

## AFC20N SERIES

20 Watts

### KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC, 47-440 Hz
- Low Standby <0.25W
- Regulated Output and Low Ripple and Low Noise
- Isolation Class II
- Small Size as AFCN 10Watt with 20Watt Higher Power
- Screw Terminal For Optional
- CE, CB 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.

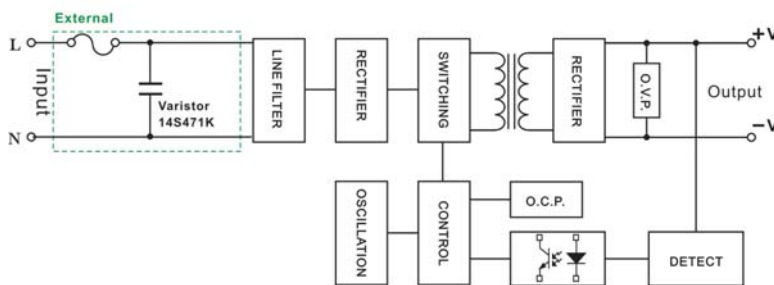
| Model No.              |                                     | AFC20N-3.3S   | AFC20N-5S | AFC20N-12S | AFC20N-15S | AFC20N-24S |
|------------------------|-------------------------------------|---|-----------|------------|------------|------------|
| Max Output Wattage (W) |                                     | 11.88W  | 18W       | 20W        | 20W        | 20W        |
| Input                  | Voltage                             | 90-264 VAC or 120-370 VDC   |           |            |            |            |
|                        | Frequency (Hz)                      | 47-440 Hz   |           |            |            |            |
|                        | Current (Full load)                 | 385 mA max. (115 VAC) / 250 mA max. (230 VAC)                         |           |            |            |            |
|                        | Inrush Current (<2ms, Cold Start)   | 20 A max. (115 VAC) / 40 A max. (230 VAC)                             |           |            |            |            |
|                        | External Fuse (recommend)           | 2 A slow blow type  |           |            |            |            |
| Output                 | Voltage (V.DC.)                     | 3.3V  | 5.1V      | 12V        | 15V        | 24V        |
|                        | Voltage Accuracy                    | ±2%   |           |            |            |            |
|                        | Current (mA) max                    | 3600  | 3600      | 1660       | 1330       | 833        |
|                        | Maximum Capacitive Load             | 5000 uF   | 5000 uF   | 1500 uF    | 1000 uF    | 470 uF     |
|                        | Minimum Load                        | 0%  |           |            |            |            |
|                        | Line Regulation (LL-HL) (typ.)      | ±0.5%   |           |            |            |            |
|                        | Load Regulation (5-100%) (typ.)     | ±1%   |           |            |            |            |
|                        | Ripple (Full load)                  | 75mV max (Vp-p)   |           | 1% of Vout |            |            |
|                        | Noise (Full load)                   | 120mV max (Vp-p)  |           | 1% of Vout |            |            |
|                        | Efficiency (typ.)                   | 73%   | 78%       | 82%        | 83%        | 83%        |
|                        | Hold-up Time(typ)                   | 11 ms (at 115VAC) / 56 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 with Fiberglass (flammability to UL 94V-0)              |           |            |            |            |
|                        | Weight                              | 62 g  |           |            |            |            |
|                        | Cooling Method                      | Free air convection   |           |            |            |            |
| Safety                 | Agency Approvals                    | CE, UL/cUL, CB (Pendibg)  |           |            |            |            |
| EMC                    | EMI (Conducted & Radiated Emission) | EN 55022 class B (Pendibg)  |           |            |            |            |
|                        | EMS (Noise Immunity)                | EN 55024 (Pendibg)  |           |            |            |            |

## NOTE

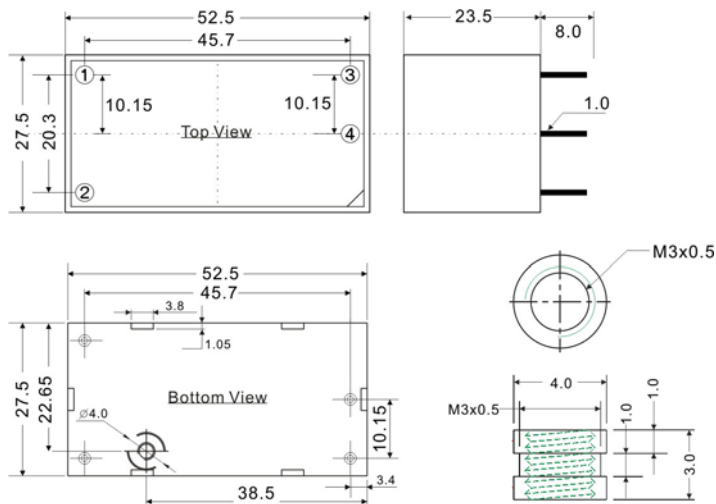
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. It's recommended to add Varistor 14S471K at L / N input side in parallel.
3. Please refer to our PDF file "AC-DC Application" on our website: [www.archcorp.com.tw](http://www.archcorp.com.tw)

## BLOCK DIAGRAM

Single Output



## MECHANICAL DIMENSION ( Top View )



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

Maximum Torque 1 2 { 1.2 1 } ( k g f . c m { N.m } )

## DERATING

