

Annunciation, Remote Monitoring, Control Industrial Control Panels



ADVANCED POWER
TECHNOLOGIES



Solution Brochure

Digital Remote Annunciation



Figure 1: Digital Remote Annunciator & Control Panel
316 Stainless Steel NEMA 4X Enclosure



Figure 2: 5.7" Remote Annunciator
Digital Color Touchscreen

Customized Digital Remote Annunciator Panel

- UL Listed Industrial Control Panel
- Wall-mount
- APT annunciators customized & configured for your specific application
- Annunciation Displays:
 - Discrete LED's
 - 20" or smaller Color touchscreen
- Digital Touchscreen Displays
 - Displays EMCP information acquired via EMCP MODBUS datalink
 - Frequency
 - Vab, Vbc, Vca
 - Ia, Ib, Ic
 - kW
 - Oil Pressure (PSI)
 - Coolant Temp (deg F)
 - Battery Voltage
 - Engine Speed (RPM)
 - Operating hours
- Annunciate virtually anything that has a dry contact, or a Modbus address
 - Generator Sets
 - ATS's
 - Doors
 - HVAC systems
 - Temperatures
 - Pressures
- Include basic controls:
 - ESTOP Pushbutton
 - Start/Stop Switch
- Annunciators can be provided in a separate control cabinet, or as an integral part of an APT system
- We'll work with you to determine what features and how to best annunciate the items you wish to monitor

Local & Remote Analog Monitoring & Control



Figure 3: 25HP Motor Starter Control & Analog Annunciator Panel NEMA 1



Figure 4: Motor Control & Annunciator Panel Interior NEMA 1

Analog Monitoring & Control Panels

- Scalable for your application
- Annunciates:
 - Status
 - Pre- Alarm
 - Shutdown
- Option to receive an email with alarm indication
- Lamp test pushbutton
- Alarm acknowledge pushbutton
- Emergency stop pushbutton
- Alarm Horn
- Ringback feature
 - Upon alarm, light flashes and horn sounds until acknowledged, which steadies the light and silences the horn
 - Lamp extinguishes once alarm input normalizes



Figure 5: APT Hybrid Electric Bus Charging Panel NEMA 1

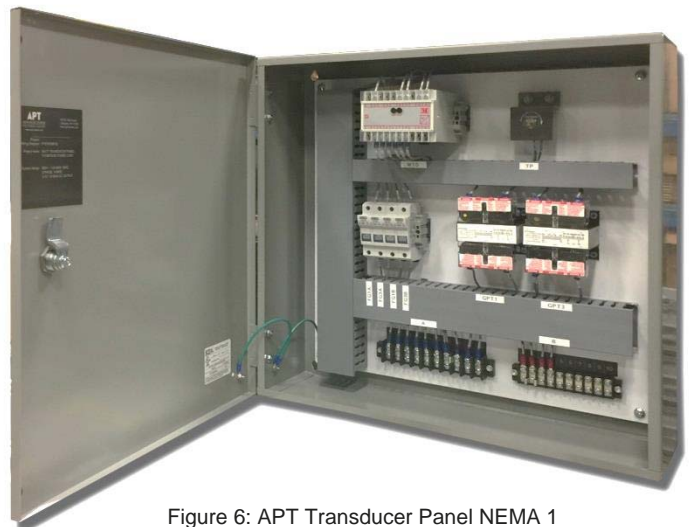


Figure 6: APT Transducer Panel NEMA 1

Local Generator Monitoring & Control



Figure 7: APT Generator Monitoring & Control Panel NEMA 1



Figure 8: Generator Monitoring & Control Interior



Figure 9: Generator Monitoring & Control Panel with Analog & Digital Metering & Relays

Local Generator Monitoring & Control Panels

- Application Configurations:
 - Single Generator Power Distribution & Protection
 - Pyrometer w/ Thermocouples Selector Switch
 - Automatic Paralleling of Multiple Generators
 - Inhibits Closing of Multiple Generators to a Dead Bus Simultaneously
 - First Up - First On Logic connects first available Generator that builds up voltage and frequency to a Dead Bus
 - Manual Paralleling Controls
 - Synch Check Relay
 - Synch Lights
 - Sustained Utility-Generator Paralleling Operation
 - Facility Load Shed
- Complete Generator Protection
- Complete Generator & Bus Metering
- Start/Stop Interface
- Direct Sensing Up to 690V (No Switchgear PTs Required)
- SCADA-ready Modbus Comm. Port for Monitoring & Control



Figure 10: Generator Monitoring & Automatic Paralleling Control Panel with Analog & Digital Controls

Remote Generator Monitoring & Control



Figure 11: APT Emergency Power Monitoring Panel for Three Automatic Transfer Switches & CAT Generators



Figure 12: APT Emergency Power Monitoring Panel for Three Automatic Transfer Switches & One Cummins Generator

Remote Generator & ATS Annunciators & Control Panel

- Three position Engine Control Switch (run/start, off/reset, auto)
- Voltage adjust rheostat or switch
- Indicating lamps (Discrete LED's)
 - Status (Green Indicating LED)
 - Panel Energized
 - Engine Ready
 - Alarms (Amber Indicating LED)
 - Common Alarm
 - Engine Off
 - Shutdowns (Red Indicating LED)
 - Emergency Stop
- APT standard 100W, 120VAC to 24VDC Power Supply
- Unwired terminal blocks for customer use
- Din rail mountable ATS Ride through Capacitor
- Wired to mounted Annunciators
- ATS Annunciators
- Generator Annunciators
- Optional Analog Circuit breaker Control
- Fiber/Ethernet Communications Converter
- Custom Application Identification Labels