DCS Input/Output Relay Card Series

LOOPBACK I/O RELAY CARD

Functions & Features
- Input and output on one card
- Output ON/OFF switch and LED indicating relay status
- Test switch provided for checking DCS operation
- Fuse provided to each channel for solenoid valve
- Output current capacity 3 A
- Output can be jumper selectable: voltage output for solenoid valve or dry contact output

MODEL: 38N2–2

ORDERING INFORMATION

- Code number: 38N2-2

INPUT

Dry contact or open collector

OUTPUT

Voltage or dry contact (jumper selectable)

FUNCTION

2: Test circuit

RELATED PRODUCTS

- Standard Rack (model: 38N-B)

GENERAL SPECIFICATIONS

Construction: Rack mounted; terminal access via screw terminals at the front and via connector at the rear
Connection
Contact input: M3.5 screw terminals (torque 0.8 N·m)
DCS I/O, alarm output: Card-edge connector
Solenoid valve output: M3.5 screw terminals (torque 0.8 N·m)
Power input: Supplied from card-edge connector
Screw terminal: Nickel-plated steel
Isolation: DCS input to power or DCS output or contact input to solenoid valve output (or dry contact output) to alarm output
Power fuse: 0.5 A incorporated
Alarm contact: Dry contact output at the alarm output terminals of the rack when the fuse is blown
Test switch: LED indicator

INPUT SPECIFICATIONS

■ CONTACT INPUT: Dry contact or open collector
Contact detecting: 24 V DC, approx. 25 mA
■ DCS STATUS OUTPUT: Dry contact or open collector
Contact detecting: 24 V DC, approx. 25 mA

OUTPUT SPECIFICATIONS

■ SOLENOID VALVE: Voltage contact
Rated load: 120 V AC @ 0.5 A (cos ø = 1)
24 V DC @ 0.5 A (resistive load)
Load current: 8 A max. for the total of 16 channels
■ DRY CONTACT: Dry contact (solenoid valve or dry contact selectable with the jumper on the PCB)
Rated load: 120 V AC @ 3 A (cos ø = 1)
24 V DC @ 3 A (resistive load)
Relay protection: For maximum relay life with inductive loads (e.g. coil), external protection including noise quenching is recommended.
■ DCS STATUS INPUT: Relay contact
Rated load: 30 V DC @ 3 A (resistive load)
■ RELAY LIFE:
Mechanical life: 5×10^7 cycles
Electrical life: 10^5 cycles
(30 cycles/min. at rated load)

INSTALLATION

Power input
•DC: Operational voltage range 24 V ±10 %; ripple 10 % p-p max.,approx. 65 mA
Operating temperature: -5 to +55°C (23 to 131°F)
Operating humidity: 30 to 90 %RH (non-condensing)
Mounting: Standard Rack 38N-B
Weight: 150 g (0.33 lb)

PERFORMANCE

Insulation resistance: ≥ 100 MΩ with 500 V DC
Dielectric strength: 1000 V AC @ 1 minute (DCS input to power or DCS output or contact input to solenoid valve output (or dry contact output) to alarm output)

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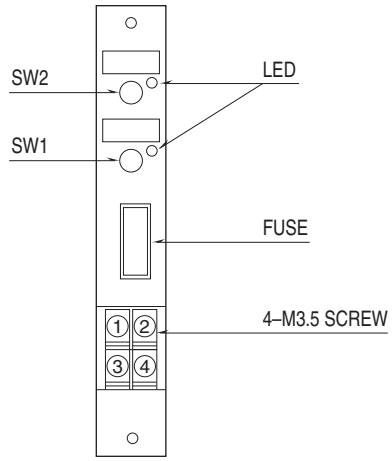
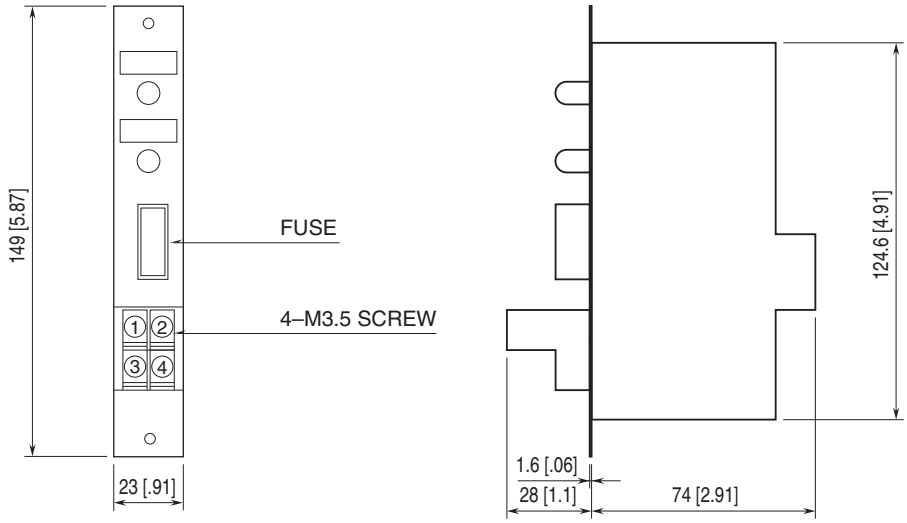
EXTERNAL VIEW



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



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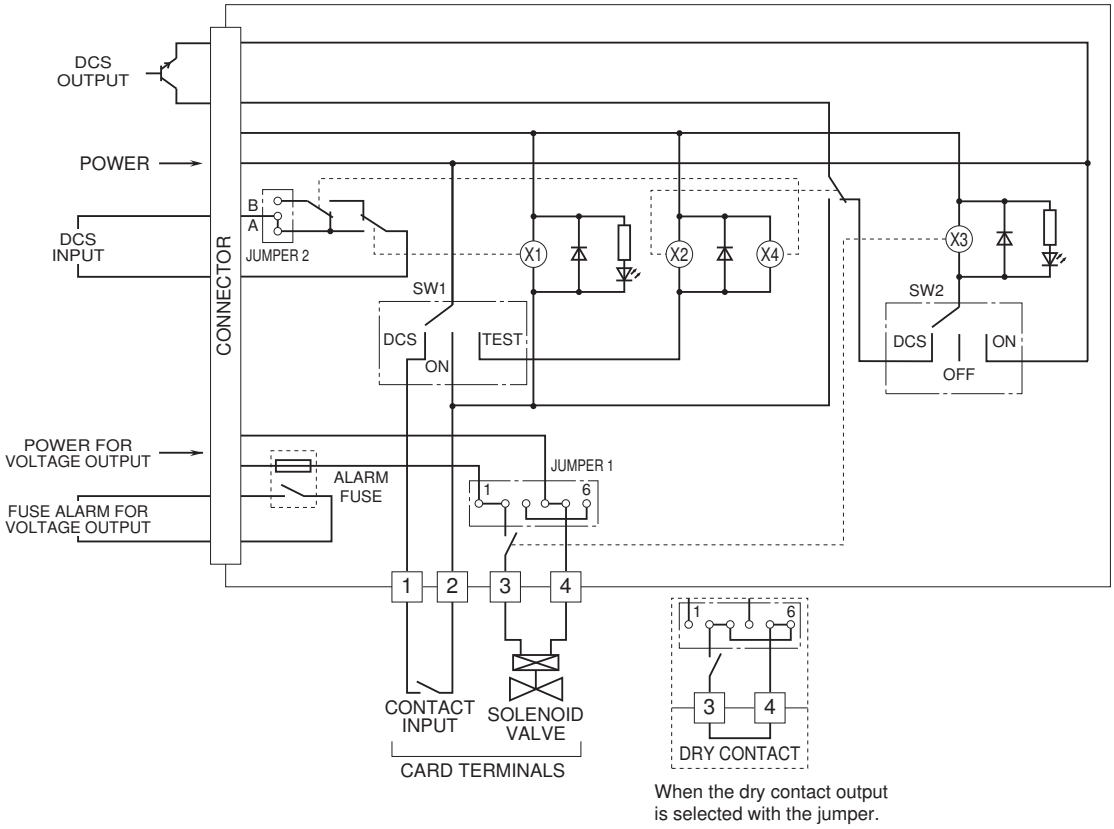
SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



When the dry contact output is selected with the jumper.

OPERATION

INPUT				OUTPUT				
SW2 STATUS	SW1 STATUS	DCS OUTPUT	INPUT	LED (IN)	DCS INPUT		LED (OUT)	OUTPUT
					CONTACT A*	CONTACT B*		
DCS	DCS	ON	ON	ON	ON	ON	ON	ON
			OFF	OFF	OFF	OFF	ON	ON
		OFF	ON	ON	ON	ON	OFF	OFF
			OFF	OFF	OFF	OFF	OFF	OFF
	ON	ON	ON / OFF	ON	ON	ON	ON	ON
		OFF	ON / OFF	ON	ON	ON	OFF	OFF
	TEST	ON	ON / OFF	ON	ON	OFF	OFF	OFF
		OFF	ON / OFF	OFF	OFF	ON	OFF	OFF
OFF	N/A						OFF	OFF
ON	N/A						ON	ON

*Selectable with a jumper.

⚠ Specifications are subject to change without notice.

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