

# V120-12-T38

## Graphic Operator Panel & Programmable Logic Controller

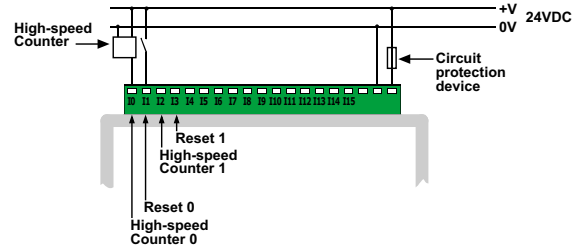
24 VDC, 22 pnp/npn digital inputs, 2 high-speed counter/shaft encoder inputs, 16 transistor outputs, I/O expansion port, 2 RS232/RS485 ports

<b>Power supply</b>	24VDC
Permissible range	20.4VDC to 28.8VDC with less than 10% ripple
Maximum current consumption	110mA@24VDC (pnp inputs) 300mA@24VDC (npn inputs)

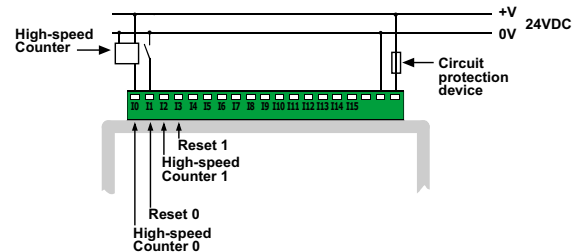
<b>Digital inputs</b>	22 pnp (source) or npn (sink) inputs. See Note 1.
Nominal input voltage	24VDC. See Note 2.
Input voltages for pnp (source):	0-5VDC for Logic '0' 17-28.8VDC for Logic '1'
Input voltages for npn (sink):	17-28.8VDC/<2mA for Logic '0' 0-5VDC/>6mA for Logic '1'
Input current	8mA@24VDC
Input impedance	3KΩ
Response time (except high-speed inputs)	10mS typical
Galvanic isolation	None
Input cable length	Up to 100 meters, unshielded

<b>High-speed counter</b>	Specifications below apply when inputs are wired for use as a high-speed counter input/shaft encoder. See Notes 3 and 4.
Resolution	32-bit
Input frequency	10kHz max.
Minimum pulse	40μs

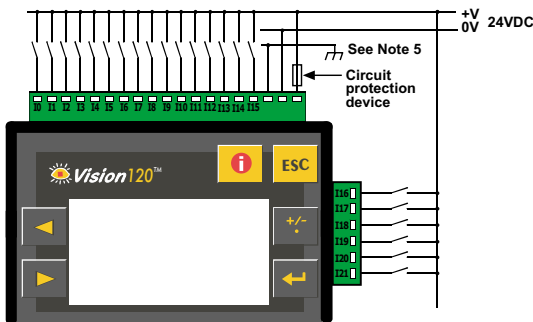
### pnp (source) high-speed counter



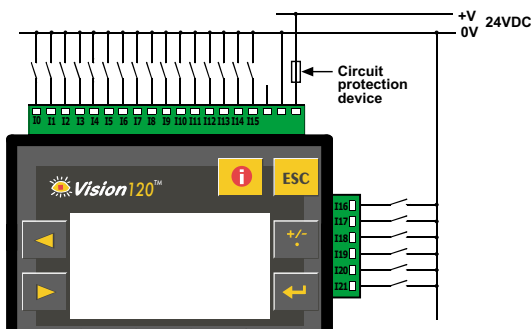
### npn (sink) high-speed counter



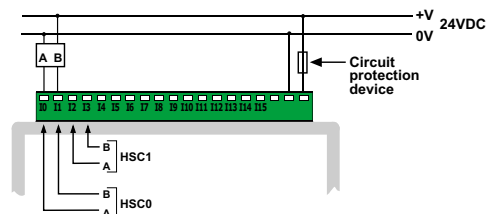
### Power supply, pnp (source) inputs



### npn (sink) inputs



### Shaft encoder



#### Notes:

1. All 22 inputs can be set to pnp (source) or npn (sink) via a single jumper and appropriate wiring.
2. npn (sink) inputs use voltage supplied from the controller's power supply.
3. Inputs #0 and #2 can each function as either high-speed counter or as part of a shaft encoder. In each case, high-speed input specifications apply. When used as a normal digital input, normal input specifications apply.
4. Inputs #1 and #3 can each function as either counter reset, or as a normal digital input; in either case, specifications are those of a normal digital input. These inputs may also be used as part of a shaft encoder. In this case, high-speed input specifications apply.
5. To avoid electromagnetic interference, mount the controller in a metal panel/cabinet and earth the power supply. Earth the power supply signal to the metal using a wire whose length does not exceed 10cm. If your conditions do not permit this, do not earth the power supply.

#### Warnings:

- Unused pins should not be connected. Ignoring this directive may damage the controller.
- Improper use of this product may severely damage the controller.
- Refer to the controller's User Guide regarding wiring considerations.
- Before using this product, it is the responsibility of the user to read the product's User Guide and all accompanying documentation.

Battery back-up

Battery

Weight

Operation

Storage

Relative

Mounting

compliant

7-year battery back-up  
data.

3.6V lithium battery

100g

100g (9.52 oz.)

0 to 50°C (32 to 122°F)

-20 to 60°C (-4 to 140°F)

5% to 95% (non-condens)

DIN-rail mounted (IP20)

Panel mounted (IP65)



UNITRA ICS

