

# Conext RL single-phase grid-tie inverter

## Flexible and efficient residential solar solution

The Schneider Electric™ Conext™ RL inverters are specially designed to maximize yields for a wide range of rooftops of detached houses and multiple dwellings. The rich MPPT features, high energy efficiency, partial shading algorithm and a wide temperature and voltage operating range enables you to maximize your ROI. Backed by Schneider Electric's global service infrastructure and expertise in energy management, the Conext RL series are the inverters you can trust for quality and reliability.

### Why choose Conext RL?



#### True bankability

- Warranty from a trusted partner with 178 years of experience
- World leader in industrial power drives, UPS and electrical distribution
- Strong service infrastructure worldwide to support your global needs



#### Higher return on investment

- Best in class conversion efficiency: 97.5% peak efficiency
- Broad operating range to harvest more energy (early mornings and late afternoons)
- Higher ROI with dual MPPT
- Shade tolerant MPPT algorithm designed to minimize the effect of partial shading on the energy output



#### Designed for reliability

- Robust design through rigorous Multiple Environmental Over Stress Testing (MEOST) and Temperature Humidity Bias (THB)
- IP65 compliant rugged, completely sealed unit to stand the harshest environmental conditions



#### Flexible

- Dual MPPTs with wide MPPT voltage range (160-500V\*) to support multiple roof orientations
- Ability to support unbalanced arrays
- Local as well as remote monitoring options available to track PV plant performance



#### Easy to service

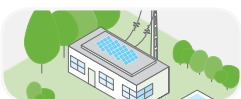
- No moving parts (e.g. fans) for low maintenance and increased uptime
- Easily replaceable communication card
- Integrated DC switch (optional)



#### Easy to install

- Compact unit that allows easy and fast mounting with included bracket
- Pluggable AC and DC connectors (MC4)
- Auto country/multilingual configurations

### Product applications



Flat roofs



Multiple pitched roofs



Partial shading



Odd number of modules



Different orientation roofs  
(East - West)



Available in 3, 4 and 5 kW

| Device short name                         | RL 3000 E  | RL 4000 E  | RL 5000 E  |
|---|--|--|--|
| <b>Electrical specifications</b>          |  |  |  |
| <b>Input (DC)</b>                         |  |  |  |
| MPPT voltage range, full power            | 160 - 500 V  | 180 - 500 V                                      | 180 - 500 V                                      |
| Operating voltage range                   | 90 - 550 V   | 90 - 550 V                                       | 90 - 550 V                                       |
| Starting voltage                          | 100 V  | 100 V  | 100 V  |
| Max. input voltage, open circuit          | 550 V  | 550 V  | 550 V  |
| Number of MPPT                            | 2  | 2  | 2  |
| Max. input current per MPPT               | 10 A   | 12 A   | 18 A   |
| Max. short circuit current per MPPT       | 13.9 A   | 16.7 A   | 25.0 A   |
| Nominal input power                       | 3.2 kW   | 4.2 kW   | 5.3 kW   |
| Max. DC input power per MPPT              | 3.2 kW   | 3.2 kW   | 3.5 kW   |
| DC connection type                        | MC4, 2 pairs (1+1)   | MC4, 4 pairs (2+2)                               | MC4, 4 pairs (2+2)                               |
| DC switch                                 | Integrated (optional)  | Integrated (optional)                            | Integrated (optional)                            |
| <b>Output (AC)</b>                        |  |  |  |
| Nominal output power                      | 3 kVA  | 4 kVA*   | 5 kVA**  |
| Nominal output voltage                    | 230 V, single-phase  | 230 V, single-phase                              | 230 V, single-phase                              |
| Isolation                                 | Transformerless  | Transformerless                                  | Transformerless                                  |
| AC voltage range                          | 184 V - 276 V  | 184 V - 276 V                                    | 184 V - 276 V                                    |
| Frequency                                 | 50 / 60 Hz   | 50 / 60 Hz                                       | 50 / 60 Hz                                       |
| Frequency range                           | 50 / 60 Hz +/- 5 Hz  | 50 / 60 Hz +/- 5 Hz                              | 50 / 60 Hz +/- 5 Hz                              |
| Max. output current                       | 13.9 A   | 18.2 A***  | 23.2 A   |
| Total harmonic distortion                 | <3 %   | <3 %   | <3 %   |
| Power factor (adjustable)                 | 0.8 lead to 0.8 lag  | 0.8 lead to 0.8 lag                              | 0.8 lead to 0.8 lag                              |
| AC connection type                        | IP67 connector   | IP67 connector                                   | IP67 connector                                   |
| <b>Efficiency</b>                         |  |  |  |
| Peak                                      | 97.5%  | 97.5%  | 97.5%  |
| European                                  | 97.0%  | 97.0%  | 97.0%  |
| <b>General specifications</b>             |  |  |  |
| Power consumption, night time             | <1 W   | <1 W   | <1 W   |
| IP degree of protection                   | IP65 (electronics and balance)   | IP65 (electronics and balance)                   | IP65 (electronics and balance)                   |
| Climatic category (per IEC 60721-3-4)     | 4K4H   | 4K4H   | 4K4H   |
| Cooling                                   | Natural convection   | Natural convection                               | Natural convection                               |
| Enclosure material                        | Aluminium  | Aluminium  | Aluminium  |
| Product weight                            | 20.0 kg (44.1 lb)  | 21.0 kg (46.3 lb)                                | 24.0 kg (52.9 lb)                                |
| Shipping weight                           | 25.0 kg (55.1 lb)  | 25.0 kg (55.1 lb)                                | 30.0 kg (66.1 lb)                                |
| Product dimensions (H x W x D)            | 42.0 x 48.0 x 16.0 cm<br>(16.5 x 18.9 x 6.3 in)  | 42.0 x 48.0 x 16.0 cm<br>(16.5 x 18.9 x 6.3 in)  | 44.5 x 51.0 x 17.7 cm<br>(17.5 x 20.1 x 7.0 in)  |
| Shipping dimensions (H x W x D)           | 50.5 x 59.5 x 29.5 cm<br>(19.9 x 23.4 x 11.6 in)   | 50.5 x 59.5 x 29.5 cm<br>(19.9 x 23.4 x 11.6 in) | 56.6 x 61.9 x 33.1 cm<br>(22.3 x 24.4 x 13.0 in) |
| Ambient air temperature for operation     | -20 to 65°C (-4°F to 149°F)****  | -20 to 65°C (-4°F to 149°F)****                  | -20 to 65°C (-4°F to 149°F)****                  |
| Operating altitude                        | Up to 2000 m   | Up to 2000 m                                     | Up to 2000 m                                     |
| Relative humidity                         | 4 - 100% condensing  | 4 - 100% condensing                              | 4 - 100% condensing                              |
| Noise emission (at 1 m distance)          | <40 dbA  | <40 dbA  | <40 dbA  |
| <b>Features and options</b>               |  |  |  |
| Embedded data logger                      | 365 days   |  |  |
| Display                                   | LCD 2 -line 16 digits, 2 Buttons   |  |  |
| Communication interface standard/optional | RS 485, MODBUS / Ethernet (with built-in web server)   |  |  |
| Multifunction relay                       | Yes  |  |  |
| Warranty in years standard/optional       | 5 / 10   |  |  |
| <b>Regulatory approvals</b>               |  |  |  |
| Electrical safety                         | CE marked for the Low Voltage Directive EN / IEC 62109-1 EN / IEC 62109-2, AS3100/AS5033   |  |  |
| Grid interconnection                      | VDE-AR-N 4105, RD1699, CEI 0-21, UTE C15-712-1, AS4777, VDE 0126, EN50438, IEC 62116, IEC 61727, MEA, PEA, IEC 61683, G83/2 for Conext RL 3000E and 4000E, G59/2 for Conext RL 5000E |  |  |
| Environmental                             | RoHS, REACH, IEC 60068-2 (as per MNRE Technical Specifications)  |  |  |
| EMC                                       | CE marked for the EMC directive 2004-108-EC<br>Emissions: EN 61000-6-3 (residential)<br>Immunity: EN 61000-6-2 (industrial)  |  |  |
| <b>Available product variants</b>         |  |  |  |
| Standard                                  | PVSNVC3000 (RL 3000 E)   | PVSNVC4000 (RL 4000 E)                           | PVSNVC5000 (RL 5000 E)                           |
| With integrated DC switch                 | PVSNVC3000S (RL 3000 E-S)  | PVSNVC4000S (RL 4000 E-S)                        | PVSNVC5000S (RL 5000 E-S)                        |
| <b>Monitoring accessories</b>             |  |  |  |
| Local monitoring                          | Ethernet card (PVSCMC1105)   |  |  |
| Remote monitoring                         | Conext Monitor 20 (PVSCMC1120)   |  |  |

Specifications are subject to change without notice. \*3.68 kVA for UK. \*\*4.6 kVA for Germany. \*\*\* 16A for UK. \*\*\*\*-20°C cold start temperature.