



For 2-Wire Flat Packs



25PS Power Supplies

These low-cost units provide power to one 4 to 20mA two-wire transmitter.

The 25PS series power supply features compact packaging and supports high-density mounting on DIN rails, snaptracks, or any flat surface. Redundant design, with direct coupled output, allows connection of back-up power supplies to the same loop. An LED indicates power is supplied to the receiving unit and a load current sense point enables easier field diagnostics.

Performance

Output

Excitation supply for a 4 to 20mA transmitter. Isolated output is 24V DC, nominal, and current limited to 30mA DC. DC-powered units (-10) include reverse polarity protection.

On AC-powered units, filtered DC output is provided. Ripple is less than 2V peak-to-peak maximum. This ripple is rejected by the two-wire transmitter and does not appear across the load resistor.

Output load (AC-powered -1, -2 units only)

AC-powered units include a 250 ohm load resistor (0.1%, 0.5W, ± 25 ppm/ $^{\circ}$ C) internally connected between the DC output and negative terminals of the supply. This resistor can be used to monitor the loop current by connecting the two-wire transmitter loop between the positive and DC output terminals while monitoring the voltage drop across this load (1 to 5V DC for 4 to 20mA loop current).

Power requirement

-1: 115V AC, $\pm 10\%$, 50/60Hz
 -2: 230V AC, $\pm 10\%$, 50/60Hz
 -10: 10 to 36V DC. Current draw is a function of the supply voltage.

Supply voltage	Current (-10 option)
10V	175mA
12V	140mA
15V	110mA
24V	70mA
36V	70mA

Ambient temperature range

-13 to 185 $^{\circ}$ F (-25 to 85 $^{\circ}$ C)

Isolation

Power supplies can sustain a 1500V AC isolation breakdown test between power and output. This complies with test requirements outlined in ANSI/ISA-S82.01-1988 for the voltages specified.

Power output protection

Overcurrent protection: Supply is current limited at 30mA (nominal) and can sustain a continuous short circuit.

Overvoltage protection: Supply is voltage limited at 30V DC (nominal).

Redundancy: Output is diode-coupled, allowing supplies to be connected in parallel for systems requiring automatic redundancy.

Power indicator

Green LED status lamp indicates power applied.

RFI resistance

Less than $\pm 0.5\%$, of output span effect with RFI field strengths of up to 10V/meter at frequencies of 27, 151 and 467 MHz.

EMI resistance

Less than $\pm 0.25\%$ of output span effect with switching solenoids or commutator motors.

Surge withstand capability (SWC)

Power/output terminations rated per ANSI/IEEE C37.90-1978. Unit is tested to a standardized test waveform that is representative of surges (high frequency transient electrical interference), observed in actual installations.

Construction

Circuit boards: Military grade FR-4 epoxy glass.
 Terminals: Compression type, 14 AWG max.
 Case: Self-extinguishing NYLON Type 6.6 polyamide thermoplastic UL94V-2, color black. General Purpose, NEMA Type 1 enclosure.
 Mounting position: Position insensitive.

Ordering Information

25PS-20-1-DIN-NCR

Power supply, 115V AC power, DIN rail mounting.

25PS-20-1-SM-NCR

Same as above, except surface mounting.

25PS-20-1-ST-NCR

Same as above, except Snaptrack mounting.

25PS-20-2-DIN-NCR

Power supply, 230V AC power, DIN rail mounting.

25PS-20-2-SM-NCR

Same as above, except surface mounting.

25PS-20-2-ST-NCR

Same as above, except Snaptrack mounting.

25PS-20-10-DIN-NCR

Power supply, 10 to 36V DC power, DIN rail mounting.

25PS-20-10-SM-NCR

Same as above, except surface mounting.

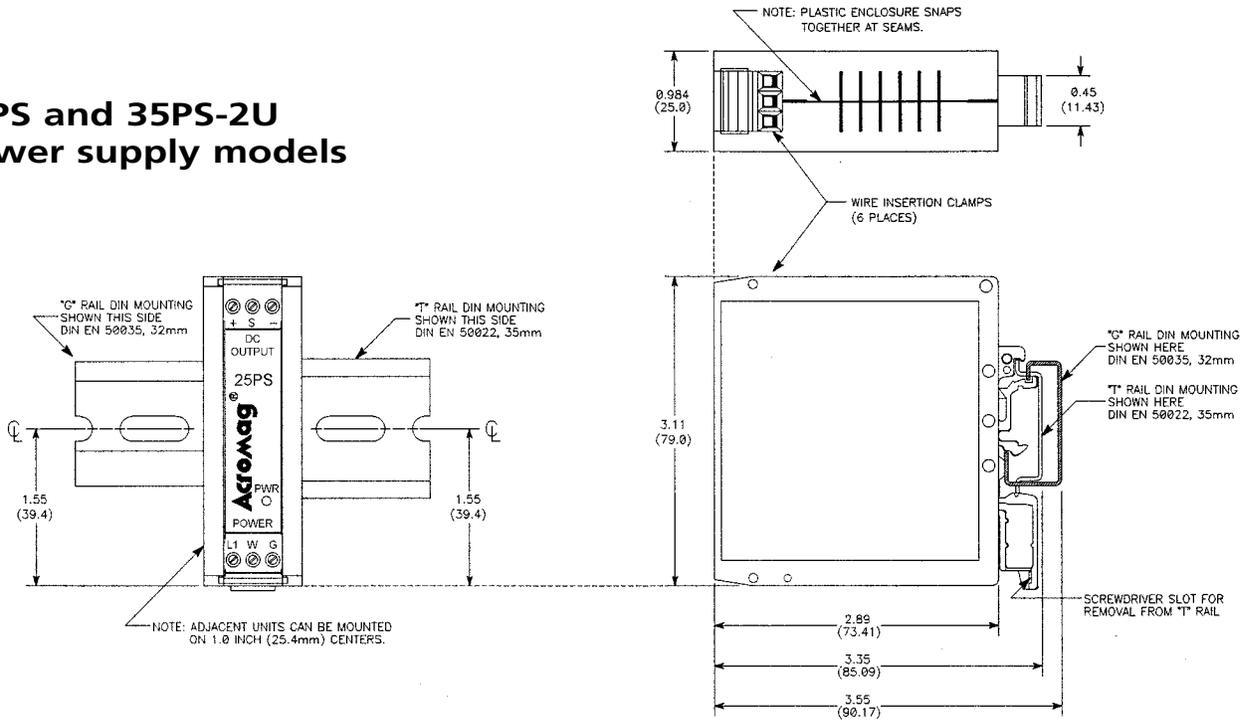
25PS-20-10-ST-NCR

Same as above, except Snaptrack mounting.



Dimensions

25PS and 35PS-2U power supply models



35PS-8U power supply

