

# Integration of Atlas Copco Air Compressors to DCS For BEMCO/SEC Qurrayah Power Plant-Phase II

**Power Generation**

Instrument Air Supply

Compressor Control



**Contact:**

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**Founding year:**

1999

Solution  
Partner



Automation

**Solution Partner:** Prudent Solutions WLL

**Customer:** Atlas Copco - BEMCO

**Segment:** Power Generation

## Requirements of the customer:

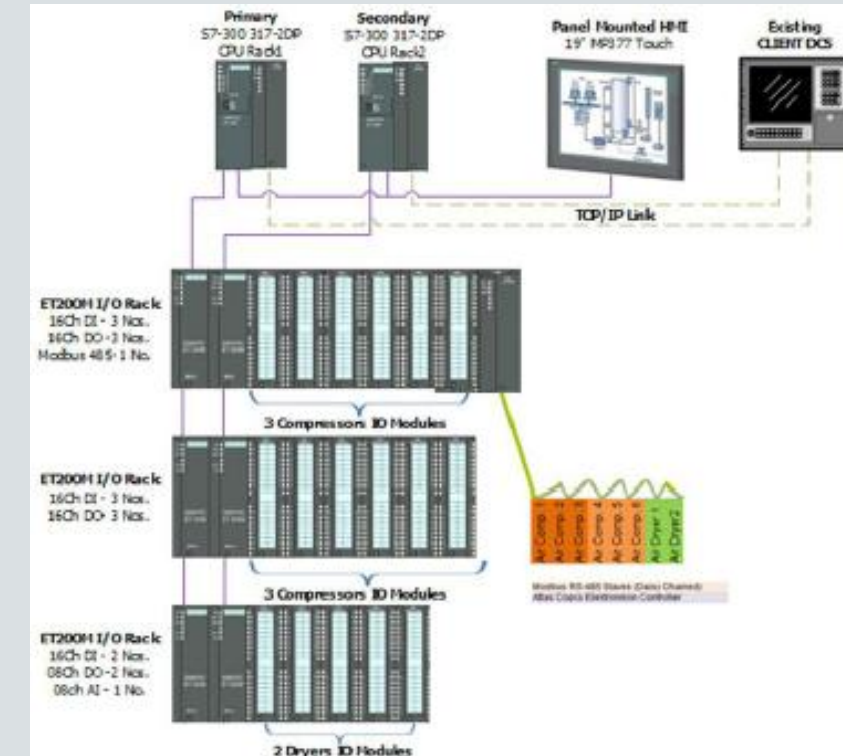
- New Instrument Air / Service Air Compressors & Dryers are being installed in the power plant, which requires a local PLC Station to interface them with GE DCS for Remote Operations, Interlocking, Sequencing, Monitoring & Alarming.
- New PLC shall receive present status of equipment via hardwired Digital / Analog signals as well as via Modbus. Current Status of equipment's to be monitored locally by HMI.
- New PLC shall send all status of compressor/dryers via Redundant Modbus RS-485, DCS can control the loading / unloading / local / remote Start / Stop of equipment via hardwired and Modbus Signal.



## Short description of the solution

Redundant S7-300 CPU with Simplex I/O's on ET-200M and MP-377 on Profibus-DP.

Communication to DCS on Dual Modbus RS-485 link



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## Implementation by the Solution Partner:

- One Common PLC for all Compressors and Dryers for Logic interlocks, sequencing and data mapping.
- Dual Modbus Slave Communication modules for Redundant Communication with DCS
- Monitoring status of equipment's, change loading / unloading set-points locally via 19" Touch Screen HMI - WinCC Flexible



## Benefits for the customer:

- Proven S7-300 technology
- Redundant CPU, Power Supply, Communication Interface provides High Availability
- Combination of Hardwired and RS485 Network provides High Reliability for important real time signal interchange
- High level Diagnostics & Ease of Maintenance

