azbil Specifications

SFC
Smart Field Communicator
Models SFC160 / SFC260

OVERVIEW

The Smart Field Communicator (SFC) allows you to establish communication with a Smart Field Instrument over the existing 4-20 mA DC lines on a 1:1 basis, covering the four major process variables of flow rate, pressure, temperature, and liquid level.

FEATURES

- With a single unit of SFC, communication can be made with the various types of Smart Field Instruments.
- The SFC can be hooked up to a loop simply by connecting the SFC to the "+" and "-" terminals of a 4-20 mA DC signal lines, without requiring to break up the loop even temporarily.
- The SFC is compact and can be hand-held.
- The SFC has an LCD display (16 characters × 2 lines).
- The model SFC260 has a printer which provides a hardcopy.

SPECIFICATIONS

Ambient Temperature for Non-explosion-protected apparatus
Model SFC160: -10°C to 50 °C
Model SFC260: 0°C to 40 °C

Ambient Humidity
Model SFC160: 10 to 90%RH
Model SFC260: 10 to 80%RH

Terminal Voltage
10-45 V DC

Display
LCD, 16 characters × 2 lines

Keyboard
Touch key

Communication Cable Connection
Hookup cable

Battery Charger
100V AC, 50 / 60 Hz
115 / 120V AC, 50 / 60 Hz
200 to 240V AC, 50 / 60 Hz

Power Source
Rechargeable battery
Charge up time: 6 hours
Operable time: 24 hours

Casing
Material
ABS resin
Color
Smoke black
Type
Portable type (hand-held type)

Weight
Model SFC160: Approx. 500 g
Model SFC260: Approx. 700 g

Accessories
Communication hookup cable with alligator clips
Communication hookup cable with easy hookups
Battery charger
Rolled thermal paper (model SFC260)

Communication Functions

The SFC provides the following communications

Check and change of configuration parameters

- Tag No.
- Type of output
- Damping time constant
- Range (Range can be changed without requiring to give any reference input)
- Pulse output
- Contact input/output
- Cold junction temperature, etc.

Check of operation data

Instantaneous input/output values of a Smart Field Instrument can be checked.

Setting of constant-current output

A Smart Field Instrument can be set into a constant current source of 4-20mA DC to check the performance of the loop.

Calibration

- Zero adjustment can be made by keying in an input value equivalent to 0% of output.
- Zero adjustment can be made by applying an input equivalent to 0% of output to the Smart Field Instrument and setting that value

Diagnosis

- Performance check of Smart Field Instrument.
- Abnormality check of process
- Configuration check
- Check of communication state

Printer

The model SFC260 has a 24-character printer, which allows the following:

To print out date, time, Tag No., and configuration data.
To print out date, time, Tag No., and action data as follows:

- Configuration change events can be printed out in the order of their occurrences.
- To confirm the operation data, instantaneous input/output values can be printed out.

Supported Devices

Smart Pressure and differencial Transmitter ST3000
Smart Pressure Transmitter .....Model PTG
Advanced Temperature Transmitter .....ThermoPLUS
Smart Temperature and Pressure Compensation Transmitter STT3000
Smart Immersion-type Liquid Level Transmitter ALTJ3000
Smart Electromagnetic Flow Meter .....MagneW3000 PLUS
Smart 2-wire Electromagnetic Flow Meter..... Magnew 2-wire PLUS
Smart 2-wire Electromagnetic Flow Meter..... SMT3000
Smart Ultrasonic Vortex flowmeter .....ULTRA Vortexor
Smart Gas chromatograph SGC3000
Smart Valve explorer ..... Model SVX
Smart Displacement type Level Transmitter..... Model SVX
Smart Valve Positioner.....SVP3000 Alphaplus

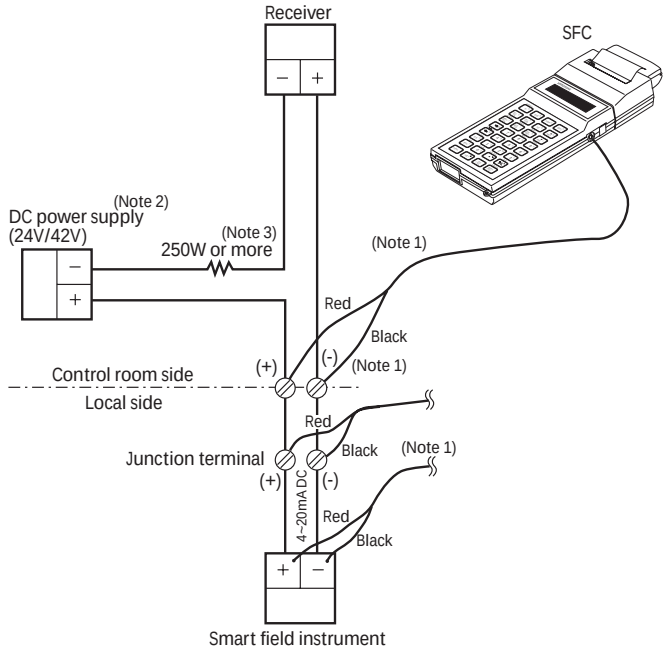
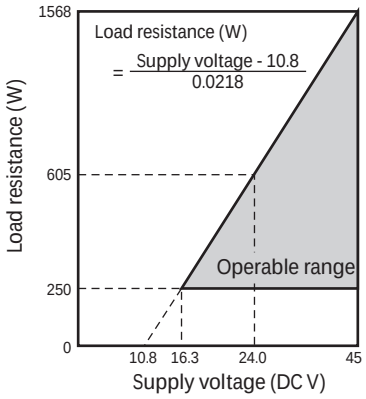


Figure 1 Hookup Method of SFC

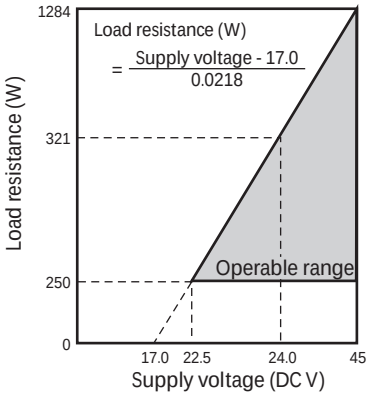
Note 1) The SFC can be hooked up to a 4-20mA DC loop at any point where its "+" and "-" terminals are accessible, readily by means of the alligator clips or easy hooks without requiring to break up to the loop even temporarily.

Note 2) Each of the 4-20mA DC loops (2-wire type) of Smart Field Instruments requires a loop power supply (24 or 42 V DC).

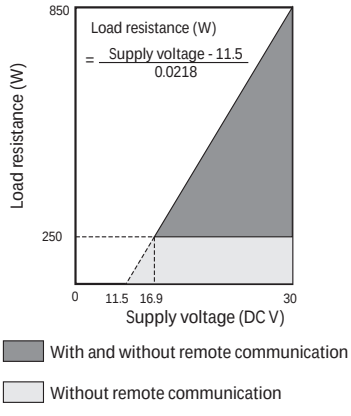
Note 3) A load resistance of 250 Ω or more is needed between the DC power source for the loop and the SFC. For details, see Figure 2.



Smart ΔP/PP Transmitter ST3000
Smart Pressure-Compensation Transmitter ST3000
Smart Gas chromatograph SGC3000
Smart Valve Positioner SVP3000

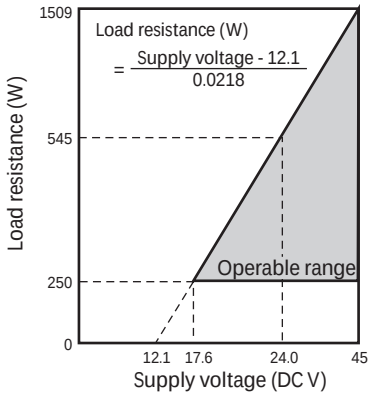


Smart Temperature and Pressure Compensation Transmitter ST3000

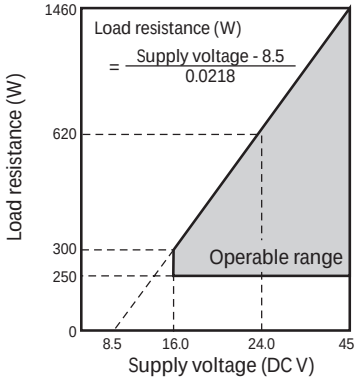


A minimum of 250W of loop resistance is required for communication with the SFC or the HART communication.

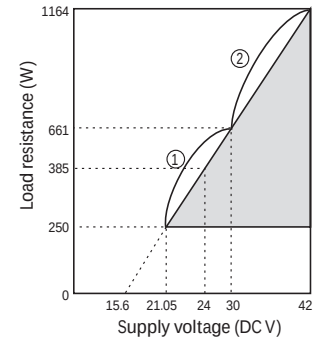
Smart Temperature and Pressure Model PTG



Smart ALTJ3000

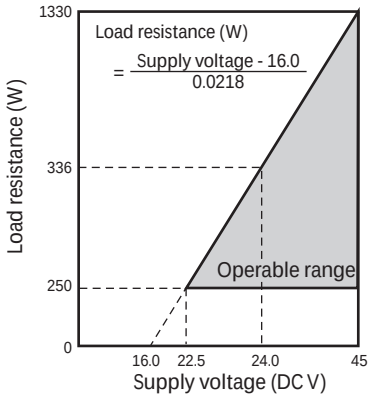


Smart Electromagnetic Flowmeter MagneW3000

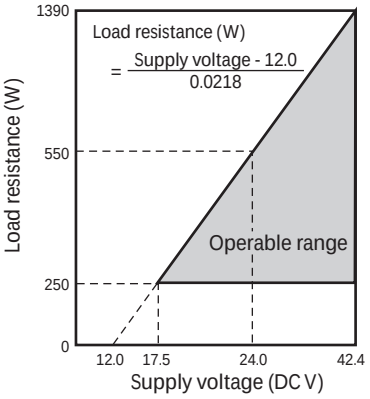


① 21.05 ≤ Supply voltage < 30
Load resistance (W) = (Supply voltage - 15.6) / 0.0218
② 30 ≤ Supply voltage < 42
Load resistance (W) = (Supply voltage - 14.25) / 0.02383

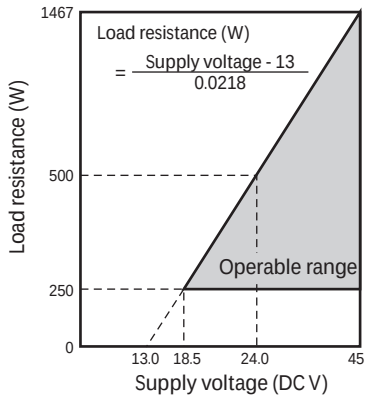
Smart 2- wire Electromagnetic Flow meter MagneW Two-wire PLUS



Smart 2- wire Electromagnetic Flow meter SMT3000



Advanced Temperature Transmitter ThermoPLUS



Smart Displacement type Level Transmitter Model SVX

Figure 2 Supply Voltage vs. Load Resistance Characteristics

MODEL SELECTION

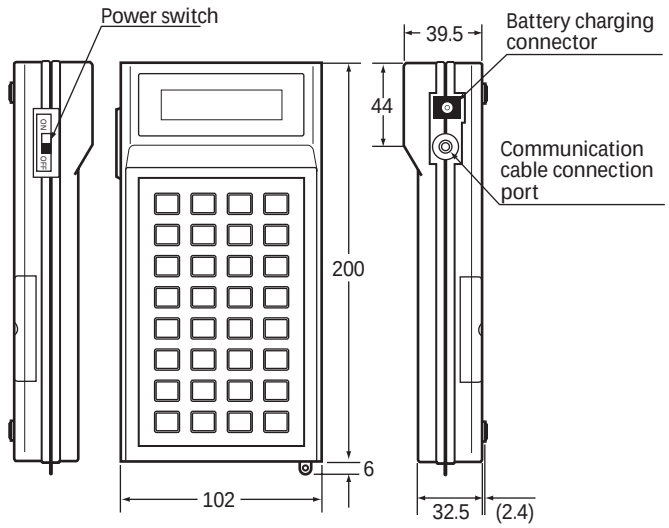
Model No. SFC160 / SFC260
Ex SFC160-11X-XC

Basic model No. - Selection - Option

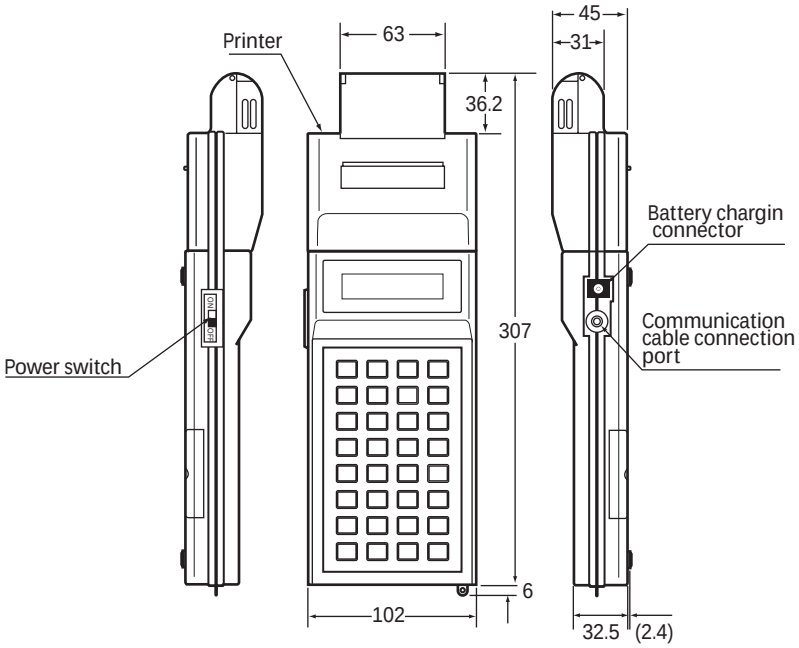
ITEM	Description	Basic model No.	Selection			Option	
Basic Model No. *1	Smart Field Communicator (Standard type)	SFC160					
	Smart Field Communicator (with printer)	SFC260					
(I) Display *2 (Language, measuring unit)	English, non-SI unit		1				
	English, SI unit		2				
	English, SI unit set as default		3				
	English, inch/lb		4				
	Japanese, SI unit only		7				
(II) Battery Charger	100V AC, 50 / 60 Hz			1			
	115 / 120V AC, 50 / 60 Hz			2			
	200 to 240V AC, 50 / 60 Hz			3			
(III) Explosion protected	Non-Explosion-protected				X		
(IV) Option	No option					X	
	Without carrying case						X
	With carrying case						C

*Note) *1 Model SFC160 can not be modified and changed to model SFC260 after delivery.*
**2 Language can not be changed after delivery.*

DIMENSION



Model SFC160



Model SFC260

Note

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