

# MKD-RT Series

On-line double conversion  
700, 1000, 1500, 2000, 3000VA  
Racktower-Design

**NEU / NEW**

Now also XL models available  
with expandable batteries

Right: The feet supplied to make the  
MKD-RT stable tower unit.

## Description

The MKD-RT is now available as a complete series in new design. It's EFFEKTA®'s high-end model in the field of high-quality microprocessor-based on-line double conversion UPS's for your IT environment or metrology and industrial plants.

The MKD-RT is already equipped with extensive and specific features, which are usually provided in the UPS market by most expensive special UPSs. The programmable switch contacts, or the adjustable restart function are just two of countless examples. The XL versions also offer the possibility of battery extension.



The MKD-RT can be used as 19" rack mount 2U device in any standard 19" rack after attaching the included 19" mounting angles. To make this possible, the clear LCD display can be rotated by 90°.



Above: XL-Version

## Properties

- UPS Classification VFI-SS-111 (IEC 62040-3)
- Can be used as tower as well as 19"-unit
- User-friendly swivel LCD display
- Optional XL version with expandable batteries
- Wide input voltage range (120-276VAC)
- Excellent power factor of 0.9
- Online double conversion with sinusoidal output switchable to ECO mode (line interactive)
- Microprocessor controlled
- Automatic frequency detection
- Output frequency preset (frequency converter function)
- Extensive communication & control:
  - RS-232 as standard
  - USB as standard
  - Programmable switch contacts as standard
  - Emergency power-off „EPO“ as standard
- Slot for another optional adapter: Relay board or SNMP
- Management software for all popular OS
- 24 months' warranty



Top left: MKD 700-2000 RT rear view

Bottom left: MKD 3000 RT rear view

With existing standard RS232 and USB interface as well as standard emergency contact (EPO) and individually programmable dry contacts (DRY IN / OUT DRY) the MKD RT provides extraordinarily extensive communication and control. And yet even this can be extended by additional optional adapter slot (SNMP, relay card).

## Specifications

| Model                                  |                             |   | MKD 700 RT  |                | MKD 1000 RT |      | MKD 1500 RT  |      | MKD 2000 RT |      | MKD 3000 RT |                                       |  |
|--|-----------------------------|---|---|----------------|-------------|------|--|------|-------------|------|-------------|---------------------------------------|--|
|  |                             |   | Standard  | XL             | Standard    | XL   | Standard   | XL   | Standard    | XL   | Standard    | XL                                    |  |
| Power                                  | Power(VA) max               |   | 700   |                | 1000        |      | 1500   |      | 2000        |      | 3000        |                                       |  |
|  | Power(W) max                |   | 630   |                | 900         |      | 1350   |      | 1800        |      | 2700        |                                       |  |
| Back-up time<br>(XL-models expandable) | @ 100% load in min.         |   | app. 10   | **             | app. 5      | **   | app. 4   | **   | app. 4      | **   | app. 4      | **                                    |  |
|  | @ 50% load in min.          |   | app. 30   |                | app. 15     |      | app. 13  |      | app. 10     |      | app. 10     |                                       |  |
| Input                                  | Cold Start                  |   | yes, default frequency=50Hz   |                |             |      |  |      |             |      |             |                                       |  |
|  | Acceptable Input Voltage    |   | 120VAC-276VAC   |                |             |      |  |      |             |      |             |                                       |  |
|  | Adjustable Bypass Voltage   |   | 120VAC-276VAC   |                |             |      |  |      |             |      |             |                                       |  |
|  | THDi                        |   | <5% with full load  |                |             |      |  |      |             |      |             |                                       |  |
|  | Input Power Factor          |   | ≥0.99(FULL RCD LOAD)  |                |             |      |  |      |             |      |             |                                       |  |
|  | Input Frequency Range       |   | 45-55Hz / 54-66Hz   |                |             |      |  |      |             |      |             |                                       |  |
|  | Output                      | Output Voltage  | Waveform  | Pure sine wave |             |      |  |      |             |      |             |                                       |  |
| Nominal voltage                        |                             |   | 208VAC/220VAC/230VAC/240VAC ±1%                                       |                |             |      |  |      |             |      |             |                                       |  |
| Transient recovery                     |                             |   | 100ms (IEC 62040-3 Non-linear load)                                   |                |             |      |  |      |             |      |             |                                       |  |
| Voltage distortion                     |                             |   | <2% THD, linear load / <5% THD, non-linear load                       |                |             |      |  |      |             |      |             |                                       |  |
| Output Frequency                       |                             | Synchronization range                                   | 45-55Hz / 54-66Hz (Adjustable)  |                |             |      |  |      |             |      |             |                                       |  |
|  |                             | Battery mode  | 50/60±0.2Hz   |                |             |      |  |      |             |      |             |                                       |  |
| Power Factor                           |                             | 0.9   |   |                |             |      |  |      |             |      |             |                                       |  |
| Transfer Time                          |                             | Line to battery mode                                    | 0ms   |                |             |      |  |      |             |      |             |                                       |  |
|  |                             | Inverter to bypass                                      | 4ms @ ECO mode  |                |             |      |  |      |             |      |             |                                       |  |
|  |                             | ECO to Inverter mode                                    | <10ms   |                |             |      |  |      |             |      |             |                                       |  |
| Full Load Efficiency                   |                             | Line mode   | > 89% with battery fully charged                                      |                |             |      |  |      |             |      |             |                                       |  |
|  |                             | Battery mode  | > 84% @ 12VDC / battery   |                |             |      |  |      |             |      |             |                                       |  |
|  |                             | ECO mode  | > 95%   |                |             |      |  |      |             |      |             |                                       |  |
| Overload Capability (Line Mode)        |                             | 102% ~ 130% : 12s / 130% ~ 150% : 1.5s / > 150% : 100ms |   |                |             |      |  |      |             |      |             |                                       |  |
| Overload Capability (Battery Mode)     |                             | 102% ~ 130% : 12s / 130% ~ 150% : 1.5s / > 150% : 100ms |   |                |             |      |  |      |             |      |             |                                       |  |
| Battery                                | Battery type                |   | 12VDC / 7Ah (XL 9Ah)<br>(Sealed maintenance free lead acid batteries) |                |             |      | 12VDC / 9Ah<br>(Sealed maintenance free lead acid batteries) |      |             |      |             |                                       |  |
|  | Quantity                    |   | 3   | **             | 3           | **   | 4  | **   | 4           | **   | 6           | **                                    |  |
|  | DC Voltage                  |   | 36VDC   |                | 36VDC       |      | 48VDC  |      | 48VDC       |      | 72VDC       |                                       |  |
|  | Charging time               |   | < 3h charge to 90% (XL-models depending on assembly)                  |                |             |      |  |      |             |      |             |                                       |  |
|  | Charging current (max) in A |   | 1.5   | 6.0            | 1.5         | 6.0  | 1.5  | 6.0  | 1.5         | 6.0  | 1.5         | 6.0                                   |  |
| Communication                          | Integrated                  |   | RS232,USB, Dry Contacts, EPO  |                |             |      |  |      |             |      |             |                                       |  |
|  | Optional cards              |   | Intelligent Slot for AS 400, SNMP, Opto-coupler                       |                |             |      |  |      |             |      |             |                                       |  |
| Indicator & Alarm                      | Display                     |   | YES / LCD   |                |             |      |  |      |             |      |             |                                       |  |
|  | Acoustic                    |   | YES   |                |             |      |  |      |             |      |             |                                       |  |
| Mechanical                             | Dimensions<br>(HxWxD in mm) | UPS   | 86.5 (2U) x 438 (19") x 435   |                |             |      |  |      |             |      |             | 86.5 (2U) x 438 (19") x 604           |  |
|  |                             | Battery pack  | 86.5 (2U) x 438 (19") x 430 (only XL)                                 |                |             |      |  |      |             |      |             | 86.5 (2U) x 438 (19") x 600 (only XL) |  |
|  | Weight in kg                | UPS   | 13.2  | 8.4            | 13.2        | 8.4  | 19.7   | 9.3  | 19.7        | 9.3  | 27.8        | 13                                    |  |
|  |                             | Battery pack max.                                       | -   | 20.5           | -           | 20.5 | -  | 20.5 | -           | 33.3 | -           | 33.3                                  |  |
|  | Protection                  |   | IP20  |                |             |      |  |      |             |      |             |                                       |  |
|  | Operating Temperature Range |   | 0°C ~ 40°C  |                |             |      |  |      |             |      |             |                                       |  |
|  | Humidity                    |   | 0~95% (No condensing)   |                |             |      |  |      |             |      |             |                                       |  |
|  | Audible Noise               |   | App. 52dB @ 1meter  |                |             |      |  |      |             |      |             |                                       |  |
|  | Standards                   | Safety  |   | EN 62040-1     |             |      |  |      |             |      |             |                                       |  |
| EMC                                    |                             | EN 62040-2 Class C1                                     |   |                |             |      |  |      |             |      |             |                                       |  |
| Certifications                         |                             | CE  |   |                |             |      |  |      |             |      |             |                                       |  |

\*\* Variable and depends on the battery layout