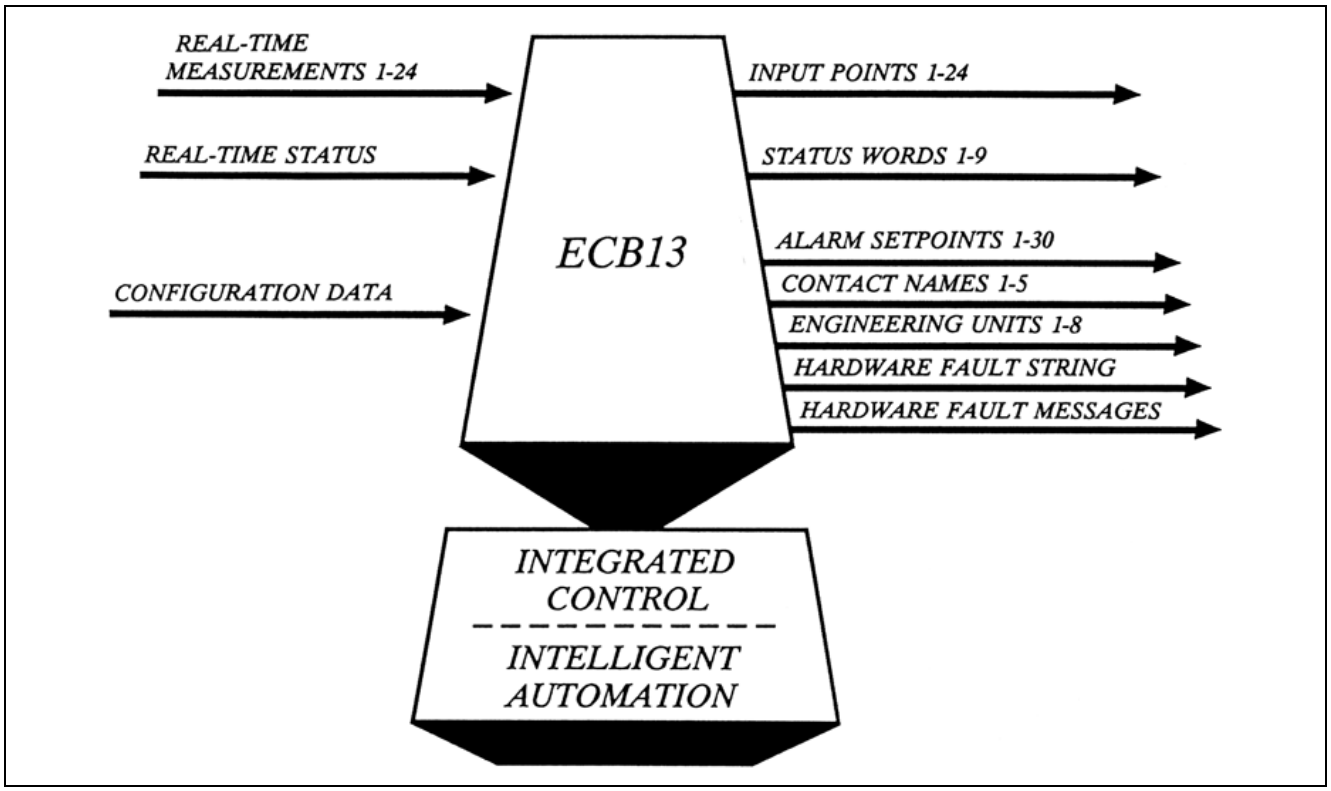
I/A Series® Software
Hydrostatic Tank Gauge
Window Equipment Control Block (ECB13)



The Window Equipment Control Block (ECB) supporting the Hydrostatic Tank Gauge directly receives HTG measurement values, status conditions, and select configuration data for input to process monitoring.

OVERVIEW

The Window ECB supporting the Hydrostatic Tank Gauge Interface (ECB13) reads up to 24 tank measurements and 9 status inputs via the Hydrostatic Tank Gauge Interface Unit (HIU) each scan cycle. Alarm setpoints are read from the HIU configured database. Both the dynamic and the non-dynamic data are then made available as input points to the process.

A bypass feature allows each input point to process monitoring to be set manually for control simulation or hardware checkout. When the bypass feature is used, the ECB continues to maintain the “device” value for use when the bypass feature is switched off.

Bad measurement detection is available upon detection of an HTG/HIU hardware fault condition or a communication failure. Last good value retention is optionally available when bad measurements are detected.

Measurement and state alarming as well as message generation are handled by local alarm and message blocks (MEALM, STALM, MSG) connected to the measurement values, alarm setpoints, and status outputs provided by ECB13. Engineering units and contact point names from the configuration database are also available for alarm and message generation.

Tank measurements include:

- net mass
- gross mass
- net volume
- gross volume
- available volume
- level
- density
- reference density
- liquid temperature
- time to fill
- air density
- vapor density
- pressure (1-3)
- flow rate
- density rate change
- vapor specific gravity
- reference temperature
- water level
- auxiliary reference density
- sensor temperature (1-3)

Alarm setpoints include:

- high-high level
- high and low levels
- liquid temperature high and low
- high and low density
- high and low water level
- high and low transmitter temperature (1-3)
- high and low transmitter pressure (1-3)
- high and low product flow
- rate-of-change product density
- mass deviation

STANDARD FEATURES

- Up to 24 input points for monitoring the process
- Bypass option for manual manipulation of individual measurements for control simulation
- Alarm setpoints and names for engineering units for connection to local alarm blocks
- Number of status conditions (general, alarm, and hardware) and contact input names for connection to local alarm and message blocks
- Settable (enable/disable) alarm detection controls (mass deviation alarm and authorized/unauthorized movement, density rate-of change alarm, flow rate alarm)
- Settable (allow/disallow) product inbound and outbound movements
- Settable high and low flow setpoints
- Bad measurement detection

OPTIONS

- Security option for select actions
- Last good value retention

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