POWERGUARD DPM20-8 installation instructions & diagram

PowerGuard DPM20-8

Installation Instructions

Rev. 1.1

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1. Isolate power to the distribution panel by opening the main incoming breaker associated with the relevant

existing power meter and verifying that the power is indeed switched off.

2. Retract the incoming feeder line to the distribution panel from the main breaker/isolator and reconnect

after feeding the wire through the large hole in the enclosed current transformer.

3. Position the DPM 20-8 controller so that the control wires to the RL1 relays can be routed conveniently.

4. Cut the white wire loop from the current transformer to a convenient length and connect to the ‘CT 100:1’

terminals. It is important that no current flows through the transformer before these wires are terminated.

5. Referring to the enclosed ‘DPM20-8 INSTALLATION’ diagram, up to eight RL20-1 relays can be controlled

from one DPM20-8. The RL20-1 relays in turn can control 8 x 230 Vac line loads not exceeding 4kW resistive

or 1 HP inductive and can now be connected according to the diagram allowing no. 8 to control the lowest

priority (first to shed) load and no. 1 to serve the highest priority load. Use wire with at least 2.5mm² cross

sectional area for the controlled loads. Care should be taken when connecting neutral wires to pair them

with the relevant earth leakage or non-earth leakage buss when connecting to the RL20-1 relays.

6. A maximum total current for the board can be programmed on the two rotary switches marked ‘SET MAIN

MAX. CURRENT’. This setting would typically be the value of the main incoming circuit breaker or isolator.

Also set the ‘SET S/BY MAX. CURRENT’ switches to a value that the standby generator can deliver

continuously, de-rating for high altitude installations. These settings can be verified on the LCD display.

7. The two contacts marked ‘S/BY’ can be short circuited by potential-free contacts to switch from main to

standby load control setting.

8. 230 Vac can now be connected to the terminals marked ‘230 VAC INPUT’, observing the line and neutral

designation. This supply must be protected by an independent 5-amp circuit breaker and taken from the

non-earth leakage supply busses. A flashing blue led light indicates power as well as main processor activity.

9. After four to six minutes, provided that there is enough power available (approximately 15 Amps at 230Vac),

CH1 will switch on. Again, if current reserve allows, CH2 to CH8 will switch on in approximately 1.5 second

steps.

10. The LCD display indicates active outputs as well as the total current consumption.

11. As soon as the total current drawn by the distribution board exceeds the maximum current value

programmed in step no. 6, CH8 contact will open for a minimum of 15 minutes and then restore power to

its load as supply becomes available again. Should demand continue to increase during this period, CH7 to

CH1 will also shed and after 15 minutes restore the lowest numbers, again depending on availability of

power.

12. Blue LED lights on the RL1 relays indicate power while green LED lights indicates active output to the

relevant load.

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