# **MODEL 260**

# **Voltage Sensor**

- Monitors for Over or Under Voltage
- LED status indicator
- Plug-in Mounting
- Automatic or Manual Reset
- 5 Year Unconditional Warranty

## **DESCRIPTION**

The **Model 260 Voltage Sensor** is a single setpoint voltage sensor. Input voltages above the setpoint cause the output contacts to energize *(contacts 1 & 8 closed)*. Input voltages below the setpoint cause the output contacts to de-energize *(contacts 1 & 2 closed)*. The dead band between pull-in and drop-out is less than 2%.

The standard unit has a screwdriver, or fingertip adjustable setpoint range of approximately 35% of the maximum voltage. This device can also be provided with a factory calibrated trip point.

AC versions of the Model 260 Voltage Sensor are not frequency sensitive, and may be used in systems from 50Hz to 400Hz. DC models are not polarity sensitive.

This device requires a standard 8-pin socket, such as Time Mark's Model 51X120.

**AUTOMATIC RESET** 

### **ORDERING STANDARD MODELS:**

| AC               | DC               |  |  |  |
|------------------|------------------|--|--|--|
| AC260B-80-130    | DC260B-20-24     |  |  |  |
| #AC260B-90-150   | DC260B-30-46     |  |  |  |
| AC260B-160-250   | DC260B-42-64     |  |  |  |
| AC260B-215-290   | DC260B-60-92     |  |  |  |
| AC260B-380-480   | DC260B-90-150    |  |  |  |
| #AC260B-400-560  | DC260B-160-250   |  |  |  |
|                  | #DC260B-250-350  |  |  |  |
| MANUAL RESET     |                  |  |  |  |
| AC               | DC               |  |  |  |
| AC260BM-80-130   | DC260BM-20-24    |  |  |  |
| #AC260BM-90-150  | DC260BM-30-46    |  |  |  |
| AC260BM-160-250  | DC260BM-42-64    |  |  |  |
| AC260BM-215-290  | DC260BM-60-92    |  |  |  |
| AC260BM-380-480  | DC260BM-90-150   |  |  |  |
| #AC260BM-400-560 | DC260BM-160-250  |  |  |  |
|                  | #DC260BM-250-350 |  |  |  |







on most models

# **SPECIFICATIONS**

| MODEL                 | 260  |  |  |
|-----------------------|--|--|--|
| Input voltage         | see <b>Ordering Info</b> tables  |  |  |
| Transient protection  | 2500 VRMS for 10ms   |  |  |
| Polarity protection   | not required   |  |  |
| Supply current        | 10mA max.  |  |  |
| Setpoint stability    | ± 1%   |  |  |
| Response time         | 100ms  |  |  |
| Operation             | Continuous duty  |  |  |
| Output contacts       | SPDT 10 Amps at 240VAC resistive   |  |  |
| Expected relay life   | Mech: 10 million operations<br>Elec: 100,000 operations at rated load  |  |  |
| Operating temperature | -20° to +131° F  |  |  |
| Humidity tolerance    | 0 - 97% without condensation   |  |  |
| Enclosure material    | ABS plastic  |  |  |
| Mounting              | 8-pin socket (**order separately)  |  |  |
| Weight                | 5 oz.  |  |  |
| Agency approval       | Most AC & DC Auto Reset versions:<br>UL Recognized* and CSA Certified*   |  |  |
|                       | * condition of acceptability: Units receiving input voltages of 300 volts or more must use a UL Recognized 600V socket, like Time Mark's 8-pin Model # 51X120. |  |  |
|                       | # Exception:  Models listed with # do not have agency approval   |  |  |

| Voltage   | G NON-<br>Model | STANDARD VERS Adjustment     | Reset          | Setpoint or Range |
|---|-----------------|------------------------------|----------------|-------------------|
| DC  | 260             | A=factory calibrated         | M=manual reset | xxx or            |
| AC  |                 | <b>B</b> =screwdriver adjust | or auto reset  | xxx-xxx           |
|   |                 |                              | is assumed     |                   |
| example: AC260 AM 230 orders an AC voltage sensor with manual reset, factory calibrated to trip at 230VAC |                 |                              |                |                   |

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# **MODEL 260** Voltage Sensor

READ ALL INSTRUCTIONS BEFORE INSTALLING, OPERATING OR SERVICING THIS DEVICE.

KEEP THIS DATA SHEET FOR FUTURE REFERENCE.

# **GENERAL SAFETY**

POTENTIALLY HAZARDOUS VOLTAGES ARE PRESENT AT THE TERMINALS OF THE MODEL 260.
ALL ELECTRICAL POWER SHOULD BE REMOVED WHEN CONNECTING OR DISCONNECTING WIRING.
THIS DEVICE SHOULD BE INSTALLED AND SERVICED BY QUALIFIED PERSONNEL.

# **Installation Instructions**

#### **INSTALLATION**

Mount the unit in a suitable enclosure. A NEMA-1 enclosure, designed for socket-mounted relays is available from Time Mark.

Connect the voltage to be monitored to terminals 6 and 7. These terminals are not polarity sensitive for any of the listed AC or DC models.

#### **WARNING**

IN APPLICATIONS WHERE VOLTAGES IN EXCESS OF 300VAC ARE TO BE MONITORED, BE CERTAIN TO USE THE **TIME MARK MODEL 51X120** 8-PIN SOCKET, OR AN EQUIVALENT UL APPROVED 600VAC RATED SOCKET.

Connect the load control wiring to the appropriate terminals on the socket:

For motor control applications; use terminals 1 and 8. For phase loss alarm applications; use terminals 1 and 2.

Insert the Model 260 into the socket and apply power. If the contact does not transfer (*green light ON*), use a voltmeter to insure that the proper voltage is present. If voltage is correct, rotate the level adjustment fully counter-clockwise. The contact should transfer to provide a signal path between pins 1 and 8.

NOTE: When installing the Model 260 Sensor in areas of high humidity or contamination, it is recommended that the base area and all exposed metal parts of the socket be coated liberally with a good quality silicone grease, such as Dow Corning DC-4 or DC-4X. Insert the unit into the socket and wipe off excess grease around the base. This will prevent the entrance of moisture and other contaminates into the base and socket areas.

### **ADJUSTMENT PROCEDURE**

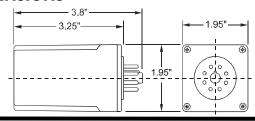
The following procedure will allow the Model 260 Voltage Sensor to be adjusted to achieve a trip point just below the nominal voltage being monitored.

Rotate the adjustment control fully clockwise, or until the red (TRIP) indicator illuminates.

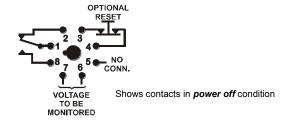
**On manual reset versions**, it will be necessary to hold the reset button down during this next step:

Slowly rotate the adjustment control in a counter-clockwise direction, just until the green (NORM) indicator comes on.

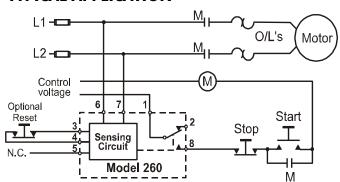
#### **DIMENSIONS**



## **PIN DIAGRAM**



#### **TYPICAL APPLICATION**



Shows No Power Applied

At this point, the Model 260 Voltage Sensor is the most sensitive to irregular power line conditions. If nuisance tripping occurs, turn the control slightly farther counter-clockwise.

A more accurate setting will require the use of an adjustable voltage source, and a voltmeter to achieve an exact setting.

#### **TROUBLESHOOTING**

Should the Model 260 Voltage Sensor fail to operate properly, check that proper voltage is being applied to pins 6 and 7. **On manual reset versions**, place a jumper across pins 3 and 4 if an external, normally-closed reset switch is not connected. Should problems persist, contact your local Time Mark Distributor, or the factory at 800 -862-2875 (Monday-Friday; 8 a.m. to 5 p.m. CST), for further assistance.

#### **WARRANTY**

This product is warranted to be free from defects in materials and workmanship, and is covered by our exclusive **5-year Unconditional Warranty**. Should this device fail to operate for any reason, we will repair it for five years from the date of manufacture. For complete warranty details, see the *Terms and Conditions of Sales* page in the front section of the Time Mark catalog or contact Time Mark at 1-800-862-2875.

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