

# Orion-Tr DC-DC converters, low power

Non-isolated

[www.victronenergy.com](http://www.victronenergy.com)

## High efficiency

Using synchronous rectification, full load efficiency exceeds 95%.

## IP43 protection

When installed with the screw terminals oriented downwards.

## Screw terminals

No special tools needed for installation.



**Orion-Tr 24/12-5 (60W)**



**Orion-Tr 24/12-10 (120W)**

| Non isolated converters                                           | Orion-Tr 24/12-5                                                                            | Orion-Tr 24/12-10          | Orion-Tr 24/12-15          | Orion-Tr 24/12-20          |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------------|----------------------------|----------------------------|
| Input voltage range                                               | 18-35V                                                                                      | 18-35V                     | 18-35V                     | 18-35V                     |
| Output voltage                                                    | 12.7V                                                                                       | 12.5V                      | 12.5V                      | 12.5V                      |
| Efficiency                                                        | 95%                                                                                         | 97%                        | 97%                        | 97%                        |
| Continuous output current                                         | 5A                                                                                          | 10A                        | 15A                        | 20A                        |
| Max. Output current                                               | 7A                                                                                          | 12A                        | 20A                        | 25A                        |
| Galvanic isolation                                                | no                                                                                          | no                         | no                         | no                         |
| Off load current                                                  | < 20mA                                                                                      | < 45mA                     | < 35mA                     | < 35mA                     |
| Operating temperature range (derate 3% per °C above 40°C)         | -20 to +55°C                                                                                |                            |                            |                            |
| DC connection                                                     | Screw terminals                                                                             |                            |                            |                            |
| Maximum cable cross-section                                       | 3,3 mm <sup>2</sup><br>AWG12                                                                | 6 mm <sup>2</sup><br>AWG10 | 6 mm <sup>2</sup><br>AWG10 | 6 mm <sup>2</sup><br>AWG10 |
| Weight kg (lbs)                                                   | 0,09 (0.20)                                                                                 | 0,2 (0.44)                 | 0,25 (0.55)                | 0,25 (0.55)                |
| Dimensions hxxwx d in mm (hxxwx d in inches)                      | 53x51x27 (2.1x2x1.1)                                                                        | 73x94x37 (2.9x3.7x1.5)     | 73x94x45 (2.9x3.7x1.8)     | 73x94x45 (2.9x3.7x1.8)     |
| Standards: Safety<br>Emission<br>Immunity<br>Automotive Directive | EN 60950<br>EN 61000-6-3, EN 55014-1<br>EN 61000-6-2, EN 61000-6-1, EN 55014-2<br>ECE R10-4 |                            |                            |                            |