	QRD MODELS							
	ALL	15-2	30-1	40-.75	60-.5	20-4	40-2	60-1.5
INPUT								
Voltage Ranges (Vac)	105-125 200-240 210-250							
Frequency Range (Hz)	48-440							
Phase	1							
Max.Current (Aac)								
at 115 Vac		0.95	0.95	0.95	0.95	2.3	2.3	2.3
at 230 Vac		0.5	0.5	0.5	0.5	1.15	1.15	1.15
Power Factor (1)		0.86	0.86	0.86	0.86	0.78	0.78	0.78
Efficiency (%) (1)		35	35	35	35	42	42	46
OUTPUT								
Voltage Mode								
Range (Vdc)		0-15	0-30	0-40	0-60	0-20	0-40	0-60
Coarse Adj.Range	Full Range							
Fine Adj.Range (mV)		150	300	400	600	200	400	600
Resolution (typical) (mV)		1.5	3.0	4.0	6.0	2.0	4.0	6.0
Output Current Range at 55°C (2) (Adc)		0-2	0-1	0-.75	0-.5	0-4	0-2	0-1.5
Current Mode								
Current Range	(See Volt.Mode)							
Coarse Adj.Range	Full Range							
Fine Adj.Range (mA)		30.0	15.0	12.0	8.0	60.0	30.0	25.0
Resolution (typical) (μA)		300	150	120	80	600	300	250
Voltage Compliance	Full Volt.Range							
Current/Volt.Crossover Static (typical)	See Fig.1-2							

(1) At nominal input and full rated output.
(2) For derating characteristics, see Figure 1-1.

Table 1-1. Unit Specifications (Sheet 1 of 4)

	QRD MODELS							
	ALL	15-2	30-1	40-.75	60-.5	20-4	40-2	60-1.5
PERFORMANCE[3]								
Voltage Mode								
Regulation [4]	±0.005% or ±0.75 mV [5]							
PARD (Ripple)[6]								
50 to 60 Hz Input								
Max. RMS Volt. (μV) (10Hz-7MHz bandwidth)	200							
Max. P-P Volt. (mV) (0-25 MHz bandwidth)	3							
PARD (Ripple)								
400 Hz Input								
Typical RMS Volt. (μV)	500							
Typical P-P Volt. (mV)	10							
Transient Response [7] (μs)	50							
Output Impedance	R + JωL							
Low Frequencies (f < 1KHz)								
R (mohms)		0.4	1.5	2.5	6.0	0.25	1.0	2.0
L (μh)		0.5	1.2	2.0	3.0	0.4	0.8	1.5
Output impedance at 100 KHz is less than 0.2 ohms and at 600 KHz is less than 1.0 ohms.								
Temperature Coefficient	(0.015% + 200 μV)/°C							
Drift [8] (typical)	0.025% E_o [9]							
Remote Error Sensing Compensation (max)	1 volt/load lead							

(3) Output performance specifications are valid at rear terminals only.
(4) For a combined full line swing and a no load-to-full load (or full load-to-no load) change.
(5) Whichever is greater.
(6) With chassis ground tied to input ground.
(7) For a step load change, no load to full load or full load to no load, and recovery to within a ± 10 mV band.
(8) 8 hours after warm up at constant line voltage, load and ambient temperature.
(9) E_o is the output voltage.

Table 1-1. Unit Specifications (Sheet 2 of 4)

	QRD MODELS							
	ALL	15-2	30-1	40-.75	60-.5	20-4	40-2	60-1.5
Remote Prog. Coefficient								
Resistance	100±.5 ohms/volt							
Volt.Signal	1 volt/volt							
Overload Protection	Crossover to Current Mode							
Output Voltage Turn-On, Turn-Off Overshoots	None							
Max.Capacitive Load	Any							
Current Mode Regulation(10)	±(.01% + β)							
β(μA)		125	125	125	125	250	250	250
PARD (Ripple) 50 to 60 Hz Input(6)								
Max.RMS Current (μA) (10Hz-7MHz bandwidth)		150	150	150	150	400	300	300
Max.P-P Current (mA) (0-25 MHz bandwidth)	2							
PARD (Ripple) 400 Hz Input								
Typical RMS Ripple (μA)	100							
Typical P-P Current (mA)	8							
Transient Response	See Note 11.							
Output Impedance	See Fig.1-3(12)							
Temperature Coefficient	(.015% + 50μA)/°C							
Drift(8) (Typical)	(0.1%+50μA)							

(10) For a combined full line swing and load change of short circuit to E max (or E max to short circuit) and recovery to a ±1% band.
(11) Function of $R_L C_o$ time constant (R_L = load resistance, C_o = value of output capacitor C19).
(12) Characteristic is typical for a Model 20-4. Typical curves for other specific models will be supplied upon request.

Table 1-1. Unit Specifications. (Sheet 3 of 4)

	QRD MODELS							
	ALL	15-2	30-1	40-.75	60-.5	20-4	40-2	60-1.5
Remote Prog. Coefficient Resistance (ohms/A) Signal (volts/A)		500 0.5	1000 1.0	1330 1.33	2000 2.0	250 0.25	500 0.5	667 0.67
Accuracy	± 10%							
Overload Protection	Crossover to Voltage Mode							
Output Current Turn-On, Turn-Off Overshoots	None							
MISCELLANEOUS Ambient Temp Range	-20 to +71°C (2)							
Series Operation	Max. 200 Vdc System Output							
Parallel Operation	Master-Slave							
Cooling	Convection							
Isolation Voltage to Grd Input Output	 1000 Vdc 200 Vdc							
Dimensions	See Fig. 1-4							
Weight (lb)		12.5	12.5	12.5	12.5	19.25	19.25	19.5
Meters- Voltage Range (Vdc) Current Range (Adc)		0-15 0-3	0-30 0-1.5	0-50 0-1	0-60 0-.6	0-25 0-5	0-50 0-2.5	0-80 0-2
Accuracy	±3%							

Table 1-1. Unit Specifications (Sheet 4 of 4)