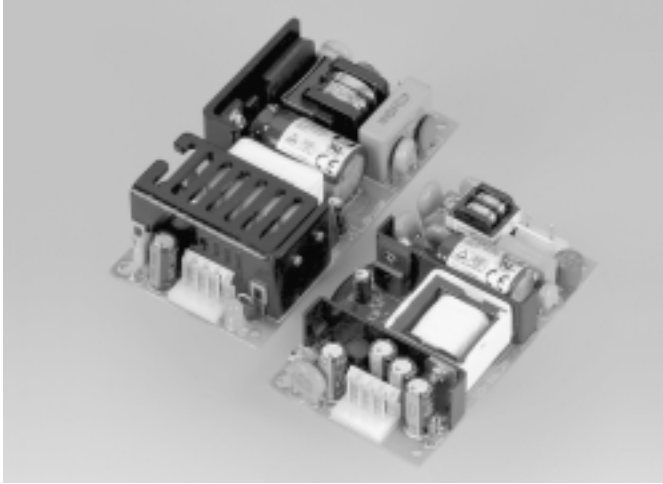


Open Frame Single Output Switchers

20-60 Watts ACS20-60 Series



THE XPERTS IN POWER

- Low Cost
- Small Size
- Universal Input
- Rugged Design
- High MTBF
- International Safety Approvals
- Covered Versions Available

Specification

Input

- Input Voltage**
 - 20 W models:
85-264 VAC (110-370 VDC)
 - 40-60 W models:
90-264 VAC (110-370 VDC)
- Input Frequency**
 - 47-63 Hz
- Inrush Current**
 - 20 W models at cold start +25 °C:
20 A at 115 VAC, 40 A at 230 VAC
 - 40-60 W models at cold start +25 °C:
25 A at 115 VAC, 50 A at 230 VAC
- Input Current**
 - 0.25 A rms for ACS20 at 230 VAC
 - 0.45 A rms for ACS40 at 230 VAC
 - 0.60 A rms for ACS60 at 230 VAC
- Earthing**
 - Class 1

Output

- Output Voltage**
 - See Table
- Output Voltage Adjustment**
 - ±5%
- Hold-Up Time**
 - 16 ms typ at full load 20 W models
 - 8 ms typ at full load 40-60 W models
- Line Regulation**
 - 0.5% max at full load
- Load Regulation**
 - 1.0% max at 10% to full load
- Ripple & Noise**
 - 1% max pk-pk, 20 MHz bandwidth
- Overvoltage Protection**
 - Typically 130% of max output
- Overcurrent Protection**
 - 120% typical

General

- Efficiency**
 - See Tables
- Switching Frequency**
 - 50-70 kHz
- Isolation**
 - 3000 VAC input to output
 - 1500 VAC input to ground
 - 500 VAC output to ground
- MTBF**
 - 230,000 hours MIL-HDBK-217F

Environmental

- Operating Temperature**
 - 0 °C to +70 °C
 - Derate from full load at +45 °C to 50% load at +55 °C (20 W models)
 - Derate from full load at +50 °C to half load at +60 °C (40 & 60 W models)
 - Reduce above temperatures by +10 °C if cover is fitted
- Storage Temperature**
 - -40 °C to +85 °C

EMC & Safety

- Safety Approvals**
 - EN60950 (TÜV), UL1950, CSA22.2 No. 234
- EMC**
 - FCC20780 Level B, CISPR22 (EN55022) Class B conducted
- ESD Susceptibility**
 - EN61000-4-2 Level 3, Perf Criteria A
- Radiated Susceptibility**
 - EN61000-4-3 10 V/m, Perf Criteria A
- EFT/Burst**
 - EN61000-4-4 Level 2, Perf Criteria A
- Surge**
 - EN61000-4-5 Level 3, Perf Criteria A
- Conducted Susceptibility**
 - EN61000-4-6 10 V, Perf Criteria A
- Safety Approvals**
 - EN60950 (TÜV), UL1950, CSA22.2 No. 234

OUTPUT VOLTAGE & CURRENT RATINGS - 20 WATT MODELS					ACS
Output Power	Output Voltage	Output Current		Efficiency	Model Number
		Nominal	Peak ⁽¹⁾		
20 W	3.3 V	4.40 A	6.60 A	70%	ACS20US03*
	5.0 V	4.40 A	6.60 A	73%	ACS20US05*
	9.0 V	2.44 A	4.00 A	77%	ACS20US09*
	12.0 V	1.80 A	2.70 A	80%	ACS20US12*
	15.0 V	1.40 A	2.10 A	80%	ACS20US15*
	24.0 V	0.92 A	1.40 A	82%	ACS20US24*

Notes

1. Peak load lasting <30 s with a max duty cycle of 10%.

Mechanical Details - 20 Watt Models

0.06(20.32)
0.13(3.30)(4PL)
2.00(50.8)
1.700(43.18)
0.150(3.81)
0.150(3.81)
3.200(81.28)
3.50(88.90)

(+) Vout
(-) Vout

NOTES:
 1. All dimensions shown in inches (mm).
 2. Input connector mates with Molex housing 09-50-3031 and Molex 2878 series crimp terminal. Output connector mates with Molex housing 90-50-3041 and Molex 2878 series crimp terminal.
 3. Loom kits with 300 mm wire available. Order part number ACS20 LOOM KIT.
 4. For mating connectors only, order part number ACS20-60 CONKIT.
 5. Covers available. Order part number ACS20 COVER (102 x 64 x 34 mm). To receive unit with cover fitted add suffix '-C' to model number.

OUTPUT VOLTAGE & CURRENT RATINGS - 40 & 60 WATT MODELS					ACS
Output Power	Output Voltage	Output Current		Efficiency	Model Number
		Nominal	Peak ⁽¹⁾		
40 W	3.3 V	6.00 A	7.20 A	74%	ACS40US03*
	5.0 V	6.00 A	7.20 A	78%	ACS40US05*
	9.0 V	4.45 A	5.34 A	82%	ACS40US09*
	12.0 V	3.34 A	4.00 A	84%	ACS40US12*
	15.0 V	2.67 A	3.20 A	85%	ACS40US15*
	24.0 V	1.67 A	2.00 A	86%	ACS40US24*
	36.0 V	1.11 A	1.33 A	87%	ACS40US36
	48.0 V	0.834 A	1.00 A	88%	ACS40US48*
60 W	3.3 V	8.00 A	8.50 A	74%	ACS60US03*
	5.0 V	8.00 A	9.00 A	78%	ACS60US05*
	9.0 V	6.67 A	8.00 A	82%	ACS60US09
	12.0 V	5.00 A	6.00 A	84%	ACS60US12*
	15.0 V	4.00 A	4.80 A	85%	ACS60US15*
	24.0 V	2.50 A	3.00 A	86%	ACS60US24*
	36.0 V	1.67 A	2.00 A	87%	ACS60US36
	48.0 V	1.25 A	1.50 A	88%	ACS60US48*

Notes

1. Peak load lasting <30 s with a max duty cycle of 10%.
- * Also available from Farnell InOne, see pages 350 & 351.

Mechanical Details - 40 & 60 Watt Models

1.20(30.48)
4.00(101.60)
0.12(3.00)(4PL)
3.70(94.00)
0.150(3.80)
LED
(+) Vout
(-) Vout
0.150(3.80)
1.70(43.20)
2.00(50.80)
4x0.125(3.17)

NOTES:
 1. All dimensions shown in inches (mm).
 2. Input connector mates with Molex housing 09-50-3031 and Molex 2878 series crimp terminal. Output connector mates with Molex housing 90-50-3041 and Molex 2878 series crimp terminal.
 3. Loom kits with 300 mm wire available. Order part number ACS40/60 LOOM KIT.
 4. For mating connectors only, order part number ACS20-60 CONKIT.
 5. Covers available. Order part number ACS40/60 COVER (114 x 64 x 38.5 mm). To receive unit with cover fitted add suffix '-C' to model number.