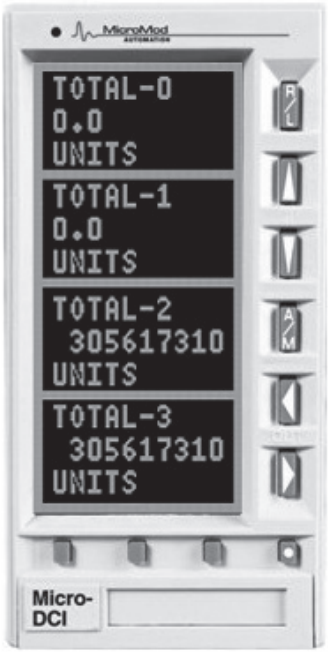
Micro-DCI™ 4 Channel Indicator Totalizers
53IT5100B

- **Four Channels of Process Variable Bargraph Indication**
- **Four Channels of Integration and Digital Totalization**
- **Alarm/Annunciator Summary**
- **Intuitive, High-Visibility Operator Interface**
- **Front-panel configuration & setup**
- **Built-in transmitter power supply**
- **Direct replacement for 53IT5100A Indicator/Totalizer**
- **Compatible with existing installations**



The 53IT5100 Indicator/Totalizer features up to four channels of process variable indication on one faceplate. The high visibility dot matrix display permits process variable indication and totalization values to be displayed in a clear and concise manner. Its capabilities include:

- Four channels of indication
- Four channels of totalizing
- Six alarm status points
- Six alarm types
- DataLink serial communications
- Two transmitter power supplies
- Two contact inputs
- Two alarm outputs
- Analog retransmission

The 53IT5100 Indicator/Totalizer includes an RS-232 front configuration port and standard RS-458 DataLink at the rear terminations for connection to a PC and/or other Micro-DCI instruments on a network. It is supported by the G3 Operator Panel DataLink interface.

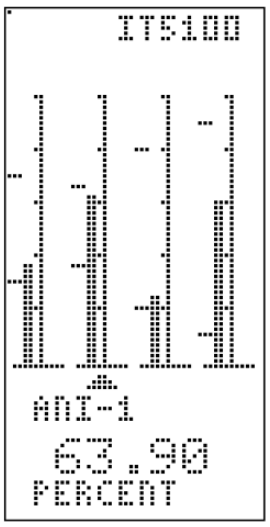
53IT5100B is a direct replacement for the 53IT5100A. The standard displays, alarm reporting and alarm acknowledgement are identical, making the transition seamless for operators, and it can be mounted in the same panel cutout.

The 53IT5100 provides up to four channels of process variable indication and four channels of integration and totalization.

The 53IT5100 accepts up to four analog inputs. Each input channel can receive signals as 4-20mA, 0-20mA, 0-5V or 1-5V and each has selectable square-root extraction. Any of the analog inputs can be retransmitted to the analog output. Each of the four input channels has full alarm capabilities.

Standard displays include two- and four-channel indication, four-channel integrator/totalizer indication with 10-digit resolution, and an alarm summary screen that shows at-a-glance status of the alarms for four analog inputs and two contact inputs. The six screens are accessed using the pushbuttons along the bottom of the display.

The four channel indicator display shows the process variable inputs in bargraph format with a digital readout for the selected input. Each channel has the ability to show individual tagnames, input range, and user specified engineering units.

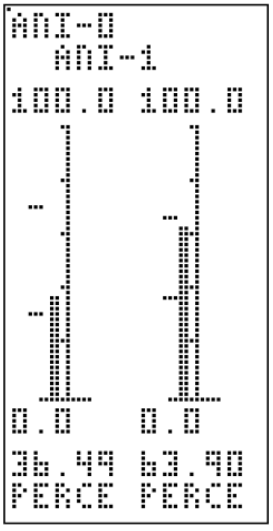


Four-Channel Indicator

Four-Channel Totalizer

The four channel integrator/totalizer display has individual, user-selectable tagnames and engineering units configurable to best represent the individual process. The digital totalizer has 10 digit floating point resolution for allows larger, more accurate totals of the process.

The two-channel indicator displays allow the end user to display two channels at a time. This allows an uncluttered presentation of information.



Two-Channel Indicator

The alarm summary screen displays the status of the alarms for the four analog inputs and the two contact inputs. The legend at the top of the display identifies the alarm group. Each of the four analog inputs has an independent programmable alarm function. Two contact outputs can be used to send alarm status to external devices.

When an alarm condition occurs a flashing “ALARM” message appears at the top of the current display. Incoming alarms are acknowledged by pressing the pushbutton on the faceplate. If the condition continues it is shown by a flashing bargraph display. When the process variable returns to its normal range the bargraph stops flashing.

Engineering Specifications

OPERATING CHARACTERISTICS

Power Requirements:
21 to 28 VDC
120 VAC +/- 10%, 50/60 Hz
220/240 VAC +/- 10%, 50/60 Hz

Power Consumption:
AC Operation: 15 W max

Internal Power Supply
Available Power Output for Transmitters:
24-26V dc, 80 mA, short circuit protected

Output Ripple: 200 mV p-p maximum

ENVIRONMENTAL CHARACTERISTICS

Enclosed temperature controlled locations (class A and B per ISA S71.01 1985)

Ambient Temperature Limits: 4 to 52°C (+40 to 125°F)

Relative Humidity Limits: 10 to 90% maximum

Temp. Effect on Accuracy: +/-0.28% per 28° (50°F) from reference temp. of 25°C (77°F)

Enclosure Classification: NEMA type 1/IEC 529 Type IP20

PHYSICAL CHARACTERISTICS

Case: Steel

Finish: Baked enamel, RAL 9002, Light Gray

Circuit Boards: Glass epoxy

Bezel: ULTEM 1000 (Polyetherimide Resin)
Flamability-UL94 5V

Dimensions: DIN case
2 27/32"W x 5 21/32"H x 12 26/32"L
(72 mm W x 144 mm H x 305 mm L)

Panel Cutout: 2 11/16"W x 5 7/16"H (68 mm W x 138 mm H)

Weight: 5 lbs. (approximate)

Electrical Connections
Rear-of-case compression-type terminal strips

Front Panel

Display: 48 x 96 pixels

Pushbuttons: 10 (membrane type switches)

MICROPROCESSOR SAMPLING & UPDATE

Program scan rate: 100 ms

Input Signal Sampling Rate
Analog: 50 ms for all inputs
Contact: 50 ms for all inputs

Display Update: 100 ms

COMMUNICATIONS

Standard Micro-DCI DataLink RS-485

Type: RS422/485, four wire, asynchronous

Speed: Selectable - all standard baud rates between 300 and 9600: plus 14,400 and 28,800
Mode: Binary

INPUT & OUTPUT SIGNALS

Analog Inputs

Quantity: 4

Signal Range: 0-5vdc or 1-5 vdc

Input Impedance: 1 megohm minimum for voltage inputs; value of ranging resistor for current signals.

Measurement Accuracy: +/-0.1% of span

(All analog inputs and outputs are referenced to signal common.)

Note: The standard rear terminal board has the appropriate resistors for mA inputs. If the input signal is voltage, the resistors should be removed.

Contact Inputs

Quantity: 2

Type: Discrete inputs internally powered with 4 volts @ 2 mA dc maximum (contact inputs are referenced to power common.)

Permissible Contact Resistance: 100 ohm maximum

Open/Close Contact Duration:
for open recognition: 0.05 s minimum
for close recognition: 0.05 s minimum

Contact Recognition Level
Closed: 1 V dc max or less than 100 ohms
Open: 4 V dc to 15 v dc or 10 mA max

Analog Outputs

Quantity: 1

Signal Range: 0 - 21.84 mA dc (4 - 20 mA dc typically)

Load Resistance: 0-750 ohms

Accuracy: +/- 0.2% of span
(Current output is refreshed every 0.05 seconds. Output slew rate is 40 mA/sec)

Discrete Outputs

Quantity: 2

Type: Unpowered discrete solid state output.

Configuration: Single pole single throw, N.O., or N.C. referenced to power common.

Voltage: 30 V dc max.

Current: 50 mA dc max.

	53IT51 01 - 06	__ 07	__ 08	A 09	2 10	1 11	A 12	B 13	A 14
4-Channel Indicator Totalizer	53IT51								
Power Requirement AC 110/120, 220/240 VAC 50-60HZ DC (24 Vdc)		1 2							
Functionality Standard Standard with Factory Configuration (Note 1)			1 2						
Design Level				B					
Enclosure Type DIN 72 x 144mm Bezel					2				
Rear Terminal Board Standard Rear Terminal Board						1			
Chassis Standard Chassis							A		
Safety Classification General Purpose FM Class 1, Div 2, Groups A,B,C,D								A B	
Conformal Coating Standard									A

Note 1: Configuration consists of entering tags, engineering units alarm limits, totalizer display step, rollover value, and other applicable parameters. If factory configuration is selected, the instrument configuration worksheet must be completed and sent in with the instrument order.

Printed in USA April 2014

MicroMod
AUTOMATION & CONTROLS

www.micromod.com

MicroMod Automation & Controls, Inc.
3 Townline Circle
Rochester, NY 14623-2537 USA
Tel: (585) 321-9200
Toll Free: 1-800-480-1975
Fax: (585) 321-9291
Email: sales@micromod.com