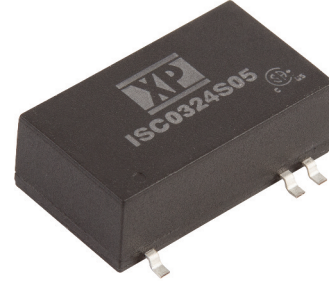


### 3 Watt

- Regulated Single & Dual Output
- Wide 4:1 Input Range
- Compact SMD Package
- 1500 VDC Isolation
- Operating Temperature -40 °C to +100 °C
- Remote On/Off
- Tape & Reel Package Available
- Optional Water Washable Versions
- 3 Year Warranty



#### Dimensions:

ISC:  
0.94 x 0.71 x 0.32" (24.00 x 18.10 x 8.25 mm)

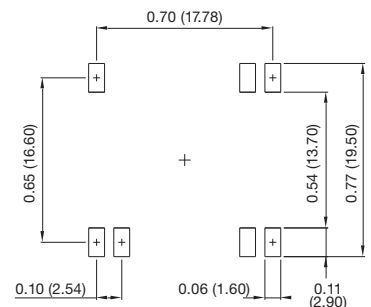
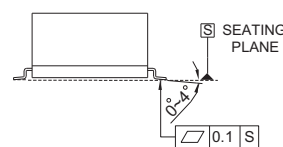
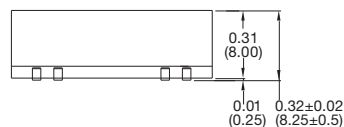
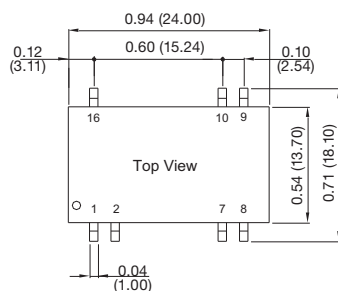
### Models & Ratings

| Input Voltage | Output Voltage | Output Current |         | Input Current <sup>(1,2)</sup> |           | Maximum Capacitive Load <sup>(3)</sup> | Efficiency | Model Number <sup>(4)</sup> |
|---------------|----------------|----------------|---------|--------------------------------|-----------|----------------------------------------|------------|-----------------------------|
|               |                | Min            | Max     | No Load                        | Full Load |                                        |            |                             |
| 9-36 V        | 3.3 V          | 90 mA          | 600 mA  | 30 mA                          | 110 mA    | 220 µF                                 | 75%        | ISC0324S3V3                 |
|               | 5.0 V          | 90 mA          | 600 mA  | 30 mA                          | 160 mA    | 220 µF                                 | 78%        | ISC0324S05                  |
|               | 12.0 V         | 38 mA          | 250 mA  | 30 mA                          | 156 mA    | 47 µF                                  | 80%        | ISC0324S12                  |
|               | 15.0 V         | 30 mA          | 200 mA  | 30 mA                          | 156 mA    | 47 µF                                  | 80%        | ISC0324S15                  |
|               | 24.0 V         | 19 mA          | 125 mA  | 30 mA                          | 156 mA    | 47 µF                                  | 80%        | ISC0324S24                  |
|               | ±5.0 V         | ±45mA          | ±300 mA | 30 mA                          | 162 mA    | ±47 µF                                 | 77%        | ISC0324D05                  |
|               | ±12.0 V        | ±19 mA         | ±125 mA | 30 mA                          | 156 mA    | ±47 µF                                 | 80%        | ISC0324D12                  |
| 18-75 V       | ±15.0 V        | ±15 mA         | ±100 mA | 30 mA                          | 156 mA    | ±47 µF                                 | 80%        | ISC0324D15                  |
|               | 3.3 V          | 90 mA          | 600 mA  | 20 mA                          | 55 mA     | 220 µF                                 | 75%        | ISC0348S3V3                 |
|               | 5.0 V          | 90 mA          | 600 mA  | 20 mA                          | 80 mA     | 220 µF                                 | 78%        | ISC0348S05                  |
|               | 12.0 V         | 38 mA          | 250 mA  | 20 mA                          | 78 mA     | 47 µF                                  | 80%        | ISC0348S12                  |
|               | 15.0 V         | 30 mA          | 200 mA  | 20 mA                          | 78 mA     | 47 µF                                  | 80%        | ISC0348S15                  |
|               | 24.0 V         | 19 mA          | 125 mA  | 20 mA                          | 78 mA     | 47 µF                                  | 80%        | ISC0348S24                  |
|               | ±5.0 V         | ±45mA          | ±300 mA | 20 mA                          | 81 mA     | ±47 µF                                 | 77%        | ISC0348D05                  |
|               | ±12.0 V        | ±19 mA         | ±125 mA | 20 mA                          | 78 mA     | ±47 µF                                 | 80%        | ISC0348D12                  |
|               | ±15.0 V        | ±15 mA         | ±100 mA | 20 mA                          | 78 mA     | ±47 µF                                 | 80%        | ISC0348D15                  |

### Notes

1. Input currents measured at nominal input voltage.
2. Input current is typically 5 mA at nominal input voltage when output is remotely turned off.
3. Maximum capacitive load is per output.
4. For optional water washable version, add suffix '-P' e.g. ISC0324S12-P.

### Mechanical Details



### Input

| Characteristic         | Minimum                                                                                         | Typical | Maximum | Units       | Notes & Conditions                                   |
|------------------------|-------------------------------------------------------------------------------------------------|---------|---------|-------------|------------------------------------------------------|
| Input Voltage Range    | 9                                                                                               |         | 36      | VDC         | 24 V nominal                                         |
|                        | 18                                                                                              |         | 75      | VDC         | 48 V nominal                                         |
| Input Filter           | Pi type                                                                                         |         |         |             |                                                      |
| Input Reflected Ripple |                                                                                                 | 20      |         | mA pk-pk    | Through 12 $\mu$ H inductor and 47 $\mu$ F capacitor |
| Input Surge            |                                                                                                 |         | 50      | VDC for 1 s | 24 V models                                          |
|                        |                                                                                                 |         | 100     | VDC for 1 s | 48 V models                                          |
| Undervoltage Lockout   | ON at >4.5 V, OFF at <8 V                                                                       |         |         |             | 24 V models                                          |
|                        | ON at >8.5 V, OFF at <16 V                                                                      |         |         |             | 48 V models                                          |
| Remote On/Off          | ON: Logic high (2.5 - 5.5 V) or open circuit<br>OFF: Logic low (<0.8 V) or short pin 1 to pin 2 |         |         |             |                                                      |

### Output

| Characteristic           | Minimum | Typical   | Maximum   | Units       | Notes & Conditions                                                                            |
|--------------------------|---------|-----------|-----------|-------------|-----------------------------------------------------------------------------------------------|
| Output Voltage           | 3.3     |           | 30        | VDC         | See Models and Ratings table                                                                  |
| Initial Set Accuracy     |         |           | $\pm 2$   | %           |                                                                                               |
| Output Voltage Balance   |         | $\pm 1.0$ | $\pm 2.0$ | %           | For dual output with balanced loads                                                           |
| Minimum Load             | 15      |           |           | %           | See Models and Ratings table                                                                  |
| Line Regulation          |         | $\pm 0.5$ | $\pm 1.0$ | %           |                                                                                               |
| Load Regulation          |         | $\pm 0.5$ | $\pm 1.2$ | %           | 15% to 100%                                                                                   |
| Cross Regulation         |         |           | $\pm 5$   | %           | On dual output models when one load is varied between 25% and 100% and other is fixed at 100% |
| Transient Response       |         | 3         |           | % deviation | Recovery within 1% in less than 600 $\mu$ s for a 25% load change.                            |
| Ripple & Noise           |         |           | 100       | mV pk-pk    | 20 MHz bandwidth. Measured using 0.47 $\mu$ F ceramic capacitor.                              |
| Overload Protection      | 110     | 150       |           | %           | Foldback                                                                                      |
| Short Circuit Protection |         |           |           |             | Continuous, with auto recovery                                                                |
| Maximum Capacitive Load  |         |           |           |             | See Models and Ratings table                                                                  |
| Temperature Coefficient  |         |           | 0.02      | %/°C        |                                                                                               |

### General

| Characteristic             | Minimum   | Typical    | Maximum | Units             | Notes & Conditions           |
|----------------------------|-----------|------------|---------|-------------------|------------------------------|
| Efficiency                 |           | 80         |         | %                 | See Models and Ratings table |
| Isolation: Input to Output | 1500/1800 |            |         | VDC               | 60 s/1 s                     |
| Isolation Resistance       | $10^9$    |            |         | $\Omega$          | At 500 VDC                   |
| Isolation Capacitance      |           | 350        | 500     | pF                |                              |
| Switching Frequency        |           | 350        |         | kHz               |                              |
| Power Density              |           |            | 7.5     | W/in <sup>3</sup> |                              |
| Mean Time Between Failure  |           | 300        |         | kHrs              | MIL-HDBK-217F, +25 °C GB     |
| Weight                     |           | 0.01 (4.2) |         | lb (g)            |                              |
| Moisture Sensitivity Level | Level 2   |            |         |                   | IPC/JEDEC J-STD-020D.1       |

### Environmental

| Characteristic                  | Minimum        | Typical | Maximum | Units | Notes & Conditions           |
|---------------------------------|----------------|---------|---------|-------|------------------------------|
| Operating Temperature           | -40            |         | +100    | °C    | See Derating Curve.          |
| Storage Temperature             | -50            |         | +125    | °C    |                              |
| Case Temperature                |                |         | +105    | °C    |                              |
| Humidity                        |                |         | 95      | %RH   | Non-condensing               |
| Cooling                         |                |         |         |       | Natural convection           |
| Case Flammability               | UL 94V-0 Rated |         |         |       | Non conductive black plastic |
| Lead-Free Reflow Solder Process |                |         |         |       | IPC/JEDEC J-STD-020D.1       |

### Safety Approvals

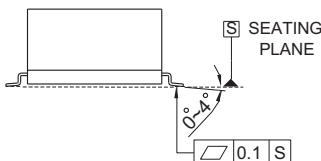
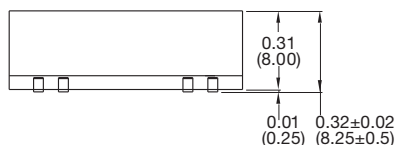
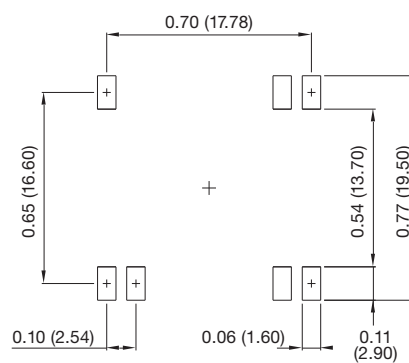
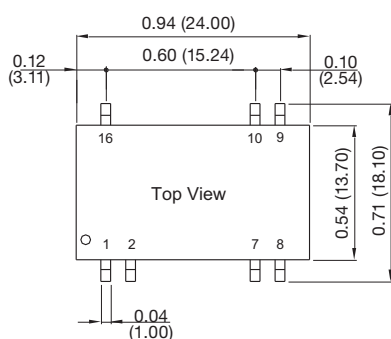
| Safety Agency | Safety Standard | Notes & Conditions |
|---------------|-----------------|--------------------|
| CB            | IEC60950-1      | ITE                |
| UL            | UL/cUL60950-1   | ITE                |

### EMC: Emissions

| Phenomenon | Standard | Test Level | Notes & Conditions |
|------------|----------|------------|--------------------|
| Conducted  | EN55022  | Class A    |                    |

### Mechanical Details

#### Connecting Pin Pattern

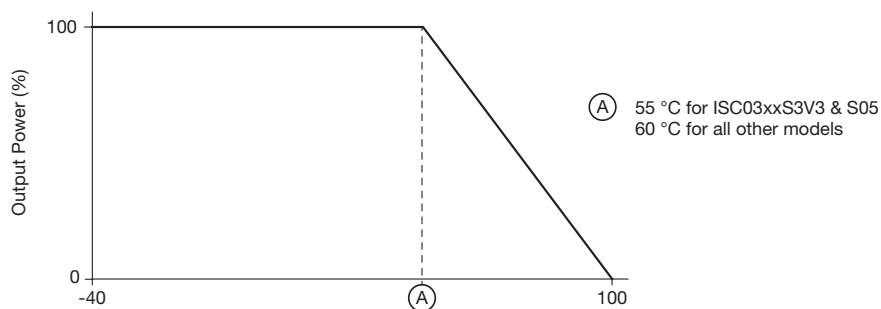


#### Pin Connections

| Pin | Single        | Dual          |
|-----|---------------|---------------|
| 1   | -Vin          | -Vin          |
| 2   | Remote On/Off | Remote On/Off |
| 7   | No Connection | No Connection |
| 8   | No Connection | Common        |
| 9   | +Vout         | +Vout         |
| 10  | -Vout         | -Vout         |
| 16  | +Vin          | +Vin          |

### Application Notes

#### Derating Curve



#### Notes

- All dimensions are in inches (mm)
- Weight: 0.01 lbs (4.2 g) approx.

- Tolerance: X.XX±0.01 (X.X±0.25)  
X.XXX±0.005 (X.XX±0.13)
- Pin Tolerance: ±0.002 (±0.05)

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