

# Onyx

## DATA SHEET

### Model

Si-TEC *Xtend* remote display

- 12" ONYX HMI - Touch Screen
- 15" ONYX HMI - Touch Screen



### Description

The Si-TEC ONYX is the top of the range remote display option from HEINZMANN Australia and is dedicated to their full range of Si-TEC *Xtend* controllers. Featuring a 12" or 15" flat capacitive touch screen, you can be sure the operator is receiving precise turbine and generator information at the touch of a finger, and in real-time. The high definition graphics are extremely clear and informative, with the touch screen response time and interface making it very easy to use. The operator and engineering login access are password protected, preventing accidental or unauthorised personnel from operating the machine.

Si-TEC (Smart Integrated Turbine & Engine Control) is the world's only digital governor fully integrated with an automatic synchroniser and kW / kVAr control.

With more than 4000 Si-TEC systems now in operation globally, the ONYX provides a further enhancement of this already successful product. The ONYX is typically used in conjunction with Si-TEC *Xtend* CGC control module for steam turbine generator applications including power stations, sugar mills, paper mills, process plants, refineries, etc.

### Application range

Used with Si-TEC *Xtend* controls in

- Sugar, mining and general industry
- Remote communications
- Hospital
- Commercial buildings
- Defense & telecommunications facilities
- Refining and petrochemical industry
- Oil & gas industry

### Key features

Remote display of Si-TEC *Xtend* CGC

12" or 15" flat "capacitive" touch screen

Turbine operation and configuration password protected

Clear and precise visual representation of all turbine and generator parameters

Real-time information from Si-TEC *Xtend* controller updated instantly to ONYX display

No requirement for external logic switches reducing wiring interface

Turbine monitoring (including inlet pressure, exhaust pressure, extraction pressure, etc.)

Range of alarm functions logic status and event log

Easy navigation of all information pages and turbine control functions

## Features

- The ONYX HMI touch screen is a dedicated remote display unit for the Si-TEC *Xtend* control range (via RS-232 interface), and is suitable for mounting on the system control panel. A high-resolution 12" or 15" capacitive LCD touch screen allows operators to view real-time turbine and generator information from the Si-TEC *Xtend*.
- The ONYX HMI touch screen eliminates the requirement for external logic switches to operate the turbine, reducing the wiring interface and costs while increasing available control panel real-estate.
- Turbine monitoring features including turbine speed, inlet pressure, exhaust pressure, extraction pressure, lube oil pressure, turbine temperature and control voltage.
- Metering of all essential generator parameters that include generator voltage, frequency, current, real power, power factor (lag & lead), generator & mains CB statuses. This further reduces the need for conventional meters and transducers.
- Live control overview, steam map and start sequence pages showing all current control set points and measured values for improved turbine operation and diagnostics
- Compatibility with other Si-TEC *Xtend* products such as PCU, mini Rio, and Temperature Scanner via Si-TEC *Xtend* CAN bus interface.
- Alarms including audible, visual, pre-warn & shutdown. Status from Si-TEC *Xtend* which includes current alarms and alarm history. A CSV file can be exported via USB.
- Event log for all essential control functions including turbine start/stop, CB status, operator and engineer logins. The entire event log can also be exported via USB in CSV format.

## Inputs/outputs

- Power supply 24 VDC nominal (18 – 32 VDC)
- 2× serial ports (12") or 4× serial ports (15")
- 2× Ethernet (Modbus TCP-IP) LAN ports
- 3× USB ports
- 1× HDMI output (for external monitors)

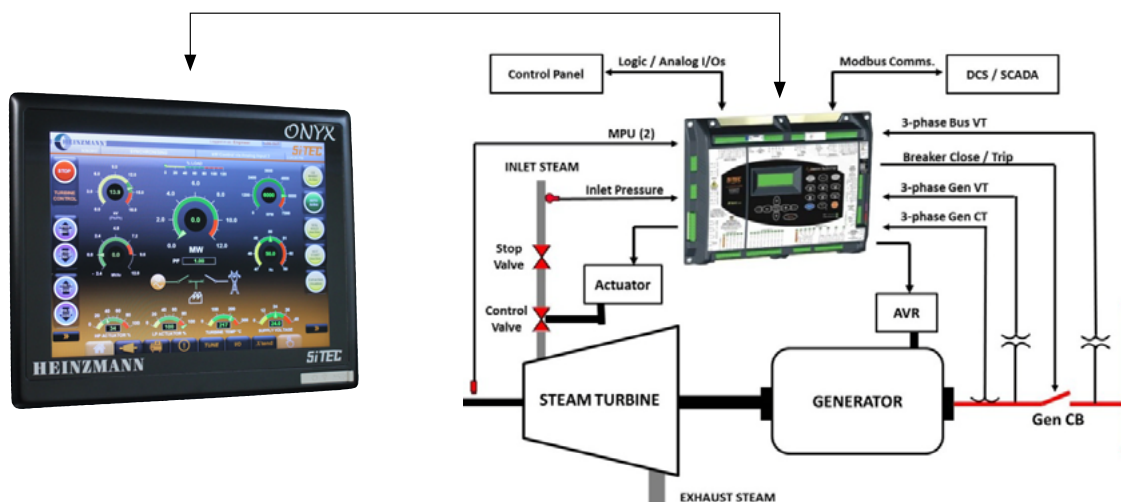
## Environment

- Operating temperature range: 0 °C ... +60 °C (fanless)
- Ingress protection IP65 (front panel only)

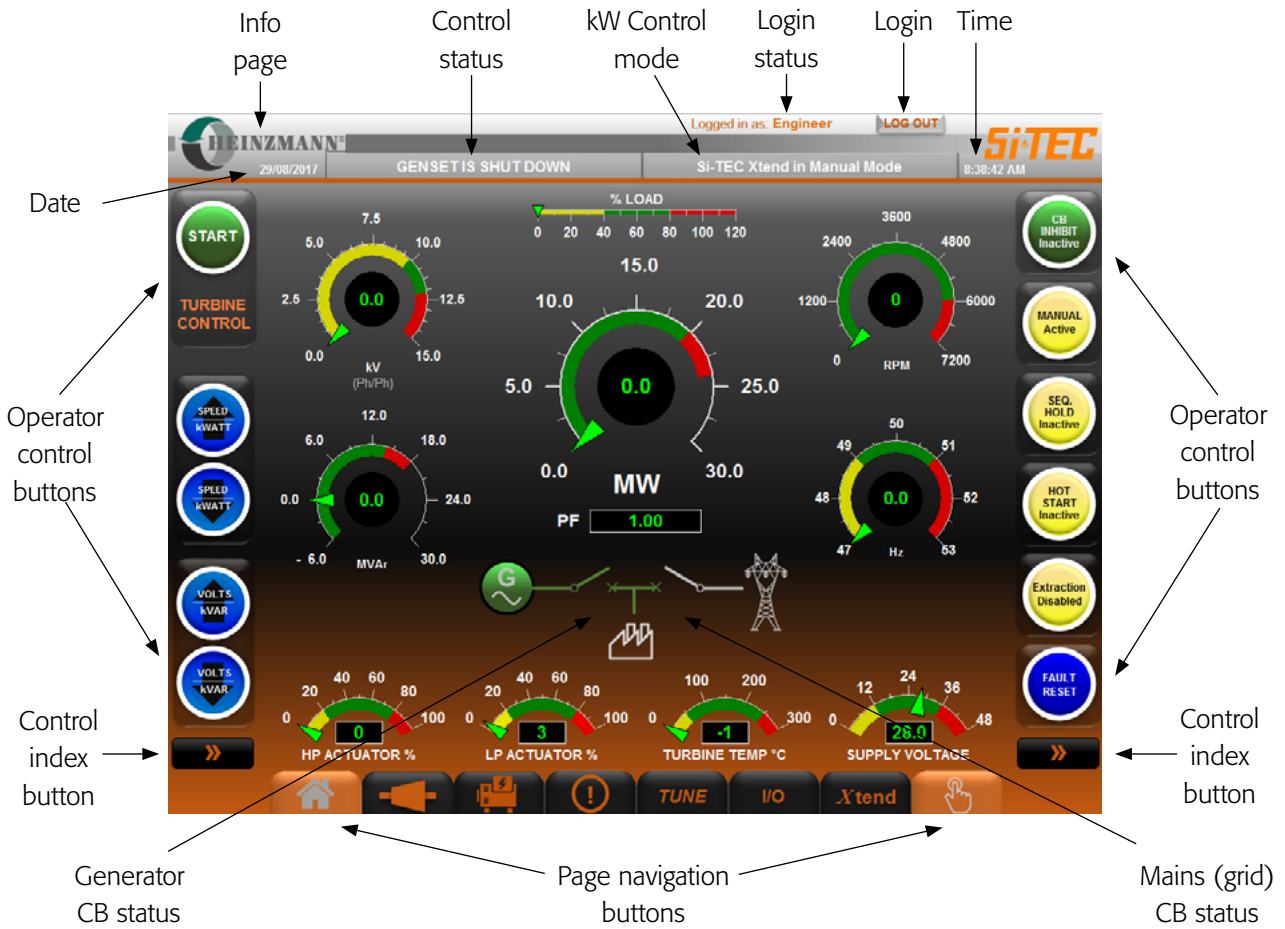
## Key functions

- Multiple user logins including:
  - Guest (no login required) allows for monitoring on pages only no operational keys available
  - Operator (password protected) allows operation of turbine but does not allow configuration changes to the Si-TEC controller
  - Engineer (password protected) allows full function of touch screen and Si-TEC controller configuration changes
- Operator control keys including start/stop, speed/kW raise & lower, voltage/kVar raise & lower, process raise & lower, extraction raise & lower, CB inhibit, auto/manual, sequence hold, hot start, fast rate, base load 1, process enabled, kW re-rate, enable extraction, cault reset and enable OST (with password protection)
- Si-TEC *Xtend* & ONYX information page, date and time settings, temperate units (°C or °F), user definable text settings for alarm and trip functions

## Application overview



# ONYX function overview



# ONYX physical dimensions (mm) - 12" & 15" front & side view

