRECTION TOGGLE, RS485 TO CBOX
(TP12) RXD INPUT TO LTC485 PIN 1, U10
(TP11) CSOUT, U16, 16C450 UART
(TP10) TXD INPUT TO LTC485, PIN 4 TO BRIDGES
(TP9) RXD U7, TO BRIDGES
(TP8) RXD U7, TO BRIDGES
(TP7) RJ-11 PROGRAMMING JACK

AUXILIARY DIGITAL OUTPUTS (FUTURE OPTIONS)

(SIERRA)

(TP15) 0–5 OUT, RAW
(TP17) +5 VDC (REF)
(TP16) -5 VDC (REF)
(TP18) -1.25 V (REF)

MICROPROCESSOR MODULE

(CR10) AUX LED, Blinks to indicate CBOX is talking to CONTROLLER board. LED is on when CONTROLLER board is jumpered for CBOX emulator.

(CR9) VERSION LED, on when in self clean. Blinks the software version number when entering the FULLSCALE output. (V2.0-3 blinks), (V1.9-2 blank), (V1.8-1 blank)

(CR11) OVER RANGE LED, on when DIGIBRIDGE interface is working with CONTROLLER board. LED flashes when there is a problem.

(CR3) FULL SCALE LED, on when FULLSCALE 5.00 VDC output from DACS in response to PUSHBUTTON 1 press, both FULLSCALE and ZERO LEDs lit when fixed output of 3.75, 2.5, or 1.25 VDC.

(CR2) ZERO LED, on when 0.00 VDC output from DACS in response to PUSHBUTTON 1 press. Blinks to indicate health of MICRO on CONTROLLER.

(CR1) POWER LED, PILOT LIGHT

(R11) 4–20mA OUTPUT SPAN, POT. OUTPUT IS OBTAINED ON 4–20mA BETWEEN 4–20mA AND GND ON TB2 AS RAW GRAND AVERAGE FLOW OUTPUT

FUTURE OPTION

FUTURE OPTION

ACTIVATES FIXED CALIBRATION SIGNALS ON ANALOG OUTPUT IN SEQUENCE: 5.00, 3.75, 2.5, 1.25, 0 VDC NORMAL OPERATION

PROPRIETARY SCHEMATIC DRAWING NO: 52–0079