PC-880

DATASHEET



The PC-880 is an eight-channel sequential power distributor in a 19-inch, one rack unit chassis. Each of the eight outlets is switched by its own 30 A power relay, released one second apart, so a complete rack comes up over roughly eight seconds and shuts down in reverse order from a single button on the front panel.

The reason sequencing matters is inrush. Amplifiers, processors and consoles all draw a large transient at the moment of switch-on, and when a full rack is energised at once those transients add. The result is a momentary voltage sag that trips the venue breaker, or worse, a direct-current transient that reaches the loudspeakers as an audible thump. Bringing the channels up one second apart spreads that inrush across eight seconds instead of eight milliseconds, and reversing the order on shutdown means the amplifiers are the first thing removed from the signal chain rather than the last.

Three independent protection layers sit behind the outlets. Overload is handled by a resettable circuit breaker on the front panel, tripping before current reaches a level that could overheat the wiring or trip the venue's main breaker. A short circuit is isolated at the PC-880 rather than propagating back up the supply, protecting everything downstream from cascade failure. Surge protection absorbs the transient overvoltage that arrives from lightning coupled into the distribution network or from other large loads switching on the same supply - a generator changeover, or an air-conditioning plant starting.

The operating window is centred on 220 V and accepts 198 to 242 V, which is the point of the design. Equipment specified around a 230 to 260 V centre, as much imported hardware is, sits near the bottom of its range whenever the local supply sags at peak hours or at the far end of a distribution feeder. A three-digit LED voltmeter on the front panel reads the incoming supply continuously, so an abnormal voltage is visible before it reaches the equipment behind it, and eight channel indicators show at a glance which outlets are live during a fault call mid-programme.

Key Features

- Eight independently switched outlets, one 30 A power relay per channel, in a 19 in 1U chassis
- One second sequencing delay per channel, approximately eight seconds for the full rack, reverse order on shutdown - eliminates cumulative inrush and the switch-off thump at the loudspeakers
- Single-button on/off for the whole rack instead of eight separate switches operated in the correct order
- Selectable sequenced or bypass operation - bypass for immediate power-up where the eight-second chain cannot be waited out
- Three protection layers: resettable overload breaker, short-circuit isolation at the unit, and surge absorption
- AC 220 V plus or minus 10 per cent (198 - 242 V), 50/60 Hz - centred on the Vietnamese mains standard rather than a 230 to 260 V European centre
- Three-digit LED voltmeter reading the incoming supply in real time, plus an individual status indicator for each of the eight channels
- Non-sequenced universal outlet on the front panel for load testing or ancillary equipment without waiting for the chain
- Adjustable switching order and rear wiring code marked on the chassis for safe service

Applications

- Amplifier and processing racks in halls and auditoriums
- Stage and event production power racks
- Karaoke rooms, bars and fixed entertainment venues
- Broadcast, conference and technical equipment rooms

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Technical Data

Type	**8-channel sequential AC power distributor, 19 in / 1U rack mounting to EIA-310**
Output channels	**8 independently switched universal outlets (CH 1 - CH 8) on the rear panel**
Auxiliary outlet	1 universal outlet on the front panel, not sequenced
Switching devices	**8 power relays, 30 A rating per channel**
Sequencing	**1 second delay per channel, approximately 8 seconds for all channels** **Reverse order on shutdown; sequenced / bypass modes selectable**
Switching order	Adjustable via front-panel order setup control
Control	One-touch on/off for the whole unit
Total rated load	**32 A / 7,000 W at 220 V, with a supply circuit and cord rated accordingly**
Operating voltage	**AC 220 V +/- 10 % (198 - 242 V), 50/60 Hz**
Protection	**Overload - resettable circuit breaker on the front panel** **Short circuit - fault isolated at the unit, not propagated upstream** **Surge - absorption of transient overvoltage from the supply network**
Indication	3-digit LED voltmeter showing incoming AC voltage in real time Individual status indicator per channel, 8 total; bypass indicator
Mains input	Fixed supply cord with strain-relief gland Wiring code marked on chassis: L red, N blue, E green/yellow
Earthing	Chassis earth to be bonded to the installation protective earth
Dimensions / weight	**482 (W) x 44 (H) x 250 (D) mm | approximately 4 kg**

Rear Panel



Eight independently switched universal outlets, CH 1 to CH 8, with a fixed supply cord entering through a strain-relief gland. The internal wiring code is marked on the rear label: L red, N blue, E green/yellow.

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Architect Specification

The power distributor shall be a sequential alternating-current distribution unit housed in a 19-inch rack chassis of one rack unit height to EIA-310, providing not fewer than eight independently switched output channels.

Each output channel shall be switched by its own power relay rated at not less than 30 A. A rating of 30 A against a theoretical even distribution of approximately 4 A per channel provides the margin required for a single channel feeding one main amplifier with a high starting current, without progressive pitting of the relay contacts over the service life. Solid-state switching without an equivalent published current rating shall not be accepted.

Channels shall be energised sequentially with a delay of approximately one second between channels, giving approximately eight seconds for the complete unit, and shall be de-energised in the reverse order. Simultaneous switching of all channels shall not be accepted, as the cumulative inrush current produces a momentary supply sag capable of tripping the venue distribution board and a direct-current transient audible at the loudspeakers.

The unit shall provide a selectable bypass mode permitting immediate energisation of all channels where the sequencing interval cannot be observed, and shall provide an adjustable switching order. Control shall be by a single on/off action for the whole unit.

Total rated load shall be not less than 32 A, corresponding to not less than 7,000 W at 220 V, sufficient to supply a main amplifier group, a mixing console and signal processing within one rack. The supply circuit, cord and plug serving the unit shall be rated for the intended total load.

The operating voltage range shall be AC 220 V plus or minus 10 per cent, that is 198 to 242 V, at 50/60 Hz, centred on 220 V in accordance with the Vietnamese distribution standard, so that operation remains within the safe range when the supply falls at peak demand or at the end of a long feeder. Equipment specified around a nominal centre of 230 V or higher shall not be accepted.

Three independent protection functions shall be provided: overload protection by a resettable circuit breaker accessible on the front panel, operating before current reaches a level capable of overheating the wiring or tripping the installation main breaker; short-circuit protection isolating the fault at the unit without propagation to the incoming supply; and surge protection absorbing transient overvoltage arising from lightning coupled into the distribution network or from the switching of other large loads on the same supply.

The front panel shall carry a three-digit light-emitting diode display indicating incoming alternating-current voltage in real time, an individual status indicator for each output channel, and an indicator for the bypass condition. A further universal outlet outside the sequencing chain shall be provided on the front panel for load testing and ancillary equipment.

Chassis dimensions shall not exceed 482 (W) x 44 (H) x 250 (D) mm and weight shall not exceed 4 kg. The chassis shall be bonded to the installation protective earth, and the internal wiring code shall be marked on the chassis.

Certificates of origin and quality shall be provided for the delivered batch, together with manufacturer technical documentation or third-party test reporting for the rated load current and the protection functions, and a commitment to supply spare relays and control boards for not less than five years.

The power distributor shall be the D&L PC-880.

References

Full measurement data and loudspeaker presets are available on request – dailycompanyltd@gmail.com