

Digital I/O with Relay 4: Basic, Count, Count+, Smart+

In this demo we will connect a 4-Series Smart+ to Relay 4 I/O for 4 - 24 VDC inputs and 3 - 120 VAC outputs.

Inputs: 24 VDC
C (Clear)
T (Tare)
P (Print)
Z (Zero)

Outputs: 120 VAC
Below Tolerance
Good
Over Tolerance

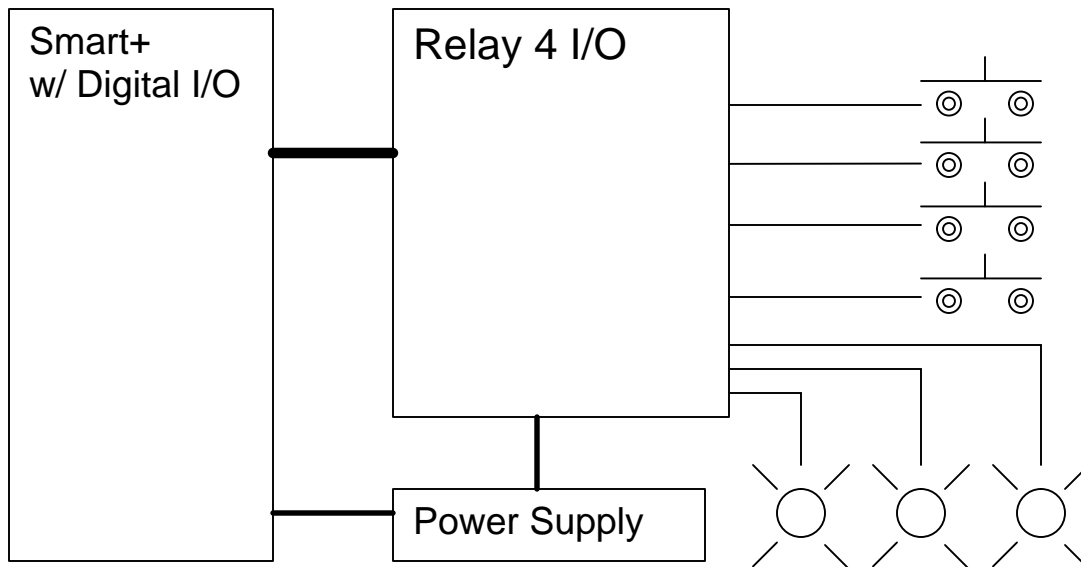
The Digital I/O option inside the Smart+ has relatively low limits on current and voltage that is why we are using the Relay 4 I/O in this demo. The relay 4 I/O is VDC only for inputs, DC voltage or AC voltage for outputs.

Relay 4 I/O:

INPUTS: 24 VDC, 30 VDC maximum.

OUTPUTS: Maximum 30 VDC, 2 A (DC outputs preferred to extend contact life)
Maximum 250 VAC, 2 A

Block diagram of our demo.



Connection Diagram.

24 VDC

0 VDC

120 VAC

Neutral

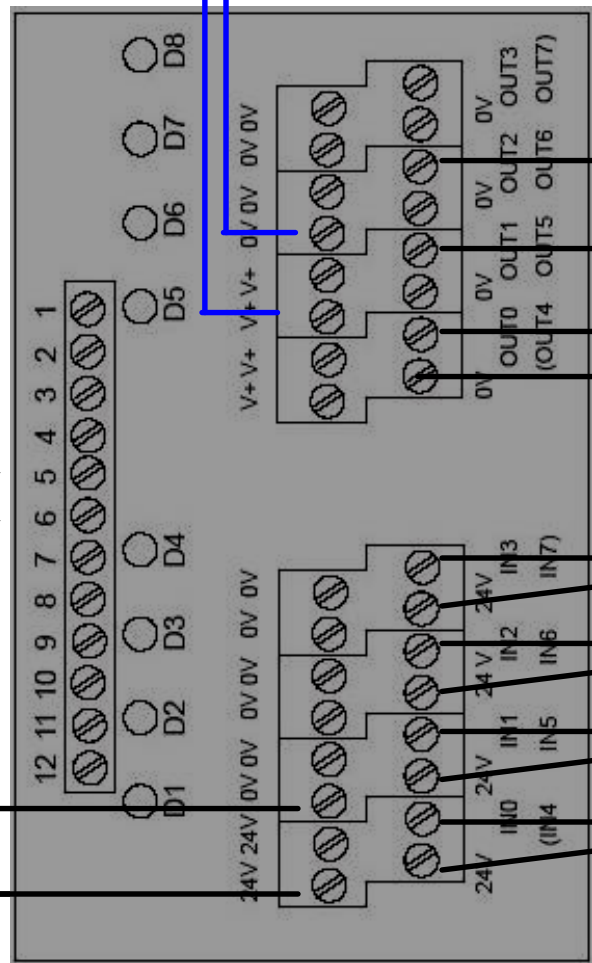
Smart+
w/ Digital I/O

Cable
21254225

9 PIN
COM2

- 5 - Yellow
- 4 - Gray
- 3 - Red
- 2 - Brown
- 1 - Black

- 9 - White
- 8 - Violet
- 7 - Blue
- 6 - Green



- OVER
- GOOD
- BELOW

- PRINT
- ZERO
- TARE
- CLEAR

Setup of Smart + for demo.

Define I/O

COMMUNICATIONS / OPTION / DIGITAL I/O / DIGITAL IN 0 / CLEAR
/ DIGITAL IN 1 / TARE
/ DIGITAL IN 2 / ZERO
/ DIGITAL IN 3 / PRINT
/ DIGITAL OUT 0 / < TOL -
/ DIGITAL OUT 1 / GOOD
/ DIGITAL OUT 2 / > TOL +
/ DIGITAL OUT 3 / OFF

Settings for Checkweighing

APPLICATION / FILLING/CHECKWEIGHING / SETPOINT TOL- / 10%

(The digital outputs will not operate unless the scale is loaded to at least 10% of target weight, this prevents nuisance operation of the below, good and over lamps connected to our outputs).

Configure a softkey for Checkweighing.

APPLICATION / SOFTKEYS / SOFTWKEY 6 (or what key you want) /
Checkweighing

Operation of demo.

Touch the Checkweighing softkey to select Checkweighing operation. Load target weight (or count) and tolerances plus and minus. The Output lamps will follow the checkweighing DeltaTrac display. By pressing the buttons you can zero the scale, tare the scale, clear the tare and print. The print key will initiate a printout on all com ports configured as printer. Operation of Checkweighing is not covered in detail here, as this is a demo on setting up digital I/O.

End of demo.