



# Technologic® Intelligent Pump Controller Start-Up Genie Parameters:

The Start-Up Genie is the fastest way to accurately program an IPC. However, when fine tuning is required, users may use the parameters in the main menu of the IPC. The table below is a cross reference between the Genie settings and their corresponding parameters in the main menu.

## IPC GENIE MENU SCREEN:

### • Motor:

- Motor Power (HP): 1-21
- Motor Voltage: 1-22
- Motor Frequency: 1-23
- Motor Nominal Speed: 1-25
- Motor Current: 1-24
- Current Limit: 4-18
- Motor Type:
  - Surface:
    - Sleep Frequency/Low Limit: 4-12
  - Submersible:
    - Sleep Frequency/Low Limit: 4-12

### • Operating Mode:

- Single Pump: (continue on Application Type)
- Constant Slave: (Note: Pump 1 is the one for variable speed)
  - Number of Pumps: 25-06 (2 or 3)
    - Two Pumps: 05-4 R1 (for fixed-speed Pump 1)
    - Three Pumps: 05-4 R2 (for fixed-speed Pump 2) and 540.1 (for fixed-speed P3)
  - Run Time Equalization: 25-04
  - Staging Bandwidth: 25-20
  - SBW Staging Delay: 25-23
  - SBW Destaging Delay: 25-24
- Duplex Control:
  - Duty StandBy: 5-13, 5-31
  - Lag pump start frequency: 5-4\* (5-40.0, 5-40.1) (5-41.0, 5-41.1)
  - Alternation: 25-50, Smart Logic (13-44.0)
  - Alternation Time: 25-52, Smart Logic (13-20.0)
  - Pump Exercise Time: 22-40
  - Start Delay: 1-71

### • Speed Control:

- Speed Reference Source: 6-\*\* (Select the AI (53 or 54) you want to use and (Volts or Amps)
  - Terminal 53 Low Ref./Feedback: 6-14
  - Terminal 53 High Ref./Feedback: 6-15
  - Min Speed Reference: 3-02
  - Max Speed Reference: 3-03

### • Test Run Mode: 5-10 [14] Jog

- Test Run Speed: 3-11
- Test Run Ramp Time: 3-80

### • Application Type:

- Level Control:
  - Level control units: 20-12,20-05,20-08
  - Tank Fill or Tank Empty Application:
    - Fill: 20-81 (PID Normal)
    - Empty: 20-81 (PID Inverse)
    - Ramp Time: 3-41, 3-42, 3-52

### • Flow Control:

- Level control units: 20-12
- Ramp Time: 3-41 and 3-42

### • Constant Pressure:

- Pressure Control Units: 20-12
- Ramp Time: 3-41, 3-42, 3-51, 3-52

### • \*Autoset: \*Would you Like to Autoset the rest of the setting? (Calculation Values):

- Setpoint 1: 20-21 (50psi)
- Wake-up Ref./FB Difference: 22-44 =  $(5/20-21)*100$  (for Constant Pressure, Level Control and Duplex Control)
- Low Speed [Hz]: 22-33 =  $4-14*0.5$

- High Speed [Hz]:  $22-37 = 4-14 \times 0.85$
  - Low Speed Power [HP]:  $22-35 = 22-39 \times (22-33 / 4-14)^3$
  - High Speed Power [HP]:  $22-39 = 1-21 \times 4-18 \times 0.46$
- **Feedback:**
    - Control Feedback Sources: 20-00, 20-03, 20-06
    - Feedback 1,2,3
      - Feedback Function: 20-20
    - Low Feedback Value: 20-13
    - High Feedback Value: 20-14
    - Feedback Sensor Fault: 6-17
  - **Setpoint:**
    - Number of Setpoints: 5-15, 20-21, 20-22
  - **Flow Compensation: 22-80:**
    - Is the speed at the design point known?: 22-82
    - Square-linear Curve Approximation: 22-81
    - Speed at Design Point (Hz): 22-86
    - Speed at No-Flow (Hz): 22-84
    - Pressure at No-Flow Speed: 22-87
  - **Pump Protection**
    - Sleep Mode: 22-22, 22-23, Smart Logic (13-10.1)
    - Sleep Frequency: 4-12
    - Sleep Delay: 22-24
    - Restart Difference: 22-44
    - Minimum Run Time: 22-40
    - Minimum Sleep Time: 22-41
    - Flow Check Window:
      - Flow Check Low Time: Smart Logic (13-20.1)
      - Flow Check High Time: Smart Logic (13-20.0)
    - Run the No Flow Power Calibration Setup: 22-20
    - No Water/Loss of Prime: 22-21
    - No Water/Loss of Prime Limit: 22-39
    - No Water/Loss of Prime Restart: 22-26
    - No Water/Loss of Prime Protection Delay: 22-27
    - Under Pressure Function: 22-50
    - Under Pressure Delay Time: 22-51
    - Under Pressure Difference: 22-52
  - Setup Protection Through Digital Input 19: 5-11
  - Setup Pump Protection Through Digital Input 27: 5-12
  - Pump Protect Delay: 22-00
  - **Digital Input**
    - Terminal 19 Digital Input: 5-11
    - Terminal 27 Digital Input: 5-12
    - Terminal 29 Digital Input: 5-13
    - Terminal 32 Digital Input: 5-14
    - Terminal 33 Digital Input: 5-15
  - **Relay & Analog Output**
    - Relay Function:
      - Relay 1: 5-40.0
      - Relay 2: 5-40.1
      - Relay On Delay 1: 5-41.0
      - Relay On Delay 2: 5-41.1
      - Terminal 42 Output: 6-50
      - Terminal 42 Output Min: 6-51
      - Terminal 42 Output Max: 6-52
  - **Communication Setup**
    - Protocol: 8-30 (Modbus RTU, FC MC, FC, Metasys N2)
    - Address: 8-31
    - Baud Rate: 8-32
    - Parity/Stop Bits: 8-33
    - Minimum Response Delay: 8-35
    - Maximum Response Delay: 8-36
    - Maximum Inter-Char Delay: 8-37
    - Estimated cycle time: 8-34
    - Protocol: 8-30 (FLN)
      - Control Timeout Time: 8-03
      - Control Timeout Function: 8-04
    - Protocol: 8-30, BACnet (8-7\*)
      - Coasting Select: 8-50
      - BACnet Device Instance: 8-70
      - MS/TP Max Master: 8-72
  - **Copy to LCP:** 0-50 set to "All to LCP"
  - **Copy from LCP:** 0-50 set to "All from LCP"

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