

SIL25C Series

12Vin single negative output

NEW Product

- **25A current rating**
- **Input voltage range: 10.2V - 13.8V**
- **nominal output voltage: -5.05V**
- **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**



The SIL25C Series is a new high density non-isolated DC/DC converter. The converter has a wide input range (10.2 to 13.8VDC) and offers a -4.5V to -5.5V output voltage range with a 25A load. The series offers remote ON/OFF, over-temperature protection and over-current 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.

UL US TÜV
2 YEAR WARRANTY

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

SPECIFICATIONS

OUTPUT SPECIFICATIONS

Voltage adjustability	(See Note 1)	-4.5V to -5.5V
Output setpoint accuracy	Using 1.0% trim resistors	±3.0%
Line regulation	Low line to high line	±1.0% max.
Load regulation	Full load to min. load	±1.0% max.
Min./max. load		0A/25A
Ripple and noise	(See Note 2)	100mV pk-pk 50mV rms
Transient response	Deviation	75mV typ. 150µs recovery to within regulation band
(See Note 3)		

INPUT SPECIFICATIONS

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

INPUT SPECIFICATIONS (CONTD.)

Turn ON threshold	10VDC
Turn OFF threshold	9.5VDC

GENERAL SPECIFICATIONS

Efficiency	90%
Switching frequency	Fixed (2 phase) 250kHz typ. per phase
Approvals and standards (pending)	(See Note 7) TÜV Product Services IEC60950, UL/cUL60950
Material flammability	UL94V-0
Weight	28.3g (1oz)
MTBF	Telcordia SR-332 3,000,000 hours

ENVIRONMENTAL SPECIFICATIONS

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

PROTECTION

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

RECOMMENDED SYSTEM CAPACITANCE

Input capacitance	(See Note 9)	3 x 270µF
Output capacitance	(See Note 9)	3 x 680µF

International Safety Standard Approvals (pending)

UL US	UL/cUL CAN/CSA 22.2 No. TBD UL60950 File No. TBD
TÜV	TÜV Product Service (EN60950) Certificate No. TBD CB report and certificate to TBD

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DC/DC CONVERTERS

C Class Non-isolated

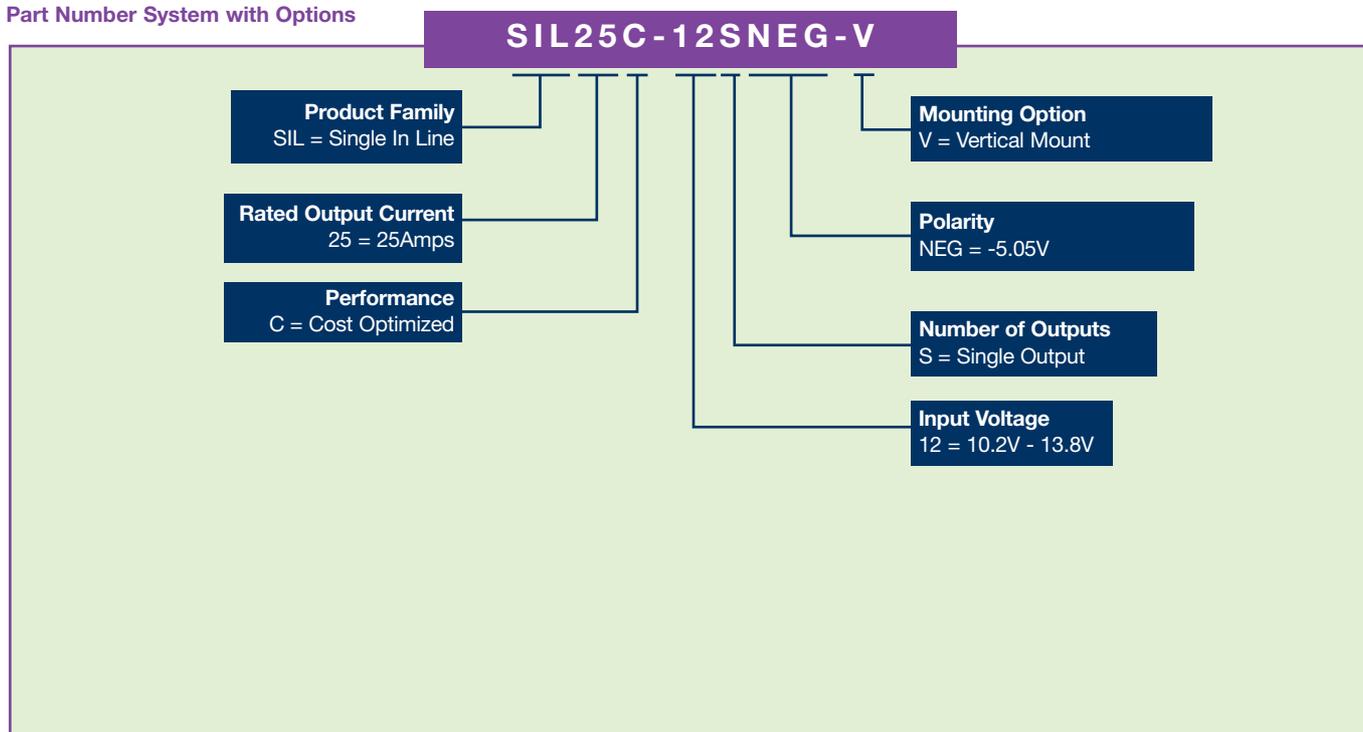
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For the most current data and application support visit www.artesyn.com/powergroup/products.htm

NEW Product

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

Part Number System with Options



Notes

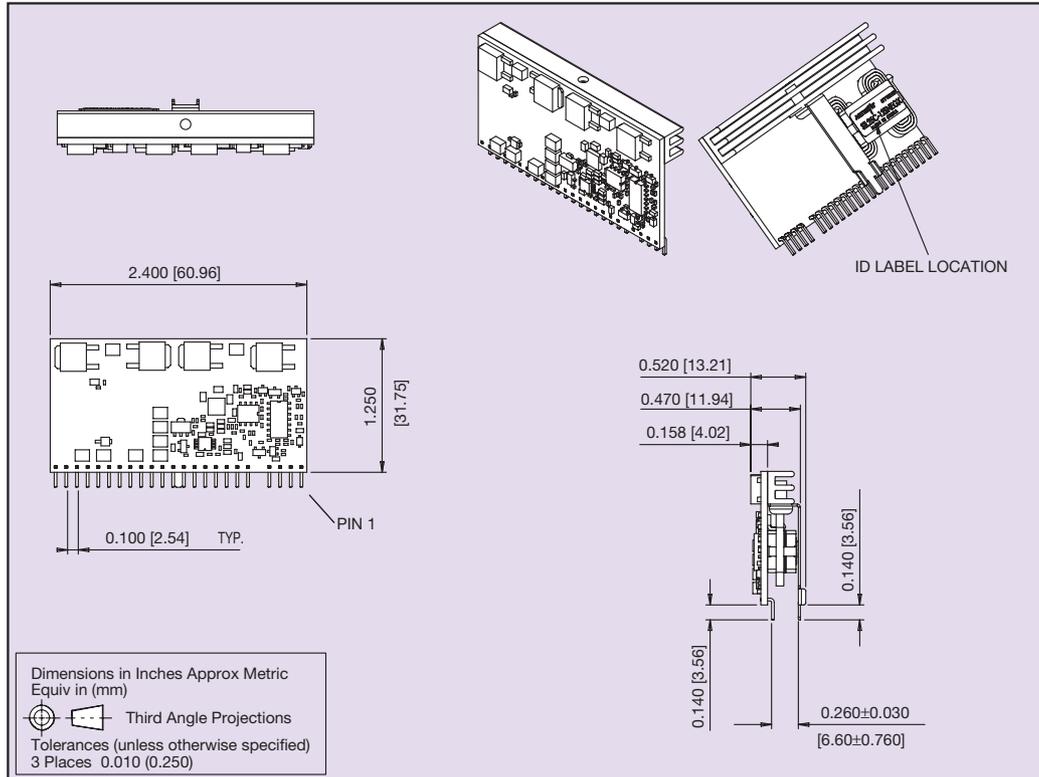
- 1 Uses external resistor. See Application Note 169 for details.
- 2 Measured with external filter. See Application Note 169 for details.
- 3 $di/dt = 1A/\mu s$, $V_{in} = \text{Nom}$, $T_c = 25^\circ C$, load change = 0.5 I_o max to 0.75 I_o max and 0.75 I_o max to 0.5 I_o max.
- 4 External input fusing is recommended.
- 5 Power up is the time from application of DC input to POWER GOOD high. Remote ON/OFF asserted high to POWER GOOD high.
- 6 Signal line assumed <3m.
- 7 This product is only for inclusion by professional installers within other equipment and must not be operated as a stand alone product.
- 8 See Application Note 169 for operation above 50°C.
- 9 See Application Note 169 for ripple current requirements.
- 10 Output can be adjusted from -4.5V to -5.5V.

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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	Vin	24	Vout

Mechanical Drawing and Pinout Table

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Please consult our website for the following items: ✓ Application Note ✓ Longform Data Sheet

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