

## TECHNICAL SPECIFICATIONS

| MODEL  | ELS-3310   | ELS-3315        | ELS-3320         | ELS-3330                  | ELS-3340        | ELS-3360   |
|--|--|-----------------|------------------|---------------------------|-----------------|------------|
| Capacity (kVA/kW)                              | 10kVA/10kW   | 15kVA/15kW      | 20kVA/20kW       | 30kVA/30kW                | 40kVA/40kW      | 60kVA/60kW |
| <b>INPUT</b>                                   |  |                 |                  |                           |                 |            |
| Voltage  | 380/400/415 VAC  |                 |                  |                           |                 |            |
| Voltage Range                                  | 304 ~ 478 VAC (100% Load) / 228 ~ 304 VAC (Derates linearly with load)   |                 |                  |                           |                 |            |
| Frequency                                      | 50 - 60 Hz (Automatic Sensing)   |                 |                  |                           |                 |            |
| Frequency Range                                | 40 - 70 Hz $\pm$ 0.5%  |                 |                  |                           |                 |            |
| Input Power Factor                             | $\geq$ 0.99  |                 |                  |                           |                 |            |
| Total Harmonic Distortion                      | $\leq$ %5  |                 |                  |                           |                 |            |
| Bypass Voltage Range                           | -20% ~ +15% VAC Upper Limit; +10%, +15%, +20%, +25% / Lower Limit; -10%, -15%, -20%, -25%, -30%, -40% Selectable   |                 |                  |                           |                 |            |
| <b>OUTPUT</b>                                  |  |                 |                  |                           |                 |            |
| Voltage  | 380 / 400 / 415 VAC - Selectable from LCD Panel  |                 |                  |                           |                 |            |
| Voltage Regulation                             | $\pm$ %1   |                 |                  |                           |                 |            |
| Frequency                                      | Synchronized with mains; 45-55 Hz or 45-65 Hz / Battery operation 50 / 60 Hz $\pm$ 0.1 Hz                          |                 |                  |                           |                 |            |
| Waveform / Output Power Factor                 | Pure Sine / Cos $\phi$ : 1   |                 |                  |                           |                 |            |
| Crest Factor                                   | 3:1  |                 |                  |                           |                 |            |
| Harmonic Distortion                            | Linear Load $\leq$ %1 ; Non-Linear Load $\leq$ %3  |                 |                  |                           |                 |            |
| Transfer Time                                  | Mains to Battery: 0 ms; Inverter to Bypass: 0 ms   |                 |                  |                           |                 |            |
| Inverter Overload Capacity                     | 110% Load 60 min, %110-%125 Load 10 min, %125-%150 Load 1 min > %150 Load 200 ms                                   |                 |                  |                           |                 |            |
| Bypass Overload Capacity                       | 125% Load (Continuous), %125-130 Load 10 min, %130-150 Load 1 min, %150-400 Load 1 s, %125-130 $\geq$ 400 Load 200 |                 |                  |                           |                 |            |
| <b>BATTERY</b>                                 |  |                 |                  |                           |                 |            |
| Battery Voltage                                | Standard Models; 240 VDC / 32-40 pcs (Adjustable)  |                 |                  |                           |                 |            |
| Battery Qty / Model                            | 20 x 12V 7-9Ah   | 40 x 12V 7-9 Ah | 60 x 12V 7-9 Ah  | External Battery Required |                 |            |
| Battery Charging Current                       | Max. 10A   | Max. 15A        | Max. 15A         | Max. 20A                  | Max. 20A        | Max. 20A   |
| Battery Charging Time                          | Standard Models: 90% capacity in 4 hours; Long-run models: depends on battery capacity                             |                 |                  |                           |                 |            |
| <b>SYSTEM</b>                                  |  |                 |                  |                           |                 |            |
| Efficiency                                     | Max 95%  | Max 95%         | Max 95%          | Max 96%                   | Max 96%         | Max 96%    |
| Display  | 5" Touchscreen   |                 |                  |                           |                 |            |
| Alarm  | Battery Operation / Low Battery / Fan Failure  |                 |                  |                           |                 |            |
| Paralel Operation                              | Up to 6 Units (Optional)   |                 |                  |                           |                 |            |
| <b>ENVIRONMENT / COMMUNICATION / STANDARDS</b> |  |                 |                  |                           |                 |            |
| Operating Temp / Humidity                      | 0 °C ~ 40 °C - %20 ~ %90 (Non-condensing)  |                 |                  |                           |                 |            |
| Audible Noise                                  | $\leq$ 58 dB (at 1 meter)  |                 |                  |                           |                 |            |
| Communication                                  | Standard; RS 232, RS 485, USB, Optional; Programmable Dry Contact, SNMP, Parallel Kit                              |                 |                  |                           |                 |            |
| <b>DIMENSIONS</b>                              |  |                 |                  |                           |                 |            |
| Net Dimensions (WxDxH)-Standard                | 250 x 720 x 560  | 250 x 800 x 700 | 250 x 840 x 930  | 350 x 800 x 1280          | 250 x 790 x 560 |            |
| Net Dimensions (WxDxH)-Charger                 | 250 x 720 x 560  | 250 x 720 x 560 | 250 x 840 x 650  | 250 x 720 x 560           |                 |            |
| Package Dimensions (WxDxH)-Standard            | 350 x 800 x 722  | 350 x 900 x 862 | 350 x 912 x 1102 | 450 x 900 x 1400          | 350 x 850 x 818 |            |
| Package Dimensions (WxDxH)-Charger             | 350 x 800 x 718  | 350 x 900 x 718 | 350 x 980 x 810  | 350 x 800 x 718           |                 |            |
| Net Weight (Kg)                                | 82(S) / 31(L)  | 145(S) / 33(L)  |                  | 215(S) / 42(L)            | 300(S) / 42(L)  | 48(L)      |
| Package Weight (Kg)                            | 93(S) / 40(L)  | 142(S) / 42(L)  | 156(S) / 42(L)   | 227(S) / 52(L)            | 310(S) / 52(L)  | 58(L)      |



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