

DN V3.2 Input Module – Digital



A digital input is used for reading the state of an external contact. This module can utilise 3.3VDC , 5VDC or 12VDC selected by the positioning of jumpers on the rear of the module. The selection of voltage depends on the type of the device being read. Modules can be configured to filter 50Hz interference in electronically noisy environments. This module has been operated successfully in combination at up to 2000Hz to measure dosing volumes as low as 0.04ml per pulse.

ON and OFF and pulse inputs can be read from:

External relay outputs with ON (closed circuit) or OFF (open circuit)
RPM sensors with pulse output
Limit Switches for position validation
Rain Gauges with pulse output

Specification:

Operating Voltage (constant)	3.3VDC, 5VDC or 12VDC
Operating Voltage (switched)	5VDC or 12VDC
Maximum Supply Current	100mA
Maximum Input Current	30mA
Maximum Input Frequency	2000Hz

Flow Meters with pulsed or frequency output
Switches e.g. MANUAL / AUTO
Reed Switches for doors and windows
Rotary Encoders

Connections:

Pin 1	V+ (Constant)
Pin 2	V+ (Switched)
Pin 3	Signal In
Pin 4	V- (Ground)

DN V3.2 Input Module – Digital with Button



This non standard digital input is used for reading the state of an external contact. It is fitted with a momentary button which allows the user to test or operate a switch on-board. This module can utilise 3.3VDC , 5VDC or 12VDC selected by the positioning of jumpers on the rear of the module. The selection of voltage depends on the type of external device being read. The configuration for a button input has de-bouncing functionality to accept only the first press action. The configuration operates as an interrupt i.e. the first press activates a function which continues after the button is released. The button module can be used as an on-board override in conjunction with an external input source.

The most common uses are:

Opening or closing a linear actuator
Stopping a motor
Starting a calibration process

Driving a motor forward
Driving a motor in reverse

Specification:

Operating Voltage (constant)	3.3VDC, 5VDC or 12VDC
Operating Voltage (switched)	5VDC or 12VDC
Maximum Supply Current	100mA
Maximum Input Current	30mA
Maximum Input Frequency	2000Hz

Connections:

Pin 1	V+ (Constant)
Pin 2	V+ (Switched)
Pin 3	Signal In
Pin 4	V- (Ground)

DN V3.2 Input Module – 4-20mA



This variant of the input module powers external devices which produce a small current as feedback. That current can range between 0 and 20mA and is used as an input value. The reading can be calibrated by the DN RTU to generate a result in stand formats such as kPa, mm, kg, litres per hour, uS, pH, volume etc. This module can utilise 3.3VDC , 5VDC or 12VDC selected by the positioning of jumpers on the rear of the module. The selection of voltage depends on the type of external device being read. Many common sensors with 4-20mA output can accept an input voltage between 9 and 30V DC so the stand input module is provided in this format unless specified otherwise. Module voltage will be marked appropriately on silk screen.

Used for reading 0-20mA or 4-20mA inputs from:

Pressure Transducers
Water Level Sensors (tanks, channels, dams)
Electrical Conductivity Sensors
Secondary meters with 4-20mA output e.g. scale sets

Fuel Level Sensors
pH Sensors
Ground Speed systems with 4-20mA output

Specification:

Operating Voltage (constant)	3.3VDC, 5VDC or 12VDC
Operating Voltage (switched)	5VDC or 12VDC
Maximum Supply Current	100mA
Input Current	0-20mA

Connections:

Pin 1	V+ (Constant)
Pin 2	V+ (Switched)
Pin 3	Signal In
Pin 4	V- (Ground)

DN V3.2 Input Module – 0-5V



This variant of the input module powers external devices which produce a variable as feedback. That voltage varies between 0 and 5V and is divided then used as an input value to the ADC. The reading can be calibrated by the DN RTU to generate a result in standard formats such as kPa, mm, kg, litres per hour, uS, pH, volume etc. This module utilises 5VDC but can be provided as a 10V input for special cases. The selection of voltage depends on the type of external device being read. Many common sensors return between 0.5 and 4.5V as their full range and in that case the channel is calibrated for that range in firmware. Module voltage will be marked appropriately on silk screen.

Used for reading 0-5V inputs from:

- Pressure Transducers
- Anemometers
- Magnetic Speed Sensors
- Turbidity Sensors

- Level Sensors
- Temperature Sensors
- Accelerometers
- Soil pH

Specification:

Operating Voltage (fixed)	5VDC
Operating Voltage (switched)	5VDC
Maximum Input Current	30mA
Input Voltage	0-5VDC

Connections:

Pin 1	V+ (Constant)
Pin 2	V+ (Switched)
Pin 3	Signal In
Pin 4	V- (Ground)