

# DVC125

97.5-132 WATTS DC/DC CONVERTER

## FEATURES

- Designed for rugged environment
- Rugged construction / potted device
- Protection against harsh conditions
- DC/DC wide range input
- Filtered against input transients
- Input-Output galvanic separation 1.5kV
- Designed to EN60950, EN1175
- High efficiency
- Regulated output
- Short-circuit / No-load protection
- Over temperature protection



## SPECIFICATIONS

| INPUT                                   |   |
|---|---|
| Input range                             | 12VDC 10-20VDC<br>24VDC 17-40VDC model dependant<br>36VDC 25-70VDC model dependant<br>48VDC 33-90VDC<br>110VDC 56-154VDC                |
| Transient over voltage (20ms, one time) | 25-35V @ 12VDC<br>50-52V @ 24VDC model dependant<br>80-90V @ 36VDC model dependant<br>100-110V @ 48VDC model dependant<br>220V @ 110VDC |
| Reverse polarity protection             | External input fuse is blown  |
| OUTPUT                                  |   |
| Output voltage                          | See table   |
| Output current                          | See table   |
| Output voltage tolerance                | ±3% @ 5VDC model<br>±1% @ 12-24VDC models   |
| Load regulation static                  | ±1.5% typical model dependant<br>0-100% load  |
| Regulation time                         | ≤0.5ms, ≤1ms for DVC251   |
| Line regulation                         | ±0.1%   |
| Temperature drift                       | 0.2% typ 0 - 60°C<br>0.5% typ -25 - 60°C  |
| Ripple & noise                          | 100mVp-p  |
| Over voltage protection                 | Protective shut down, self reset after cool down  |
| Efficiency                              | 85-92% model dependant  |

| ENVIRONMENT                 |   |
|-----------------------------|---|
| Ambient temperature         | -40°C - 75°C without power derating, Max baseplate temperature 100°C  |
| Storage temperature         | -40°C - 85°C  |
| Over temperature protection | Protective shut down, self reset after cool down  |
| Humidity                    | 100% relative humidity, dewing permitted  |
| Cooling                     | Natural convection / cooling via contact to mounting surface  |
| STANDARDS                   |   |
| Safety                      | Designed to meet EN60950, EN1175  |
| Protective degree           | IP67 (not connector)  |
| Insulation                  | Input to output: 1.5kV, 500V for 12/24 models<br>Input to case: 1.5kV, 500V for 12/24 models<br>Output to case: 500V                                    |
| EMC                         | Designed to meet EN55011 Class B, EN61000-6-2   |
| MECHANICAL                  |   |
| Case size & weight          | DVC75: 110 x 68 x 38mm, 450g<br>DVC125/150: 156 x 85 x 40mm, 1000g<br>DVC251: 153 x 131 x 50mm, 950g<br>DVC500: 222 x 16 x 50mm, 2750g                  |
| OPTIONS                     |   |
| Custom device               | Individual cable loom, alternative input / output voltages<br>Version with "E" mark (E1 approval) for road vehicle<br>Variants for railway applications |

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## SELECTION TABLE

| TYPE         | INPUT VOLTAGE               | OUTPUT VOLTAGE | OUTPUT CURRENT *) | CAT. NO. |
|--------------|-----------------------------|----------------|-------------------|----------|
| DVC125-24-12 | 24VDC (17-40VDC)            | 12,5VDC        | 8A                | 105078   |
| DVC125-24-15 | 24VDC (20-40VDC)            | 15VDC          | 6.5A              | 105071   |
| DVC125-24-20 | 24VDC (17-40VDC)            | 20VDC          | 5A                | 105106   |
| DVC125-24-24 | 24VDC (17-40VDC)            | 24VDC          | 5A                | 105079   |
| DVC125-36-12 | 36VDC (25-70VDC)            | 12.5VDC        | 10A               | 105077   |
| DVC125-36-20 | 36VDC (25-70VDC)            | 20VDC          | 5.5A              | 105076   |
| DVC125-36-24 | 36VDC (25-70VDC)            | 24VDC          | 5.5A              | 105107   |
| DVC125-48-12 | 48VDC (33-90VDC)            | 12.5VDC        | 10A               | 105086   |
| DVC125-48-20 | 48VDC (33-90VDC)            | 20VDC          | 5.5A              | 105104   |
| DVC125-48-24 | 48VDC (33-90VDC)            | 24VDC          | 5.5A              | 105080   |
| DVC125-80-12 | 72/80/96/110VDC (56-154VDC) | 12,5VDC        | 10A               | 105087   |
| DVC125-80-20 | 72/80/96/110VDC (56-154VDC) | 20VDC          | 5.5A              | 105105   |
| DVC125-80-24 | 72/80/96/110VDC (56-154VDC) | 24VDC          | 5.5A              | 105082   |

## TECHNICAL ILLUSTRATION

