



- ◆ Standard Quarter Brick Footprint
- ◆ 36-75VDC Input
- ◆ 1.2V 100A - 35V 6A Nominal Outputs
- ◆ Through Hole Mounting
- ◆ Low 12.7mm Profile
- ◆ 1500VDC Basic Isolation

## iQM/iQN/iQP Series 72 - 300W Quarter Brick Converter

### iQM/iQN/iQP Features and Benefits

#### Features

- ◆ High operating efficiency (up to 92%)
- ◆ Constant switching frequency
- ◆ Baseplate

#### Benefits

- ◆ Reduced system heating
- ◆ Easier system filtering
- ◆ Allows for improved thermal management with optional heatsink

### Specifications

ITEMS	MODEL	iQM (iQP)									
		1.2	1.5	1.8	2.5	3.3	5	12	28	35	
Nominal Output Voltage	VDC										
Input Voltage Range	VDC	36 - 75									
Input Current (max)	A	2.8 - 10.5 Amps model dependent									
Output Voltage Tolerance	VDC	1.16 - 1.24	1.45 - 1.55	1.74 - 1.86	2.42 - 2.58	3.20 - 3.40	4.85 - 5.15	11.6 - 12.4	27.44 - 28.56	34.48 - 35.53	
Ripple & Noise (max) (pk to pk) (1)	mV	80 (50)	90 (100)	90 (80)	90 (75)	100 (80)	100	120 (200)	200	250	
Line Regulation (max)	mV	5					6.6	8 (10)	24	56	100
Load Regulation (max)	mV	5	7	6	5	6.6	10	24	N/A	N/A	
Overload Protection (typ)	%	Inception- 108-117% of rated output; Short circuit auto recovery									
Overvoltage Protection	VDC	1.5	1.83	2.25	3.1	4.1	6.1	14.5	33.6	39.7	
Remote Sense	-	Yes									
Remote On / Off	-	Positive or Negative Logic available, see Feature Set									
Temperature (operating)	°C	-40-120(121)			-40-117(121)		-40-115(119)	-40-117(116)	40-115	-40-119	
Temperature (storage)	°C	-55 to 125									
Humidity (operating)	-	20-95% RH Non condensing									
Humidity (storage)	-	10-95% RH Non condensing									
Cooling	-	Convection or forced air									
Isolation Voltage	VDC	1500V Input to output & base plate, 500V Output to base plate									
Vibration (non operating)	-	5 to 50Hz @ 0.5g (4.9m/s <sup>2</sup> ), and 50 to 500Hz @ 1.5g (14.7m/s <sup>2</sup> ) per Bellcore TR-EOP-000063-5.4.4									
Shock	-	196.1m/s <sup>2</sup>									
Safety Agency Approvals	-	UL60950 (US and Canada), VDE0805 (IEC60950), CB scheme (IEC60950), CE Mark (LVD)									
Weight (max)	g	60									
Size	mm	57.9 x 36.8 x 12.7									
Warranty	-	3 years									

Notes: See website for detailed specifications

- (1) iQM 1.2 -5.0V Measured across 47uF +1uF +0.1uF ceramic caps.
- (1) iQM 12V Measured across 47uF +1uF +0.1uF ceramic caps + 470uF Al electrolytic
- (1) iQN 28V Measured across 40uF +1uF +0.1uF ceramic caps + 2x220uF Al electrolytic
- (1) iQN 35V Measured across 47uF +1uF +0.1uF ceramic caps + 68uF Al electrolytic
- (1) iQP 1.2 - 12V Measured across 47uF +1uF +0.1uF ceramic caps + 1000uF Al electrolytic

**Model Selector**

Model	Voltage (V)	Adjust Range (V)	Max. Curr. (A)	Max. Output Power (W)	Efficiency at Full Load (%)
iQM48060A012V-001-R	1.2	.96 - 1.32	60	72	80.5
iQP48100A012V-001-R	1.2	.96 - 1.32	100	120	80
iQM48060A015V-001-R	1.5	1.2 - 1.65	60	90	83.5
iQP48090A015V-001-R	1.5	1.2 - 1.65	90	135	84
iQM48060A018V-001-R	1.8	1.44 - 1.98	60	108	85
iQP48085A018V-001-R	1.8	1.44 - 1.98	85	153	86.5
iQM48050A025V-001-R	2.5	2.0 - 2.75	50	125	88.5
iQM48060A025V-001-R	2.5	2.0 - 2.75	60	150	87.5
IQP48080A025V-001-R	2.5	2.0 - 2.75	80	200	89
iQM48035A033V-001-R	3.3	2.64 - 3.63	50	165	90.5
iQM48050A033V-001-R	3.3	2.64 - 3.63	35	115.5	91.5
iQP48070A033V-001-R	3.3	2.64 - 3.63	70	231	91.5
iQM48033A050V-001-R	5	4.0 - 5.5	33	165	91
iQP48050A050V-001-R	5	4.0 - 5.5	50	250	91.5
iQM48017A120V-001-R	12	9.6 - 13.2	17	204	90.5
IQP48021A120V-001-R	12	9.6 - 13.2	21	252	92
iQP48025A120V-001-R	12	9.6 - 13.2	25	300	91.5
iQN48007A280V-001-R	28	16.8 - 30.8	7	196	92
iQN48006A350V-001-R	35	17 - 35	6	210	90

**Pinout**

PIN	Function (iQM, iQN)	Function (iQP)
1	Vin (+)	Vin (+)
2	On / Off	On / Off
3	Vin (-)	Vin (-)
4	Vout (-)	Vout (-)
5	Sense (-)	Vout (-)
6	Trim	Sense (-)
7	Sense (+)	Trim
8	Vout (+)	Sense (+)
9	no pin	Vout (+)
10	no pin	Vout (+)

<b>Feature Set</b>			
Feature Set	On / Off Logic	OVP	Pin Length
00	Positive	Latch	0.145
01*	Negative	Latch	0.145
02	Positive	Latch	0.110
03	Negative	Latch	0.110
04	Positive	Latch	0.200
05**	Negative	Latch	0.200
06	Positive	Non-Latch	0.145
07	Negative	Non-Latch	0.145
08	Positive	Latch	0.180
09	Negative	Latch	0.180

\* Preferred feature set for iQM/iQN  
\*\* Preferred feature set for iQP

Model Number Example: iQM48050A033V-001-R, iQP48050A05V-005-R

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[www.emea-tdk-lambda.com](http://www.emea-tdk-lambda.com)



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