MODEL 2681
Voltage Band Monitor



- **SPDT Output in Standard Relay Configuration**
- **Monitors Over and Under Voltage**
- **AC or DC Versions**
- **Automatic Reset**

DESCRIPTION

The **Model 2681 Voltage Band Monitor** is a dual set-point voltage monitor. Input voltages between the upper and lower set-points will cause the output contacts to pull in (contacts 1 & 3 closed) and the LED indicator to illuminate. Input voltages above or below the set-points will cause the output contacts to drop out (contacts 1 & 4 closed) and extinguish the LED indicator.

The Model 2681 is available in AC or DC versions. AC models of the 2681 are not frequency sensitive and can be used on systems from 50 to 400 Hz. The voltage set-points are screwdriver adjustable over a wide operating range.

The SPDT ouput configuration is identical to the configuration of general purpose relays. This unit requires a standard 8-pin socket for mounting.

SPECIFICATIONS

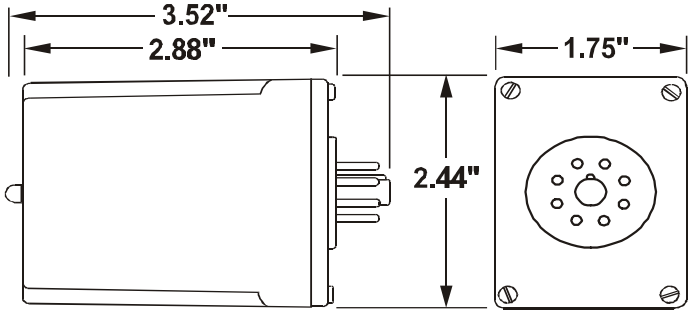
2681 - AC VERSIONS				
Nominal AC voltages	**24vac**	**120vac**	**208vac**	**240vac**
Max input voltage	32vac	160vac	250vac	285vac
Under voltage range	19-24vac	90-120vac	185-208vac	200-240vac
Over voltage range	24-29vac	120-150vac	208-240vac	240-270vac
Input frequency (Hz)	50 - 400 Hz			

2681 - DC VERSIONS						
Nominal DC Voltage	**12vdc**	**24vdc**	**28vdc**	**48vdc**	**110vdc**	**230vdc**
Max input voltage	17vdc	32vdc	37vdc	62vdc	145vdc	270vdc
Under voltage range	10-12vdc	19-24vdc	22-28vdc	38-48vdc	85-110vdc	175-230vdc
Over voltage range	12-15vdc	24-29vdc	28-34vdc	48-58vdc	110-135vdc	230-260vdc

2681 - ALL VERSIONS	
Power consumption	± 2 watts max
Set-point stability	± 0.5% of set-point
Dead band	2%
Polarity protection	DC versions only
Trip response	0.5 sec fixed (± 0.1 sec)
Reset time	0.1 sec
Output contacts	SPDT
Contact rating	10A at 240vac resistive
Expected relay life	Mechanical: 10 million operations Electrical: 100,000 at rated load
Operating temp	- 40° to +122°F
Humidity tolerance	97% w/o condensation
Mounting	8-pin socket (*order separately)
Case material	ABS plastic
Weight	5 oz.

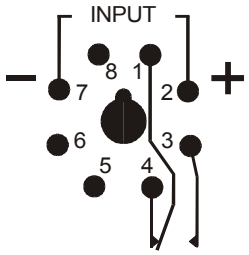
* Order 8-pin socket number 51X120

DIMENSIONS



(dimensions have tolerance of ± 0.06)

PIN DRAWING



Shown De-Energized

Telephone: Main - (918) 438-1220
Sales - (800) 862-2875
Fax: (918) 437-7584

E-mail: sales@time-mark.com
Internet: http://www.time-mark.com

TIME MARK CORPORATION

11440 East Pine Street
Tulsa, Oklahoma 74116

Doc No. 87A168 12/00

© 2000 TIME MARK CORPORATION

TIME MARK is a division of AEMT, Inc.

MODEL 2681 Voltage Band Monitor

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 2681 MONITORS. ALL ELECTRICAL POWER SHOULD BE REMOVED WHEN CONNECTING OR DISCONNECTING WIRING. THIS DEVICE SHOULD BE INSTALLED AND SERVICED BY QUALIFIED PERSONNEL.

Installation Instructions

INSTALLATION

The Model 2681 is a socket-mounted voltage band monitor. The pin configuration diagram on the unit shows the contacts in the power OFF, or tripped condition.

Connect the wiring to the socket as shown in the Typical Application diagram. **Observe the proper polarity of the input voltage for DC models.**

ADJUSTMENT PROCEDURE

NOTE:
When adjusting the Model 2681 you may wish to jumper the control circuit contacts to prevent tripping the load on and off. A variable voltage source and a digital voltmeter provide the most accurate means of calibrating the trip point setting. However, for AC line voltages, you can often obtain a satisfactory calibration by using only the AC line voltage.

Rotate the UNDER VOLTAGE adjustment pot clockwise, until the relay trips, and the UNDER VOLTAGE LED indicator is lit.

Then, rotate the adjustment pot counter-clockwise slowly, until the relay resets. The UNDER VOLTAGE LED should be off.

Rotate the OVER VOLTAGE adjustment pot counter-clockwise, until the relay trips, and the OVER VOLTAGE LED indicator is lit.

Then, rotate the adjustment pot clockwise slowly, until the relay resets. The OVER VOLTAGE LED should now be off.

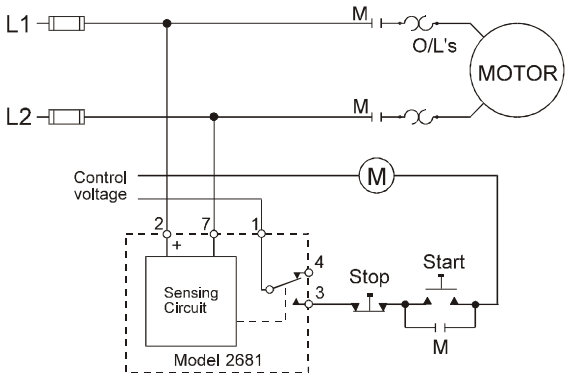
The above calibrations will be correct in most applications. If nuisance tripping occurs, turn the adjustments for a slightly wider voltage band.

A reasonably accurate voltage setting can be obtained by using only the operating line voltage. Apply the voltage and follow steps 2 and 4 above.

Voltages approximately 2% to 4% above and below the nominal voltage will now trip the relay. To prevent nuisance tripping you may need to turn the adjustments slightly lower and higher as needed.

NOTE: *When installing the Model 2681 monitor 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 silicon 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.*

TYPICAL APPLICATION



Shows No Power Applied

TROUBLESHOOTING

Should the Model 2681 fail to operate properly, check that voltage is present and is of the correct level. Check all fuses, and verify that all wiring connections are correct. 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

The **Model 2681 Voltage Band Monitor** is warranted to be free from defects in materials and workmanship, and is covered by our exclusive **5-year Unconditional Warranty**. If this device fails to operate, for any reason, we will repair or replace it free, for five years from the date of purchase. Contact the Time Mark Sales Department for further details.

Telephone: Main - (918) 438-1220
Sales - (800) 862-2875
Fax: (918) 437-7584

E-mail: sales@time-mark.com
Internet: http://www.time-mark.com

TIME MARK CORPORATION

11440 East Pine Street
Tulsa, Oklahoma 74116

Doc No. 87A168 12/00

© 2000 TIME MARK CORPORATION

TIME MARK is a division of AEMT, Inc.