



SM-100U SUBSTATION MONITOR

- 12 Point Annunciator
- High Reliability in Severe Temperature Conditions
- Simple Operation
- Individual Reset per Point
- 125VDC or 48VDC

The RiS SM-100U is a compact 12-point annunciator, intended for use as a remote alarm indicator in substations and other unattended areas. It combines simple operation with low cost and high reliability even under severe ambient temperature conditions.

By accepting Normally Open Contacts, it is typically used to monitor such diverse operations as breaker position, transformer and regulator temperatures, bus interconnections, and water pump pressure. It is also suitable as a ground alarm or as a local alarm panel driving a common control room annunciator.

Each point of the SM-100U is provided with an indicating light and name plate describing the input being monitored. When an alarm occurs the unit provides a memory function by sealing in the alarm until the point has been manually reset. The auxiliary contacts of each point may be wired in parallel so that a closure resulting from an alarm will also serve as a signal for transmission to a supervisory panel in the control room. On this basis the SM-100U increases station reliability and minimizes loss of customer service by greatly reducing the time required to detect and locate faults in unattended facilities. A service technician can be dispatched as soon as a signal is received in the control room, and is guided to the source of trouble by consulting the remotely installed monitor.

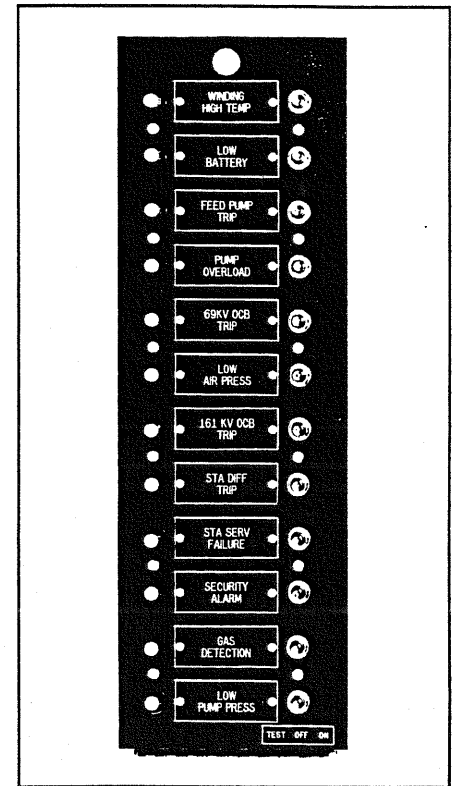
Operation

Each of the 12 points in the SM-100U is equipped with a long-life, 50,000 hour

lamp and a three-position switch. When a Normally Open alarm contact closes, a relay energizes and locks in. The appropriate lamp illuminates and the auxiliary relay closes, providing a signal to the supervisory panel. The service technician dispatched as a result of the alarm first consults the SM-100U to determine the location of the fault. He then disables the appropriate point prior to clearing the fault, by moving the switch to the OFF position. (If the fault has cleared itself, this serves to reset the point.) After clearance of the fault, the switch is returned to the ON position. The entire unit may be functionally tested by momentarily moving each switch to the TEST position.

Additional Operational Sequences are available. Please consult ordering information or the factory for further details.

An optional System Reset button which allows the reset of all 12 annunciator points with a momentary push button is also available.



Specifications

Input Signals:

Normally open alarm contacts supplied with voltage from the positive side of the station battery.

Output Signals:

Lighted lamps upon alarm status until manually reset. Individual auxiliary relay contacts.

Operating Voltage: 125VDC or 48VDC

Power Dissipation:

5.9 Watts @ 125VDC per point
2.2 Watts @ 48VDC per point
0 Watts during standby

Lamps:

Telephone type 24 ESB, operated at reduced voltage for 50,000 hour life.

Relays:

Contact rating is 5A at 24VDC, 0.5A at 125VDC

Ambient Temperature Range:
-30°F to 140°F (-34°C to 60°C)

Sequence of Operation

| Condition | Field Alarm Contacts | Switch | Lamp | Auxiliary Contacts |
|------------------|----------------------|--------|------|--------------------|
| Normal | Open | On | Off | Open |
| Alarm | Closed | On | On | Closed |
| Return to Normal | Open | On | On | Closed |
| Reset | Open | Off | Off | Open |

Humidity 0 to 95% non-condensing

Isolation 600VAC or 1000VDC
Input to case, output to case

Surge Withstand Capability (SWC)
Conforms to ANSI/IEEE C37.90.1-1989

Field Connections:

Terminal block with #6 screws.
14 AWG wire maximum.

Dimensions:

5.625"W x 17.00"H x 4.00"D
(14.29 cm x 43.18 cm x 10.16 cm)

Weight: 9 lbs. 13 oz. (4.45 kilos)

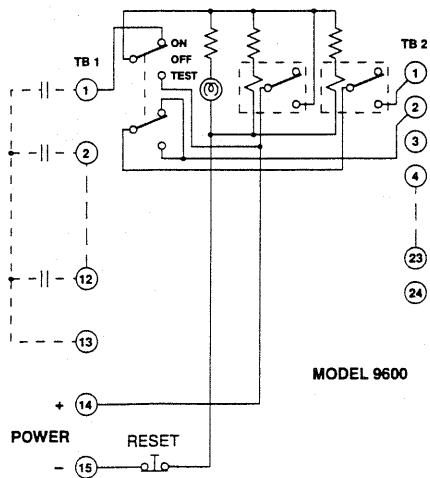
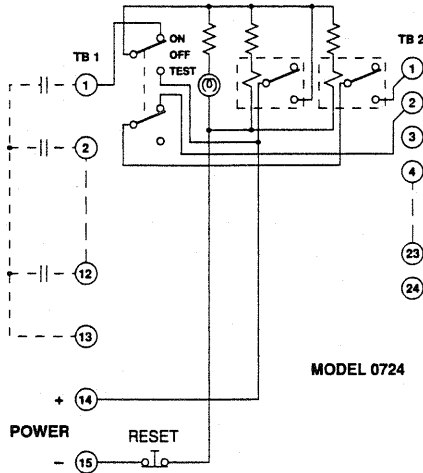
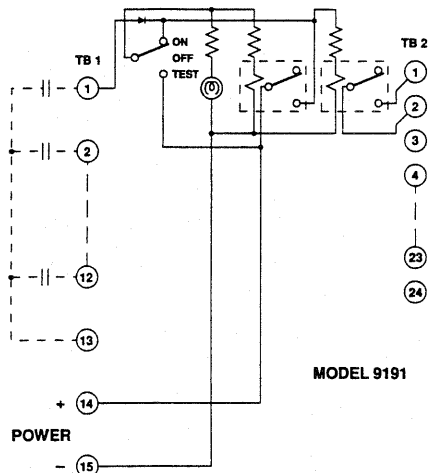
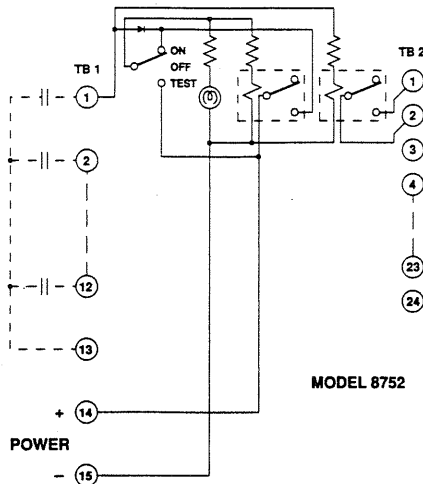
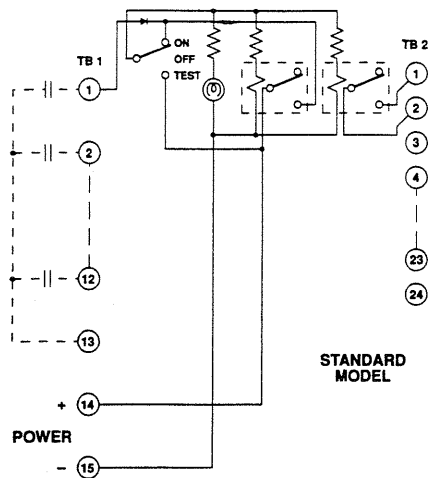
Mounting:

Wall mount or panel mount is available

Labeling:

Black lamacoid legend plates with white engraved lettering. Each plate is 1" x 2.5" overall. Up to 5 lines with 24 characters per line is possible using 1/8" engraving. Please consult factory for other various options on engraving sizes.

Connection Drawings



TB1=12 NORMALLY OPEN ALARM CONTACTS

RELAY CONTACTS ARE SHOWN IN DE-ENERGIZED (NORMAL) STATE

TB2=12 NORMALLY OPEN AUXILIARY CONTACTS FOR USE WITH SUPERVISORY, AUDIBLE, OR VISUAL INDICATOR

Ordering Information

Model Number:

SM100U for 125 VDC power
SM100UA for 48 VDC power

Specify legends engraved or blank, and options as desired.

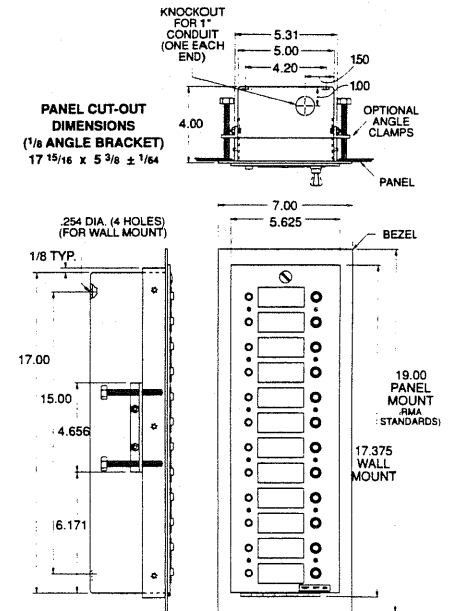
Optional Operation Sequences

- STD Auxiliary contacts latched until reset
- 8752 Auxiliary contacts follow field contacts
- 9191 Auxiliary contacts latched until reset and alarm clears
- 9600 Common reset, auxiliary contacts latched until reset, auxiliary contacts activated on test
- 0724 Common reset, auxiliary contacts latched until reset, auxiliary contacts disabled during test

Spare Parts

| | |
|-------------|--------------|
| Switch | P/N 5110-053 |
| Lens Cover | |
| Red | P/N 5806-010 |
| Amber | P/N 5806-011 |
| White | P/N 5806-012 |
| Green | P/N 5806-013 |
| Power Relay | P/N 4500-020 |
| Lamp | P/N 5804-070 |

Dimensions



Specifications subject to change without notice



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