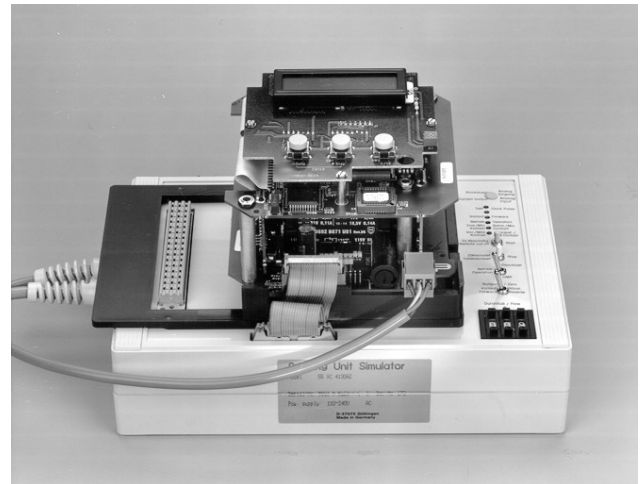


## Electro-Magnetic Flowmeters Primary Simulator 55XC4000

- The primary simulator generates a flow signal which can be selected between 0 and 99.9% (99.9% = 9.99 m/s) with a resolution of 0.1%.
- A switch can be used to select flow direction (forward, reverse, or zero flow rate).
- The common mode rejection, signal inputs and binary inputs can be checked with the use of a switch or button.
- Light emitting diodes are used to check the operating conditions.
- A flow signal in percent based on 33.33 ft/s can be selected using an integral DIP switch.
- 4mm banana sockets provide a means for accessing the following output signals: datalink, current, scaled pulse and frequency.
- Carrying Case included.



Primary Simulators  
Series 55XC4000

## Primary Simulator for Magnetic Flowmeters

The primary simulator is used to verify proper operation of ABB's magnetic flowmeter signal converters. They are primarily used for troubleshooting and periodic maintenance. The output of this device simulates the output of the magnetic flowmeter. They are not required for normal maintenance, for setting the range (span), or for otherwise preparing the magmeter system for operation.

The following electromagnetic converters can be connected to the 55XC4000 simulator without the use of adaptors: 50XM1000, CD1\*, 50SD1000 (converter module only), 50SM1000 and D50ES7000. An adaptor is required to connect a 50XE4000, 50XM2000, or 50CM2000 converter.

\* CD-1 design levels prior to 10D1465C, 10D1475E and 10D1476C require the Model 55MC1020A simulator.

## Engineering Specifications

### Pulsed DC Instruments Accuracy:

Flow Rate > 4% (0.4 m/s):  $\pm 0.1\%$  of rate  
Flow Rate < 4% (0.4 m/s):  $\pm 0.004\%$  of max.  
>0.0004 m/s

### AC Excitation Instruments Accuracy:

Flow Rate > 10% (1 m/s):  $\pm 0.1\%$  of rate  
Flow Rate < 10% (1 m/s):  $\pm 0.01\%$  of max.  
> 0.001 m/s

### Parameter Settings:

Forward, reverse, zero (center switch position).  
Operate, common mode (using switch)

### Range Settings:

0% to 99.9% (0 to 9.99 m/s or 32.8 ft/s)

**Resolution:** 0.1% using 3 decade switch

### Excitation Frequency:

#### Pulsed DC Excitation

6-1/2, 7-1/2, 12, 15, 25 and 30 Hz  
Reference level approximately 70mV

#### AC Excitation

50, 60 Hz  
Reference level approximately 70 mV

### Flow Signal Amplitude:

Approximately 180  $\mu$ Vpp/m/s

### Power Requirements:

110 - 240 Vac (50/60 Hz)

## Output Signals:

Signal Common (1 ea. - 4mm banana jack)  
Unscaled Frequency Output  
(1 ea. - 4mm banana jack)  
Current Output (2 ea. - 4mm banana jacks)  
Data Link or Scaled Pulse Output  
(4 ea. - 4mm banana jacks)  
Operate (alarm) (1 red LED)  
Excitation Frequency (2 green LEDs)  
Flow Direction (1 green LED)  
MAX, MIN, or pre-batch, end contact (2 green LEDs)

## Input Signals:

Analog Input, 50SM or ES converter only  
(1 ea. - 4mm banana jack)  
Ext. Zero Return, Ext. Totalizer Reset, Start or Stop  
(2 push-buttons)

## Physical Characteristics

### Ambient Temperature:

32°F to 104° F (0°C to 40°C)

**Dimensions:** 9.5 x 7 x 2.4 inches (L x W x H)

**Weight:** Approximately 2.25 lbs.

**Case:** White plastic

### Electrical and Environmental Classification:

General Purpose

## MODEL NUMBER DESIGNATION

Model 55XC4

### Range Setting

Without (adaptor only) ..... 0  
 3-Digi-Switches In 1000 Steps ..... 1

### Power Supply (Power supply must match converter power supply)

Without (adaptor only) ..... 0  
 24/48 Vac/dc, 4mm plug ..... 2  
 120/240 Vac, USA plug ..... 3

### Accessories

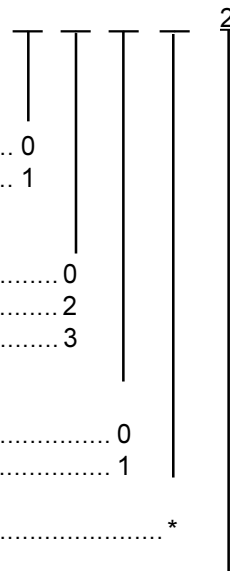
None ..... 0  
 Adaptor for 50XM2000, 50XE4000, 50CM2000 ..... 1

**Design Level** (Assigned by ABB at time of order entry) ..... \*

### Name Tag

English ..... 2

**Instruction Manual** (One copy supplied with order at no charge) ..... D184B049U01



Notes

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