

Section 1 —Smart Field Communicator STS103 Overview

1.1 Introduction

Function

The hand-held Smart Field Communicator(SFC), Model STS103 is a battery-powered device which establishes two-way communications between Honeywell’s Smart Field Instruments (SFIs) and an operator over the existing SFI signal lines. The operator can send data to and receive data from the SFI’s microprocessor, through the STS103, when connected to the SFI’s signal lines at any accessible location from the control room to the Smart Field Instrument.

Smart Field Instruments (SFIs)

There are many current SFIs with which the STS103 communicates. The STS103 is designed for expansion and will be used with other new SFIs as they become available. The current Honeywell smart field instruments with which the STS103 may be used are listed below.

- Smart Pressure Transmitter **ST 3000**,
- Smart Temperature Transmitter **STT 3000**,
- Magnetic Mass Flowmeter **MagneW 3000**,
- Smart Coriolis Mass Flowmeter **SCM 3000**,
- Smart Gas Chromatograph **SGC 3000**, and
- Smart Multivariable Transmitter **SMV 3000**.

ATTENTION

The specific instructions for using the SFC with SCM 3000, and SGC 3000 are contained in User’s Manual for that specific instrument.

Operation

You can use the STS103 to

- **Select the Communications Mode** – Command the SFI to transmit its output signal in either an Analog (4-20 mA) mode or in the Digital Communications (DE) mode.
- **Configure** – Enter the desired operating parameters (For example: LRV, URV, Damping, Failsafe Mode, Configuration Parameters) into the Smart Field Instrument.
- **Diagnose** – Access the SFI self-diagnostic capabilities to troubleshoot suspected operation or communication problems.
- **Calibrate** – The SFC provides a simplified procedure for calibrating Smart Field Instruments, thus maintaining excellent accuracy with significantly reduced maintenance requirements.
- **Display** – Readout all the configured operating parameters from the SFI as well as other data such as PROM Serial Number, Device ID, Scratch pad memory, Sensor Temperature, Input values in selected Engineering Units, and others.



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1.1 Introduction, Continued

Operation, continued

- **Checkout** – Put the SFI in the Output mode and command the SFI to transmit a precise signal, selectable from 0% to 100% full scale, to assist you in verifying loop operation, loop calibration, or troubleshooting.

Specifications

The STS103's specifications are listed in Table 1-1.

Table 1-1 Model STS103 Specifications

Operating Conditions			
		Operating Limits	Transportation and Storage
Ambient Temperature	°C	-10° to 50°	-20° to 60°
	°F	14° to 122°	-4° to 140°
Humidity	%	10% to 90% RH	5% to 95% RH
Vibration			
	Maximum Acceleration (G)	0.2	0.5
	Frequency (Hz)	0 to 100	0 to 100
	Amplitude (mm peak to peak)	0.75	-----
Shock			
	Maximum Acceleration (G)	5	15
	Duration (ms)	50	11
Minimum load resistance @ 24 Vdc Supply Voltage		250 Ohms	
Performance			
Safety Approvals		FM Intrinsic Safe, Class I, II, III, Div 1, GP A-G Outdoor Nonincendive, Class I, Div 2, GP A-G Outdoor	
CE Conformity, Europe		89/336/EEC , the EMC Directive	
Physical			
Dimensions			
	Overall	102 mm x 42 mm x 206 mm (4 in. x 1.7 in. x 8 in.)	
	Keypad	86 mm x 136 mm (3.4 x 5.4 in.)	
Weight		470 g (1 lb.)	
LCD Display		2 lines x 16 characters	
Display Character		5 x 7 dots with line for cursor	
Keyboard Type		Tactile feedback embossed membrane, 4 by 8 matrix, 32 keys	
Lead Connectors		Easy hook and alligator clips	
Battery Charger			
	Input Power	108 – 120 Vac, 200 – 240 Vac, 50/60 Hz	
	Output Power	7 Vdc, 180 mA	
	Time to charge	16 hours minimum	
	Time between charges	24 hours minimum, a colon":" in the eighth character position indicates low battery power.	