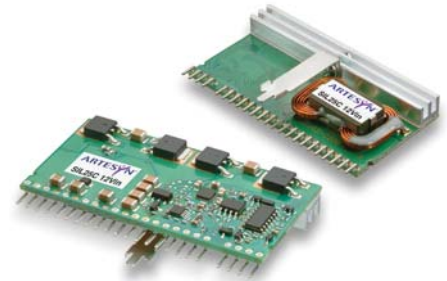


SIL25C Series

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 **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 |

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 |

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 | 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 |

SIL25C Series

12Vin single negative output

DC/DC CONVERTERS

C Class Non-isolated

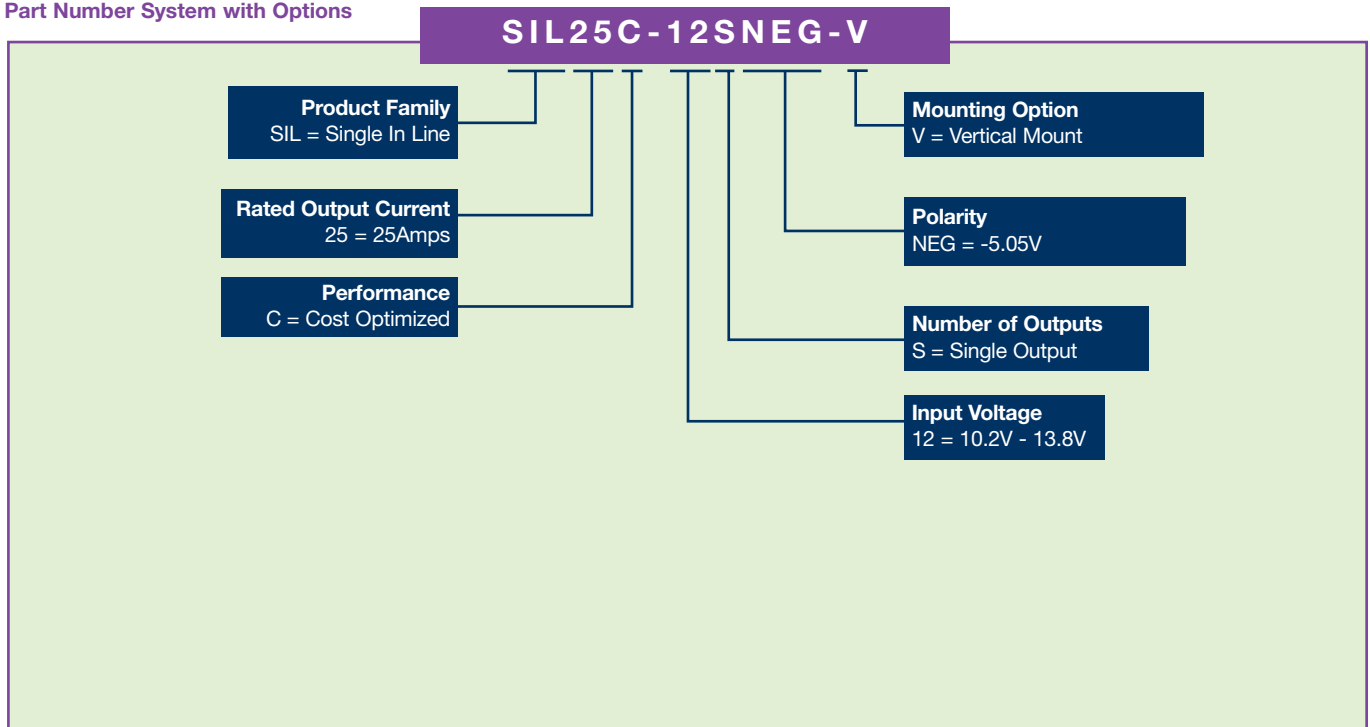
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For the most current data and application support visit www.artesyn.com/powergroup/products.htm

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

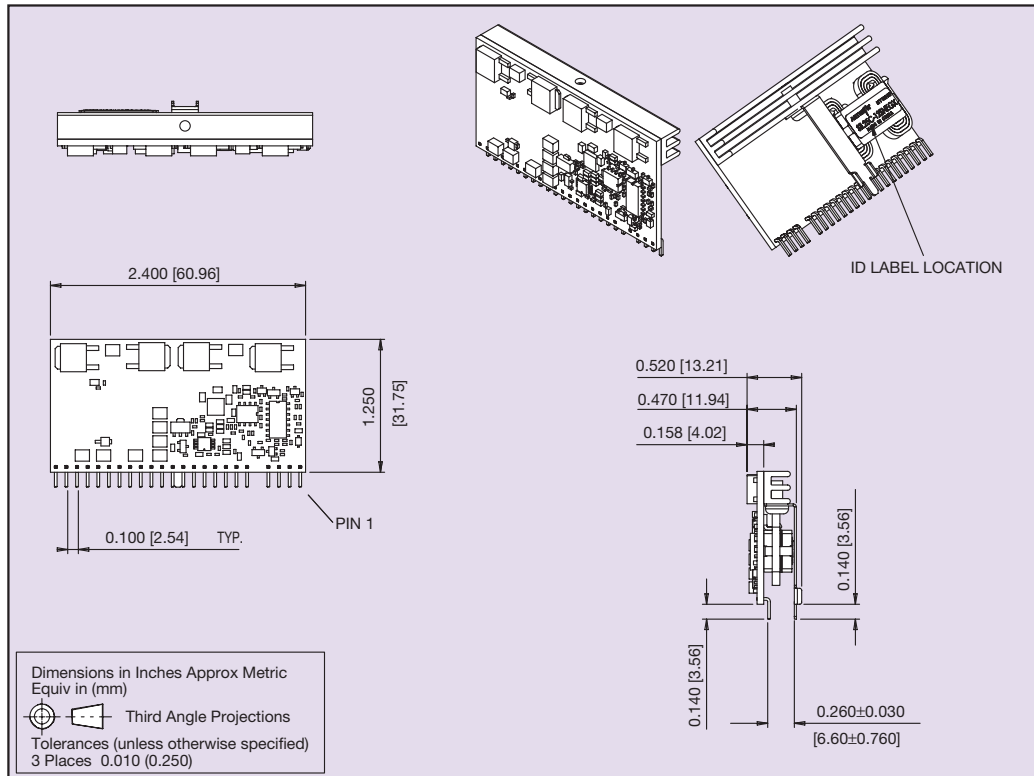
- 1 Uses external resistor. See Application Note 169 for details.
- 2 Measured with external filter. See Application Note 169 for details.
- 3 $di/dt = 1A/\mu s$, $V_{in} = \text{Nom}$, $T_c = 25^\circ C$, load change = 0.5 I_o max to 0.75 I_o max and 0.75 I_o max to 0.5 I_o max.
- 4 External input fusing 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.

SIL25C Series

12Vin single negative output

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

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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