

**Digital Filter**  
for harmonic  
rejection



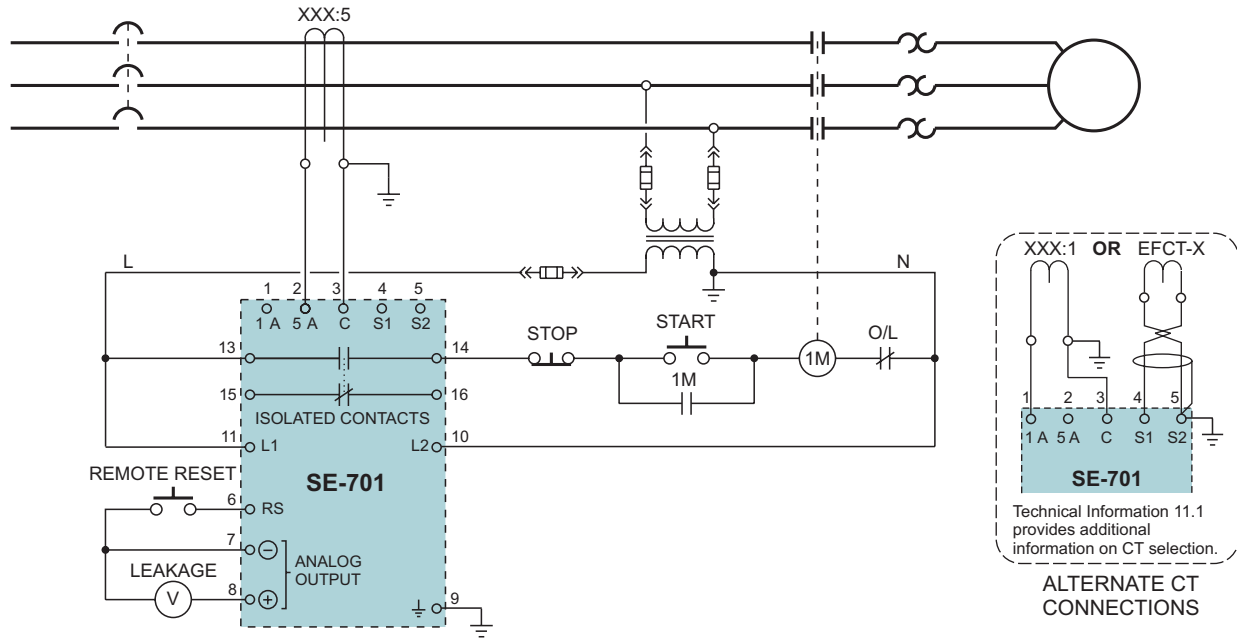
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## SE-701 GROUND-FAULT MONITOR

The SE-701 is a microprocessor-based ground-fault monitor for resistance-grounded and solidly grounded systems. Its output relay can operate in the fail-safe or non-fail-safe mode for undervoltage or shunt-trip applications. The normally open and normally closed output contacts are isolated for use in independent control circuits. Additional features include LED and fluorescent-flag trip indication, autoreset or latching trips with front-panel and remote reset, self test, 0- to 5-V analog output, inputs for standard and sensitive ground-fault current transformers, CT verification for sensitive current transformers, digital selector switches, switch-selectable algorithms for fixed-frequency or variable-frequency applications, and an inhibit that can be enabled to prevent the output relay from operating during a high-current ground fault.

Ground-fault current is sensed by a standard CT with a 1-A or 5-A secondary, or by a sensitive CT with a 5-A-primary rating (EFCT series). The trip level of the ground-fault circuit is digital-switch selectable in 1% increments from 1 to 99% of the CT-primary rating. Trip time is digital-switch selectable with ten settings from 0.05 to 2.5 seconds.

## TYPICAL APPLICATION



## TECHNICAL SPECIFICATIONS

Supply:

01 Option . . . . .	120 Vac (+15, -40%), 50/60 Hz, 2.5 VA
02 Option . . . . .	240 Vac (+15, -40%), 50/60 Hz, 2.5 VA
03 Option . . . . .	24 Vac (+15, -40%), 50/60 Hz, 2.5 VA
0U Option . . . . .	55 to 275 Vac, 50/60 Hz, 3.5 VA
	75 to 275 Vdc, 2.0 W <sup>(1)</sup>
0D Option . . . . .	9 to 36 Vdc, 3.0 W <sup>(1)</sup>
0T Option . . . . .	30 to 70 Vdc, 3.0 W <sup>(1)</sup>

Trip-Level Range . . . . . 1 to 99% CT-Primary Rating in 1% increments  
(50 mA to 4.95 A with EFCT-x)

Trip-Time Settings . . . . . 0.05, 0.10, 0.20, 0.30, 0.40, 0.50, 1.0, 1.5,  
2.0, and 2.5 seconds

### Accuracies:

Trip Level . . . . .	Largest of 5% of setting or:
1-A input:	
1% setting . . . . .	-10, +15 mA
2 - 99% setting . . . . .	± 10 mA
5-A and EFCT inputs:	
1% setting . . . . .	-35, +60 mA
2 - 99% setting . . . . .	± 35 mA
Trip Time . . . . .	5% of setting (-25, +20 ms minimum)

### Inhibit:

Off. . . . .	Class I
On. . . . .	Class II
Level . . . . .	11 x CT-Primary Rating

### Input:

Algorithms . . . . .	DFT Digital or Peak
Digital Filter . . . . .	50 to 60 Hz, Bandpass
CT . . . . .	1- or 5-A Secondary Rating, or EFCT-x
CT Detection . . . . .	Open-Circuit Detection with EFCT-x
Thermal Withstand:	
Continuous . . . . .	5 x CT-Secondary Rating
1-Second . . . . .	80 x CT-Secondary Rating
Burden:	
5-A input . . . . .	< 0.01
1-A input . . . . .	< 0.05
EFCT input . . . . .	2

### Analog Output:

Range . . . . .	0 to 5 Vdc, 5 V = 100% CT-Primary Rating
Output Impedance . . . . .	220

### Reset

Front-Panel Switch and  
Remote N.O. Momentary Contact

Functional Test . . . . . Front-Panel Switch

### Relay Contacts:

Configuration . . . . .	Isolated N.O. and N.C.
Operating Mode . . . . .	Fail-Safe or Non-Fail-Safe
CSA/UL Contact Rating . . . . .	8 A Resistive, 250 Vac/30 Vdc
Supplemental Contact Ratings:	
Make/Carry 0.2 s . . . . .	20 A
Break:	
dc. . . . .	30 W Resistive, 15 W Inductive (L/R = 0.04 s)
ac. . . . .	2,000 VA Resistive, 1,400 VA Inductive (PF = 0.4)
	Subject to maximums of 8 A and 250 V (ac or dc)

Operating Mode . . . . . Latching or Autoreset

### Dimensions:



Height . . . . .	75 mm (3.0 )
Width . . . . .	55 mm (2.2 )
Depth . . . . .	115 mm (4.5 )

Shipping Weight . . . . . 0.45 kg (1 lb.)

### Environment:

Operating Temperature . . . . .	-40 to 60°C
Storage Temperature . . . . .	-55 to 80°C
Humidity . . . . .	85% Non-Condensing

Surge Withstand . . . . . ANSI/IEEE 37.90.1-1989  
(Oscillatory and Fast Transient)

Certification . . . . . CSA, Canada and USA  LR 53428  
Australia  C US

<sup>(1)</sup> CSA Certification pending.

## ORDERING INFORMATION

SE-701-0□

1	120-Vac Supply
2	240-Vac Supply
3	24-Vac Supply
U	Universal ac/dc Supply
D	9- to 36-Vdc Supply
T	30- to 70-Vdc Supply

EFCT-1 . . . . .	Sensitive Ground-Fault CT, 82-mm (3.2 ) Window
EFCT-1FC . . . . .	Flux Conditioner, 70-mm (2.7 ) Window
EFCT-2 . . . . .	Sensitive Ground-Fault CT c/w Flux Conditioner, 139-mm (5.5 ) Window
EFCT-26 . . . . .	Sensitive Ground-Fault CT, 26-mm (1.0 ) Window
PMA-55 . . . . .	Panel-Mount Adapter
SE-EFVC . . . . .	Voltage Clamp

Consult factory for custom mounting adapters.

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