

ESM Series

Single Phase UPS
from 10 - 60 kVA

3:1
PHASE



Applications

Three level Technology, Compact and Robust, Monoline is the perfect UPS to protect and supply loads in the industrial fields and critical applications.

- Three Level Technology
- On Line-Double Conversion Technology (Class VFI-SS-111)
- IGBT PWM Rectifier & Inverter Technology
- High Efficiency up to 96%
- Higher efficiency with eco mode up to 98%
- High Input Power Factor (≥ 0.99)
- Increase battery life time up to 35% with smart charger
- Temperature compensation battery charging
- Higher fan life time with Intelligent fan speed control Operate as frequency converter (50 Hz / 60 Hz)
- Short Circuit, Overload, Lightning and Surge Protection
- Perfect Generator Compability
- Easy Service with Manual bypass
- Variable input low voltage depending on loading percentage (up to -40%) Parallelable with Common or Seperate Battery Cabinet Realtime warnings at LCD screen

Software & Connectivity TM

- Local communication with RS232 and RS485
- 2 pcs configurable input contact
- Relay board with alarms
- Genset contact
- EPO contact
- USB
- Remote Monitoring Panel
- Battery Temperature Sensor for Charging
- JBUS, PROFIBUS Local Connection
- SNMP IT Manager Monitoring
- Environment Sensors for Data Centers (Humidity, Temperature, Smoke, etc.)
- GSM, Telnet, GPRS Communication
- PC & Server Shutdown
- Web Page Remote Monitoring
- Building Management System
- E-mail Alarm Reporting
- Remote Monitoring 24/7 Technical Service

Model	ESM 3110X ESM 3110T	ESM 3115X ESM 3115T	ESM 3120UX ESM 3120T	ESM 3130X ESM 3130T	ESM 3140X ESM 3140T	ESM 3160X ESM 3160T
Nominal power (kVA)	10	15	20	30	40	60
General Specs						
Technology	Three Level On-Line double conversion VFI-111					
Waveform	Sinusoidal					
Architecture	Stand Alone or Optional Parallel					
Input Characteristics						
Input voltage	3:1 // 380, 400, 415 V 3PH+N+PE - 1:1 // 220, 230, 240 V 1PH+N+PE*3					
Input frequency	45-65 Hz					
Voltage Tolerance (%100 load)	(-20)% (+20)%					
Voltage Tolerance (%50 load)	(-40)% (+20)%					
Input Power Factor	1:1 ≥ 0,99; 3:1 ≥ 0,95					≥ 0,99
Output characteristics						
Output Voltage	220,230,240 V 1 Ph+ N+PE (Adjustable from front panel)					
Output Voltage Tolerance	±1%					
Overall Efficiency (AC-AC)	Up to 96% (At half load)					
Ecomode Efficiency	Up to 98% (Optional)					
Nominal Output Frequency	50/60Hz +0,01 free run (Adjustable from LCD Panel)					
Crest Factor	3:1					
Output Power Factor	0,9 (U2 model) / 1 (U1 model) / 0,8 (U3 model)					
THD of Output Voltage	≤2% (Linear load) & ≤5% (Non-linear load)					
Bypass characteristics						
Overload Capability	150% for 1 minutes					
Bypass	Built in Automatic and Maintenance Bypass					
Voltage Tolerance	±10%					
Batteries						
Battery Type	VRLA-AGM / GEL / NiCd / Li-ion					
Battery Test	Automatic or Manual					
Battery Recharge Time	<6h-8h					
Charger Capacity						
U1/U2/U3 Model (max)	1A			4A		
with Charger Option	4A / 13A					
Battery Quantity						
with Internal Battery (12V 7/9Ah)	20/28 (U1) pcs	28 pcs	28 pcs (only on U3)	2x30 pcs (only on U3)		-
External Cabinet with 4A Charger Option	A2: 30-40 pcs (Default 30 pcs) A3: 40-46 pcs (Default 40 pcs)					
External Cabinet with 13A Charger Option	30-46 pcs (Default 30 pcs - Adjustable from LCD Panel)					
Communication and Accessories						
LCD Display	Graphical Icd screen, Led Bar Status					
Communication ports (Optionals)	RS485, Genset, SNMP, GSM Modem, Relay Contacts, Input Contacts, Modbus and USB					
Accessories (Optional)	Galvanic Isolation Transformer, Remote Monitoring Panel					
Ambient Conditions						
Operating temperature (°C)	0°C - 40°C					
StorageTempature	-15°C+ 55°C					
Relative Humidity (%)	< 95% not condensing					
Altitude	< 1500m					
Noise (at 1 meter)	<55 dBA					
Protection Class	IP 20 (Higher Ip Ratings are optional)					
Compliance						
Reference Product Standards	EN 62040-1-1 (Safety), EN 62040-2 (EMC), EN 62040-3 (Performance)					