

SEL SEL-4388 MIRRORED BITS® Tester

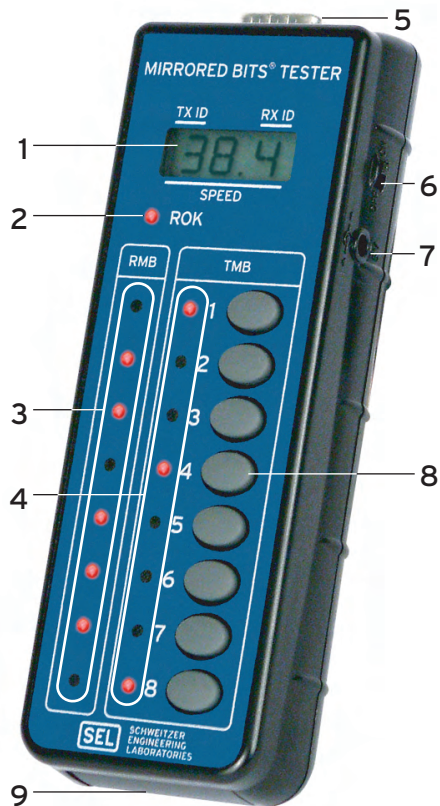


Figure 1 SEL-4388 MIRRORED BITS Tester

- Display:** Three-segment LCD shows RX_ID (right) and TX_ID (left), alternating with detected data rate (SPEED).
- ROK LED:** Illuminates when receiving valid MIRRORED BITS data (after synchronization)—see *Synchronization on page 2*.
- RMB LEDs:** Always display the active receive state of the eight Receive MIRRORED BITS (RMBs).
- TMB LEDs:** Always display the active transmit state of the eight Transmit MIRRORED BITS (TMBs).
- Port:** Connects to a MIRRORED BITS communications channel: male, subminiature, 9-pin D connector. Supplied cables: C602 (straight through), C603 (null modem or cross-over cable).
Pin 1 = +5 Vdc*;
Pin 2 = Data Out;
Pin 3 = Data In;
Pin 5 = Ground;
Pin 8 = +6 Vdc
* requires external ac power adapter 230-0601
- ON/OFF Switch (for battery power only):** OFF conserves batteries when not in use or when using the External Power Input.
- External Power Input:** Accepts 4–18 Vdc, center pin is positive (+) on the 0.7 mm coaxial dc jack. Optional ac power adaptor is 230-0601.
- TMB Pushbuttons:** Directly assert and deassert eight Transmit MIRRORED BITS (TMBs). If connection is interrupted,

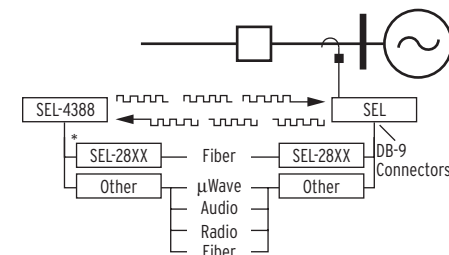
TMBs remain latched until a new synchronization process occurs (aids in testing intermittent or marginal channels).

- Battery Compartment:** Provides internal power option. Uses two alkaline AAA batteries (Ray-O-Vac® 824 or equivalent).

Major Features and Benefits

- Save time by confirming MIRRORED BITS addresses and data rate.
- Quickly and easily troubleshoot communications links.
- Use as a training aid for new-to-MIRRORED BITS personnel.
- Use portable, battery-powered tester anywhere.

Applications



* Use a null-modem cable (C603, included), and appropriate gender changer (240-1551-M/M, DB-9, accessory) as needed.

Figure 2 Functional Diagram

Operation

Power-On Sequence

- ▶ Connect MIRRORRED BITS communications network (see *Figure 2*).
- ▶ Move ON/OFF Switch to ON, or apply external power.
- ▶ Observe synchronization process
 - Sequential LED test
 - Sequential LCD-segment test
 - “S E L” appears on the LCD
 - LEDs blink while detecting data rate
 - ROK LED illuminates

Normal Operation

Read parameters and operate TMB pushbuttons. The display shows the RX_ID and TX_ID needed to communicate with the device to which the SEL-4388 is connected, not the actual ID settings of the connected device.

Synchronization

Synchronization occurs when the tester detects a change in RX_ID, TX_ID, or data rate (SPEED).

Troubleshooting

Alarm State—SEL-4388 illuminates all LEDs for 10 seconds, then extinguishes LEDs (except latched TMB LEDs).



Sleep State—“S E L” remains on the front-panel LCD.

Power-on with no MIRRORRED BITS communications: Alarm State, then Sleep State

Lost connection: Alarm State, then Sleep State

Connected to non-MIRRORRED BITS protocol: Alarm State, then Sleep State

Data rate (SPEED) outside range: Alarm State, then Sleep State

Specifications

MIRRORRED BITS Protocol

MB (MBA and MBB), MB8

Port Data Rate (SPEED)

2400 to 38400 bps

Power Supply

Internal

Two AAA batteries
(Ray-O-Vac 824 or equivalent)

External

Range: 4–18 Vdc
Burden: <120 mW

Battery Operating Life

30 hours with all LEDs illuminated

Operating Temperature Range

0 to +45°C (+32° to +113°F)

Humidity

0% to 95% without condensation

Unit Weight (with batteries)

0.2 kg (0 lb, 7 oz)

Dimensions (H x W x D)

146 mm x 53 mm x 32 mm
(5.75 in. x 2.10 in. x 1.25 in.)

Factory Assistance

We appreciate your interest in SEL products and services. If you have questions or comments, please contact us at:

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