

# Transfer Switch Logic Family



ATC-100R



ATC-400



ATC-600



ATC-800

|                                        |                                                                                               |                                                                                                    |                                                                                                                |                                                                                                                |
|----------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| System Application Voltage             | 120/240V, 208V 1 phase                                                                        | Up to 600Vac                                                                                       | Up to 600Vac                                                                                                   | Up to 600Vac                                                                                                   |
| Product Specifications                 |                                                                                               |                                                                                                    |                                                                                                                |                                                                                                                |
| Voltage                                |                                                                                               |                                                                                                    |                                                                                                                |                                                                                                                |
| Voltage Measurements of:               | Source 1 and 2                                                                                | Source1 and 2 - VAB,VBC and VCA                                                                    | Source1, 2 and Load - VAB,VBC and VCA                                                                          | Source 1, 2 and Load - VAB,VBC and VCA                                                                         |
| Voltage Measurement Range              | 120 - 240Vac                                                                                  | 0 - 790Vac rms                                                                                     | 0 - 790Vac rms                                                                                                 | 0 - 790Vac rms                                                                                                 |
| Voltage Measurement Accuracy           | ±2% of nominal                                                                                | ±1% of nominal                                                                                     | ±2% of nominal                                                                                                 | ±2% of nominal                                                                                                 |
| Undervoltage Dropout Range             | 80% of nominal                                                                                | 50% - 97% of nominal                                                                               | 50% - 97% of nominal                                                                                           | 50% - 97% of nominal                                                                                           |
| Undervoltage Pickup Range              | 90% of nominal                                                                                | Dropout ±2% to 99% of nominal                                                                      | Dropout ±2% to 99% of nominal                                                                                  | Dropout ±2% to 99% of nominal                                                                                  |
| Overvoltage Dropout Range              | n/a                                                                                           | 105% - 120% of nominal                                                                             | 105% - 120% of nominal                                                                                         | 105% - 120% of nominal                                                                                         |
| Overvoltage Pickup Range               | n/a                                                                                           | 103% of nominal to dropout -2%                                                                     | 103% of nominal to dropout -2%                                                                                 | 103% of nominal to dropout -2%                                                                                 |
| Frequency                              |                                                                                               |                                                                                                    |                                                                                                                |                                                                                                                |
| Frequency Measurements of:             | Source 2                                                                                      | Source 1 and 2                                                                                     | Source 1 and 2                                                                                                 | Source 1 and 2                                                                                                 |
| Frequency Measurement Range            | 50 - 60Hz                                                                                     | 40 - 70 Hz                                                                                         | 40 - 80 Hz                                                                                                     | 40 - 80 Hz                                                                                                     |
| Frequency Measurement Accuracy         | ±0.3 Hz                                                                                       | ±0.3 Hz                                                                                            | ±0.1 Hz                                                                                                        | ±0.1 Hz                                                                                                        |
| Underfrequency Dropout Range           | 56Hz                                                                                          | 90% - 97% of nominal                                                                               | 90% - 97% of nominal                                                                                           | 90% - 97% of nominal                                                                                           |
| Underfrequency Pickup Range            | 58Hz                                                                                          | Dropout +1Hz to 99% of nominal                                                                     | Dropout +1Hz to 99% of nominal                                                                                 | Dropout +1Hz to 99% of nominal                                                                                 |
| Overfrequency Dropout Range            | n/a                                                                                           | 103% - 110% of nominal                                                                             | 100% - 120% of nominal                                                                                         | 100% - 120% of nominal                                                                                         |
| Overfrequency Pickup Range             | n/a                                                                                           | 101% of nominal to dropout -1Hz                                                                    | 101% of nominal to dropout -1Hz                                                                                | 101% of nominal to dropout -1Hz                                                                                |
| Control Power                          |                                                                                               |                                                                                                    |                                                                                                                |                                                                                                                |
| Input Range                            | n/a                                                                                           | 65Vac - 145Vac rms, 50/60Hz                                                                        | 65Vac - 160Vac rms, 50/60Hz                                                                                    | 65Vac - 160Vac rms, 50/60Hz                                                                                    |
| Inputs                                 |                                                                                               |                                                                                                    |                                                                                                                |                                                                                                                |
| Front Panel Input Pushbuttons          | Internal “Set Exerciser” pushbutton                                                           | Engine Test, Step, Help, Lamp Test, Increase, Decrease, Reset                                      | Engine Test, Display Select, Step, Help, Increase, Decrease, Reset                                             | Engine Test, Display Select, Step, Help, Increase, Decrease, Reset                                             |
| Input Contacts                         |                                                                                               |                                                                                                    |                                                                                                                |                                                                                                                |
| Source 1 Closed                        | n/a                                                                                           | Yes                                                                                                | Yes                                                                                                            | Yes                                                                                                            |
| Source 2 Closed                        | n/a                                                                                           | Yes                                                                                                | Yes                                                                                                            | Yes                                                                                                            |
| Lockout                                | n/a                                                                                           | Yes                                                                                                | Yes                                                                                                            | Yes                                                                                                            |
| Go to Emergency                        | n/a                                                                                           | Yes                                                                                                | Yes                                                                                                            | Yes                                                                                                            |
| Bypass TDNE/TDEN                       | n/a                                                                                           | Yes                                                                                                | Yes                                                                                                            | Yes                                                                                                            |
| Monitor Mode                           | n/a                                                                                           | Yes                                                                                                | Yes                                                                                                            | Yes                                                                                                            |
| Go to Neutral                          | n/a                                                                                           | Yes                                                                                                | Yes                                                                                                            | Yes                                                                                                            |
| Manual Re-Transfer                     | n/a                                                                                           | Yes                                                                                                | Yes                                                                                                            | Yes                                                                                                            |
| Emergency inhibit                      | n/a                                                                                           | Yes                                                                                                | Yes                                                                                                            | Yes                                                                                                            |
| Run / Programming Toggle Switch        | n/a                                                                                           | Yes                                                                                                | Yes                                                                                                            | Yes                                                                                                            |
| Output Contacts                        |                                                                                               |                                                                                                    |                                                                                                                |                                                                                                                |
| Form “A” for Generator Start           | (1) 5A, 250Vac/30Vdc                                                                          | (1) 5A, 250Vac/30Vdc                                                                               | (2) 5A, 250Vac/30Vdc                                                                                           | (2) 5A, 250Vac/30Vdc                                                                                           |
| Form “C” for Generator Start           | n/a                                                                                           | n/a                                                                                                | n/a                                                                                                            | n/a                                                                                                            |
| Form “A” for Control                   | n/a                                                                                           | (4) 10A, 250Vac/30Vdc                                                                              | (4) 10A, 250Vac/30Vdc                                                                                          | (4) 10A, 250Vac/30Vdc                                                                                          |
| Form “C” for Source 1 and 2 Available  | n/a                                                                                           | (2) 10A, 250Vac/30Vdc                                                                              | (2) 10A, 250Vac/30Vdc                                                                                          | (2) 10A, 250Vac/30Vdc                                                                                          |
| Form “C” for Alarm                     | n/a                                                                                           | (1) 10A, 250Vac/30Vdc                                                                              | (1) 10A, 250Vac/30Vdc                                                                                          | (1) 10A, 250Vac/30Vdc                                                                                          |
| Form “C” for Pre-Transfer              | n/a                                                                                           | (1) 10A, 250Vac/30Vdc                                                                              | n/a                                                                                                            | n/a                                                                                                            |
| Front Panel Indication                 |                                                                                               |                                                                                                    |                                                                                                                |                                                                                                                |
| LED Indication                         | n/a                                                                                           | Unit Status. Source 1 and 2 - Available and Connected (5 total)                                    | Automatic, Test and Program Mode. Source 1 and 2 Available, Connected and Preferred. Load Energized (10 Total) | Automatic, Test and Program Mode. Source 1 and 2 Available, Connected and Preferred. Load Energized (10 Total) |
| Main Display                           | n/a                                                                                           | LCD Display                                                                                        | LED Display and LED Indication                                                                                 | LED Display and LED Indication                                                                                 |
| Parameters Displayed                   | n/a                                                                                           | Voltage, Frequency, Status, History, Time, Date, Set Points, Help Information                      | Voltage, Frequency, Status, Load, History, Time, Date, Set Points, Help Information                            | Voltage, Frequency, Status, Load, History, Time, Date, Set Points, Help Information                            |
| Display Language                       | n/a                                                                                           | English                                                                                            | English                                                                                                        | English                                                                                                        |
| Communications Capable                 | n/a                                                                                           | PONI                                                                                               | PONI / INCOM                                                                                                   | PONI / INCOM                                                                                                   |
| Enclosure Compatibility                | Nema 1and 3R                                                                                  | NEMA 1, 12 and 3R, UV Resistant Faceplate                                                          | NEMA 1, 12, 3R, and 4X UV Resistant Faceplate                                                                  | NEMA 1, 12, 3R, and 4X UV Resistant Faceplate                                                                  |
| Operating Environmental Range          | Operation -20°C to +70°C, Storage -30°C to +85°C, Humidity 0% - 95% relative (non-condensing) | Operation -20°C to +70°C, Storage -30°C to +85°C, Humidity 0% - 95% relative (non-condensing)      | Operation -20°C to +70°C, Storage -30°C to +85°C, Humidity 0% - 95% relative (non-condensing)                  | Operation -20°C to +70°C, Storage -30°C to +85°C, Humidity 0% - 95% relative (non-condensing)                  |
| Applicable Standards                   | UL 1008, CSA                                                                                  | UL 1008, UL 991, FCC Part 15, CISPR 11, IEC 1000-2,3,4,5, CE, CSA, UBC and BOCA for Seismic Zone 4 | UL 1008, UL 991, FCC Part 15, CISPR 11, IEC 1000-2,3,4,5, CE, CSA, UBC and BOCA for Seismic Zone 4             | UL 1008, UL 991, FCC Part 15, CISPR 11, IEC 1000-2,3,4,5, CE, CSA, UBC and BOCA for Seismic Zone 4             |
| Programming Selections                 |                                                                                               |                                                                                                    |                                                                                                                |                                                                                                                |
| Time Delay Normal to Emergency         | 3 seconds - fixed                                                                             | 0 - 1800 seconds                                                                                   | 0 - 1800 seconds                                                                                               | 0 - 1800 seconds                                                                                               |
| Time Delay Emergency to Normal         | 7 minutes fixed                                                                               | 0 - 1800 seconds                                                                                   | 0 - 1800 seconds                                                                                               | 0 - 1800 seconds                                                                                               |
| Time Delay Engine Cooldown             | 5 minutes - fixed                                                                             | 0 - 1800 seconds                                                                                   | 0 - 1800 seconds                                                                                               | 0 - 1800 seconds                                                                                               |
| Time Delay Engine Start                | 10 seconds - fixed                                                                            | 0 - 120 seconds                                                                                    | 0 - 120 seconds                                                                                                | 0 - 120 seconds                                                                                                |
| Time Delay Neutral                     | n/a                                                                                           | 0 - 120 seconds                                                                                    | 0 - 120 seconds or based on load voltage decay of 2% - 30% of nominal                                          | 0 - 120 seconds or based on load voltage decay of 2% - 30% of nominal                                          |
| Time Delay Emergency Fail              | n/a                                                                                           | 0 - 6 seconds                                                                                      | 0 - 6 seconds                                                                                                  | 0 - 6 seconds                                                                                                  |
| Closed Transition Operation            | n/a                                                                                           | n/a                                                                                                | n/a                                                                                                            | Enabled or Disabled                                                                                            |
| Closed Transition Voltage Difference   | n/a                                                                                           | n/a                                                                                                | n/a                                                                                                            | 1% - 5% of nominal                                                                                             |
| Closed Transition Frequency Difference | n/a                                                                                           | n/a                                                                                                | n/a                                                                                                            | 0.0 to 0.3 Hz                                                                                                  |
| In Phase                               | n/a                                                                                           | Enabled or Disabled                                                                                | Enabled or Disabled                                                                                            | Enabled or Disabled                                                                                            |
| In Phase Frequency Difference          | n/a                                                                                           | 0.0 to 3.0 Hz                                                                                      | 0.0 to 3.0 Hz                                                                                                  | 0.0 to 3.0 Hz                                                                                                  |
| Synchronization Time Allowance         | n/a                                                                                           | 1 - 60 minutes                                                                                     | 1 - 60 minutes                                                                                                 | 1 - 60 minutes                                                                                                 |
| Load Sequencing                        | n/a                                                                                           | n/a                                                                                                | Up to 10 Devices (via sub-network)                                                                             | Up to 10 Devices (via sub-network)                                                                             |
| Pre-Transfer Signal                    | n/a                                                                                           | 1 - 120 seconds (Form “C” Contact)                                                                 | 0 - 120 seconds ( Up to 10 Devices via sub-network)                                                            | 0 - 120 seconds ( Up to 10 Devices via sub-network)                                                            |
| Plant Exerciser                        | Selectable day, 7 day interval,15 minutes run time, No Load                                   | Selectable - disabled, daily or 7, 14, 28 day intervals, 0 - 600 minutes, Load or No Load          | Selectable - disabled or 7 day interval, 0 - 600 minutes, Load or No Load                                      | Selectable - disabled or 7 day interval, 0 - 600 minutes, Load or No Load                                      |
| Preferred Source Selection             | n/a                                                                                           | n/a                                                                                                | Source 1 or 2 or None                                                                                          | Source 1 or 2 or None                                                                                          |
| System Sensing                         | 1 phase                                                                                       | 3 phase or 1 phase                                                                                 | 3 phase or 1 phase                                                                                             | 3 phase or 1 phase                                                                                             |
| PT Ratio                               | n/a                                                                                           | 2:1 to 500:1                                                                                       | 2:1 to 500:1                                                                                                   | 2:1 to 500:1                                                                                                   |
| Number of Generators                   | 0 or 1                                                                                        | 0 or 1                                                                                             | 0 to 2                                                                                                         | 0 to 2                                                                                                         |
| Commitment to Transfer in TDNE         | n/a                                                                                           | Enabled or Disabled                                                                                | Enabled or Disabled                                                                                            | Enabled or Disabled                                                                                            |
| Re-Transfer Mode                       | n/a                                                                                           | Automatic or Manual                                                                                | Automatic or Manual                                                                                            | Automatic or Manual                                                                                            |
| Test Pushbutton Mode                   | n/a                                                                                           | Disabled, Load, No Load                                                                            | Disabled, Load, No Load                                                                                        | Disabled, Load, No Load                                                                                        |
| System Selection                       | Utility/Generator or Dual Utility                                                             | Utility/Generator or Dual Utility                                                                  | Utility/Generator or Dual Utility or Dual Generator                                                            | Utility/Generator or Dual Utility or Dual Generator                                                            |

Features are order specific. Not all features are supplied as standard.  
Some contacts are utilized as standard and are not available for customer connection.

