



DATA CENTERS



E-BUSINESS  
(Servers Farms, ISP/ASP/POP)



TELECOM-MUNICATION DEVICES



INDUSTRIAL PLCS



ELECTRO-MEDICAL DEVICES



EMERGENCY DEVICES  
(Lights/Alarms)

**critical**  
POWER SUPPLIES

# Master Dialog

RM 8-100 kVA three-phase/single-phase

RT 10-80 kVA three-phase/three-phase



Master Dialog RM / RT



MASTER DIALOG provides maximum protection for industrial applications thanks to its outstanding mechanical and electrical design. The load is powered continuously by the inverter with a filtered, stabilised and regulated sinewave supply. The input and output EMI filters considerably increase the immunity of the load to mains disturbances and surges.

MASTER DIALOG is supplied with PowerShield<sup>3</sup> software as standard and can be remotely monitored using the TeleNetGuard system from anywhere in the world. Additional battery extension packs allow the standard battery runtime to be extended up to several hours.

MASTER DIALOG series includes 8-100kVA three/single-phase and 10-

80 kVA three-phase models and uses double conversion on-line technology (VFI) with an isolation transformer on the inverter output.

#### HIGH RELIABILITY

- Extremely high short-circuit current to ensure compatibility with the most difficult transformer applications (lighting, drives and industrial processes) and an isolation transformer on the inverter output.
- Full microprocessor control with no-break static and manual bypasses
- IGBT technology

**MINIMUM IMPACT ON THE MAINS**

Input current distortion <4% for the Master Dialog "Clean" version with sinusoidal absorption to remove the risk of resonance with other input supply users or phase shift capacitor sets. The absorbed current distortion is independent of input supply parameters such as impedance. This enables Master Dialog to deliver maximum performance levels regardless of the installation environment. With these input features Master Dialog can achieve significant savings in terms of sizing and power supply sources - isolation transformers and generators over less sophisticated power systems.

**MAXIMUM BATTERY CARE**

- Temperature compensating charger
- Battery deep discharge protection
- Built-in automatic and manual battery test feature

**SIMPLE TO INSTALL**

- Capability to install the UPS into any distribution system (neutral not required on rectifier input)
- Capability to separate the rectifier/bypass power networks and to power these from two separate sources, without Galvanic isolation (necessary on UPS without an output transformer)
- Option to regulate the output voltage and offset voltage drops down long cable runs

**MAXIMUM RELIABILITY AND AVAILABILITY**

Connect up to 8 units in parallel or N+1 redundancy, even of different power ratings. The UPS continue to operate in parallel even if one of the interconnecting communication cable is disconnected (closed loop).

**LOW CONSUMPTION LEVELS**

Master Dialog can achieve efficiencies >98% thanks to a selectable Economy Mode which can be used in stable electrical environments to provide power supply continuity should the mains fail

**OTHER CHARACTERISTICS**

- 0.8 power factor makes Master Dialog suitable for powering ICT and industrial loads
- High level diagnostics: event log with 128 messages, states, measurements and alarms - available from the built-in LCD in several languages
- Back Feed protection: to avoid energy feeding back into the mains supply should a fault occur



**ADVANCED COMMUNICATION**

- Compatible with TeleNetGuard for remote maintenance
- Advanced, multi-platform communication for all operating systems and network environments: PowerShield<sup>3</sup> monitoring and shut-down software included, for Windows 2008, Vista, 2003, XP; Mac OS X, Linux, Novell and most popular Unix operating systems. The UPS is supplied with a cable for direct connection to the PC (Plug and Play)
- RS232 serial port
- Volt-free signal contacts
- EPO (Emergency Power Off) shutdown input contact
- Input for switching to bypass by remote signal
- LCD or LED-based remote control panel
- Generator interface: enables desynchronisation of the UPS output from a generator supply which may be subject to phase and frequency variations. The interface also enables more economic use of the battery charger.

**SPECIFIC SOLUTIONS**

The UPS can be adapted to your requirements. Please contact TEC to discuss specific applications and options.

**OPTIONS**

- Isolation transformer module
- Remote control panel
- Closed Loop parallel kit option (to be ordered with the unit)
- Empty battery cabinets for prolonged runtime

BATTERY BOX	BB 384-38A	BB 384-65B	BB 384-38C	384-65D	384-80D	384-100D	384-120D
RM MODELS	10-15-20-30-40-60		15-20-30-40	60-80	30-40-60-80	30-40-60-80	60-80
RT MODELS	10-15-20-30-40	60	15-20-30-40	60-80	30-40-60-80	30-40-60-80	60-80
Dimensions (mm) h x w x d							

RM MODELS	RM 8	RM 10	RM 15	RM 20	RM 30	RM 40	RM60	RM 80	RM 100	
POWER (kVA)	8	10	15	20	30	40	60	80	100	
INPUT										
Rated voltage (V)	400 Vac three-phase									
Voltage range	± 20%									
Frequency range	45 ÷ 65 Hz									
Power factor	> 0.92 in RM CLEAN version									
Distortion of the current absorbed	< 5% in RM CLEAN version									
Soft start	0-100% in 10"									
BY PASS										
Rated voltage (V)	230 Vac single-phase									
Permitted voltage range	± 15% (selectable from ± 10% to ± 25% from front panel)									
Rated frequency	50/60 Hz (autorange)									
Permitted frequency range	± 2% (selectable from ± 1% to ± 5% from front panel)									
Standard features	Back Feed protection; separate bypass line									
BATTERIES										
Type	Maintenance-free lead-acid VRLA AGM / GEL; NiCd									
Maximum recharge current (A)	0.2 x C10									
RECTIFIER OUTPUT										
Maintenance voltage	Variable acc. to temperature (-0.5 Vx°C)									
Ripple	< 1%									
INVERTER OUTPUT										
Rated power (kVA)	8	10	15	20	30	40	60	80	100	
Rated voltage (kW)	6.4	8	12	16	24	32	48	64	80	
Number of phases	1									
Rated voltage (V)	230 single-phase									
Rated current (A)	35	43	65	87	130	174	261	348	434	
Regulation of the output voltage	220 ÷ 244 V (configurable from control panel)									
Crest factor (I <sub>peak</sub> /I <sub>rms</sub> )	3: 1									
Waveform	Sinewave									
Static stability	± 1%									
Dynamic stability	± 5% in 5 ms									
Frequency	50/60 Hz configurable									
Overload	110% 125% 150% of the rated current for 5h/10'/1'									
Frequency stability	± 0.05% on mains failure; ± 2% (selectable from ± 1% to ± 5%) with mains supply present									
ENVIRONMENTAL										
Weight (kg)	190 to 460	200 to 470	220 to 490	230 to 500	290	340	440	520	650	
Dimensions (HxWxD) (mm)	1200 x 555 x 720						1400 x 800 x 740		1400 x 1070 x 740	
Remote signalling	Volt free contacts									
Remote controls	EPO and Bypass									
Communication	RS232 + remote contacts									
Operating temperature	0°C ÷ +40°C									
Relative humidity	< 95% non condensing									
Colour	Light grey RAL 7035									
Noise	54 dBA at 1 m		60 dBA at 1 m			65 dBA at 1 m				
Protection rating	IP20									
Efficiency Smart Mode	up to 98%									
Compliance	Safety EN 62040-1 EMC EN 62040-2 Directives 2006/95/EC 2004/108/EC; EN 62040-3									
Internal batteries	yes	yes	yes	yes	no	no	no	no	no	

RT MODELS	RT 10	RT 15	RT 20	RT 30	RT 40	RT 60	RT 80
POWER (kVA)	10	15	20	30	40	60	80
<b>INPUT</b>							
Rated voltage (V)	400 Vac three-phase						
Voltage range	± 20%						
Frequency range	45 ÷ 65 Hz						
Power factor	> 0.9 in RT CLEAN version						
Distortion of the current absorbed	< 5% in RT CLEAN version						
Soft start	0-100% in 10"						
<b>BY PASS</b>							
Rated voltage (V)	400 Vac three-phase						
Permitted voltage range	± 15% (selectable from ± 10% to ± 25% from front panel)						
Rated frequency	50/60 Hz auto sensing						
Permitted frequency range	± 2% (selectable from ± 1% to ± 5% from front panel)						
Standard features	Back Feed protection; separate bypass line						
<b>BATTERIES</b>							
Type	Maintenance-free lead-acid VRLA AGM/GEL; NiCd						
Maximum recharge current (A)	0.2 x C10						
<b>RECTIFIER OUTPUT</b>							
Maintenance voltage	Variable acc. to temperature (-0.5 Vx°C)						
Ripple	< 1%						
<b>INVERTER OUTPUT</b>							
Rated power (kVA)	10	15	20	30	40	60	80
Rated voltage (kW)	8	12	16	24	32	48	64
Number of phases	3 + N						
Rated voltage (V)	400						
Rated current (A)	14	22	29	43	58	87	115
Regulation of the output voltage	348 ÷ 424 V (from control panel)						
Crest factor (I <sub>peak</sub> /I <sub>rms</sub> )	3: 1						
Waveform	Sinewave						
Static stability	± 1%						
Dynamic stability	± 5% in 5 ms						
Frequency	50/60 Hz configurable						
Overload	110% 125% 150% of the rated current for 5h/10'/1'						
Frequency stability	± 0.05% on mains failure; ± 2% (selectable from ± 1% to ± 5%) with mains supply present						
<b>ENVIRONMENTAL</b>							
Weight (kg)	210 to 480	220 to 490	230 to 500	282 to 552	330	450	555
Dimensions (HxWxD) (mm)	1200 x 555 x 720					1400 x 800 x 740	
Remote signalling	Volt free contacts						
Remote controls	EPO and Bypass						
Communication	RS232 + remote contacts						
Operating temperature	0°C ÷ +40°C						
Relative humidity	< 95% non condensing						
Colour	Light grey RAL 7035						
Noise	54 dBA at 1 m		60 dBA at 1 m			62 dBA at 1 m	
Protection rating	IP20						
Efficiency Smart Mode	up to 98%						
Compliance	Safety EN 62040-1 EMC EN 62040-2 Directives 2006/95/EC 2004/108/EC; EN 62040-3						
Internal batteries	yes	yes	yes	no	no	no	no