three-term control and other control routine components as required by the specification.

E. The RTU shall be capable of routine signal processing including integration, summation, subtraction and totalisation of one or more inputs.

F. The RTU shall be capable of executing sequential control logic. Programming of sequential control shall be by means of high-level function blocks as defined in BSEN 61131-3. The programming language used shall be in ladder diagram format and/or FBD as appropriate to the engineers responsible for the operation and maintenance.

G. The RTU's shall have standalone capability, able to continue monitoring equipment and executing control loops if the communication link to the master station fails. In the event of such a failure the RTU shall log all alarms and required analogues until all the total memory is filled. When the communication link is restored the RTU will automatically upload the logged data to the data archiving system.

H. The RTU's shall have a watchdog function and full self-diagnostics capable of detecting and reporting faults to the master station and displayed locally.

I. The RTU shall be fully factory programmed, tested and tagged. It shall be possible to modify the programs remotely by downloading from the engineer's terminal with and without shutting down the RTU.

J. The RTU programming languages shall be strictly compliant with BSEN 61131-3.

Data Recording and Storage

1.3.23.10 Analogue variables

Sufficient capacity shall be provided to store in a fully tagged form the instantaneous, maximum, minimum and averaged value of each analogue, as well as pulse inputs at each RTU's. The period between samples shall be configurable, the default being 15 minutes for which storage shall be available for a minimum of 7 days. When the analogue storage is 80% full, the RTU shall contact the corresponding control centre to transfer the stored data.

1.3.23.11 Events

The memory capacity shall be sufficient to store, all events (including alarms). The memory shall be sized to allow a minimum of 20 events per input and output from each RTU with a minimum of 1000 events, per 24 hours. 7 days of storage shall