SIL25C Series



12 Vin single negative output

DC-DC CONVERTERS

C Class Non-isolated

NEW Product



- Input voltage range: 10.2 Vdc to 13.8 Vdc
- nominal output voltage: -5.05 Vdc
- Industry leading value
 - Cost optimized design
- Excellent transient response
- Output Voltage adjustability
 - Supports silicon voltage migration
 - · Resulting in reduced design-in and qualification time
- Designed in reliability: MTBF of 3 million hours per Telcordia SR-332
- Available RoHS compliant

The SIL25C Series is a new high density non-isolated dc-dc converter. The converter has a wide input range (10.2 Vdc to 13.8 Vdc) and offers a -4.5 Vdc to -5.5 Vdc output voltage range with a 25 A load. The series offers remote ON/OFF, overtemperature protection and overcurrent protection as standard. The remote sense feature enables the SIL25C compensate for voltage drops between the converters output and the load. With full international safety approvals including EN60950 and UL/cUL60950 the SIL25C reduces compliance costs and time to market.





All specifications are typical at nominal input, full load at 25 °C ambient unless otherwise stated

SPECIFICATIONS

OUTPUT SPECIFICATIONS

Voltage adjustability	(See Note 1)	-4.5 Vdc to -5.5 Vdc
Output setpoint accuracy	Using 1.0% trim re	sistors ±3.0%
Line regulation	Low line to high lin	e ±1.0% max.
Load regulation	Full load to min. lo	ad ±1.0% max.
Min./max. load		0 A/25 A
Ripple and noise 5 Hz to 20 MHz	(See Note 2)	100 mV pk-pk 50 mV rms
Transient response (See Note 3)	Deviation	75 mV typ. 150 µs recovery to vithin regulation band

INPUT SPECIFICATIONS

Input voltage range	Nominal 12 V	10.2-13.8 +Vdc
Input current	No load Remote OFF	400 mA 30 mA
Input current (max.)	(See Note 4)	14.2 A max. @ Io max. and Vin = 10.8 V
Input reflected ripple	(See Note 2)	300 mA (pk-pk)
Remote ON/OFF Logic compatibility ON OFF		Logic high >2.4 Vdc <1.2 Vdc
Start-up time (See Note 5)	Power up Remote ON/OFF	<10 ms <10 ms

INPUT SPECIFICATIONS (CONTD.)

Turn ON threshold 10 Vdc Turn OFF threshold 9.5 Vdc

GENERAL SPECIFICATIONS

Efficiency		90%
Switching frequency	Fixed (2 phase) 250 k	Hz typ. per phase
Approvals and standards (pending)		Product Services 50, UL/cUL60950
Material flammability		UL94V-0
Weight		28.3 g (1 oz)
MTBF	Telcordia SR-332	3,000,000 hours

ENVIRONMENTAL SPECIFICATIONS

Thermal performance (See Note 8)	Operating ambient, temperature	-40 °C to +80 °C
,	Non-operating	-40 °C to +125 °C

PROTECTION

Short-circuit Hiccup, non-latching Over-temperature Hiccup, non-latching

RECOMMENDED SYSTEM CAPACITANCE

International Safety Standard Approvals (pending)



UL/cUL CAN/CSA 22.2 No. TBD UL60950 File No. TBD



TÜV Product Service (EN60950) Certificate No. TBD CB report and certificate to TBD

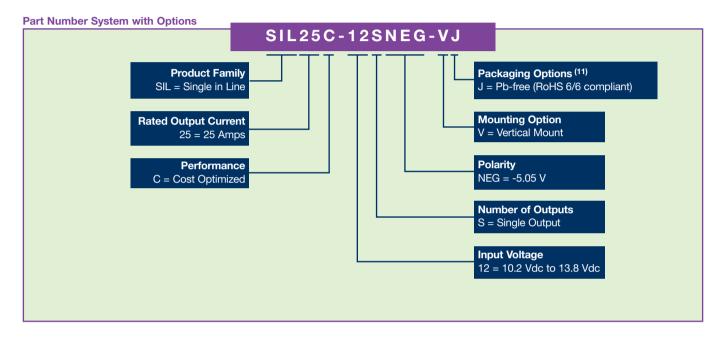
SIL25C Series



12 Vin single negative output

DC-DC CONVERTERS C Class Non-isolated For the most current data and application support visit www.artesyn.com/powergroup/products.htm **NEW Product**

OUTPUT POWER	INPUT	OVP	OUTPUT	OUTPUT	OUTPUT CURRENT	EFFICIENCY	REGUL	ATION	MODEL
(MAX.)	VOLTAGE		VOLTAGE (10)	(MIN.)	(MAX.)	(TYP.)	LINE	LOAD	NUMBER ^(11,12)
125 W	10.2-13.8 Vdc	N/A	-5.05 V	0 A	25 A	90%	±1.0%	±1.0%	SIL25C-12SNEG-VJ



Notes

- Uses external resistor. See Application Note 148 for details.
- Measured with external filter. See Application Note 148 for details. di/dt = 1 A/ μ s, Vin = Nom, Tc = 25 °C, load change = 0.5 lo max to 0.75 lo max and 0.75 lo max to 0.5 lo max.
- External input fusing is recommended.
- Power up is the time from application of dc input to POWER GOOD high. Remote ON/OFF asserted high to POWER GOOD high.
- Signal line assumed <3 m.
- This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- See Application Note 148 for operation above 50°C.
- See Application Note 148 for ripple current requirements.
- 10 Output can be adjusted from -4.5 Vdc to -5.5 Vdc.
- 11 TSE RoHS 5/6 (non Pb-free) compliant versions may be available on special request, please contact your local sales representative for details.
 12 NOTICE: Some models do not support all options. Please contact your local Artesyn representative or use the on-line model number search tool at http://www.artesyn.com/powergroup/products.htm to find a suitable alternative.

SIL25C Series

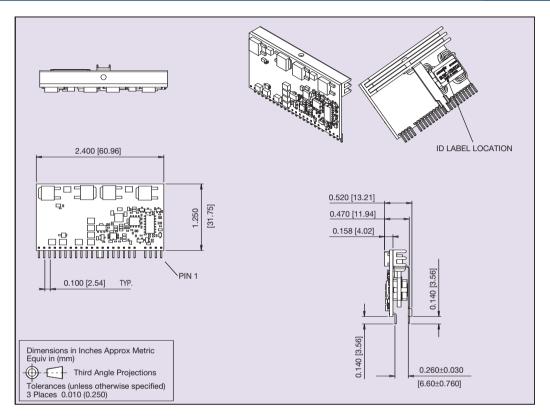


12 Vin single negative output

DC-DC CONVERTERS C Class Non-isolated 3

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NEW Product



PIN CONNECTIONS							
PIN NO.	FUNCTION	PIN NO.	FUNCTION				
1	TRIM	13	Vin				
2	Not Connected	14	Vin				
3	Ground	15	Vout				
4	Power Good	16	Vout				
5	No Pin	17	Ground				
6	Not Connected	18	Vout				
7	Ground	19	Ground				
8	Ground	20	Vout				
9	Remote ON/OFF	21	Ground				
10	Remote Sense (GND)	22	Vout				
11	Remote Sense (V _o)	23	Ground				
12	12 Vin		Vout				

Mechanical Drawing and Pinout Table

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Please consult our website for the following items:

Application Note

Longform Datasheet

www.artesyn.com