



## CL25 SERIES

Single, dual and triple outputs

For new design -ins refer to the SCL25 series instead

- 90VAC to 264VAC Universal Input
- Short Circuit Protected
- VDE, UL, CSA and BABT Approved
- VDE0871 Level B Conducted Noise
- 25W Continuous, 35W Peak Output Power
- Stand alone "listed" equipment

The CL25 Series of 25W (35W peak) external switching power supplies enables the system specifier to optimise the design for several reasons. Firstly, because the power supply offers pre-approved SELV outputs, the submission of the apparatus for safety approval is simplified. Secondly, the task of integrating the power supply into the mechanical design is eliminated, presenting further savings by ensuring a shorter and simpler design cycle. These advantages are complemented by Universal Input, IEC950, UL, CSA and BABT approvals, to complete a worldwide packaged power solution suitable for a wide variety of low power, desktop applications.

[ 2 YEAR WARRANTY ]



## SPECIFICATION

All specifications are typical at nominal input, full load at 25°C unless otherwise stated

| OUTPUT SPECIFICATIONS                        |                                                                  |                                           |
|----------------------------------------------|------------------------------------------------------------------|-------------------------------------------|
| Line regulation<br>LL to HL, FL              | Single outputs<br>Multi's: +5.1V output<br>Multi's: aux. outputs | ±0.5%<br>±0.5%<br>±1.0%                   |
| Overshoot/undershoot                         | At turn-on                                                       | 10%                                       |
| Transient response                           | +5.1V<br>(40% to 60%<br>full load step)                          | ±250mV max. dev.<br>1ms recovery<br>to 1% |
| Temperature coefficient                      | All outputs                                                      | ±0.025%/°C                                |
| Overvoltage protection                       | +5V output only                                                  | 6.25V ±0.75V                              |
| Output power limit                           | Primary power limited                                            | 45W Pin max.                              |
| Short circuit protection                     |                                                                  | Continuous<br>with auto restart           |
| Minimum output current                       |                                                                  | 0A                                        |
| INPUT SPECIFICATIONS                         |                                                                  |                                           |
| Input voltage range                          |                                                                  | 90 to 264VAC<br>120 to 370VDC             |
| Input frequency range                        |                                                                  | 47 to 440Hz                               |
| Input surge current                          | 110VAC<br>230VAC                                                 | 12A max.<br>24A max.                      |
| Safety ground<br>leakage current             | 110VAC, 60Hz<br>230VAC, 50Hz                                     | 1mA max.<br>2mA max.                      |
| ELECTROMAGNETIC COMPATIBILITY SPECIFICATIONS |                                                                  |                                           |
| Radiated noise                               | EN55022, EN55011, FCC                                            | Level A                                   |
| Conducted noise                              | EN55022, EN55011, FCC                                            | Level B                                   |
| Electrostatic discharge                      | EN61000-4-2                                                      | Level 4                                   |
| Electrostat. air discharge                   | IEC801-2                                                         | Level 3                                   |
| RF field susceptibility                      | IEC801-3                                                         | Level 3                                   |
| Electrical fast<br>transients/bursts         | EN61000-4-4                                                      | Level 3                                   |
| Surge susceptibility                         | EN61000-4-5                                                      | Level 3                                   |

| GENERAL SPECIFICATIONS       |                                                                                                                         |                                                               |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| Hold-up time                 | 110VAC<br>230VAC                                                                                                        | 10ms<br>60ms                                                  |
| Efficiency                   | 110VAC and 230VAC                                                                                                       | 70% typical                                                   |
| Isolation voltage            | Input/output<br>Input/chassis                                                                                           | 3000VAC<br>1500VAC                                            |
| Switching frequency          | Variable                                                                                                                | 45kHz to 85kHz                                                |
| Approvals and<br>standards   | Safety                                                                                                                  | VDE0805, EN60950<br>BABT, IEC950, UL1950<br>CSA C22.2 No. 950 |
| Case material                |                                                                                                                         | ABS plastic                                                   |
| Material flammability        |                                                                                                                         | UL94-5V                                                       |
| Weight                       |                                                                                                                         | 500g (17.65oz)                                                |
| MTBF                         | MIL-HDBK-217E                                                                                                           | 150,000 hours                                                 |
| ENVIRONMENTAL SPECIFICATIONS |                                                                                                                         |                                                               |
| Thermal performance          | Operating<br>Non-operating<br>0°C to +40°C ambient,<br>convection cooled<br>Peak (0°C to 40°C, max. 60s),<br>See Note 1 | 0°C to +40°C<br>-40°C to +85°C<br>25W<br>35W                  |
| Relative humidity            | Non-condensing                                                                                                          | 5% to 95% RH                                                  |
| Altitude                     | Operating<br>Non-operating                                                                                              | 10,000 feet max.<br>30,000 feet max.                          |
| Vibration                    | 5Hz to 500Hz                                                                                                            | 2.4G rms (approx.)                                            |

### International Safety Standard Approvals



VDE0805/EN60950/IEC950 File No. 10401-3336-1071  
Licence No. 90353, 79517 and 1071



UL1950 File No. E136005



CSA C22.2 No. 950 File No. LR41062C/LR50913/LR101320



Certificate No. 606008

# 25 Watt AC/DC external power supplies

| OUTPUT VOLTAGE            | OUTPUT CURRENT |                     | RIPPLE <sup>(2)</sup> | TOTAL REGULATION <sup>(3)</sup> | MODEL NUMBER             |
|---------------------------|----------------|---------------------|-----------------------|---------------------------------|--------------------------|
|                           | MAX            | PEAK <sup>(1)</sup> |                       |                                 |                          |
| 5.1V                      | 5.0A           | 6.0A                | 100mV                 | ±4.0%                           | CL25-7605 <sup>(5)</sup> |
| 9.5V                      | 2.5A           | 3.2A                | 95mV                  | ±4.0%                           | CL25-7614                |
| 12.0V                     | 2.0A           | 2.5A                | 120mV                 | ±4.0%                           | CL25-7612                |
| 16V                       | 1.5A           | 2.0A                | 160mV                 | ±4.0%                           | CL25-7616                |
| 24.0V                     | 1.0A           | 1.5A                | 240mV                 | ±4.0%                           | CL25-7624                |
| 48.0V                     | 0.5A           | 0.7A                | 240mV                 | ±4.0%                           | CL25-7617                |
| +5.1V (A)                 | 2.5A           | 4.0A                | 50mV                  | ±3.0%                           | CL25-7618                |
| ±12.0V (B) <sup>(4)</sup> | 1.0A           | 2.0A                | 120mV                 | ±3.0%                           |                          |
| +5.1V (A)                 | 2.5A           | 4.0A                | 50mV                  | ±3.0%                           | CL25-7619 <sup>(5)</sup> |
| ±15V (B) <sup>(4)</sup>   | 0.8A           | 1.5A                | 150mV                 | ±3.0%                           |                          |
| +5.1V (A)                 | 2.5A           | 4.0A                | 50mV                  | ±3.0%                           | CL25-7620 <sup>(5)</sup> |
| ±24V (B) <sup>(4)</sup>   | 0.5A           | 1.0A                | 240mV                 | ±3.0%                           |                          |
| +5.1V (A)                 | 2.0A           | 4.0A                | 50mV                  | ±4.0%                           | CL25-7608 <sup>(5)</sup> |
| +12V (B)                  | 1.0A           | 2.0A                | 120mV                 | ±5.0%                           |                          |
| -12V (C)                  | 0.2A           | 1.0A                | 120mV                 | ±5.0%                           |                          |
| +5.1V (A)                 | 2.0A           | 4.0A                | 50mV                  | ±4.0%                           | CL25-7610 <sup>(5)</sup> |
| +15V (B)                  | 0.5A           | 1.5A                | 150mV                 | ±5.0%                           |                          |
| -15V(C)                   | 0.2A           | 1.0A                | 150mV                 | ±5.0%                           |                          |

## Notes

- 1 Peak output current lasting less than 60 seconds with duty cycle <5%. During peak loading outputs may exceed total regulation limits.
- 2 50MHz bandwidth, peak-to-peak, measured differentially.
- 3 Total regulation is defined as the static output regulation at 25°C, including initial tolerance, line voltage within stated limits and load currents within stated limits.
- 4 Output B of dual models is a floating output. Polarity is referenced by user.
- 5 The output cable length is reduced to 24" for all multiple output models and for the CL25-7605.
- 6 To maintain user-system safety approvals, the input power cable must be appropriately rated and approved.

| PIN NUMBER | SINGLE OUTPUT  | DUAL OUTPUT                 | TRIPLE OUTPUT  |
|------------|----------------|-----------------------------|----------------|
| Pin 1      | V <sub>A</sub> | V <sub>A</sub>              | V <sub>A</sub> |
| Pin 2      | V <sub>A</sub> | V <sub>A</sub>              | V <sub>A</sub> |
| Pin 3      | V <sub>A</sub> | V <sub>A</sub>              | V <sub>A</sub> |
| Pin 4      | V <sub>A</sub> | V <sub>B</sub> <sup>+</sup> | V <sub>B</sub> |
| Pin 5      | Return         | V <sub>B</sub> <sup>-</sup> | V <sub>C</sub> |
| Pin 6      | Return         | Return                      | Return         |
| Pin 7      | Return         | Return                      | Return         |
| Pin 8      | Return         | Return                      | Return         |

