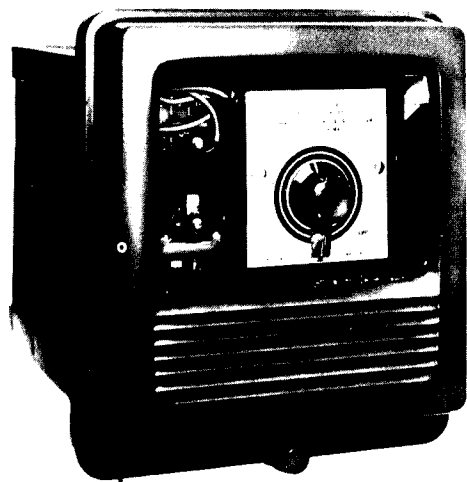




July, 1991
Supersedes DB 41-764, pages 1-4,
dated August, 1978
Mailed to: E, D, C/41-100B

Overcurrent Relay for
Class 1E Application
Device Number: 37 or 50

Type SSC-T Current Relay



Application

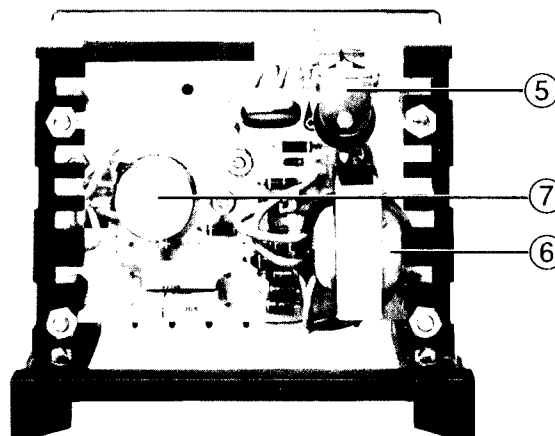
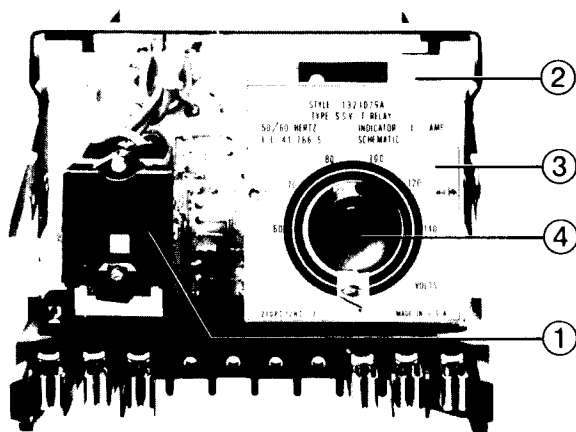
The solid state type SSC-T current relay is a high seismic relay suitable for nuclear power station relaying protection. The relay is adjustable over a wide range of current and has a calibrated scale plate which indicates the pick-up setting. The output unit is a telephone relay and an ICS (Indicating Contactor Switch) seal-in device.

The type SSC-T relay has a high ratio of drop-out and is particularly suitable for use in applications requiring an accurate current level detector.

Class 1E Application

The SSC-T relay has been specially designed and tested to establish its suitability for Class 1E applications. Materials have been selected and tested to insure that the relay will perform its intended function for its design life when operated in a normal environment as defined by ANSI standard C37.90 – 1971, when exposed to radiation levels up to 10^4 rads, and when subjected to seismic events producing a Shock Response Spectrum within the limits of the relay rating.

"Class 1E" is the safety classification of the electric equipment and systems in nuclear power generating stations that are essential to emergency shutdown of the reactor, containment isolation, cooling of the reactor, and heat removal from the containment and reactor, or otherwise are essential in preventing significant release of radioactive material to the environment.



Design Features

- ① Indicating Control Switch
- ② Circuit Board Module
- ③ Calibrated Scale Plate
- ④ Potentiometer (R2) Dial
- ⑤ Output Telephone Relay (SSV)
- ⑥ Transformer
- ⑦ Potentiometer (R2)

Characteristics SSC-T

Range Continuous Rating

0.5 – 2 amps	2 amps
2.0 – 8 amps	8 amps
4.0 – 16 amps	10 amps
10 – 40 amps	10 amps

1 Second Rating: 28 times the continuous rating

Operating Frequency: 50/60 Hz

Temperature Error: 2% between –20°C and 65°C

Dropout Ratio: 90% to 98%

Response Time: Pickup Time = 10 – 13 ms
Dropout Time = 10 – 26 ms
For 2 to 15 times pickup setting value (Fig. 1)

Transient Overreach: 5%

Burden: (Table I)

Frequency Response: (Fig. 2)

Table I (60 hertz)

Range (Amps)	Pickup Current Setting			
	Lowest Setting		Highest Setting	
	VA	P.F. AngleØ	VA	P.F. AngleØ
0.5 – 2.0	0.5	8.5°	4.0	12.5°
2.0 – 8.0	0.5	8.5°	5.0	12.5°
4.0 – 16.0	0.5	8.5°	5.0	12.5°
10.0 – 40.0	0.8	10.0°	8.0	10.7°

Further Information

List Prices: PL 41-020
Technical Data: TD 41-025
Instructions: IL 41-766.5
Other Protective Relays:
Application Selector Guide, TD 41-016

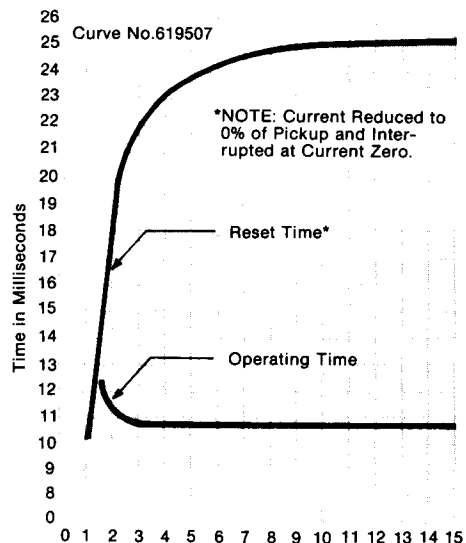


Fig. 1 Typical Operating and Reset Time Curves of the Type SSC-T Relay (Range 2-8 Amps)

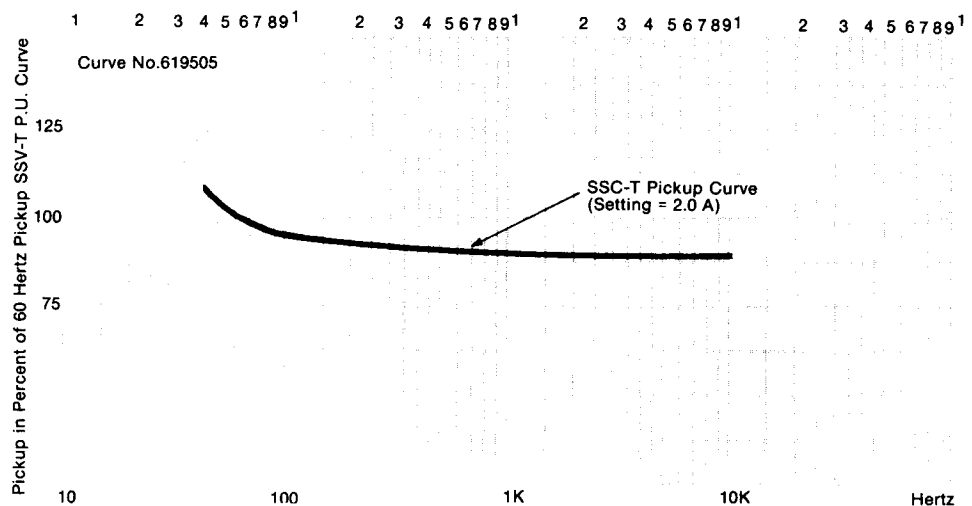


Fig. 2 Typical Frequency Curve of the Type SSC-T Relay (2-8 Amp)



ABB Power T&D Company Inc.
Relay Division
Coral Springs, FL
Allentown, PA

Descriptive Bulletin
41-117S

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July, 1991
Supersedes TD 41-020, Type SSC-T on
page 142 dated November, 1987
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Overcurrent Relay for
Class 1E Application

Type SSC-T Current Relay

Over or Under Current, Instantaneous, 50/60 Hertz (Device Number: 37 or 50)

Type	Indicating Contactor Switch	Adjustable Range (Ac)	Drop Out Ratio	Contacts (Each Unit)	Relay Data		
					Block Diagram	Style Number	Case Size
One Unit Per Case							
SSC-T	1 amp dc	0.5 – 2.0 amp	90-98%	2M①	3516A15	1321D79A03	FT-11
		2 – 8		2M①	3516A15	1321D79A02	
		4 – 16		2M①	3516A15	1321D79A04	
		10 – 40		2M①	3516A15	1321D79A05	
	1 amp dc	0.5 – 2.0		2M	3517A80	1321D79A07	
		2 – 8		2M	3517A80	1321D79A06	
		4 – 16		2M	3517A80	1321D79A08	
		10 – 40		2M	3517A80	1321D79A09	
Three Units Per Case							
SSC-T	3 – 1 amp	0.5 – 2.0 amp	90-98%	2M①	3522A43	1334D03A02	FT-21
		2 – 8		2M①		1334D03A01	
		4 – 16		2M①		1334D03A03	
		10 – 40		2M①		1334D03A04	
	1 – 1 amp	0.5 – 2.0 amp		2M①	3522A44	1334D03A06	
		2 – 8		2M①		1334D03A05	
		4 – 16		2M①		1334D03A07	
		10 – 40		2M①		1334D03A08	

① Contacts are electrically independent – refer to block diagram reference.