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Find the *Kepco JQE 25-20M* at our website: ***Click HERE***



JQE Power Supplies

## JQE MODEL TABLE

| MODEL | d-c OUTPUT RANGE VOLTS | AMPS | OUTPUT IMPEDANCE VOLTAGE MODE SERIES R | SERIES L(1) | CURRENT MODE SHUNT R | SHUNT C(2) | MAX. INPUT AMPS at 125V a-c |
|---|---|---|---|---|---|---|---|
| **QUARTER-RACK** | | | | | | | |
| JQE 6-10M | 0-6 | 0-10 | 30μΩ | 1μH | 50kΩ | 3kμF | 2.0 |
| JQE 15-6M | 0-15 | 0-6 | 125μΩ | 1μH | 84kΩ | 1kμF | 2.1 |
| JQE 25-4M | 0-25 | 0-4 | 300μΩ | 1μH | 125kΩ | 700μF | 2.2 |
| JQE 36-3M | 0-36 | 0-3 | 600μΩ | 1μH | 165kΩ | 400μF | 2.2 |
| JQE 55-2M | 0-55 | 0-2 | 1.4mΩ | 1μH | 250kΩ | 220μF | 2.3 |
| JQE 75-1.5M | 0-75 | 0-1.5 | 2.5mΩ | 1μH | 330kΩ | 160μF | 2.3 |
| JQE 100-1M | 0-100 | 0-1 | 5mΩ | 2μH | 500kΩ | 110μF | 2.1 |
| **HALF-RACK** | | | | | | | |
| JQE 6-22M | 0-6 | 0-22 | 14μΩ | 0.5μH | 23kΩ | 5.8kμF | 4.2 |
| JQE 6-45M | 0-6 | 0-45 | 7μΩ | 0.5μH | 11kΩ | 8kμF | 9.0 |
| JQE 15-12M | 0-15 | 0-12 | 63μΩ | 0.5μH | 42kΩ | 2.7kμF | 4.0 |
| JQE 15-25M | 0-15 | 0-25 | 30μΩ | 0.5μH | 20kΩ | 4.5kμF | 8.4 |
| JQE 25-10M | 0-25 | 0-10 | 125μΩ | 0.5μH | 50kΩ | 2.4kμF | 5.3 |
| JQE 25-20M | 0-25 | 0-20 | 63μΩ | 0.5μH | 25kΩ | 4.3kμF | 10.5 |
| JQE 36-8M | 0-36 | 0-8 | 225μΩ | 0.5μH | 62.5kΩ | 1.4kμF | 6.0 |
| JQE 36-15M | 0-36 | 0-15 | 120μΩ | 0.5μH | 33kΩ | 3.6kμF | 9.5 |
| JQE 55-5M | 0-55 | 0-5 | 550μΩ | 1μH | 100kΩ | 850μF | 5.0 |
| JQE 55-10M | 0-55 | 0-10 | 275μΩ | 1μH | 50kΩ | 2.1kμF | 9.0 |
| JQE 75-3M | 0-75 | 0-3 | 1.25mΩ | 1μH | 165kΩ | 850μF | 4.0 |
| JQE 75-8M | 0-75 | 0-8 | 469μΩ | 1μH | 62.5kΩ | 1.2kμF | 10.0 |
| JQE 100-2.5M | 0-100 | 0-2.5 | 2mΩ | 1μH | 200kΩ | 600μF | 4.5 |
| JQE 100-5M | 0-100 | 0-5 | 1.25mΩ | 1μH | 100kΩ | 600μF | 8.4 |
| JQE 150-1.5M | 0-150 | 0-1.5 | 5mΩ | 2μH | 330kΩ | 440μF | 4.6 |
| JQE 150-3.5M | 0-150 | 0-3.5 | 2.2mΩ | 2μH | 140kΩ | 440μF | 8.7 |
| **FULL-RACK** | | | | | | | |
| JQE 6-90M | 0-6 | 0-90 | 3.5μΩ | 0.5μH | 3.5kΩ | 17.6kμF | 15.7 |
| JQE 15-50M | 0-15 | 0-50 | 15μΩ | 0.5μH | 10kΩ | 12kμF | 16.6 |
| JQE 25-40M | 0-25 | 0-40 | 31μΩ | 0.5μH | 12.5kΩ | 14kμF | 21.0 |
| JQE 36-30M | 0-36 | 0-30 | 60μΩ | 0.5μH | 16kΩ | 11kμF | 19.0 |
| JQE 55-20M | 0-55 | 0-20 | 138μΩ | 1μH | 25kΩ | 7.3kμF | 18.0 |
| JQE 75-15M | 0-75 | 0-15 | 250μΩ | 1μH | 33kΩ | 4.2kμF | 18.0 |
| JQE 100-10M | 0-100 | 0-10 | 0.62mΩ | 1μH | 50kΩ | 2.2kμF | 17.0 |
| JQE 150-7M | 0-150 | 0-7 | 1.1mΩ | 2μH | 72kΩ | 1kμF | 18.0 |

(1) For determining dynamic impedance in voltage mode.
(2) For determining dynamic impedance in current mode.

**Series JQE power supplies are systems-type voltage stabilizers with current limiting. They are available in a variety of ratings: 100 watts in a 1/4-rack package, 250-500 watts in a 1/2-rack package, and 1000 watts in a full-rack package.**

The tabulation of the effective series resistance and inductance in voltage mode and the effective shunt resistance and shunt capacitance in current mode, is done to allow a calculation of the output impedance versus frequency.

### FEATURES

- 10 turn voltage control for exceptional resolution.
- Analog output control by resistance: 1000Ω/Volt; or by a voltage delivering 0-1mA.
- Digital listen only control using SN-series digital interfaces.
- Current limited, front panel control (not programmable) 10%-105% $I_o$ max.
- JQE can control current with an external current-sense resistor.

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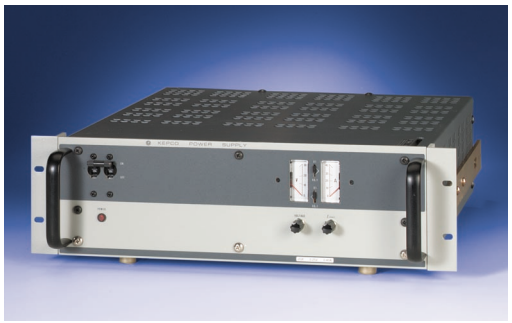
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Model JQE 25-4M Quarter Rack



Model JQE 100-2.5M Half Rack



Model JQE 25-40M Full Rack

CE JQE are CE marked per the Low Voltage Directive (LVD), EN61010-1.

## JQE GENERAL SPECIFICATIONS

| SPECIFICATION | RATING/DESCRIPTION | CONDITION |
|---|---|---|
| **INPUT** | | |
| a-c Voltage | 105-125, 210-250V a-c | User selectable |
| Current | See model table | Max load, 115V a-c |
| Frequency | 47-65Hz | Range |
| **OUTPUT** | | |
| d-c Output | Series pass | Transistor |
| Type of Stabilizer | Voltage stabilizer | Current limited |
| Voltage | 0 to 100% of rating | Adjustment range for temp 0-71°C |
| Current | 0 to 100% of rating | |
| Error Sense | 0.5V per load wire | Static voltage allowance |
| Isolation Voltage | 500V d-c or peak | Output to ground |
| Leakage Current | <5 microamperes | rms at 115V a-c |
| Output to Ground | <50 microamperes | p-p at 115V a-c |
| Series Connection | 500V | Max voltage off ground |
| Parallel Connection | Automatic | Use current mode limiting |
| | Current sharing | Use master-slave connection |
| | Redundancy type | External steering diodes |
| OVP | Not available | |
| **CONTROL** | | |
| Type Voltage | Fixed input, variable gain | |
| Current | Differential comparison | |
| Voltage Local | 10-turn precision rheostat | |
| Remote Analog | 1000 ohms per volt or 0 to 1mA control current | |
| Remote Digital | Use SN/SNR interface | 12 bit Listen-only |
| Current Local | Multiturn pot | |
| Remote Analog | Not provided | See Series ATE models |
| Dynamics Normal (slow) | dV/dt = I/C | See tabulated value of C in the model table |
| Fast mode | Not provided | See Series ATE models |
| **MECHANICAL** | | |
| Input Connection | Detachable IEC type 3-wire | ¼ and ½ rack size |
| | Permanently wired | Full rack size |
| Output Connections | Front panel binding posts | Models under 15A |
| | Rear barrier strip | ¼ and ½ size |
| | Rear compression studs | Full rack size |
| Meters | Two 1½" vertical 3%, analog | Front panel |
| Indicators | Neon | Pilot |
| Mounting (in std 19" racks) | Use RA 24 rack adapter | ¼ and ½ size |
| | Mounting "ears" provided | Full rack |
| Cooling | Forced air | Exhaust to rear |
| Dimensions (HxWxD) inches | 5 7/32 x 4 5/32 x 17 3/16 | ¼ rack size |
| mm | 132.6 x 105.6 x 436.6 | |
| inches | 5 7/32 x 8 11/32 x 17 3/8 | ½ rack size |
| mm | 132.6 x 211.9 x 441.3 | |
| inches | 5 7/32 x 19 x 17 1/64 | Full rack size |
| mm | 177 x 482.6 x 504.8 | |
| Finish: Fed Std 595 | Light gray, color 26440 | Front panel, 2 tone |
| Weight (packed for shipment) | 18lb (8.2Kg) | ¼ rack size |
| | 37lb (16.8Kg) | ½ rack size (250W) |
| | 49lb (22.3Kg) | ½ rack size (500W) |
| | 97lb (44.1Kg) | Full rack size |

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## JQE STATIC SPECIFICATIONS

| INFLUENCE QUANTITY | OUTPUT EFFECTS VOLTAGE MODE | OUTPUT EFFECTS CURRENT MODE(1) | AMPLIFIER OFFSETS(6) VOLTAGE $\Delta E_{io}$ | AMPLIFIER OFFSETS(6) CURRENT $\Delta I_{io}$ | REFERENCE 6.2V±5% |
|---|---|---|---|---|---|
| Source 105-125/210V a-c | <0.0005% | <0.005% | <10µV | <2nA | 0.0001% |
| Load No load-full load | <0.005% or 0.2mV(2) | <0.01% | <200µV | <5nA | — |
| Time 8-hours (drift) | <0.01% or 1mV(2) | >0.02% | <20µV | <2nA | 0.005% |
| Temp. Per °C | <0.01%(3) | <0.02%(3) | <20µV | <5nA | 0.005% |
| Ripple and Noise(4) rms | <0.2mV | <0.02% of $I_O$ max. | — | — | — |
| Ripple and Noise(4) p-p(5) | <1.0mV | <0.1% of $I_O$ max. | — | — | — |

(1) External current sensing, using the voltage amplifier. Effects are measured for a 1-Volt current sensing voltage drop.
(2) Whichever is greater.
(3) Typical temperature effect coefficients are: 0.005% per °C voltage mode; 0.01% per °C externally sensed current mode.
(4) One terminal grounded or connected so that the common-mode current does not flow through the load or (in current-mode) through a sensing resistor.
(5) 20Hz to 10MHz.
(6) The output effect can be calculated by the relationship:
$\Delta E_O = \pm E_r(R_f/R_i) \pm \Delta E_{io}(1+R_f/R_i) \pm I_{io}(R_f)$ where $R_f$ is the feedback resistor, and $R_i$ is the input resistor from the reference, $E_r$.

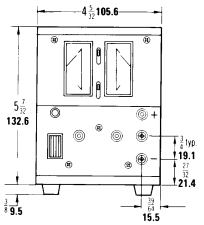
The tabulated offsets, more particularly their change as a function of source, time and temperature, allow a user to calculate performance of the uncommitted amplifier(s) with user specified input and feedback components. The formula for this is given in the static specifications table footnote.

### OUTLINE DIMENSIONAL DRAWINGS

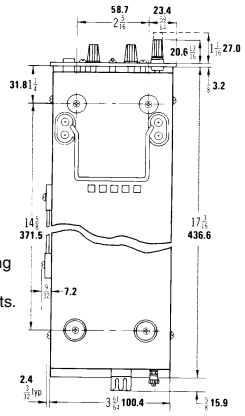
Fractional dimensions in light face type are in inches, **dimensions in bold face type are in millimeters.**
Tolerance: ± 1/64" **(0.4)** between mounting holes
± 1/32" **(0.8)** other dimensions
Panels: Per Mil. Std. 189

The 1/4 rack and 1/2 rack size JQE power supplies can be rack mounted using RA 24. See page 77.

### JQE QUARTER-RACK MODELS

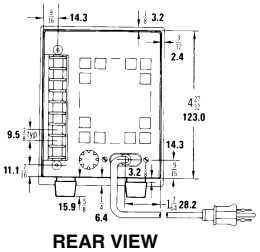


FRONT VIEW



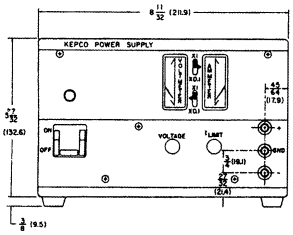
To rack mount, remove handle, feet and bail. Use (4) 8-18 x 5/8″ thread cutting screws into plastic inserts.

BOTTOM VIEW

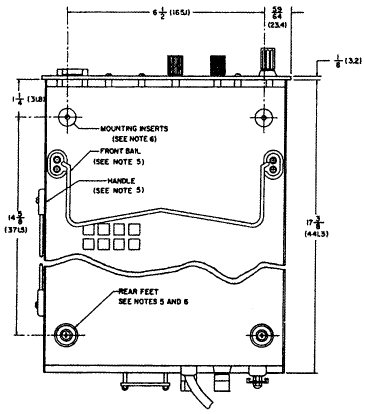


REAR VIEW

### JQE HALF-RACK MODELS

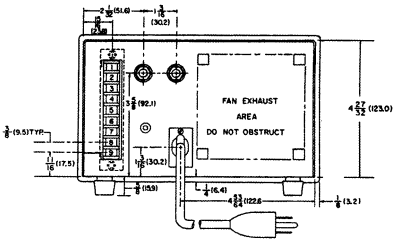



FRONT VIEW



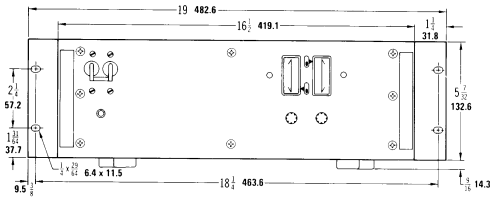

BOTTOM VIEW

To rack mount, remove handle, feet and bail. Use (4) 8-18 x 5/8″ thread cutting screws into plastic inserts.

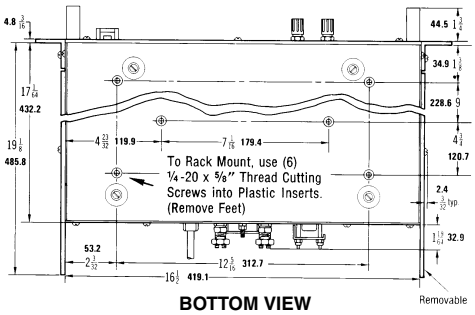



REAR VIEW

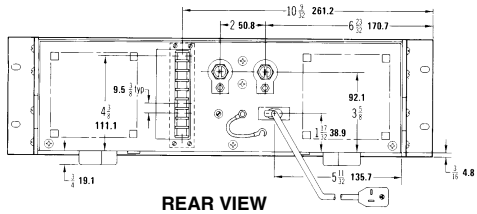
### JQE FULL-RACK MODELS



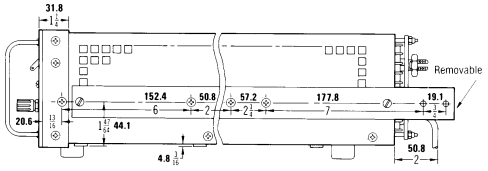
FRONT VIEW




BOTTOM VIEW



REAR VIEW




SIDE VIEW


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