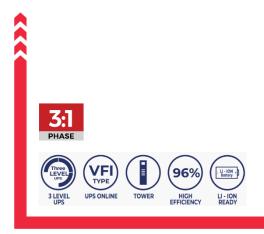
ESM Series

Single Phase UPS from 10 - 60 kVA





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 Rectifer & 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 file 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

- 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 3160	
Nominal power (kVA)	10	15	20	30	40	60	
General Specs							
Technology	Three Level On-Line double conversation 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		22	20.230.240 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 Output Power Factor	3:1 0,9 (U2 model) / 1 (U1 model) / 0,8 (U3 model)						
THD of Output Voltage	5,9 (02 model) / 1 (01 model) / 0,8 (03 model) ≤2% (Linear load) & ≤5% (Non-linear load)						
Bypass characteristics			32% (Lillear load) & 1	570 (Non-linear load)			
Overload Capability			150% for	1 minutes			
Bypass	Built in Automatic and Maintenance Bypass						
Voltage Tolerance			±1	0%			
Batteries							
Battery Type	VRLA-AGM / GEL / NiCd / Li-ion						
Battery Test	Automatic or Manual						
Battery Recharge Time		4	<6h	-8h			
Charger Capacity							
U1/U2/U3 Model (max)	1 A			4A			
with Charger Option			4A /	13A			
Battery Quanitity							
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				4			
LCD Display	Graphical Icd screen, Led Bar Status						
Communication ports (Optionals)	RS485, Genset, SNMP, GSM Modem, Relay Contacts, Input Contacts, Modbus and USB Galvanic Isolation Transformer, Remote Monitoring Panel						
Accessories (Optional)		Ga	alvanic Isolation Transform	er, 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)						