



CompactBlock LDX Distributed I/O

It's Small
It's Easy
It's Expandable

Product Profile

The CompactBlock™ I/O product family now offers you a cost-effective I/O product line for light industrial and commercial automation environments.

- Reduced wiring!
- Reduced size!
- Reduced installation space!
- Reduced costs!

CompactBlock LDX I/O is especially suitable where low cost and confined space are coupled with reduced environmental requirements.

- Wide breadth of I/O types can handle diverse applications including 24 VDC, relay, 120 VAC, analog and temperature
- Selectable termination types: D-shell (removable) and screw termination



- Universal sink/source inputs reduces the number of components to stock and allows flexibility of input types
- Expandable: digital base blocks support up to 3 digital expansion blocks and analog base blocks support up to 2 digital expansion blocks
- Node address switches and autobaud ease network commissioning

CompactBlock LDX I/O offers the leading, lowest cost, device-level communication network, DeviceNet™, to translate simple messages from the controller to the plant floor.

- Easy to connect and configure using modular EDS files
- Cyclic and change-of-state messaging increase network throughput, thus increasing your productivity
- ODVA conformance ensures high level of interoperability with other DeviceNet products

CompactBlock LDX I/O is also available on another open network, Profibus-DP

- Easy to configure using GSD files and any Profibus-DP configuration package
- Works with any available Profibus-DP scanner



Bringing Together Leading Brands in Industrial Automation

| Discrete I/O | Description |
|------------------------|-------------------------------------------------------------------|
| DeviceNet Bases | |
| 1790D-0B16 | DNet LDX, 16 sourcing output base, D-shell connector |
| 1790D-0V16 | DNet LDX, 24 VDC, 16 sinking output base, D-shell connector |
| 1790D-0W6 | DNet LDX, 6 relay output base, D-shell connector |
| 1790D-16BV0 | DNet LDX, 24 VDC, 16 universal in, D-shell |
| 1790D-8BV8B | DNet LDX, 24 VDC, 8 univ In/8 source out, D-shell |
| 1790D-8BV8V | DNet LDX, 24 VDC, 8 univ In/8 sink out, D-shell |
| 1790D-T0A6 | DNet LDX, 120 VAC, 6 output base, terminal block |
| 1790D-T0B16 | DNet LDX, 24 VDC, 16 source output base, terminal block |
| 1790D-T0V16 | DNet LDX, 24 VDC, 16 sinking output base, terminal block |
| 1790D-T0W6 | DNet LDX, 6 relay output base, terminal block |
| 1790D-T16BV0 | DNet LDX, 24 VDC, 16 universal in, terminal block |
| 1790D-T8A0 | DNet LDX, 120 VAC, 8 input base, terminal block |
| 1790D-T8BV8B | DNet LDX, 24 VDC, 8 univ in/8 source out, terminal block |
| 1790D-T8BV8V | DNet LDX, 24 VDC, 8 univ in/8 sink out, terminal block |
| Profibus Bases | |
| 1790P-T0W6 | Profibus, 6 relay out base, terminal block |
| 1790P-T8BV8V | Profibus, 24 VDC, 8 univ in/8 sink out base, terminal block |
| 1790P-T8BV8B | Profibus, 24 VDC, 8 univ in/8 source out base, terminal block |
| Expansions | |
| 1790-0B16X | LDX I/O, 24 VDC, 16 source out expansion, D-shell |
| 1790-0V16X | LDX I/O, 24 VDC, 16 sink out expansion, D-shell |
| 1790-0W8X | LDX I/O, 8 relay out, expansion, D-shell |
| 1790-16BV0X | LDX I/O, 24 VDC, 16 universal in expansion, D-shell |
| 1790-8BV8BX | LDX I/O, 24 VDC, 8 univ in/8 source out expansion, D-shell |
| 1790-8BV8VX | LDX I/O, 24 VDC, 8 univ in/8 sink out expansion, D-shell |
| 1790-T0A8X | LDX I/O, 120 VAC, 8 output expansion module, terminal block |
| 1790-T0B16X | LDX I/O, 24 VDC, 16 source out expansion, terminal block |
| 1790-T0V16X | LDX I/O, 24 VDC, 16 sink out expansion, terminal block |
| 1790-T0W8X | LDX I/O, 8 relay out, expansion, terminal block |
| 1790-T16BV0X | LDX I/O, 24 VDC, 16 universal in expansion, terminal block |
| 1790-T8A0X | LDX I/O, 120 VAC, 8 input expansion module, terminal block |
| 1790-T8BV8BX | LDX I/O, 24 VDC, 8 univ in/8 source out expansion, terminal block |
| 1790-T8BV8VX | LDX I/O, 24 VDC, 8 univ in/8 sink out expansion, terminal block |
| Analog I/O | |
| DeviceNet Bases | |
| 1790D-4R0 | DNet LDX, 4 input RTD base, D-shell connector |
| 1790D-4T0 | DNet LDX, 4 input thermocouple base, D-shell connector |
| 1790D-NOC2 | DNet LDX, 2 output analog current base, D-shell connector |
| 1790D-NOV2 | DNet LDX, 2 output voltage analog base, D-shell connector |
| 1790D-N4C0 | DNet LDX, 4 input analog current base, D-shell connector |
| 1790D-N4V0 | DNet LDX, 4 input voltage analog base, D-shell connector |
| 1790D-T4R0 | DNet LDX, 4 input RTD base, terminal block |
| 1790D-T4T0 | DNet LDX, 4 input thermocouple base, terminal block |
| 1790D-TNOC2 | DNet LDX, 2 output analog current base, terminal block |
| 1790D-TNOV2 | DNet LDX, 2 output voltage analog base, terminal block |
| 1790D-TN4C0 | DNet LDX, 4 input analog current base, terminal block |
| 1790D-TN4V0 | DNet LDX, 4 input voltage analog base, terminal block |
| Profibus Bases | |
| 1790P-T4R0 | Profibus, 4 input RTD base, terminal block |
| 1790P-T4T0 | Profibus, 4 input thermocouple base, terminal block |
| 1790P-TNOC2 | Profibus, 2 output analog current base, terminal block |
| 1790P-TN4C0 | Profibus, 4 input analog current base, terminal block |

| Optional Components | |
|------------------------------|-------------------------------------------------------------------------------|
| 1790-7CMCBL | LDX I/O replacement ribbon cable, 7cm (lots of 5) |
| 1790-15CMCBL | LDX I/O longer ribbon cable, 15cm (lots of 5) |
| 1799-DNETCON | 5-position open style plug for DNet |
| 1799-DNETSCON | 5-position open style plug/locking screws for DNet |
| 1799-DNC5MMS | DNet 5-position open plug to 5-pin micro male connector, straight (lots of 5) |
| Environmental Specifications | |
| Operating Temperature | 0 to 55°C (32 to 140°F) |
| Non-Operating Temperature | -40 to 85°C (-40 to 185°F) |
| Relative Humidity | 5-90% non-condensing |
| Operating Altitude | 2000m |
| Shock Operating | 10g |
| Non-operating | 30g |
| Vibration | 2g@10-500Hz, 0.012 inch p-p from 10-57Hz |
| Mounting | DIN rail or screw |
| Cable Size | Terminal block: 16 AWG maximum (1.25mm ²) |
| Weight | Base block: 0.31lb (0.1kg) Expansion block: 0.3lb (0.1kg) |

| General Specifications | |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Indicators | 1 red/green module status 1 red/green network status |
| Wiring Category | 2 ¹ |
| Product Certifications | UL, UL Hazardous Class I, Div 2, Groups A, B, C, D ² (where product or packaging is marked) c-UL, c-UL Hazardous Class I, Div 2, Groups A, B, C, D ² |
| | CE marked for all applicable directives |

| DeviceNet Specifications | |
|--------------------------|-------------------------------------------------------------------|
| Network Protocol | I/O slave messaging: Poll command, Cyclic Command, COS command |
| Network Length | 500 meters maximum @ 125Kbps 100 meters maximum @ 500Kbps |
| Number of Nodes | 64 maximum: rotary switch type |
| Communication Rate | 125Kbps, 250Kbps, 500Kbps: autobaud rate selection |
| Isolation | 1250 VAC rms isolation between user power & DeviceNet |
| Wiring | Refer to publication DN-6.7.2 |
| Dimensions | 52x104x42mm (2.03x4.07x1.64in) |

| Profibus Specifications | |
|-------------------------|----------------------------------------------------------------|
| Network Protocol | Profibus-DP (EN 50170) Slave with Class 1 or Class 2 master |
| Modes | Freeze, Sync, Fail Safe |
| Network Length | 1200 meters max. @ 9.6Kbps, 100 meters max. @ 12Mbps |
| Number of Nodes | 100 Node/Max, rotary switches |
| Communication Rate | 9.6 to 12000Kbps: autobaud rate selection |
| Isolation | I/O to Logic: Photocoupler System power: non-isolation |
| Dimensions | 52x119x42mm |

¹ Refer to publication 1770-4.1, Programmable Controller Wiring and Grounding Guidelines

² All blocks that have D-shell connectors are UL approved for use as part of Class 2 circuit only.

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