

**LRPS-2025-9196188- LTA for SCADA System**  
**Answers to Queries**

1. Item #1, VFDs:

- sizes from 1 kW to 10 kW, is it single phase or three phase?
- What are the required accessories/items required to be installed in the control panel (cabinet, relays, timers, MCB, MCCB protections, cabling, digital displays)?

**Answer:**

- **3 Phase**
- **Accessories including but not limited to Cabinet ,Timerc relay x2 , power meter x1 ,MCB x1 ( for control ) , PT100 PID controller x1 , cooling fan x 1 or 2 ( based on cabinet size ) , MCCB x1 ( main input ) , phase voltage relay x1, level control relay x1 , indicator lamp x10 ,cash cable , cable 1.5mm2 ( for control ) , 14 pin relay x 8 , connectors x 25 .**

2. The backup power systems:

- single or three phase?
- What is the requested autonomy?
- Is the steel structure galvanized or aluminum?
- Is it required to install earthing & lightning system?
- AC/DC combiner boxes and cables are included in the system?

**Answer:**

- **Single phase**
- **Based on the installed system, usually for 5kw.h , 24VDC battery system and 90% inverter's efficiency , (The battery can last approximately 6.5 hours)**
- **Galvanized (flexibility in installation )**
- **Earthing (separated system ) usually using existing one in station**
- **Full combiner box : ( AC breaker x2 (for in-out of EDL) , DC breaker x2 ( for battery and panels , Port fuse and fuse x 2 ( for panels , double safety ) ,contactor ( modular )**

3. Do we need to quote an MCCB with DSE control panel?

**Answer: usually we add separated protections ( phase and current ) relays**

4. The power cables are NYY or another type?

**Answer: yes ( low-voltage power cable ,600/1000V)**

5. The cable trays should be galvanized? Should we price the cover also?

**Answer: based on application , for power cable usually yes galvanized and for sensors maybe a separated galvanized one or plastic type to avoid the interference, and absolutely all with covers**

6. Item #10, should be priced per I/O?

**Answer: Yes.**

7. Regarding ATS:

- Are they 3 poles or 4 poles?
- ATS greater than 350 hp, how much greater?

**Answer:**

- **4 Pole**
- **3500 A , around 2300hp**