

KEY FEATURES

- Low Standby <0.1W
- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-305VAC, 47-440 Hz
- Regulated Output and Low Ripple and Low Noise
- Isolation Class II
- Small Size as AFCN 10Watt with 20Watt Higher Power
- CE and UL Approval
- 3-Year Product Warranty


ELECTRICAL SPECIFICATIONS

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

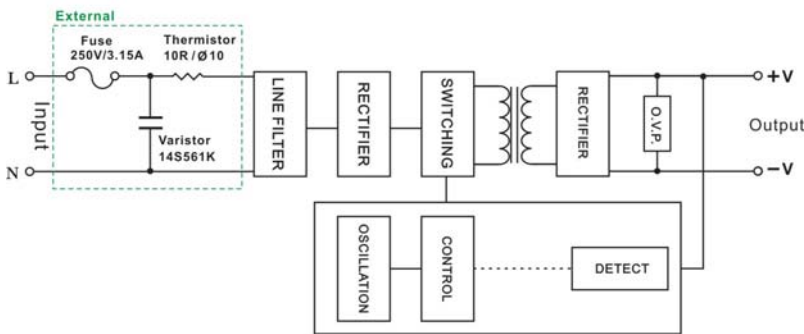
| Model No. | AFC20H-5.1S | AFC20H-12S | AFC20H-15S | AFC20H-24S |
|--|---|------------------|------------------|------------|
| Max Output Wattage (W) | 18W | 20W | 20W | 20W |
| Input | Voltage | | | |
| | 90-305 VAC or 120-430 VDC | | | |
| | Frequency (Hz) | | | |
| | 47-440 Hz | | | |
| | Current (Full load) | | | |
| | 385 mA max. (115 VAC) / 250 mA max. (230 VAC) | | | |
| | Inrush Current (<2ms, Cold Start) | | | |
| | 30 A max. (115 VAC) / 40 A max. (230 VAC) | | | |
| Leakage Current | | | | |
| 0.25 mA max. (230 VAC) | | | | |
| External Fuse (recommended) | | | | |
| 3.15 A slow blow type | | | | |
| External Varistor (recommended) | | | | |
| 14S561K | | | | |
| External Thermistor (recommended) | | | | |
| 10R / 10φ | | | | |
| Output | Voltage (V.DC.) | | | |
| | 5.1V | 12V | 15V | 24V |
| | Voltage Accuracy | | | |
| | ±2% | | | |
| | Current (mA) max | | | |
| | 3529 | 1660 | 1330 | 833 |
| | Maximum Capacitive Load | | | |
| | 4000uF | 1000uF | 680uF | 220uF |
| | Minimum Load | | | |
| | 0% | | | |
| Line Regulation (LL-HL) (typ.) | | | | |
| ±1% | | | | |
| Load Regulation (5-100%) (typ.) | | | | |
| ±3% | ±1% | | | |
| Ripple & Noise | | | | |
| 120mV max (Vp-p) | 120mV max (Vp-p) | 150mV max (Vp-p) | 240mV max (Vp-p) | |
| Efficiency (at 230 VAC) | | | | |
| 82% | 85% | 85% | 86% | |
| Hold-up Time(typ) | | | | |
| 36 ms (at 230VAC) | | | | |
| Protection | Over Power Protection | | | |
| | Hiccup technique, auto-recovery | | | |
| | Over Voltage Protection | | | |
| Zener diode clamp | | | | |
| Short Circuit Protection | | | | |
| Hiccup mode, indefinite (automatic recovery) | | | | |
| Isolation | Input-Output (V.AC) | | | |
| 3000V | | | | |
| Environment | Operating Temperature | | | |
| | -40°C...+70°C (with derating) | | | |
| | Storage Temperature | | | |
| | -40°C...+85°C | | | |
| | Temperature Coefficient | | | |
| ±0.05%/°C | | | | |
| Humidity | | | | |
| 95% RH | | | | |
| MTBF | | | | |
| >400,000 h @ 25°C (MIL-HDBK-217F) | | | | |
| Physical | Dimension (L x W x H) | | | |
| | 2.07 x 1.08 x 0.93 Inches (52.5 x 27.5 x 23.5 mm) Tolerance ±0.5 mm | | | |
| | Case Material | | | |
| | Plastic resin (flammability to UL 94V-0) | | | |
| Weight | | | | |
| 62 g | | | | |
| Cooling Method | | | | |
| Free air convection | | | | |
| Safety | Agency Approvals | | | |
| CE, UL/cUL, CB | | | | |
| EMC | EMI (Conducted & Radiated Emission) | | | |
| | EN 55032 class B | | | |
| EMS (Noise Immunity) | | | | |
| EN 55024 | | | | |

NOTE

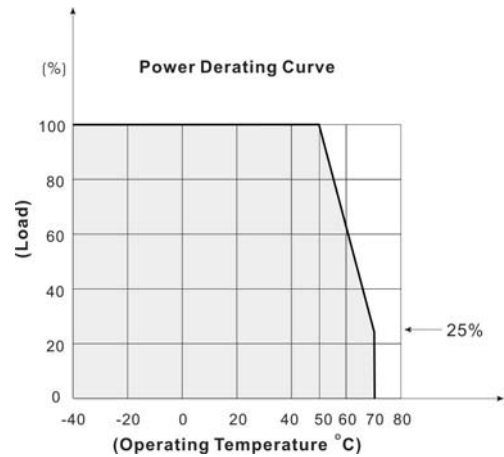
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. It's recommended Varistor 14S561K at L / N input side in parallel.
3. It's recommended Fuse 250V/3.15A at L input side in series connection.
4. It's recommended 10R / 10φ thermistor at L input side in series connection.
5. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

BLOCK DIAGRAM

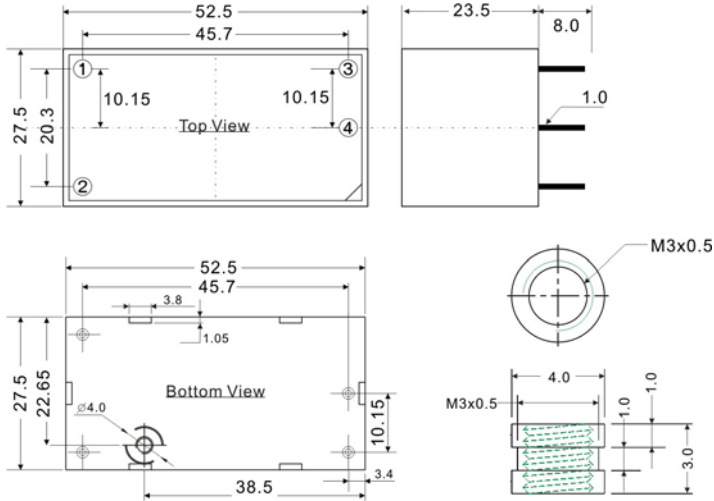
Single Output



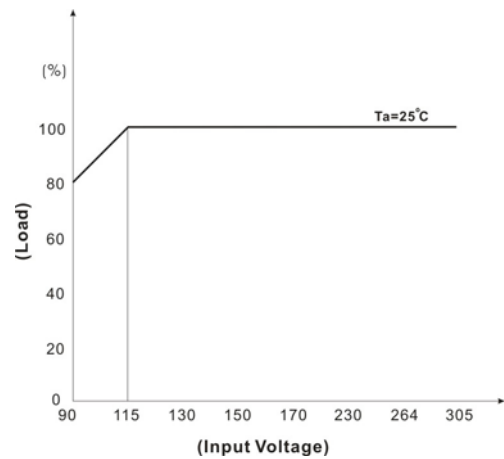
DERATING



MECHANICAL DIMENSION (Top View)



Maximum Torque 1.2 { 1.2 1 } (k g f . c m { N . m })



| PIN# | Single |
|------|-----------|
| 1 | AC IN (L) |
| 2 | AC IN (N) |
| 3 | +DC OUT |
| 4 | -DC OUT |