ENTRON

APPLICATION NOTE 700209B
HALF CYCLE CURRENT MONITORING
EN1001 SERIES CONTROLS

The EN1001 Series Controls may be used to weld using half of a cycle.

ENABLE HALF CYCLE WELDING
1. Put the control in PROGRAM mode.
2. Use the SELECT push button to find *EF*.
3. Use the SCHEDULE push buttons to find *PO* in the EXTENDED FUNCTIONS.
4. Program *PO*=*09* to enable HALF CYCLE welding.
5. Make sure the value for EXTENDED FUNCTION *SE*=*00*.

PROGRAM A HALF CYCLE WELD
1. Use the SCHEDULE push buttons to select a working schedule.
2. Program SQUEEZE to meet the cylinder squeeze requirements.
3. Program WELD=*01*.
4. Program HOLD to meet the weld schedule requirements.
5. Program OFF=*00* (HALF CYCLE is not possible in REPEAT schedules).
6. Program IMPULSES=*00* (Many unidirectional HALF CYCLE IMPULSES induce saturation/ half cycling).
7. Program COOL=*00*.
8. Program VALVE MODE to meet requirements of the machine.
9. Program CYCLE MODE=*00* (NON-REPEAT and non-CHAINED schedule).
10. Program SLOPE MODE=*00*.
11. Program SLOPE COUNT=*00*.

ENABLE CURRENT MONITORING
1. Use the SELECT push buttons and find *EF*.
2. Use the SCHEDULE push buttons to find *C.r.* in the EXTENDED FUNCTIONS.
3. Program *C.r.*=*11*, *21*,* *31*, or *33*, depending on the type of sensor used.
4. Program *r.A.* to proper range (see appropriate instructions in Instruction Manual 700120).
5. Use the SELECT push button to select PERCENT CURRENT.
6. Re-assert/update the programmed value by pressing ENTER or program the necessary PERCENT CURRENT in the DATA display.

* As of PROM firmware version 619016-002**Z**, Secondary Hall Effect Current Sensor is no longer available.

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ENABLE CURRENT MONITORING (cont.)

7. Put the control in OPERATE mode.
8. Make a weld. If necessary, adjust the CURRENT (repeat Steps 6, 7, and 8).
9. After the weld, the control will display a value of CURRENT.
10. Put the control in PROGRAM mode.
11. While in PERCENT CURRENT function, use the SCHEDULE push buttons to find *H. ı.* and *L.o.* parameters.
12. Program the appropriate value of HIGH and LOW limits if necessary. If these values are left at *00*, the control will use a limit of +10% for HIGH limit and -10% for LOW limit.

NOTICE
If FUNCTION indicator LEDs are set to display PERCENT CURRENT, the control will show measured CURRENT after every weld. If the weld CURRENT is too low or too high, the weld control will block further initiations. The Valve 3 output (410319 Firing Boards) will turn on immediately upon a HIGH or LOW ERROR condition and remain on until the Front Panel push buttons are used to acknowledge the error.

!   CAUTION   !
VL1-VL2 is only valve output available on the 410333-010 (EN1001B) Firing Boards. This output will turn on and remain on as described above.