

Micro 850 Overview	2080-LC50-48xxx
Embedded communication	USB, Serial, Ethernet
Basic I/O size	48 points
Max number of I/O	Up to 132
Max number of Expansion I/O	4
Motion axis (Only available in model with transistor output)	Up to 3 axis

To computer for programming

Micro850 Capacity
 * LC50-48xxx has 140KB of memory and supports 5 plug in I/O modules & 4 expansion modules.
 * Supports Ladder Programming, Function Block Diagram, Structured Text .

Micro850 Configuration
 External Power Supply
 • Embedded I/O 28 In, 20 Out, Base Analog I/O channels via plug in or expansion. Maximum Digital I/O :132, Max Expansion I/O Modules:4
 6 High Speed Counters

Micro850 Performance
 *Designed for larger standalone machine applications that require more I/O or higher performance analog I/O
 *Number of I/O points embedded in the base 24,48 points.

2080-DNET20
 • Up to 20 nodes of PowerFlex AC drives or CompactBlock LDX I/O
 • Reduces wiring and installation costs for larger standalone machines that have distributed drives and I/O

CompactBlock LDX I/O
 • Base blocks contain a maximum of 16 digital or 4 analog I/O.
 • Built-in DeviceNet network adapter.
 • Thermocouple and RTD base blocks are also available.
 • CompactBlock LDX digital I/O base blocks support up to three expansion blocks, for a maximum of 64 I/O points
 • Inputs and outputs are powered by an external 24V dc source that is independent of the network.

Power Tap has built-in Terminating Resistor

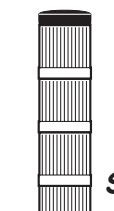
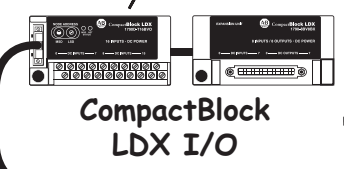
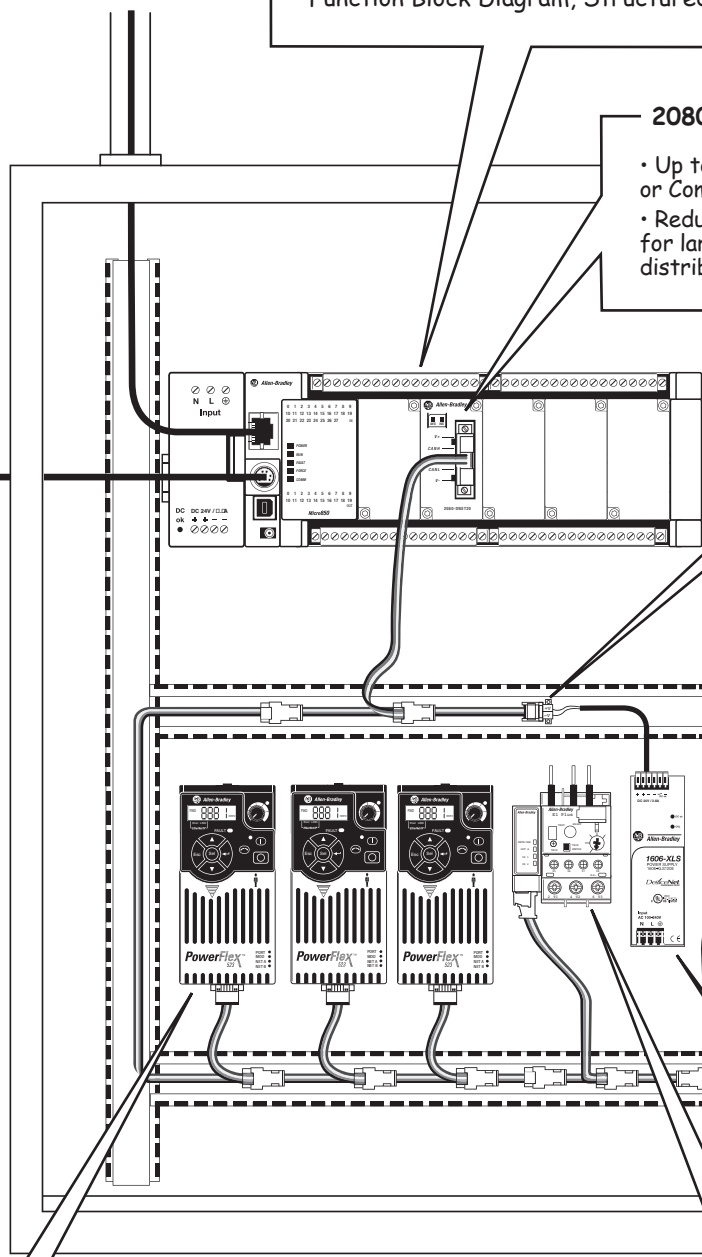
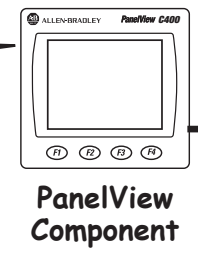
Devicenet Configuration
 DeviceNet requires a power supply to provide power to devices on the network. Several media options are available

Devicenet Capacity
 Up to 20 nodes
 Trunkline (Kwiklink lite) can be up to 75m (500K Baud)
 Each device can be up to 6 m (20 ft) from the trunk

Panelview Component Performance
 • 4.3, 5.7 ,10.7 inch Display Sizes
 • Monochrome Transmissive FSTN Options/Color Transmissive TFT, Analog Touch

Panelview Component Configuration
 *Optimized for compatibility with MicroLogix™, SLC™, and Micro800 controllers.
 *Features include unicode language switching, alarm messages and history, and basic recipe capability • User Interface through Web browser•

Panelview Component Capacity
 * Supports communication via RS-232 (DH-485), RS-232 (DF1), RS-485 and Ethernet
 * Two USB ports for transferring files or updating firmware , Supports SD memory cards



24Vdc Class 2 Power Supply

E1 Plus Overload

Wire Way

Kwiklink Lite Terminator

Powerflex 523 Configuration
 • Innovative LCD Display
 • USB Powered Programming
 • Studio 5000 Logix Designer Programming with AOPs
 • Connected Component Workbench (CCW)

Powerflex 523 Capacity
 5 to 15 HP, 4 to 22KW
 • 100 to 600V single or 3-phase
 • 24vDC digital Inputs
 • Analog Input
 • Embedded DSI Port

Powerflex 523 Performance
 • V/Hz, SVC, PM, Economizer
 • Embedded EMC Filter for 1ph 240V & 3ph, 480V

Support & Performance Table	Theoretical	Tested
No. of PowerFlex Drives	20*	15
Screw to Screw Performance (max)	<50ms	<50ms
Autoscan speed (20 Nodes) 0-20	<3s	<3s
Generic input/output	24bytes each	24bytes each
No. of remote I/O (max)	320pts	320pts

* Single Drive per node

Note: Performance is what we tested, not the max capacity



Micro800 DeviceNet Communication Popular Configuration Drawing

Bill of Materials

Qty	Catalog #	Description
System: Controller Hardware		
1	2080-LC50-48QWB	Micro 850 Controller
1	2080-DNET20	Devicenet Plug in Module
HMI Hardware		
1	2711C T4T	PanelView C400, touch terminal
1	2080-PS120-240VAC	Power Supply Module
Distributed I/O Hardware - CompactBlock		
2	1790D-T16BV0	DeviceNet LDX I/O, 24VDC, 16 Universal In Base Block, Screw-clamp
1	1790D-8BV8BX	DeviceNet LDX I/O, 24VDC, 8 Universal In/8 Source Out Expansion Block, D-Shell
2	1799-DNETCON	5 Pin Connector
2	1485R-P1M5-C	Cordset
2	1485P-P1N5-MN5V	Trunk Tap
Drive Hardware		
3	25A-A4P8N104	Powerflex 523 Drive, 1HP, Single Phase 240V
3	25-COMM-D	PowerFlex 520 Series DeviceNet Adapter
<p>Note: PowerFlex drives come in many variations - before ordering, you will need to identify voltage rating, horsepower, and enclosure type. Please refer to the PowerFlex Selection Guide for additional details on selecting the right drive for you application.</p>		
Distributed Devicenet Devices		
1	193S-EEPP	E1 Plus Electronic Overload Relay
1	193-EDN	DeviceNet Side Mount Module For E1 Plus
Power Supply		
1	1606-XLSDNET4	Class 2, DeviceNet Power Supply 24V, 4Amps
Signaling Device		
1	855TP-DM1B24Y4Y5Y3	DeviceNet Control Tower Lights
KwikLink Media Configuration		
1	1485P-K1TLR4	Power Tap
9	1485P-K1TG4	Trunk-line Connector IDC
2	1485P-K1DL4	Drop -line Connector IDC
1	1485P-K1TR4	Terminating Resistor IDC
1	1485P-KCrimp	Crimping Pliers
5	1485P-K1G4-Y5	5-pin Open Style Connector IDC
Media		
1	1485C-P1WX00	IP20 Flat Media Cable Spool,100 ,300,600meters
Configuration Tool Required		
1	9328-SO001-EN-C	Connected Components Workbench software

DeviceNet KwikLink Lite Media Guidelines

Data Rate	125k baud	250k baud	500k baud
Trunk Cable length (Max)	420m	200m	75m
DeviceNet Nodes (Max)	20		
Drop Cable length (Max)	6.1m		
Cumulative Drop	159m	78m	39m

KwikLink Lite Cable Color Code

Red	24 VDC
White	CAN_H
Blue	CAN_L
Black	0V DC

About this Configuration

This Micro 850 Controller based low cost system demonstrates the power and scalability of the Component class on an Devicenet based network. This system utilizes standard Devicenet technology to allow you to easily mix and match, I/O control & drive control, on a single Devicenet network.

A key advantage of this architecture is the ability to use Connected Components Workbench a common integrated environment for programming, configuration, commissioning, and motion tools for the PowerFlex 523, Panelview Component, and Micro 800 Controller family of products.

About the Products

Micro 850 Controllers

- The Micro850 controller is equipped with the same form factor, plug-in support, instruction/data size and motion capabilities as the 24-pt and 48-pt Micro830 controllers
- Support up to four Micro850 Expansion I/O modules, Up to a maximum of 132 I/O points (with 48-pt model)
- Designed for larger standalone machine applications that require more I/O or higher performance analog I/O than supported by Micro830.
- Structured Text, Ladder Diagram and Function Block editors that support
- Symbolic addressing
- Connected Components Workbench software is used for PLC programming, HMI and Drives configuration

CompactBlock LDX I/O

- CompactBlock LDX I/O is ideally suited for light industrial and commercial applications.
- Compact design of hardware lets it fit into shallow enclosures and confined areas.
- DeviceNet and PROFIBUS DP are supported.
- Up to 64 points can be addressed on a single network node.
- I/O types include AC/DC, analog, RTD, and thermocouple.
- Choice of D-shell connector for convenient disconnection or fixed screw terminals for I/O connections

PanelView Component

- A full line of displays ranging from 2" to 10",
- Communicate to MicroLogix, Micro800 and SLC controllers via serial (RS232 or RS422/RS485) networks on all terminals, and Ethernet on the C400, C600 and C1000 displays.
- Features include unicode language switching, alarm messages and history, and basic recipe capability
- PanelView Component software (DesignStation) is an offline programming software offering better user experience with significant DesignTime performance improvement

PowerFlex Drives

- Serves applications ranging from 4 kW (.5 hp) to 22 kW (15 hp).
- Common set of networks, operator interface and programming for all PowerFlex drives
- Communication Options - ControlNet, Devicenet, DH Plus, RIO, 3rd party networks
- Hundreds of pieces of status and diagnostic information are shared with Micro 850 controllers directly.

KwikLink Lite Flat Media

- KwikLink Lite is the new, ODVA-approved solution for wiring DeviceNet networks. This new physical media makes DeviceNet wiring and cable installation both quick and easy, and extends the network into light-duty, IP20-rated applications.
- Drop-lines for connecting nodes can be easily added using the unique KwikLink Lite two-piece connectors.
- The cable system supports the intermixing of DeviceNet cable types (thin-round with flat).
- All of the KwikLink Lite Connectors provide Insulation Displacement Technology with reduced assembly time.

ControlTower™ Stack Lights

- They are available in three sizes: 30mm, 50mm, and 70mm.
- UL Type 4/4X/13, IP65 ratings.
- Wide variety of light and/or sound functions, colors, voltages, and mounting options are available to meet most applications.
- Allen-Bradley stack lights can be supplied as separate light/sound modules or pre-assembled for greater flexibility.

For More Information and Help

For more information contact your local distributor or Rockwell Automation sales representative.

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