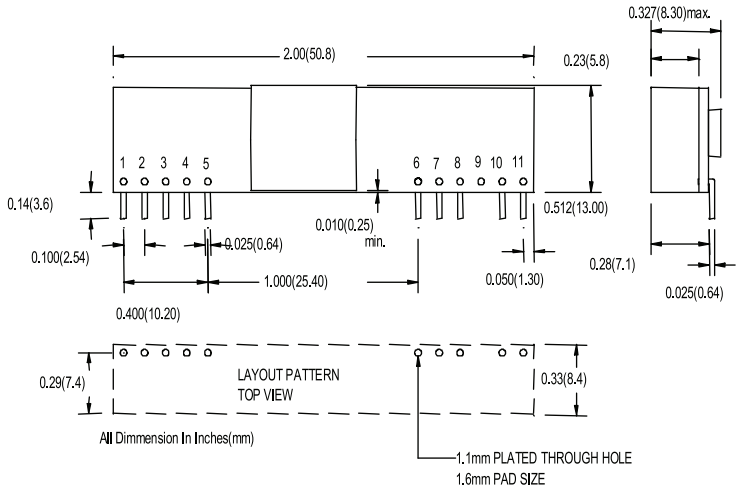
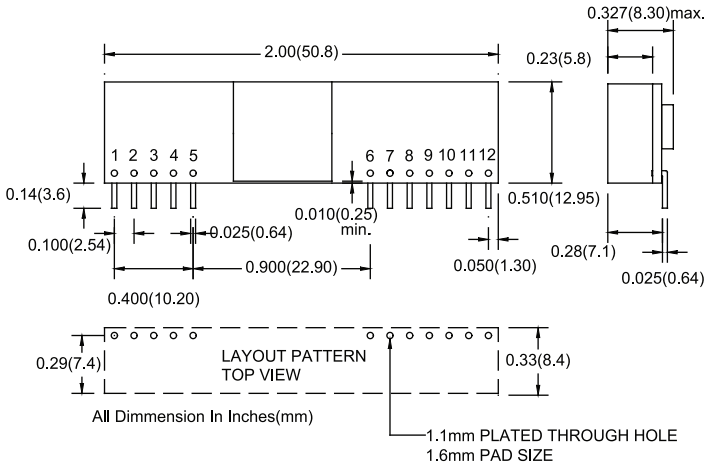
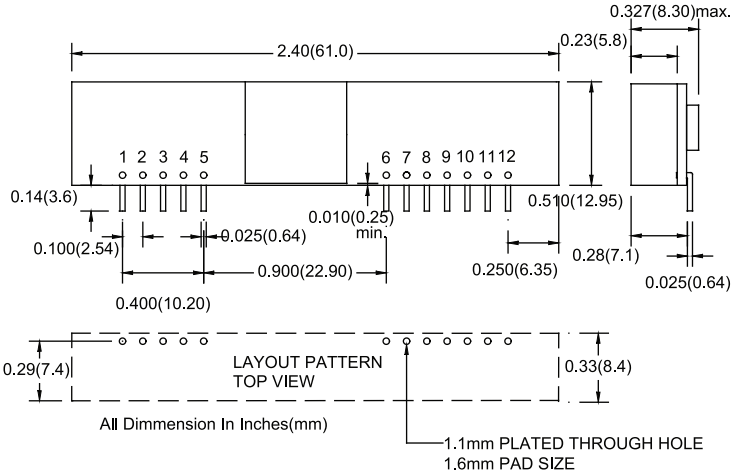
Outline Drawing PL16S-12C Series



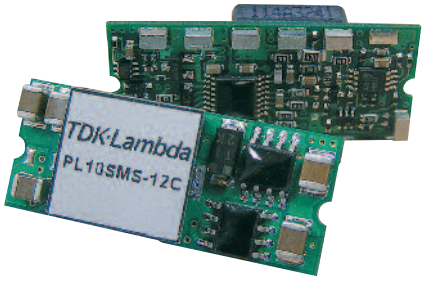
Outline Drawing PL10S-W12C & PL16S-W12C Series



Outline Drawing PL20S-W12C Series



Innovating Reliable Power TDK·Lambda



- Industry Standard Package and Footprint
- DOSA Compatible Models
- Low Voltage Outputs to 0.75V
- Wide Input Range 6 to 14V (on 'W' models)
- Output Voltage Adjustment
- Remote On/Off and Sequencing ('W' models)

PL10-20SMS Series

10-20A Surface Mount
Non-Isolated DC-DC Converters

Key Market Segments & Applications

Telecommunications
Data Communications
Networking Equipment
Test Equipment
Industrial Electronics
Distributed Power Architecture

PL10-20SMS Features and Benefits

Features

- High Efficiency up to 95%
- Wide Output Voltage Adjustment Range
- SMT Packages
- Industry Standard Pin Out

Benefits

- Reduces Input Current Draw
- Stock One Part for all Voltages
- Low Assembly Cost
- Second Sourcing

Specifications

ITEMS \ MODELS			PL10SMS-12C	PL10SMS-W12C	PL15SMS05C	PL16SMS-12C	PL16SMS-W12C	PL20SMS-W12C
Output Voltage Range	(2)	VDC	0.75-5.0		0.75-3.3		0.75-5.0	
Output Current		A	10		15	16		20
Output Voltage Accuracy		%	±1.5%					
Turn On/Off Threshold	ON	VDC	8.0V	5.0V	2.8V	8.0V	5.0V	5.0V
	OFF	VDC	7.7V	4.0V	2.7V	7.7V	4.0V	4.0V
Ripple & Noise (Typ)	(1)	m	V		30mV rms, 75mV pk-pk			
Line Regulation (Typ)		%	±0.2% (Vo=3.3V)					
Load Regulation (Typ)		%	±0.5% (Vo=3.3V)					
Capacitive Load (max)		µF	8000µF		10000µF		8000µF	
Transient Response		-	<200µs settling time for 25% load change					
Overcurrent Protection		-	Continuous					
Overvoltage Protection		-	N/A					
Over Temp. Protection		°C	+120°C typ.	+130°C typ.	+120°C typ.	+130°C typ.		
Remote Sense		-	Yes					
Remote On / Off		-	On: Vin or open circuit; Off: <0.4VDC					
Sequencing/Tracking		-	-	Yes	-	-	Yes	Yes
Power Good Signal (logic high)		-	-	Optional	-	-	Optional	
Operating Temperature		°C	-40°C to +85°C					
Operating Humidity		%	20 - 95% Non condensing					
Storage Temperature		°C	-55°C to +125°C					
Storage Humidity		%	10 - 95% Non condensing					
Cooling		-	Convection, or forced air					
Vibration (non operating)		-	10 - 500 - 10Hz, amplitude 1.524mm, X, Y, Z 6 minutes each					
Shock		-	Half sine wave, 40g, 11ms, 3 times each axis, +X, -X, +Y, -Y, +Z, -Z axis					
Safety Agency Approvals		-	UL/C-UL60950					
Switching Frequency		kHz	300kHz					
Weight (Typ)		g	6.5	7.7	6.5	6.8	7.7	10.7
Size (WxHxD)		-	See outline drawing					
Warranty		yrs	2					

Note: See Installation Manual for full details, test methods of parameters and application notes
(1) The output noise is measured with a 10µF tantalum cap and 1µF ceramic cap across output. (2) See Application Notes for Trim equations and tables.

Model Selector

Model	Input Voltage (VDC)	Output Voltage (VDC)	Output Curr. (A)	No Load (mA)	Full Load (mA)	Eff. (%)
PL10SMS-12C	8.3 - 14	0.75	10	50	762	82
	8.3 - 14	1.2	10	50	1163	86
	8.3 - 14	1.5	10	50	1404	89
	8.3 - 14	1.8	10	60	1666	90
	8.3 - 14	2.0	10	60	1832	91
	8.3 - 14	2.5	10	60	2264	92
	8.3 - 14	3.3	10	70	2956	93
	8.3 - 14	5.0	10	70	4385	94
PL10SMS-W12C	6.0 - 14	0.75	10	40	762	82
	6.0 - 14	1.2	10	40	1149	87
	6.0 - 14	1.5	10	50	1404	89
	6.0 - 14	1.8	10	40	1666	90
	6.0 - 14	2.0	10	60	1832	91
	6.0 - 14	2.5	10	65	2264	92
	6.0 - 14	3.3	10	75	2956	93
	6.5 - 14	5.0	10	95	4386	95
PL15SMS-05C	3.0 -5.5	0.75	15	60	3658	82
	3.0 -5.5	1.2	15	60	4286	84
	3.0 -5.5	1.5	15	60	5172	87
	3.0 -5.5	1.8	15	70	6136	88
	3.0 -5.5	2.0	15	70	6742	89
	3.0 -5.5	2.5	15	70	8152	92
	4.5 - 5.5	3.3	15	70	10532	94
PL16SMS-12C	9.0 -14	0.75	16	40	1299	77
	9.0 -14	1.2	16	50	1928	83
	9.0 -14	1.5	16	50	2326	86
	9.0 -14	1.8	16	60	2727	88
	9.0 -14	2.0	16	60	2996	89
	9.0 -14	2.5	16	65	3704	90
	9.0 -14	3.3	16	75	4783	92
	9.0 -14	5.0	16	75	7092	94
PL16SMS-W12C	6.0 - 14	0.75	16	40	1250	80
	6.0 - 14	1.2	16	40	1882	85
	6.0 - 14	1.5	16	50	2273	88
	6.0 - 14	1.8	16	60	2697	89
	6.0 - 14	2.0	16	60	2963	90
	6.0 - 14	2.5	16	65	3663	91
	6.0 - 14	3.3	16	75	4731	93
	6.5 - 14	5.0	16	95	7092	94
PL20SMS-W12C	6.0 - 14	0.75	20	40	1603	78
	6.0 - 14	1.2	20	50	2381	84
	6.0 - 14	1.5	20	50	2874	87
	6.0 - 14	1.8	20	50	3409	88
	6.0 - 14	2.0	20	60	3745	89
	6.0 - 14	2.5	20	65	4630	90
	6.0 - 14	3.3	20	75	5978	92
	6.5 - 14	5.0	20	95	8865	94

Options

Remote On / Off Option

Blank	On: Vin or open circuit; Off: <0.4VDC
N	On: open circuit or <0.4VDC; Off: >2.8VDC to Vin

Power Good Option

P	(available on W12C models)

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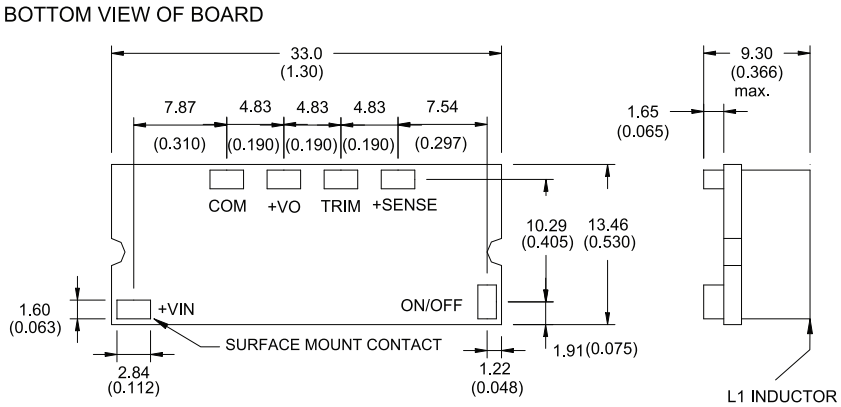
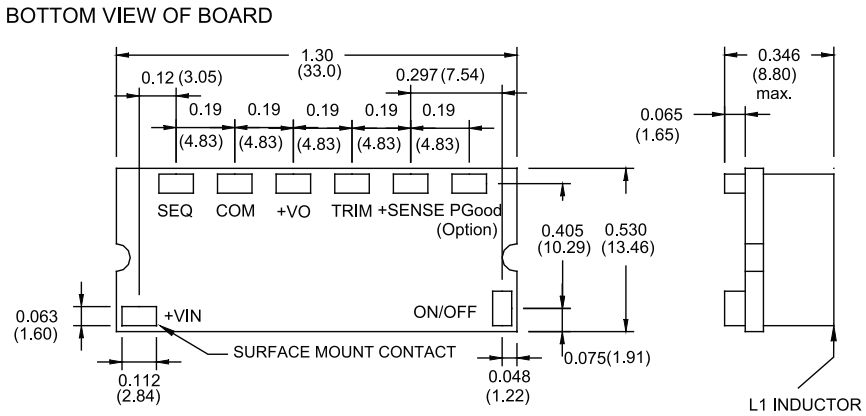
Outline Drawing PL10SMS-12C, PL15SMS-05C & PL16SMS-12C Series



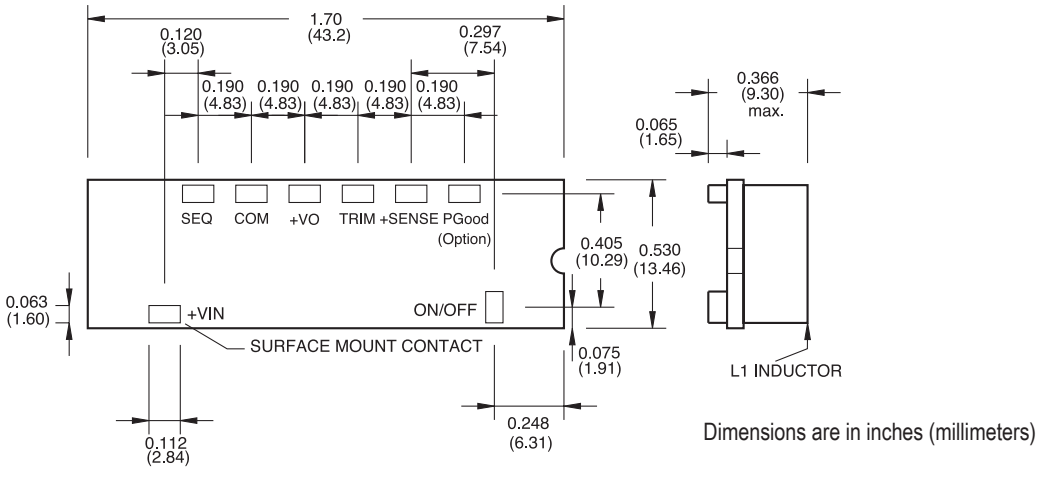
Dimensions are in millimeters (inches)

Outline Drawing PL10SMS-W12C & PL16SMS-W12C Series



Dimensions are in inches (millimeters)
Tolerances :X.XX¡ 0.02in (0.5mm), X.XXX¡ 0.010in (0.25mm, unless otherwise noted).

Outline Drawing PL20SMS-W12C Series



Dimensions are in inches (millimeters)

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MC12 / MZ12 series 1-phase

New standard, complies with RoHS directive led by lead free. Meets every aspect of industrial requirement for EMC solution. High cost performance, terminal connection type Noise Filter. Available with low leakage and DIN-Rail option.

MC13 series 3-phase

Compact & clean. Small to mount on FA / Robot control panel. Environmentally friendly and lead free. Available for screw mounting and DIN-Rail mounting.

Line Filters

Specifications			
Series	**MC12**	**MZ12**	**MC13**
Rated voltage	250 V	250 V	500 V AC 3-phase 50/60 Hz
Rated current	6 A – 30 A	6 A – 30 A	6 A – 30 A
Test voltage	terminal-case: 2500 V AC (20 mA)	terminal-case: 2500 V AC (20 mA)	terminal-case: 2000 V AC (100 mA)
Leakage current standard or low leakage type	1 mA max. at 250 V AC or 10 μA max. at 250 V AC	1 mA max. at 250 V AC or 10 μA max. at 250 V AC	5 mA max. at 500 V AC
Dimensions (DIN-type)	97 (108) x 34.5 x 60 mm	97 (108) x 34.5 x 60 mm	145 (136) x 52 x 63 mm
Weight	300 g	300 g	600 g

TDK-Lambda offers a complete range of line filters to provide optimum attenuation of conducted noise. Further series with higher current capability and designs for 48 V DC are available on request.

For complete range please visit
www.emea.tdk-lambda.com/filters

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Innovating Reliable Power

TDK-Lambda EMEA offer customers a unique proposition for custom power solutions

Innovating

Our position as a leading global supplier of standard and configurable power products for over 60 years means we can capitalise on our extensive Advanced Technology research and over 700 patents to provide innovative leading edge custom power solutions with high power density, high efficiency and digital control.

Reliable Power

Our key focus is not only ensuring the long term reliability of our products but also being reliable in all aspects of our business relationships with you. Our systems and processes are in accordance with ISO9001 and ISO14001 to ensure consistent, environmentally responsible, high quality products and services. TDK-Lambda custom products utilise field proven topologies, components and validation / test methodologies derived from the millions of TDK-Lambda products in use worldwide to give you a fast response, low risk solution.

The best solution

TDK-Lambda custom power solutions include full bespoke designs, modified standards and 'brick on board' products. Our expertise is vast, covering 0.6V to 50kV, 1W to 50kW ACDC and DCDC. As well as satisfying your technical requirements we will always offer you the best all round solution taking into account cost, time to market and reliability.

Applications

We recognise that each customer's application is unique in some way. TDK –Lambda's specialist knowledge of the key attributes of many different applications is gained from many years experience working with loyal customers for both custom and standard power supply requirements

Key market segments covered include:

- Factory Automation
- Process Control
- Test and Measurement
- Medical and Laboratory
- Broadcast
- Communications
- LED Lighting and Signage
- Defence and Aerospace
- Computer and Office Automation
- Semiconductor Manufacture
- Point of Sale and Vending
- Renewable Energies

Product Design Process

Technical Proposal

- Detailed proposal based on Customer Specification
- Supported by Spice Circuit Simulation
- Mechanical concept in 3D CAD

Standard Field Proven Technologies

- Fly-back, forward, boost
- Resonant and multi resonant
- Synchronous rectification
- Digital control and/or monitoring
- High efficiency, low audible noise

Component Selection

- Cost optimisation by use of standard component set
- In-house component evaluation laboratory
- All components qualified to TDK-Lambda group standard
- Components selected to meet TDK-Lambda de-rating criteria
- RoHS validation laboratory

Design Verification Testing

- Electrical performance across entire operating environment
- Thermal performance across entire operating environment
- EMC compliance, in-house conducted and 10M OATS
- Immunity – Surge, burst, ESD, ring-wave
- Mechanical – Sinusoidal vibration, shock
- HALT, high altitude simulation, TST, humidity
- Ingress protection (IP) testing

Regulatory Approvals

- In-house Approved Safety Test Laboratory
- IECEE SMT program under UL for IEC/EN60950-1, IEC/EN60601-1, IEC/EN61010-1 and CB
- CTDP for UL/CSA60950-1, UL/CSA60601-1, UL/CSA61010-1
- CE Certification
- Other approvals by request

Acronyms

CAD: Computer aided design
TST: Thermal shock test
OATS: Open area test site
SMT: Supervised manufacturer's testing program
ESD: Electrostatic discharge
CTDP: Client test data program
HALT: Highly accelerated life test
IECEE: International Electrotechnical Commission for Electrical Equipment

www.emea.tdk-lambda.com

Предлагаем продукцию
TDK Lambda
и другие ЭЛЕКТРОННЫЕ КОМПОНЕНТЫ
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