

# Power supply · regulated, 240 W

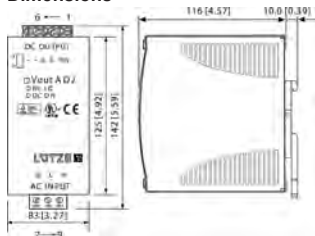
## Primary switchmode power supply, PFC, Single-phase

Input: wide-range input AC 93–132 V, AC 186–264 V, DC 210–370 V

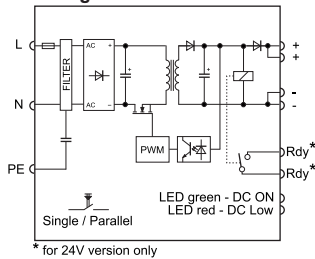
Output: 24 V / 48 V, adjustable



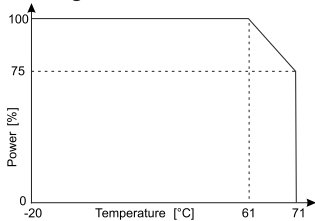
### Dimensions



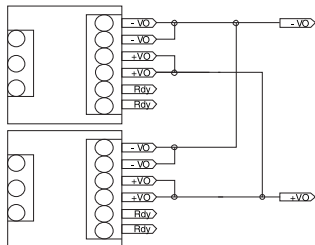
### PIN assignment



### Derating



### Parallel/redundant mode



| Description                      | Part-No.       | Type   | PU          |   |
|----------------------------------|----------------|--------|-------------|---|
| <b>Screw terminal, pluggable</b> |                |        |             |   |
| Output voltage/current           | DC 24 V / 10 A | 722759 | DRA 240-24B | 1 |
|                                  | DC 48 V / 5 A  | 722778 | DRA 240-48B | 1 |
| <b>Screw terminal</b>            |                |        |             |   |
| Output voltage/current           | DC 24 V / 10 A | 722781 | DRA 240-24A | 1 |

| Input                          | DRA 240-24B   | DRA 240-48B | DRA 240-24A |
|--------------------------------|---|-------------|-------------|
| Nominal voltage                | AC 115 / 230 V (auto select)  |             |             |
| Operation voltage range        | AC 93–132 V, AC 186–264 V, DC 210–370 V                             |             |             |
| Line frequency                 | 47 – 63 Hz  |             |             |
| Rated current                  | U <sub>i</sub> = AC 115 V: 2.4 A / U <sub>i</sub> = AC 230 V: 1.2 A |             |             |
| Inrush current                 | U <sub>i</sub> = AC 115 V: 30 A / U <sub>i</sub> = AC 230 V: 60 A   |             |             |
| Internal fuse                  | T6, 3 A / AC 250 V  |             |             |
| External fuse                  | Mini-circuit breaker: B 10 A, C 6 A                                 |             |             |
| Power Factor Correction P.F.C. | 0.7   |             |             |

| Output                            | DRA 240-24B  | DRA 240-48B     | DRA 240-24A     |
|-----------------------------------|--|-----------------|-----------------|
| Rated voltage output              | DC 24 V  | DC 48 V         | DC 24 V         |
| Rated current output              | 10 A   | 5 A             | 10 A            |
| Max. output current               | –  |                 |                 |
| Short-circuit current             | –  |                 |                 |
| Voltage trim range                | 22.5–28.5  | 47/56 V         | 22.5–28.5 V     |
| Accuracy                          | ±1 %   |                 |                 |
| Line regulation                   | ±0.5 %   |                 |                 |
| Load regulation                   | Single ±1 %, Parallel ±5 %   |                 |                 |
| Rise time                         | 1 s  |                 |                 |
| Temperature coefficient           | ±0.03 % / °C   |                 |                 |
| Ripple & Noise                    | 100 mV   |                 |                 |
| Hold up time                      | V <sub>in</sub> = 115 V: 25 ms / V <sub>in</sub> = 230 V: 30 ms      |                 |                 |
| Status indication DC ON LED green | ≥17.6–19.4 V   | ≥37–43 V        | ≥17.6–19.4 V    |
| Status indication DC LOW LED red  | ≤17.6–19.4 V   | ≤37–43 V        | ≤17.6–19.4 V    |
| Parallel/redundant operation      | max 3 devices with 90 % load current each, switching with switch S/P |                 |                 |
| Efficiency                        | 89 %   | 90 %            | 89 %            |
| Low power loss                    | 35 A (AC 230 V)  | 32 A (AC 230 V) | 35 A (AC 230 V) |
| Rated over load protection        | 105–145 %  |                 |                 |
| Over voltage protection           | 120–145 %  |                 |                 |
| Short circuit characteristics     | Current limit  |                 |                 |

| <b>General</b>                     |   |          |   |
|------------------------------------|---|----------|---|
| Switching frequency                | approx. 40 kHz  |          |   |
| Insulation voltage input/output    | AC 3.0 kV <sub>eff</sub>  |          |   |
| Insulation voltage input / ground  | AC 1.5 kV <sub>eff</sub>  |          |   |
| Insulation voltage output / ground | –   |          |   |
| Insulation resistance at DC 500 V  | 100 MΩ  |          |   |
| Operation temperature range        | –25 °C – 70 °C (derating)   |          |   |
| Derating                           | –2.5 % / °C starting at 60 °C   |          |   |
| Storage temperature range          | –40 °C – 85 °C  |          |   |
| M.T.B.F.                           | 423000 h  | 437000 h | 423000 h  |
| Relative humidity                  | 20–90% RH, non-condensing   |          |   |
| Dimensions (w × h × d) in mm       | 83.0 × 142.0 × 116.0  |          |   |
| Cooling                            | Natural air cooling, 25 mm distance on all sides  |          |   |
| Housing material                   | metal   |          |   |
| Field installation                 | rail TS 35 (EN 50022)   |          |   |
| Application height                 | 2000 m  |          |   |
| Installation position              | vertical  |          |   |
| Protection class                   | IP 20   |          |   |
| IP rating                          | I (SELV, PELV)  |          |   |
| Overvoltage category               | II  |          |   |
| Pollution degree                   | 2   |          |   |
| Weight (kg/piece)                  | 1.000   |          |   |
| Termination                        | Screw terminal: 0.2–2.5 mm <sup>2</sup> - pluggable,max. 0.56 Nm  |          | Screw terminal: 0.2–4.0 mm <sup>2</sup> ,max. 0.62 Nm |
| Approvals                          | UL: UL 508 listed; cUL: UL 60950-1; TÜV: EN 60950, CE: EN 61000-6-3, EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 55024 |          |   |

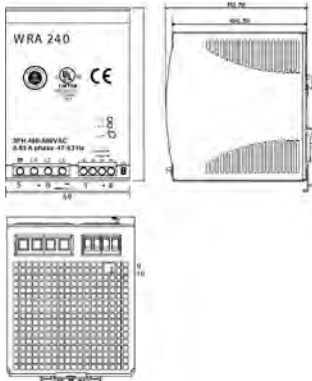
| <b>Monitoring</b>   |               |   |               |
|---------------------|---------------|---|---------------|
| DC ON Control (Rdy) | Normally open | – | Normally open |
| Switching voltage   | DC 60 V       | – | DC 60 V       |
| Switching current   | max. 300 mA   | – | max. 300 mA   |
| Switching capacity  | –             |   |               |
| Insulation voltage  | DC 500 V      | – | DC 500 V      |

# Power supply · regulated, 240 W, 3-phase

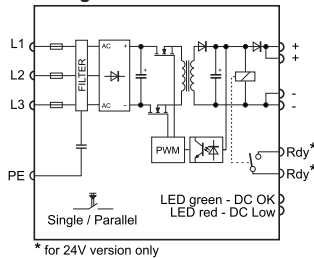
**Primary switchmode power supply, PFC, 3-phase**  
**Input: wide-range input AC 340–576 V, DC 480–820 V**  
**Output: 24 / 48 V, adjustable**



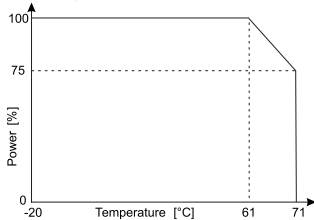
## Dimensions



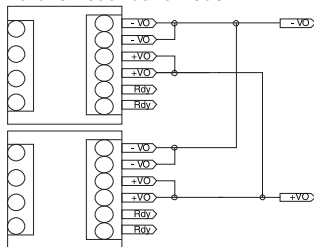
## PIN assignment



## Derating



## Parallel/redundant mode



| Description            | Part-No.      | Type   | PU         |   |
|------------------------|---------------|--------|------------|---|
| <b>Screw terminal</b>  |               |        |            |   |
| Output voltage/current | DC 24 V/ 10 A | 722804 | WRA 240-24 | 1 |
|                        | DC 48 V/ 5 A  | 722808 | WRA 240-48 | 1 |

| Input                          | WRA 240-24   | WRA 240-48 |
|--------------------------------|--|------------|
| Nominal voltage                | 3× AC 340–500 V  |            |
| Operation voltage range        | 3× AC 340–575 V; 3× DC 480–820 V                                     |            |
| Line frequency                 | 47 – 63 Hz   |            |
| Rated current                  | U <sub>I</sub> = AC 380 V: 0.85 A / U <sub>I</sub> = AC 500 V: 0.7 A |            |
| Inrush current                 | 20 A   |            |
| Internal fuse                  | 3×T2, 0 A / AC 600 V   |            |
| External fuse                  | Automatic: 3 × B 6 A   |            |
| Power Factor Correction P.F.C. | 0.6  |            |

| Output                            | WRA 240-24  | WRA 240-48      |
|-----------------------------------|---|-----------------|
| Rated voltage output              | DC 24 V   | DC 48 V         |
| Rated current output              | 10 A  | 5 A             |
| Max. output current               | –   |                 |
| Short-circuit current             | –   |                 |
| Voltage trim range                | 22.5/28.5 V   | 47/56 V         |
| Accuracy                          | 1 %   |                 |
| Line regulation                   | ±1 %  |                 |
| Load regulation                   | Single ±1 %, Parallel ±5 %  |                 |
| Rise time                         | 1 s   |                 |
| Temperature coefficient           | ±0.03 % / °C  |                 |
| Ripple & Noise                    | 100 mV  |                 |
| Hold up time                      | min. 20 ms  |                 |
| Status indication DC ON LED green | ≥17.6–19.4 V  | ≥37–43 V        |
| Status indication DC LOW LED red  | ≤17.6–19.4 V  | ≤37–43 V        |
| Parallel/redundant operation      | max 2 devices with 90 % load current each, switching with switch S/P              |                 |
| Efficiency                        | 90 %  | 91 %            |
| Low power loss                    | 30 A (AC 380 V)   | 24 A (AC 380 V) |
| Rated over load protection        | Temperature: Deactivation at 100–110°C and automatic activation after cooling off |                 |
| Over voltage protection           | 125–137 %   | 125–142 %       |
| Short circuit characteristics     | Hiccup-mode   |                 |

| General                            | WRA 240-24  | WRA 240-48 |
|------------------------------------|---|------------|
| Switching frequency                | approx. 25 kHz  |            |
| Insulation voltage input/output    | AC 3.0 kV <sub>eff</sub>  |            |
| Insulation voltage input / ground  | AC 1.5 kV <sub>eff</sub>  |            |
| Insulation voltage output / ground | –   |            |
| Insulation resistance at DC 500 V  | 100 MΩ  |            |
| Operation temperature range        | -25 °C – 71 °C (derating)   |            |
| Derating                           | Capacity: -2.5% / °C starting at +61 °C   |            |
| Storage temperature range          | -40 °C – 85 °C  |            |
| M.T.B.F.                           | 488000 h  | 519000 h   |
| Relative humidity                  | 20–90% RH, non-condensing   |            |
| Dimensions (w × h × d) in mm       | 89.0 × 123.6 × 117.5  |            |
| Cooling                            | Natural air cooling, 25 mm distance on all sides  |            |
| Housing material                   | Metal   |            |
| Field installation                 | rail TS 35 (EN 50022)   |            |
| Application height                 | 3000 m  |            |
| Installation position              | vertical  |            |
| Protection class                   | IP 20   |            |
| IP rating                          | I (SELV, PELV)  |            |
| Overvoltage category               | II  |            |
| Pollution degree                   | 2   |            |
| Weight (kg/piece)                  | 1.100   |            |
| Termination                        | Screw terminal: 0.2–4.0 mm <sup>2</sup> , max. 0.62 Nm  |            |
| Approvals                          | UL: UL 508 listed; cUL: UL 60950-1 accepted; TÜV: EN 60950-1, CE: EN 61000-6-3 / EN 55022 Class B, EN 61000-3-2, EN 61000-3-3, EN 61000-6-2, EN 55024 |            |

| Monitoring          | WRA 240-24    | WRA 240-48 |
|---------------------|---------------|------------|
| DC ON Control (Rdy) | Normally open | –          |
| Switching voltage   | DC 60 V       | –          |
| Switching current   | max. 300 mA   | –          |
| Switching capacity  | –             | –          |
| Insulation voltage  | DC 500 V      | –          |