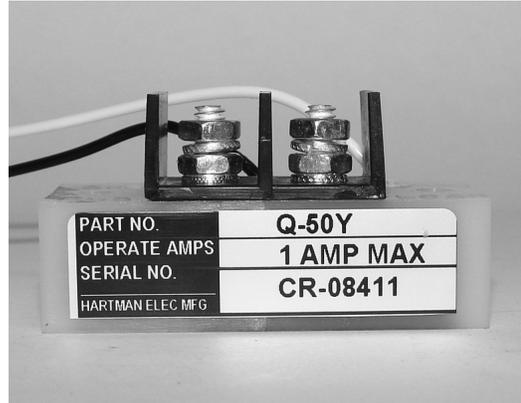


## Q-50 Series Relay, Current Indicator, Rated up to 2 Amps, 28 Vdc

### Product Facts

- SPST NC
- Environmentally sealed
- Meets many requirements of MIL-PRF-6106



### Performance Data

#### Electrical Characteristics

Contact Arrangement — SPST NC

Contact Rating @ 120 Vdc — 0.1 Amp

Rated Operating Voltage — 28 Vdc

Sensing Current Rating — 2 Amps, continuous

Pickup Max. — 1 Amp DC

Dropout Min. — 0.4 Amp

Operating Voltage, Nom. — 28 Vdc

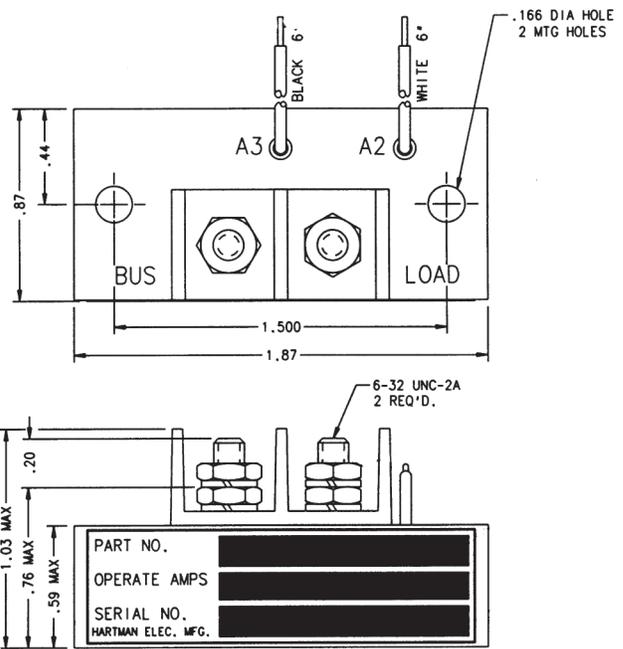
#### General Characteristics

Temperature Range —

-55°C to +71°C

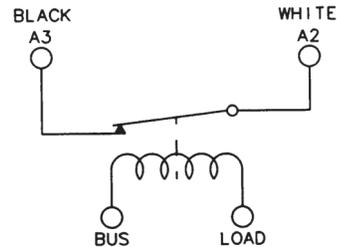
Altitude, Max. — 50,000 ft

Weight, Max. — 1.25 oz



Mounting Style A

### Circuit Configurations (Consult factory for other available circuit configurations)



Circuit Configuration 1

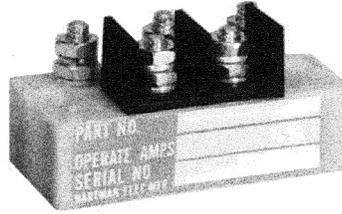
For factory-direct application assistance, phone 419-521-9500 or fax 419-526-2749.

HARTMAN Part Number	Construction Type	Mounting Style	Duty Cycle	Circuit Config.	TE Part Number
Q-50Y	Environmentally Sealed	A	Continuous	1	1-1616131-2

## Q-50 Series Relay, Current Indicator, Rated up to 3.5 Amps, 28 Vdc

### Product Facts

- SPDT
- Environmentally sealed
- Meets many requirements of MIL-PRF-6106



### Performance Data

#### Electrical Characteristics

**Contact Arrangement** — SPDT

**Contact Rating @ 28 Vdc** —  
0.25 Amp

**Lamp Load @ 28 Vdc** — 0.080 Amp

**Rated Operating Voltage** — 28 Vdc

**Sensing Current Rating** — 3.5  
Amps, continuous

**Pickup Max.** — 2 Amp DC

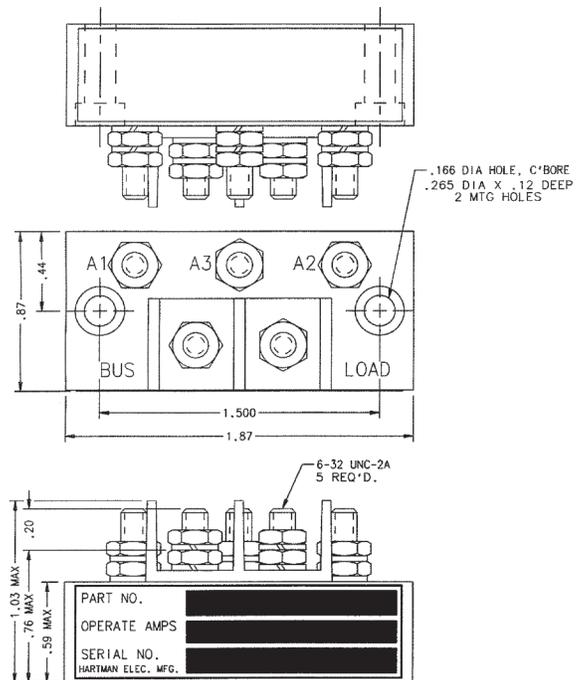
**Dropout Min.** — 0.8 Amp

#### General Characteristics

**Temperature Range** —  
-55°C to +71°C

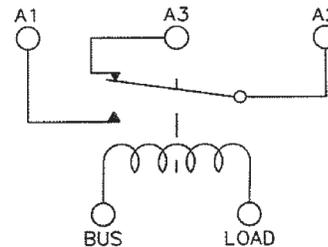
**Altitude, Max.** — 50,000 ft

**Weight, Max.** — 1.25 oz



Mounting Style A

### Circuit Configurations (Consult factory for other available circuit configurations)



Circuit Configuration 1

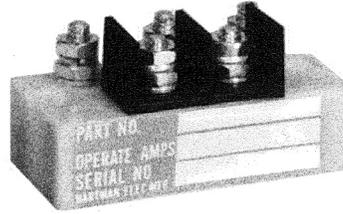
For factory-direct application assistance, phone 419-521-9500 or fax 419-526-2749.

HARTMAN Part Number	Construction Type	Mounting Style	Duty Cycle	Circuit Config.	TE Part Number
Q-50F	Environmentally Sealed	A	Continuous	1	1616131-9

**Q-50 Series Relay, Current Indicator, Rated up to 6.25 Amps, 28 Vdc**

**Product Facts**

- SPDT
- Environmentally sealed
- Meets many requirements of MIL-PRF-6106



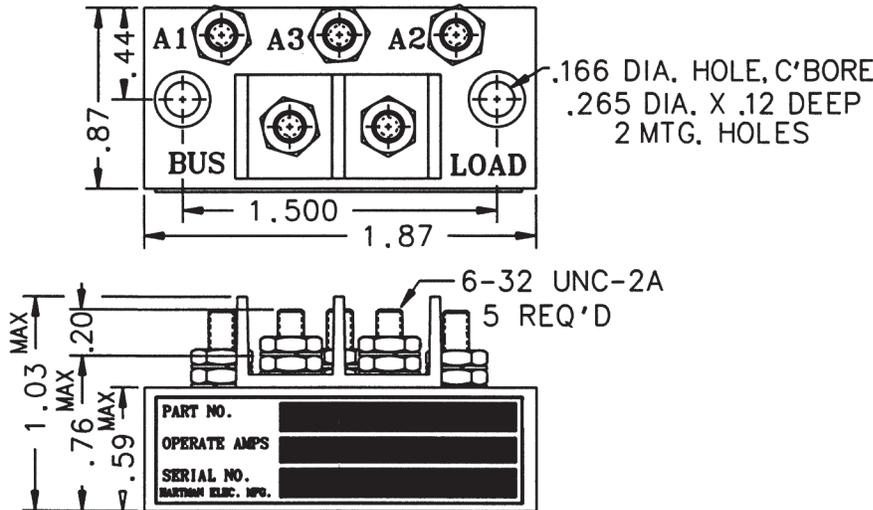
**Performance Data**

**Electrical Characteristics**

- Contact Arrangement** — SPST NC
- Contact Rating @ 28 Vdc** — 0.25 Amp
- Rated Operating Voltage** — 28 Vdc
- Sensing Current Rating** — 6.25 Amps, continuous
- Lamp Load** — 0.080 Amp
- Pickup Max.** —  
Q50BB - 2.5 Amps DC  
Q50BD - 2.0 Amps DC  
Q50E - 3.5 Amps DC
- Dropout Min.** —  
Q50BD - 0.8 Amps DC  
Q50BB - 1.0 Amps DC  
Q50E - 1.4 Amps DC

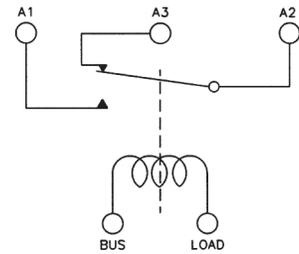
**General Characteristics**

- Temperature Range** — -55°C to +71°C
- Altitude, Max.** — 50,000 ft
- Weight, Max.** — 1.25 oz



Mounting Style A

**Circuit Configurations**  
(Consult factory for other available circuit configurations)



Circuit Configuration 1

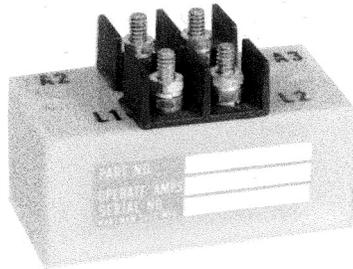
HARTMAN Part Number	Construction Type	Mounting Style	Coil Type	Circuit Config.	TE Part Number
Q-50BB	Environmentally Sealed	A	Continuous	1	1616131-5
Q-50E	Environmentally Sealed	A	Continuous	1	1616131-8
Q-50BD	Environmentally Sealed	A	Continuous	1	1616131-6

For factory-direct application assistance, phone 419-521-9500 or fax 419-526-2749.

## Q-50 Series Relay, Current Indicator, Rated up to 10 Amps, 28 Vdc

### Product Facts

- SPST NO
- Environmentally sealed
- Meets many requirements of MIL-PRF-6106



### Performance Data

#### Electrical Characteristics

**Contact Arrangement** — SPST NO

**Contact Rating @ 28 Vdc** —  
0.25 Amp

**Lamp Load @ 28 Vdc** — 0.08 Amp

**Rated Operating Voltage** — 28 Vdc

**Sensing Current Rating** — 20 Amps,  
continuous, max.

**Pickup Max.** —  
3.5 Amps DC

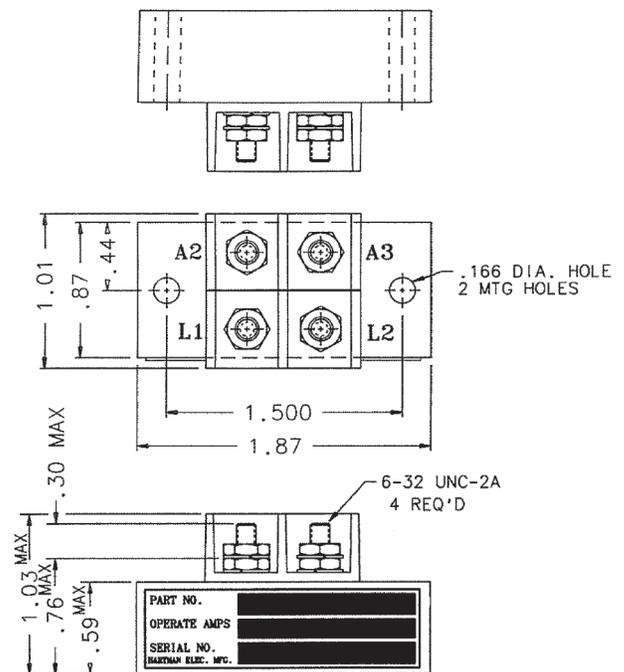
**Dropout Min.** — 0.5 Amp

#### General Characteristics

**Temperature Range** —  
-55°C to +71°C

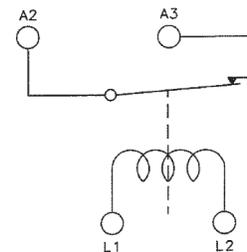
**Altitude, Max.** — 50,000 ft

**Weight, Max.** — 1.25 oz



Mounting Style A

### Circuit Configurations (Consult factory for other available circuit configurations)



Circuit Configuration 1

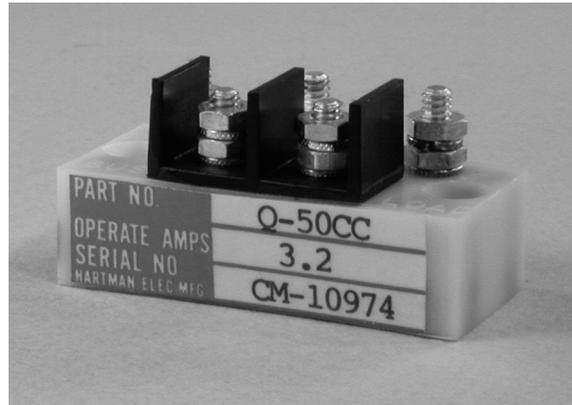
For factory-direct application assistance, phone 419-521-9500 or fax 419-526-2749.

HARTMAN Part Number	Construction Type	Mounting Style	Duty Cycle	Circuit Config.	TE Part Number
Q-50A	Environmentally Sealed	A	Continuous	1	1616131-1

**Q-50 Series Relay, Current Indicator, Rated up to 15 Amps, 28 Vdc**

**Product Facts**

- SPDT
- Environmentally sealed
- Meets many requirements of MIL-PRF-6106



**Performance Data**

**Electrical Characteristics**

**Contact Arrangement** — SPDT

**Contact Rating @ 28 Vdc** — 0.25 Amp

**Lamp Load @ 28 Vdc** — 0.10 Amp

**Rated Operating Voltage** — 28 Vdc

**Sensing Current Rating** — 15 Amps DC, continuous, max.

**Pickup Max.** — 3.2 Amps DC

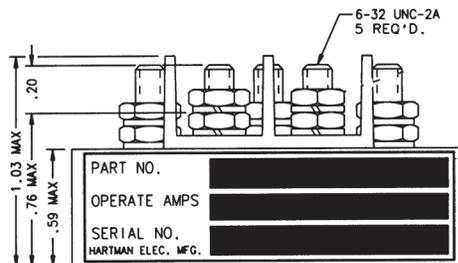
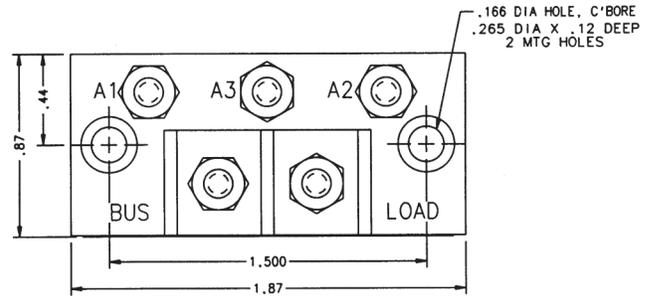
**Dropout Min.** — 1.2 Amps

**General Characteristics**

**Temperature Range** — -55°C to +85°C

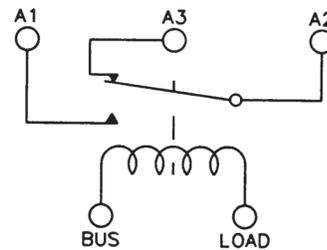
**Altitude, Max.** — 50,000 ft

**Weight, Max.** — 1.25 oz



Mounting Style A

**Circuit Configurations** (Consult factory for other available circuit configurations)



Circuit Configuration 1

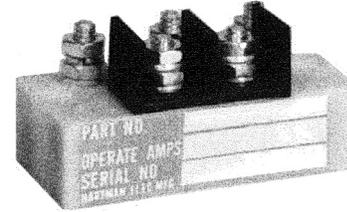
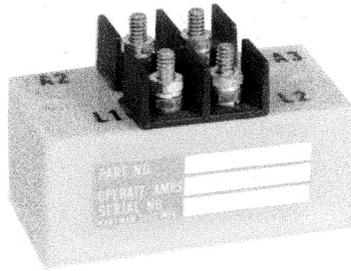
For factory-direct application assistance, phone 419-521-9500 or fax 419-526-2749.

HARTMAN Part Number	Construction Type	Mounting Style	Duty Cycle	Circuit Config.	TE Part Number
Q-50CC	Environmentally Sealed	A	Continuous	1	1616131-7

## Q-50 Series Relay, Current Indicator, Rated up to 16 Amps, 28 Vdc

### Product Facts

- SPST NC
- Environmentally sealed
- Meets many requirements of MIL-PRF-6106



### Performance Data

#### Electrical Characteristics

##### Contact Arrangement —

Q50S - SPST NC

Q50Z - SPDT

##### Contact Rating @ 28 Vdc —

0.25 Amp

##### Lamp Load @ 28 Vdc —

0.10 Amp

##### Rated Operating Voltage — 28 Vdc

**Sensing Current Rating** — 16 Amps  
DC, continuous, max.

**Pickup Max.** — 3 Amps DC

**Dropout Min.** — 1.2 Amps

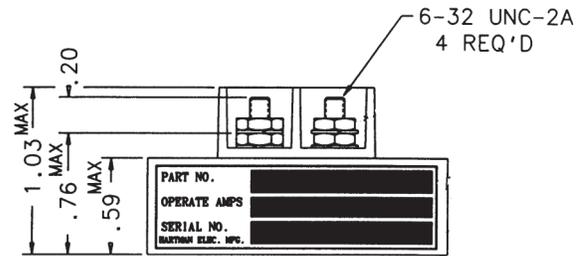
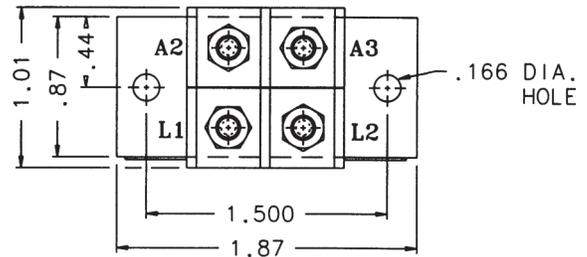
#### General Characteristics

##### Temperature Range —

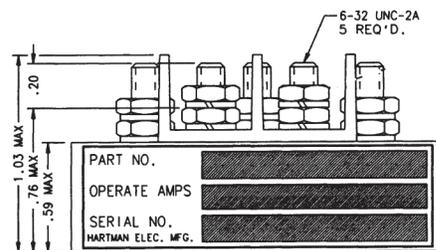
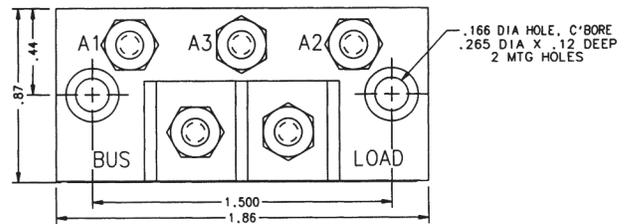
-55°C to +71°C

**Altitude, Max.** — 50,000 ft

**Weight, Max.** — 1.25 oz

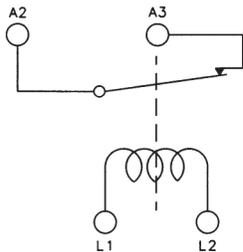


Mounting Style A

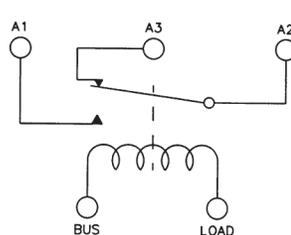


Mounting Style B

### Circuit Configurations (Consult factory for other available circuit configurations)



Circuit Configuration 1



Circuit Configuration 1

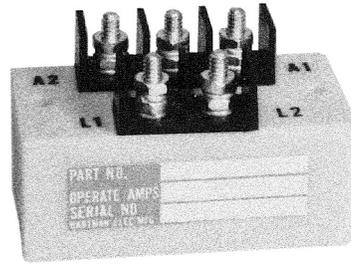
HARTMAN Part Number	Construction Type	Mounting Style	Duty Cycle	Circuit Config.	TE Part Number
Q-50S	Environmentally Sealed	A	Continuous	1	1-1616131-1
Q-50Z	Environmentally Sealed	A	Continuous	2	1-1616131-3

For factory-direct application assistance, phone 419-521-9500 or fax 419-526-2749.

## Q-50 Series Relay, Current Indicator, Rated up to 20 Amps, 28 Vdc

### Product Facts

- SPST NC or SPST NO
- Environmentally sealed
- Meets many requirements of MIL-PRF-6106



### Performance Data

#### Electrical Characteristics

**Contact Arrangement** —  
SPST NC, SPST NO or SPDT

**Contact Rating @ 28 Vdc** —

- Q-50AB-2 — 0.2 Amp
- Q-50J, — 0.25 Amp
- Q-50AG — 1.0 Amp
- Q-50AB-1 — 1 Amp switching, and 2 Amps carry
- Q50AC — 2 Amp

**Lamp Load @ 28 Vdc** —

- Q-50AC, Q-50AB-2 — 0.08 Amp
- Q-50J, Q-50AG — 0.20 Amp

**Operating Voltage, Nom.** — 28 Vdc

**Sensing Current Rating** —

- 20 Amps continuous, max. except for Q-50AB-1 and Q-50AB-2 which are 10

Amps max. and 15 Amps max. for 3 sec. Q50AC 2 Amps continuous 10 Amps max. for 5 seconds

**Pickup Max.** —

- Q-50AC — 0.3 Amp
- Q-50AB-1, Q-50AB-2 — 1.5 Amp
- Q-50J — 3.5 Amps DC
- Q-50AG — 6 Amps DC ± 20%

**Dropout Min.** —

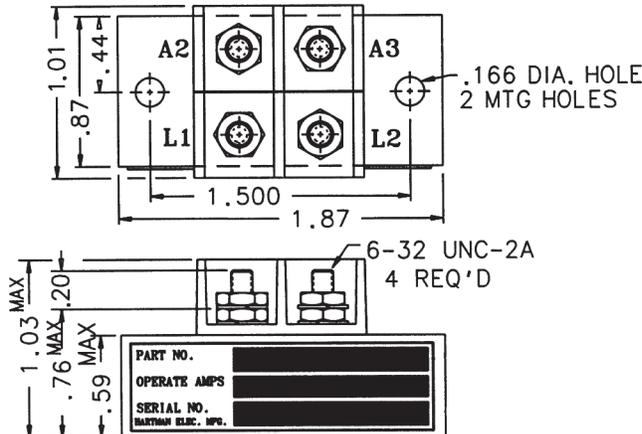
- Q-50AC — 0.1 Amp
- Q-50J — 0.5 Amp
- Q-50AB-1, Q-50AB-2 — less than 1 Amp
- Q-50AG — 2.4 Amp

### General Characteristics

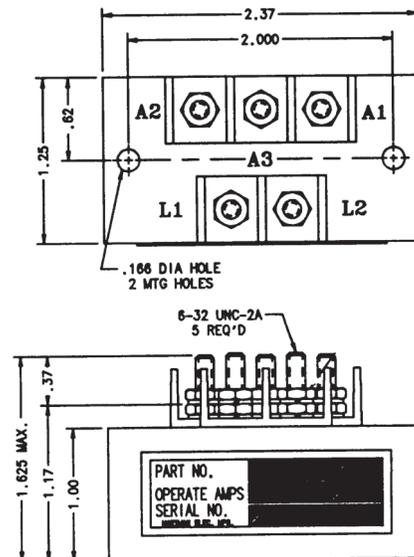
**Temperature Range** —  
-55°C to +71°C

**Altitude, Max.** —  
Q-50J, Q-50AB-1 — 50,000 ft  
Q-50AC, Q-50AG, Q-50AB-2 — 60,000 ft

**Weight, Max.** — 1.25 oz



Mounting Style A

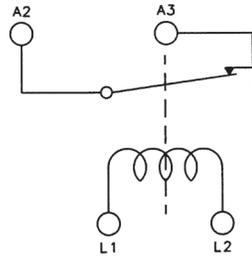


Mounting Style B

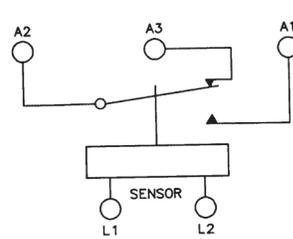
For factory-direct application assistance, phone 419-521-9500 or fax 419-526-2749.

**Q-50 Series Relay, Current Indicator, Rated up to 20 Amps,  
28 Vdc** (Continued)

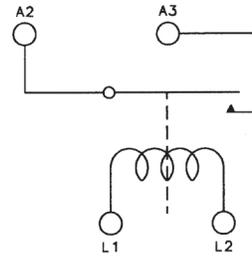
**Circuit Configurations** (Consult factory for other available circuit configurations)



Circuit Configuration 1



Circuit Configuration 2



Circuit Configuration 3

HARTMAN Part Number	Construction Type	Mounting Style	Duty Cycle	Circuit Config.	TE Part Number
Q-50J	Environmentally Sealed	A	Continuous	1	1-1616131-0
Q-50AC	Environmentally Sealed	B	Continuous	2	1616131-4
Q-50AG	Environmentally Sealed	A	Continuous	1	1616540-7
Q-50AB-1	Environmentally Sealed	A	Continuous	1	1616131-2
Q-50AB-2	Environmentally Sealed	A	Continuous	3	1616131-3

For factory-direct application assistance, phone 419-521-9500 or fax 419-526-2749.