**Robotina d.o.o.**
OIC Hrpelje 38
SI-6240 Kozina
Slovenia

! THE PAGE IS UNDER CONSTRUCTION !

# 1. Hardware

# 2. Low voltage system building blocks

## 2.1. Hybrid Inverters

| Description | Grid | Battery | Power [kW] | Code | Mounting |
|---|---|---|---|---|---|
| Low voltage hybrid inverter (Deye) | 3-phase | LV | 10 | LV-10-3P-01 | wall |
| Low voltage hybrid inverter (Deye) | 3-phase | LV | 12 | LV-12-3P-01 | wall |
| Low voltage hybrid inverter (Deye) | 1-phase | LV | 8 | LV-08-1P-01 | wall |

## 2.2. Batteries

| Description | Voltage | Ah | Capacity [kWh] | Code | Mounting |
|---|---|---|---|---|---|
| LiFePO4 LV battery module | 51.2 | 200 | 10.2 | rb_512-200-w | wall |
| LiFePO4 LV battery module | 51.2 | 280 | 14.3 | rb_512-280-w | wall |

# 3. High voltage system building blocks

## 3.1. Hybrid Inverters

| Description | Grid | Battery | Power [kWh] | Code | Mounting |
|---|---|---|---|---|---|
| High voltage hybrid inverter (Deye) | 3-phase | HV | 10 | HV-10-3P-01 | wall |
| High voltage hybrid inverter (Deye) | 3-phase | HV | 15 | HV-15-3P-01 | wall |
| High voltage hybrid inverter (Deye) | 3-phase | HV | 20 | HV-20-3P-01 | wall |
| High voltage hybrid inverter (Deye) | 3-phase | HV | 30 | HV-30-3P-01 | wall |
| High voltage hybrid inverter (Deye) | 3-phase | HV | 50 | HV-50-3P-01 | wall |

| Description | Grid | Battery | Power [kWh] | Code | Mounting |
|---|---|---|---|---|---|
| High voltage hybrid inverter (Deye) | 3-phase | HV | 60 | HV-60-3P-01 | wall |
| High voltage hybrid inverter (Deye) | 3-phase | HV | 70 | HV-70-3P-01 | wall |
| High voltage hybrid inverter (Deye) | 3-phase | HV | 75 | HV-75-3P-01 | wall |
| High voltage hybrid inverter (Deye) | 3-phase | HV | 80 | HV-80-3P-01 | wall |

## 3.2. eSTORE all in one solution (Battery rack with inverter)

| Battery module rb_512-100-r | | | | | | Order code | |
|---|---|---|---|---|---|---|---|
| No. of modules | Voltage[V] | Capacity[Ah] | Current[A] | Nominal Power[W] | Capacity[Wh] | Inverter HV-30-3P-01 | Inverter HV-50-3P-01 |
| 8 | 409,6 | 100 | 100 | 40960 | 40960 | eSTORE 410-800-30-O | eSTORE 410-800-50-O |
| 9 | 460,8 | 100 | 100 | 46080 | 46080 | eSTORE 461-900-30-O | eSTORE 461-900-50-O |
| 10 (recomended) | 512 | 100 | 100 | 51200 | 51200 | eSTORE 512-1000-30-O | eSTORE 512-1000-50-O |
| 11 | 563,2 | 100 | 100 | 56320 | 56320 | eSTORE 563-1100-30-O | eSTORE 563-1100-50-O |
| 12 | 614,4 | 100 | 100 | 61440 | 61440 | eSTORE 614-1200-30-O | eSTORE 614-1200-50-O |
| 13 | 665,6 | 100 | 100 | 66560 | 66560 | eSTORE 665-1300-30-O | eSTORE 665-1300-50-O |
| **Battery module rb_512-200-r** | | | | | | **Order code** | |
| **No. of modules** | **Voltage[V]** | **Capacity[Ah]** | **Current[A]** | **Nominal Power[W]** | **Capacity[Wh]** | **Inverter HV-50-3P-01** | **Inverter HV-60-3P-01** |
| 8 | 409,6 | 200 | 100 | 40960 | 81920 | eSTORE 410-1600-50-O | eSTORE 410-1600-60-O |
| 9 | 460,8 | 200 | 100 | 46080 | 92160 | eSTORE 461-1800-50-O | eSTORE 461-1800-60-O |
| 10 (recomended) | 512 | 200 | 100 | 51200 | 102400 | eSTORE 512-2000-50-O | eSTORE 512-2000-60-O |
| 11 | 563,2 | 200 | 100 | 56320 | 112640 | eSTORE 563-2200-50-O | eSTORE 563-2200-60-O |
| 12 | 614,4 | 200 | 100 | 61440 | 122880 | eSTORE 614-2400-50-O | eSTORE 614-2400-60-O |
| 13 | 665,6 | 200 | 100 | 66560 | 133120 | eSTORE 665-2600-50-O | eSTORE 665-2600-60-O |
| **Battery module rb_512-280-r** | | | | | | **Order code** | |
| **No. of modules** | **Voltage[V]** | **Capacity[Ah]** | **Current[A]** | **Nominal Power[W]** | **Capacity[Wh]** | **Inverter HV-60-3P-01** | **Inverter HV-75-3P-01** |
| 8 | 409,6 | 280 | 200 | 81920 | 114688 | eSTORE 410-2240-60-O | eSTORE 410-2240-75-O |
| 9 | 460,8 | 280 | 200 | 92160 | 129024 | eSTORE 461-2520-60-O | eSTORE 461-2520-75-O |
| 10 (recomended) | 512 | 280 | 200 | 102400 | 143360 | eSTORE 512-2800-60-O | eSTORE 512-2800-75-O |
| 11 | 563,2 | 280 | 200 | 112400 | 157696 | eSTORE 563-3080-60-O | eSTORE 563-3080-75-O |
| 12 | 614,4 | 280 | 200 | 122880 | 172032 | eSTORE 614-3360-60-O | eSTORE 614-3360-75-O |
| 13 | 665,6 | 280 | 200 | 133120 | 186368 | eSTORE 665-3640-60-O | eSTORE 665-3640-75-O |

# 3.3. eSTORE High Voltage batteries (HV Battery rack without inverter)

| Battery module rb_512-100-r | | | | | | |
|---|---|---|---|---|---|---|
| **No. of modules** | **Voltage[V]** | **Capacity[Ah]** | **Current[A]** | **Nominal Power[W]** | **Capacity[Wh]** | **Order code** |
| 8 | 409,6 | 100 | 100 | 40960 | 40960 | eSTORE 410-800-O |
| 9 | 460,8 | 100 | 100 | 46080 | 46080 | eSTORE 461-900-O |
| 10 (recomended) | 512 | 100 | 100 | 51200 | 51200 | eSTORE 512-1000-O |
| 11 | 563,2 | 100 | 100 | 56320 | 56320 | eSTORE 563-1100-O |
| 12 | 614,4 | 100 | 100 | 61440 | 61440 | eSTORE 614-1200-O |
| 13 | 665,6 | 100 | 100 | 66560 | 66560 | eSTORE 665-1300-O |
| **Battery module rb_512-200-r** | | | | | | |
| **No. of modules** | **Voltage[V]** | **Capacity[Ah]** | **Current[A]** | **Nominal Power[W]** | **Capacity[Wh]** | **Order code** |
| 8 | 409,6 | 200 | 100 | 40960 | 81920 | eSTORE 410-1600-O |
| 9 | 460,8 | 200 | 100 | 46080 | 92160 | eSTORE 461-1800-O |
| 10 (recomended) | 512 | 200 | 100 | 51200 | 102400 | eSTORE 512-2000-O |
| 11 | 563,2 | 200 | 100 | 56320 | 112640 | eSTORE 563-2200-O |
| 12 | 614,4 | 200 | 100 | 61440 | 122880 | eSTORE 614-2400-O |
| 13 | 665,6 | 200 | 100 | 66560 | 133120 | eSTORE 665-2600-O |
| **Battery module rb_512-280-r** | | | | | | |
| **No. of modules** | **Voltage[V]** | **Capacity[Ah]** | **Current[A]** | **Nominal Power[W]** | **Capacity[Wh]** | **Order code** |
| 8 | 409,6 | 280 | 200 | 81920 | 114688 | eSTORE 410-2240-O |
| 9 | 460,8 | 280 | 200 | 92160 | 129024 | eSTORE 461-2520-O |
| 10 (recomended) | 512 | 280 | 200 | 102400 | 143360 | eSTORE 512-2800-O |
| 11 | 563,2 | 280 | 200 | 112400 | 157696 | eSTORE 563-3080-O |
| 12 | 614,4 | 280 | 200 | 122880 | 172032 | eSTORE 614-3360-O |
| 13 | 665,6 | 280 | 200 | 133120 | 186368 | eSTORE 665-3640-O |

# 3.4. HV eSTORE - Liquid colling

| No. of modules | Voltage[V] | Capacity[Ah] | Current[A] | Nominal Power[W] | Capacity[Wh] | Inverter | Order code |
|---|---|---|---|---|---|---|---|
| 1 | 832 | 314 | 180 | 125000 | 261200 | 2× 62,3 kW | eSTORE-832-314-125-O |

# 3.5. Freestanding-modular Batteries

| Description | Voltage[V] | Capacity [kWh] | Code | Mounting |
|---|---|---|---|---|
| LiFePO4 High Voltage | 230.4 | 11.52 | rbg3-01-f | Freestanding (modular) |
| LiFePO4 High Voltage | 307.2 | 15.36 | rbg4-01-f | Freestanding (modular) |
| LiFePO4 High Voltage | 384 | 19.20 | rbg5-01-f | Freestanding (modular) |
| LiFePO4 High Voltage | 614.4 | 30.72 | rbg8-01-f | Freestanding (modular) |

### 3.5.1. *Each battery needs its own xEMS controller

# 3.6. Energy Management

| Description | Code | Mounting |
|---|---|---|
| xEMS compact controller | xems-c-01 | Wall |
| xEMS compact controller - Isolated RS485 | xEMS-C-01-MB | Wall |
| xEMS controller - Modular | xEMS-M-01 | Wall |
| **Wireless extension modules** | | **Code** |
| Wireless Modbus-to-Modbus bridge | | WM-1 |
| Wireless Modbus relay | | WR-1 |
| Wireless modbus 5 relay, 1 digital input, 1 temperature input | | wr-5 |
| **Optional Power Sensors** | | **Code** |
| 1-phase power sensor, DIN rail | | pm1-e-d |
| 1-phase power sensor, DIN rail, CT | | pm1-e-d-ct |
| 3-phase power sensor, DIN rai | | pm3-e-d |
| 3-phase power sensor, DIN rail, CT | | pm3-e-d-ct |
| 1-phase split core current transformer,50A | | CT1-E-50 |
| 3-phase split core current transformer,50A,100A, 250A, 400A | | CT3-E-XX |

# 3.7. Software

### 3.7.1. Special parameters setting for EMS functionality with Robotina xEMS systems