

Allen-Bradley Bulletin 100 DeviceNet™ System Accessory



Product Profile

Cost-Effective Direct Component Connection to DeviceNet

The Allen-Bradley Bulletin 100 DeviceNet System Accessory (DSA) is an optimal Complete Automation product to use for connecting discrete input or output devices to a DeviceNet network. As a world-class product, the DSA's modular concept enables it to be installed in both new and existing installations and provides the following features:

- Compact size
- Easy to install
- Cost-effective
- Choice of I/O configurations
 - 4 inputs/2 outputs
 - 2 inputs/1 output
- Connects the following components to DeviceNet:
 - Pushbuttons
 - Limit switches
 - Disconnect switches
 - Motor starters
 - Reduced-voltage starters
 - Pilot lights
 - Relays
 - Solenoids

This compact module measures only 22.5 mm wide, allowing it to add I/O to a device while requiring minimal panel space. The DSA is also very easy to use. It can be attached to 35 mm DIN Rail or mounted to a panel via two mounting screws.

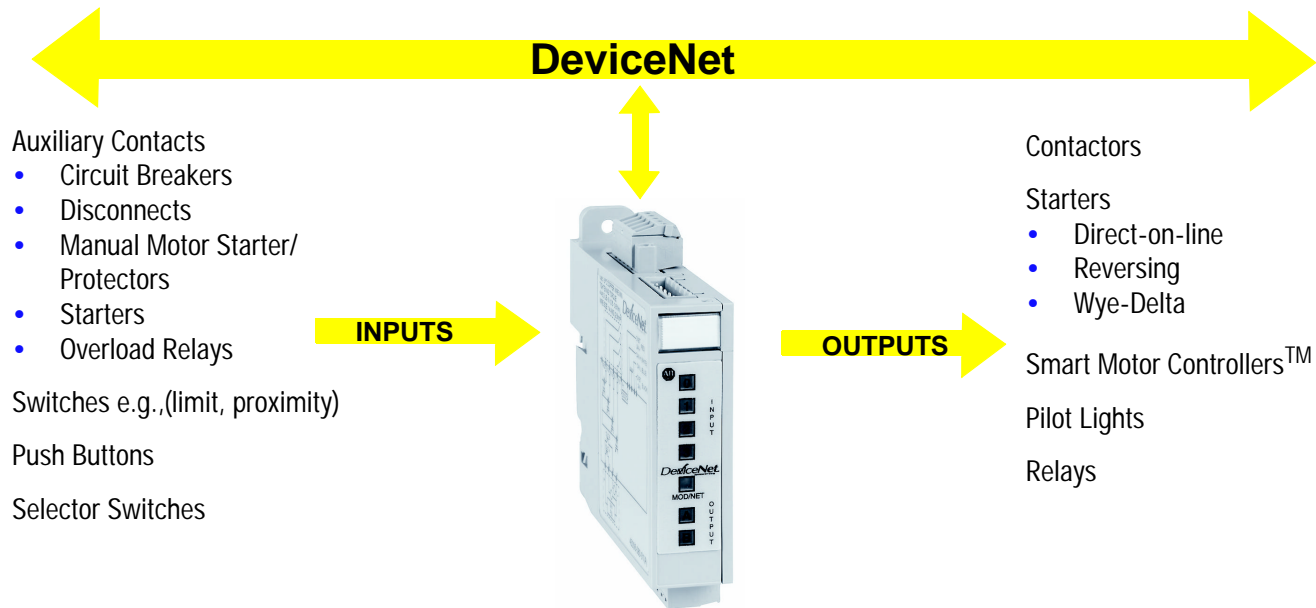
Wiring is made easy with the use of plug-in terminal blocks, allowing the connectors to be wired and then simply plugged into the unit. Additionally, the DSA supports "wire elimination" in many applications, particularly when compared to the traditional wiring practices used in non-networked applications.



Traditional wiring practices use runs of wire to connect each input or output back to an I/O rack. Using DeviceNet and the DSA, the multiple wiring runs are replaced by a single trunk cable and the I/O connections are made locally, saving both installation time and wire.

A choice of outputs is also available, adding flexibility to the DSA configuration options. Both relay and solid-state outputs are available for switching loads with the DSA. The relay output is rated up to 5A at 240V AC, and the solid-state output is rated up to 2A at 24V DC.

The DSA is cost-effective, particularly when used in applications in which discrete inputs are wired back to a programmable logic controller (PLC) (e.g., motor starting applications). The DSA's ease of wiring, compact size and DeviceNet communications protocol allow traditionally discrete devices to be connected to DeviceNet simply and easily.



Typical Applications

Typical Applications for a DSA include:

- Distributed Starters — a central processor is used but, due to application cost and ease of assembly, the starters are not located at the site of the processor (e.g., conveyors)
- Across-the-line starters
- Reversing starters
- Communicating with Smart Motor Controllers™

Product Selection:

Description		Cat. No.
120V AC, 2 inputs	1 Relay output	100-DNY21R
24V DC, 2 inputs	1 Relay output	100-DNY22R
24V DC, 2 inputs	1 Solid-state output	100-DNY22S
120V AC, 4 inputs	2 Relay outputs	100-DNY41R
24V DC, 4 inputs	2 Relay outputs	100-DNY42R
24V DC, 4 inputs	2 Solid-state outputs	100-DNY42S

Available options:

- Choice of I/O
 - 4 inputs/2 outputs
 - 2 inputs/1 output
- Inputs — Accepts inputs from hard contacts (e.g., contactor, overload relay or circuit breaker auxiliary contacts, disconnect switches; limit switches; proximity switches)
 - 120V AC or 24V DC
 - Automatic reset of faulted inputs
- Outputs (e.g., to energize a contactor solenoid or pilot light)
 - Solid-state output (for DC contactor coils)
 - Relay output (generally for AC contactor coils)
- Mounting
 - DIN Rail
 - Panel
 - Dovetail connection to Bulletin 100C contactor
- Communication
 - Autobaud detection; without DIP switches — adding to ease of setup
 - Faulted node recovery — for ease of installation and configuration
 - Change-of-State (COS) messaging — reduces network traffic
 - Individual LED status indication for both inputs and outputs — provides easily identified status indication

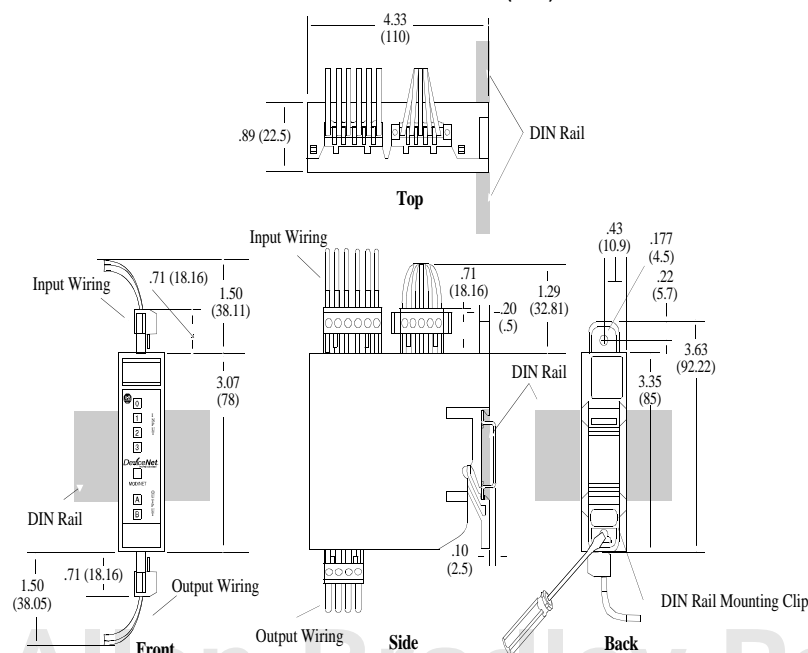
Input Specifications

		Cat. Nos. 100-DNY21R, 100-DNY41R	Cat. Nos. 100-DNY22R, 100-DNY42R, 100-DNY22S, 100-DNY42S
Inputs per device		2 for 100-DNY21R 4 for 100-DNY41R	2 for 100-DNY22R, 100-DNY22S 4 for 100-DNY42R, 100-DNY42S
On-state voltage range		80...132V AC	10... 30V DC
Off-state voltage		40V, at 60 Hz	5.5V DC
On-state current	max. min.	2 mA 1.2 mA	11 mA, at 30V 3 mA, at 10V
Off-state current		0.6 mA min.	1.5 mA max.
Transition	Voltage	40...79V AC	5...10V DC
	Current	0.6... 1.2 mA	1.5...3 mA
Sensor Source	Voltage	—	19...25V DC
	Current	—	35 mA

Output Specifications

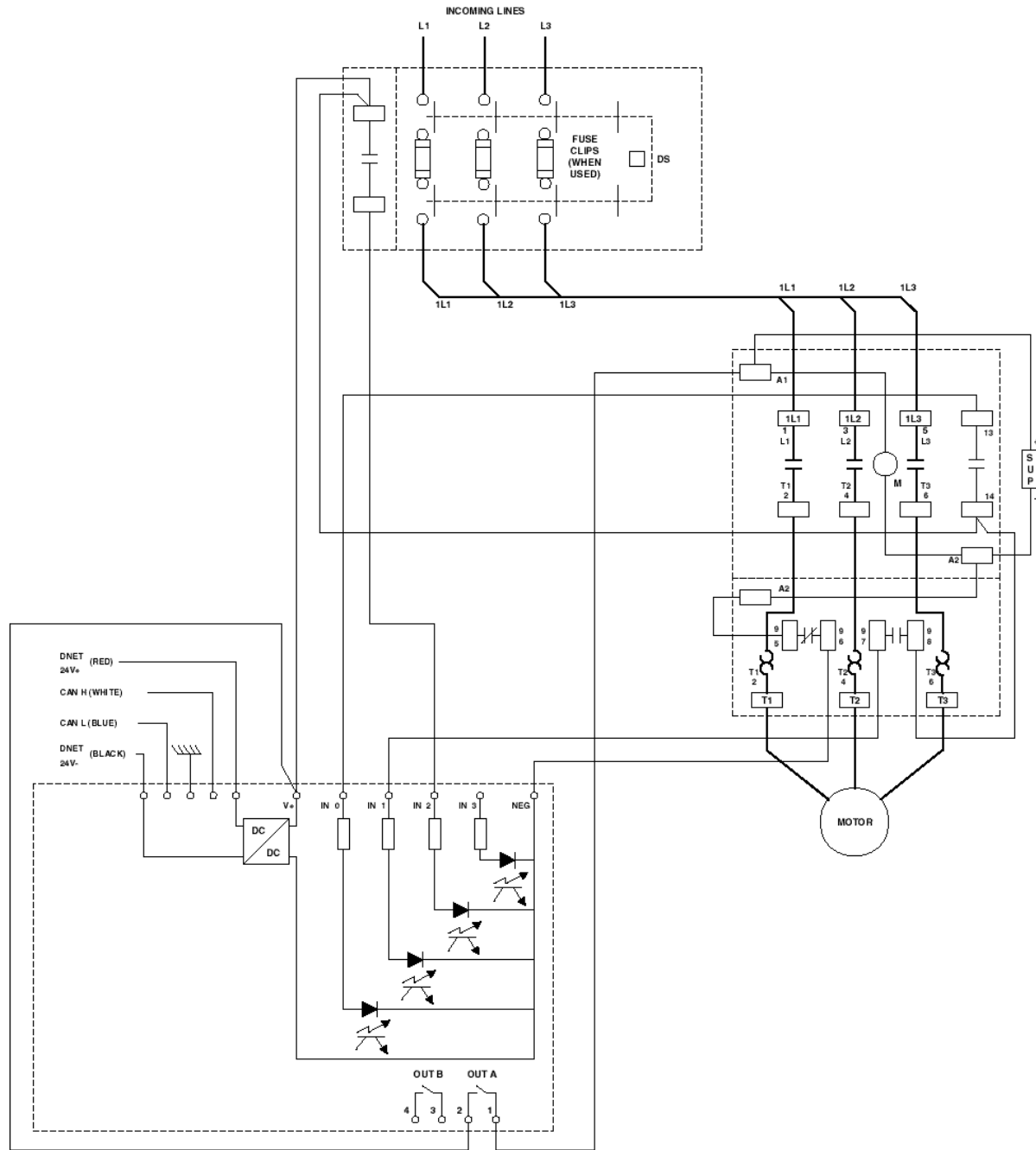
		Cat. Nos. 100-DNY21R, 100-DNY22R, 100-DNY41R, 100-DNY42R (Relay Outputs)	Cat. Nos. 100-DNY22S, 100-DNY42S (Transistor Outputs)
Outputs per device		2 for 100-DNY41R, 100-DNY42R 1 for 100-DNY21R, 100-DNY22R	2 for 100-DNY42S, 1 for 100-DNY22S
Voltage range		max. 240V AC, 30V DC	15...30V DC, $\pm 0.0\%$
Switching Capacity	max.	3600 VA UL: B 300 IEC: AC-15: 5 A	—
Thermal continuous current per output	max.	5 A	—
On-State voltage drop	max.	—	0.25V at 2 A
On-State current per output	max.	—	2 A
Maximum Off-state leakage current		—	1.5 mA
Surge Current per output		—	4 A for 50 ms

Approximate Dimensions — Dimensions are in inches (mm). Dimensions are not intended for manufacturing purposes.



Allen-Bradley Parts

Wiring Diagram — for typical starter applications (100DNY-42R shown)



Reach us now at www.rockwellautomation.com

Wherever you need us, Rockwell Automation brings together leading brands in industrial automation including Allen-Bradley controls, Reliance Electric power transmission products, Dodge mechanical power transmission components, and Rockwell Software. Rockwell Automation's unique, flexible approach to helping customers achieve a competitive advantage is supported by thousands of authorized partners, distributors and system integrators around the world.

America Headquarters, 1201 South Second Street, Milwaukee, WI 53204, USA, Tel: (1) 414 382-2600, Fax: (1) 414 382-4444
European Headquarters SA/NV, avenue Hermann Debraux, 46, 1160 Brussels, Belgium, Tel: (32) 2 863 06 03, Fax: (32) 2 863 06 40
Asia Pacific Headquarters, 27/F Citicorp Centre, 18 Whitfield Road, Causeway Bay, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

