

LONMARK Certified Programmable Controllers

| | ECL-103 | ECL-203 | ECL-253 | ECL-300 | ECL-350 | ECL-400 | ECL-403 | ECL-410 | ECL-413 | ECL-450 | ECL-453 | ECL-600 | ECL-610 | ECL-650 | ECx-400 | ECx-410 | ECx-420 | |
|---|----------------|----------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------|----------------|----------------|---|
| General | | | | | | | | | | | | | | | | | | |
| Controller Status LED | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Interactive color operator interface | | | ■ | | ■ | | | | | ■ | ■ | | | ■ | | | | ■ |
| Real-Time Clock | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | | | |
| DIN-Rail Mounting | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | | ■ | ■ | ■ |
| LONMARK Device Class | SCC Generic | SCC Generic | SCC Generic | SPD ¹ | SPD ¹ | SPD ¹ | SPD ¹ | SPD ¹ | SPD ¹ | SPD ¹ | SPD ¹ | SPD ¹ | SPD ¹ | SPD ¹ | | | | |
| Inputs | | | | | | | | | | | | | | | | | | |
| Universal (Software Configurable) | 4 | 6 | 6 | 10 | 10 | 12 | 12 | 12 | 12 | 12 | 12 | 16 | 16 | 16 | 12 | 12 | 12 | |
| 0-20mA/4-20mA (external 249Ω Resistance) | ■ | ■ | ■ | | | | | | | | | | | | | | | |
| 0-20mA/4-20mA (built-in 249Ω Resistance, Jumper Selectable) | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | |
| 50 Hz Pulse | | | | ■ ² | ■ ² | ■ ² | ■ ² | ■ ² | ■ ² | ■ ² | ■ ² | ■ ² | ■ ² | ■ ² | ■ ² | ■ ² | ■ ² | |
| Analog/Digital Converter (Bits) | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 | |
| EC-Smart-View Capability | 4 | 4 | 4 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | | | | |
| Wireless inputs ³ | 18 | 24 | 24 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | 28 | | | | |
| 15VDC Power Supply | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Outputs | | | | | | | | | | | | | | | | | | |
| Universal (Analog) | 2 | 3 | 3 | 8 | 8 | 12 | 4 | 12 | 4 | 12 | 4 | 12 | 12 | 12 | 12 | 12 | 12 | 0 |
| Digital/Analog Converter (Bits) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | |
| 0-20mA/4-20mA (Jumper Selectable) | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Digital (Triac 24 V AC) | 4 | 5 | 5 | | | | 8 | | 8 | | 8 | | | | | | | |
| Output LED Status Indicator | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| HOA Switch | | | | | | | | ■ | ■ | | | | ■ | | | | ■ | |
| Power Input | | | | | | | | | | | | | | | | | | |
| 24 VAC | ■ | | | | | | | | | | | | | | | | | |
| 24 VAC/VDC | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Power Status LED Indicators | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

1. SPD: "Static Programmable Device" LONMARK Device Class.
2. The first four inputs are software configurable for pulse counting; 50 Hz maximum frequency.
3. All controllers are Open-to-Wireless™ ready. Available when an optional Wireless Receiver is connected to the controller. Some wireless sensors may use more than one wireless input from the controller.



Programming – Configuration

EC-gfxProgram
Pre-Loaded Application

| | | | | | | | | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| ECL-103 | ECL-203 | ECL-253 | ECL-300 | ECL-350 | ECL-400 | ECL-403 | ECL-410 | ECL-413 | ECL-450 | ECL-453 | ECL-600 | ECL-610 | ECL-650 | ECx-400 | ECx-410 | ECx-420 |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

Communication

LonMark Certified
LonWorks TP/FT-10
Rx LED Indicators
Tx LED Indicators

| | | | | | | | | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| ECL-103 | ECL-203 | ECL-253 | ECL-300 | ECL-350 | ECL-400 | ECL-403 | ECL-410 | ECL-413 | ECL-450 | ECL-453 | ECL-600 | ECL-610 | ECL-650 | ECx-400 | ECx-410 | ECx-420 |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |

Objects

| | | | | | | | | | | | | | | | | | |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|----------------|----------------|
| Calendar Objects | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Schedule Objects | 2 | 2 | 2 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | |
| Loop (PID) | 8 | 8 | 8 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | |
| Constants | | | | | | | | | | | | | | | | | |
| - Boolean | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | |
| - Enumeration | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | 62 | |
| - Numeric | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | |
| Variables | | | | | | | | | | | | | | | | | |
| - Boolean | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | 124 | |
| - Enumeration | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | 54 | |
| - Numeric | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | 56 | |
| nciSetpoint | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Total Network Variables | 170 | 176 | 176 | 161 | 161 | 171 | 171 | 171 | 171 | 171 | 171 | 254 | 254 | 254 | | | |
| Network Variable Input (General Usage) | | | | | | | | | | | | | | | | | |
| - NVI Changeable Type, Up to 31 Bytes ⁴ | 50 | 50 | 50 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | |
| Network Variable Output (General Usage) | | | | | | | | | | | | | | | | | |
| - NVO Changeable Type, 31 Bytes | 50 | 50 | 50 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | 35 | |
| Hardware Input Network Variable | | | | | | | | | | | | | | | | | |
| - nvoHwInput per Hardware Input | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ ⁵ | ■ ⁵ | ■ ⁵ |
| Hardware Output Network Variable | | | | | | | | | | | | | | | | | |
| - nviHwOutput per Hardware Output | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ ⁵ | ■ ⁵ | ■ ⁵ |
| - nvoHwOutput per Hardware Output | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ ⁵ | ■ ⁵ | ■ ⁵ |

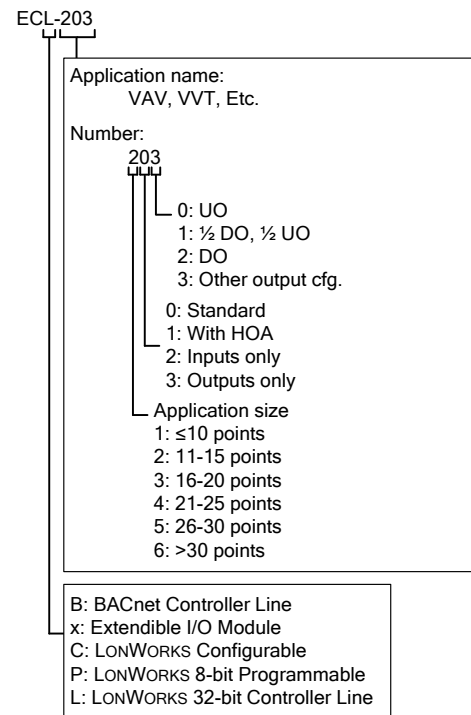
4. Any type of Fan-In function is supported in combination with the “FOR” loop function.
5. These Network Variables are managed by the ECL-600, ECL-610, or ECL-650 controller (master).



Recommended Applications

| | ECL-103 | ECL-203 | ECL-253 | ECL-300 | ECL-350 | ECL-400 | ECL-403 | ECL-410 | ECL-413 | ECL-450 | ECL-453 | ECL-600 | ECL-610 | ECL-650 | ECx-400 | ECx-410 | ECx-420 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 2 pipe Fan Coil | ■ | ■ | ■ | | | | | | | | | | | | | | |
| 2 pipe Fan Coil with Changeover Sensor | ■ | ■ | ■ | | | | | | | | | | | | | | |
| 4 pipe Fan Coil | ■ | ■ | ■ | | | | | | | | | | | | | | |
| Chilled Ceiling | ■ | ■ | ■ | | | | | | | | | | | | | | |
| Heat Pump | ■ | ■ | ■ | | | | | | | | | | | | | | |
| Unit Ventilator | ■ | ■ | ■ | | | | | | | | | | | | | | |
| Small Roof Top | | ■ | ■ | | | | | | | | | | | | | | |
| Medium Roof Top | | ■ | ■ | | | | ■ | | ■ | | ■ | | | | | | |
| Large Roof Top | | | | | | | ■ | | ■ | | ■ | | | | | | |
| Small Air Handling Unit | | ■ | ■ | ■ | ■ | | | | | | | | | | | | |
| Medium Air Handling Unit | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Large Air Handling Unit | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Multi-Zones Application | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Chillers | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Boiler | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Cooling Tower | | | | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ | ■ |
| Central Plant | | | | | | | | | | | | ■ | ■ | ■ | ■ | ■ | ■ |

Controller Naming Conventions:



Total Quality Commitment

All Distech Controls product lines are built to meet rigorous quality standards. Distech Controls is an ISO 9001 registered company.

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