

DRY Contact Output Modules

5AMP Series

5AMP5*, 5AMP12, 5AMP15, 5AMP24

Standard I/O

Overview

5AMP Series high current Dry Output modules provide direct control of power loads, such as motors, contactors, solenoids and lights. They are directly compatible with industry standard I/O mounting racks. High reliability makes this series ideal for robust industrial control applications. The input is active-low and may be controlled by open-collector logic. TTL and CMOS outputs can control 5V models directly*.

The versatile DRY CONTACT output has zero OFF-state leakage current, low ON-state resistance, high power factor inductive load switching and eliminates the need for separate AC and DC module types. This series offers both FORM 1A (N.O.) and FORM 1B (N.C.) types which can be used to pre-configure select I/O points for default power-down states. Standard models are normally open.

Available in 5V*, 12V, 15V & 24V Logic Voltages.

Recommended Operating Parameters

SYMBOL	PARAMETER	LIMITS			UNIT	CONDITION
		MIN	TYP	MAX		
Vcc	Supply Voltage (5 Volt Types) (12 Volt Types) (15 Volt Types) (24 Volt Types)	4.6 9.0 12.0 20.0		5.25 14.0 15.5 26.0	Vdc	Pins 3 & 5 Pins 3 & 4 S4 Types
Icc	Supply Current (5 Volt Types) (12-24 Volt Types)		40 16.7	48 19.2	mAdc	
TA	Ambient Temp.	-40		+70	°C	Operating
ton	Pick-up Time (operate)		6	10	mSEC	
toff	Dropout Time (release)		3	10	mSEC	
VIL	Input Logic Voltage Low		1.0	0.8	V	5 Volt Types
VIH	Input Logic Voltage High	3.0	2.4		V	5 Volt Types
Viso	Isolation Voltage	3000			Vac	See Note 1
IIL	Input Logic Low Current		-1.5	-2.5	mA	See Note 2

Notes:

- Dielectric withstand ratings are 50/60 Hz rms for 1 minute. FORM 1A types are 3000 Vrms, FORM 1B types are derated to 1500 Vrms.
- Input logic low current specifications are for 5 pin models. Use 'supply current' for this parameter for four pin models (S4) suffix. "S4" models do not have pin 5. No Input High current is required. Unit may be driven from open-collector logic.

- Internal relay coil is suppressed with clamping diode (not shown).
- *ALL 5 VOLT MODELS REQUIRE ANY SERIES LED TO BE SHUNTED FOR PROPER OPERATION. Recommended for use in DIN-102R socket or UNI-816 Universal I/O rack with LED set to OUT.
- 5 Amp M-types and SM-types are available in FORM A (N.O.) only.

** Refer to warranty section for limited warranty details.

I/O Compatibility

0.6" Standard I/O
Classic I/O types
70 types



M-5AMP Types

M-5AMP5*, M-5AMP12, M-5AMP15, M-5AMP24

SM-5AMP Types

SM-5AMP5*, SM-5AMP12, SM-5AMP15, SM-5AMP24

I/O Compatibility

M-Type I/O
SM-Type I/O
70M types



Product Features

- ▶ AC/DC Switching
- ▶ 5 Amp rated @ 250VAC/30VDC
- ▶ Fits Standard I/O Racks
- ▶ Operating Temp -40°C to +70°C
- ▶ 3000 Vac Input to Output Isolation
- ▶ Black I/O Case
- ▶ High Reliability
- ▶ Captive #4-40 Screw (0.6" types)
- ▶ Encapsulated Design
- ▶ 3 Year Limited warranty**
- ▶ (N.O.) FORM 1A Standard
- ❖ (N.C.) FORM 1B (Opt) 0.6" Case
- ❖ 4 pin version available (all types)

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M-5AMP Types

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SM-5AMP Types

SM-5AMP5*, SM-5AMP12, SM-5AMP15, SM-5AMP24

*Absolute Maximum Ratings

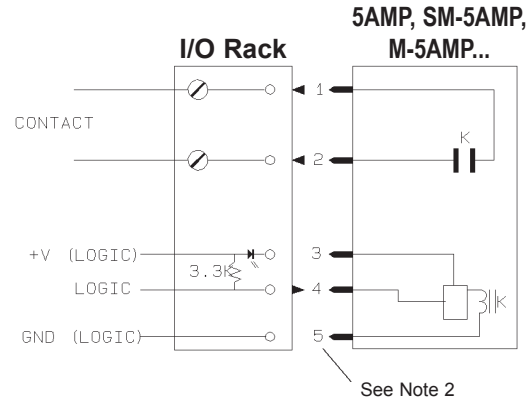
Supply Voltage (pins 3 & 5)	0 to Vcc (max)
Logic Input (pins 4 & 5)	-0.5V, Vcc + 5V
Ambient Operating Temperature	-40° to +70°C

*NOTE: STRESSES ABOVE THOSE LISTED UNDER ABSOLUTE MAXIMUM RATINGS MAY CAUSE PERMANENT DEVICE DAMAGE. OPERATION AT THESE RATINGS FOR EXTENDED PERIODS MAY AFFECT RELIABILITY.

Output Contact Ratings

PARAMETER	LIMIT	UNITS
Switching Voltage	250/30	ac/dc Volts
Switching Current (Resistive)	5	Amps
Switching Current (Inductive)	2	Amps
Power Rating	150	Watts
Horse Power Rating	1/10	H.P.
VA Rating	1250	VA
Initial Contact Resistance	0.03	Ohms
Min. Recommended Load	10	mA

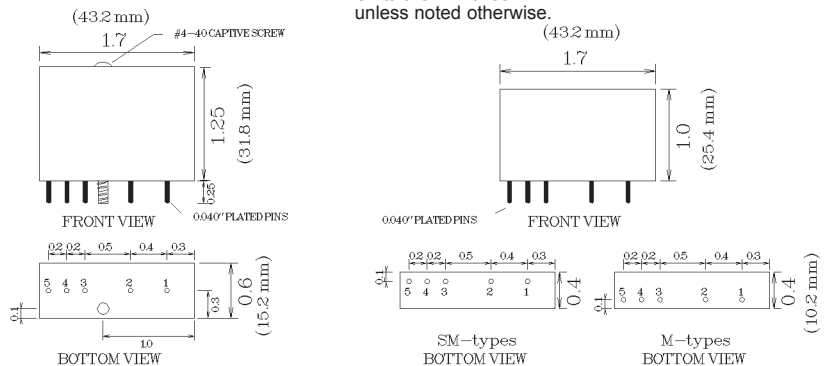
Connection Diagram



Operation

The **5AMP Series** high current Dry Output Modules combine rugged industry standard I/O packaging with a high current rated silver tin oxide dry contact. Operation of these units is logically identical to industry standard SSR output modules. When pin 4 is asserted low, the relay coil is energized (on-state). Standard models, with the exception of 4 pin "S4" types, include a current amplifier (control input is pin 4) which is compatible with standard logic families; 5 volt models can be controlled directly by TTL and CMOS logic. Upon receiving a low input signal, the amplifier switches the full relay current through pins 3 & 5. An internal pull-up resistor is included thus making these units compatible with open-collector control signals. For four pin "S4" models, the relay coil is connected directly from pins 3 (+) and 4 (-) eliminating the need for the current amplifier. When pin 4 is NOT asserted low or no power is applied (off-state), the coil is de-energized; FORM 1A (N.O.) contacts are open and FORM 1B (N.C.) contacts are closed.

Dimensions



Part Numbering

Examples:

- 5AMP12-B** - 0.6" Case, 12V Logic, N.C.
- SM-5AMP24S4** - 0.4 SM Case, 24V Logic, N.O., 4 pin
- 5AMP5** - (non-standard*-requires LED shunt)
0.6" Case, 5V logic, N.O. [consult factory]

