

DN V3.2 Output Module – Digital



A digital output module can utilise internal power sourced from the battery or an external source to control an external circuit by switching the low side of the circuit (V-/ground).

For switching and powering external devices such as:

- External relays (DC)
- Small solenoid Valves (max 0.5A)
- Very small motors (DC)
- Panel and warning lights

Specification:

Operating Voltage	3.3VDC, 5VDC or 12VDC
Maximum Output Current	2.5A

Connections:

Pin 1	V+ (Constant)
Pin 2	Not Connected
Pin 3	V- (Switched)
Pin 4	Not Connected

DN V3.2 Output Module – Series Switching Relay



A series switching relay opens and closes an external circuit. It does not supply the power to run the connected equipment.

The relay utilised in this module can support a load up to 2.5A.

For switching a powered device such as:

- Motor control circuit
- Lighting circuit (low voltage)
- External relay coil circuit
- Solenoid Valves (Externally powered)
- Small motor (low voltage)

Specification:

Operating Voltage (external)	up to 48V AC/DC
Maximum current	2.5A

Connections:

Pin 1	Not Connected
Pin 2	V+ (In)
Pin 3	V+ (Out)
Pin 4	Not Connected

DN V3.2 Output Module – High Side Switching Relay



A high side switching relay is utilised to switch the positive power source to an external device. When the relay is OFF the external device is connected to ground but is isolated from the power supply.

Power is supplied from the connect board via either the battery or the External Relay Power connector. Internal or external supply is set via a jumper on the rear of the connect board.

For switching a device such as:
Solenoid Valve
External Relay (coil)
Light or Indicator (low voltage)
Siren or Strobe (low voltage)
Small Motor (low voltage)

Specification:

Operating Voltage (internal)	12V DC
Operating Voltage (external)	up to 48V AC/DC
Maximum current	5A

Connections:

Pin 1	Not Connected
Pin 2	Not Connected
Pin 3	V+ (Switched)
Pin 4	V- (Constant)

DN V3.2 Output Module – Low Side Switching Relay



A low side switching relay is utilised to switch the ground (negative) return from an external device. When the relay is OFF the external device is connected to the power supply but does not have a return path to ground (negative).

Power is supplied from the connect board via either the battery or the External Relay Power connector. Internal or external supply is set via a jumper on the rear of the connect board.

For switching a device such as:

- Solenoid Valve
- External Relay (coil)
- Light (low voltage)
- Siren or Strobe (low voltage)
- Small Motor (low voltage)

Specification:

Operating Voltage (internal)	12V DC
Operating Voltage (external)	up to 48V AC/DC
Maximum current	5A

Connections:

Pin 1	V+ (Constant)
Pin 2	Not Connected
Pin 3	V- (Switched)
Pin 4	Not Connected

DN V3.2 Output Module - 2 Wire Relay



A 2 wire relay is utilised to output power on a two wire circuit to run devices up to 5A. The module switches both the negative and positive supply. The key difference with this module is that the negative and positive power supplies can be reversed allowing you to change the direction of current flow. The DN RTU can be configured to operate this module with pulsed output for use with latching solenoids and relays with pulse intervals from 0.01 seconds up to 4.5 seconds.

Power is supplied from the connect board via either the battery or the External Relay Power connector. Internal or external supply is set via a jumper on the rear of the connect board.

For switching or driving a device such as:
 2 wire Solenoid
 2 wire Latching Solenoid or Relay

Specification:

Operating Voltage (internal)	12V DC
Operating Voltage (external)	up to 48V AC/DC
Maximum current	5A

Connections:

Pin 1	Not Connected
Pin 2	V+ / V- (Switched)
Pin 3	V- / V+ (Switched)
Pin 4	Not Connected

Currently available solutions:

Brand	Device Type	Model
AquaTivePlus®	Latching solenoid valve	AquaTivePlus® AC/DC

DN V3.2 Output Module - 3 Wire Relay



A 3 wire relay is utilised to output power on a three wire circuit to run devices up to 5A. The module switches the positive supply on and off between two wires with the common negative on the third. The key difference with this module is that the power supply can be effectively switched to reverse the power supply across two separate circuits. The DN RTU can be configured to operate this module with pulsed output for use with latching solenoids and relays with pulse intervals from 0.01 seconds up to 4.5 seconds.

Power is supplied from the connect board via either the battery or the External Relay Power connector. Internal or external supply is set via a jumper on the rear of the connect board.

For switching or driving a device such as:
3 wire Latching Solenoid or Relay

Specification:

Operating Voltage (internal)	12V DC
Operating Voltage (external)	up to 48V AC/DC
Maximum current	5A

Connections:

Pin 1	Not Connected
Pin 2	V+ (Switched)
Pin 3	V- (Switched)
Pin 4	V+ (Switched)

Currently available solutions:

Brand	Device Type	Model
Bermad	Latching solenoid valve	S-982-3W-BB

DN V3.2 Output Module – 10A High Side Relay



A high side switching relay is utilised to switch the positive power source to an external device. When the relay is OFF the external device is connected to ground but is isolated from the power supply. This module is designed with a higher power relay and can supply up to 10A.

Power is supplied from the connect board via either the battery or the External Relay Power connector. Internal or external supply is set via a jumper on the rear of the connect board.

For switching a device such as:
 Solenoid Valve
 External Relay (coil)
 Light or Indicator (low voltage)
 Siren or Strobe (low voltage)
 Small Motor (low voltage)

Specification:

Operating Voltage (internal)	12V DC
Operating Voltage (external)	up to 48V AC/DC
Maximum current	10A

Connections:

Pin 1	Not Connected
Pin 2	Not Connected
Pin 3	V+ (Switched)
Pin 4	V- (Constant)