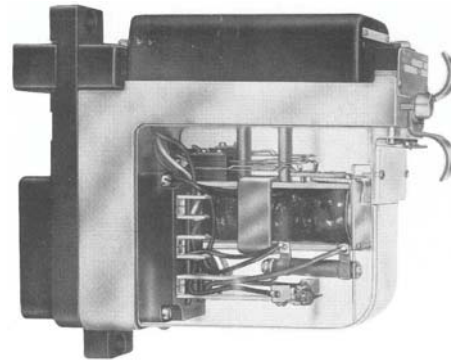


PN-150SO DC Switch Control Relay

General Description

The PN-150SO relay is used in conjunction with the PN-150BM relay (see **RSE-4K2**) to cut off power to a dc switch machine that has stalled. The motor current flows through the coil; when the operating time is exceeded, the relay becomes energized. This opens the control circuit of the PN-150BM relay which, in turn, cuts off power to the switch machine. The circuit is arranged so that, once the PN-150SO relay is energized, it will remain energized until the switch control is reversed. Models of this relay are designed for switch machines with clutches adjusted to slip at 12 or 20 amperes. The PN-150SO relay has both sets of coil leads available for external circuit arrangements, and is not equipped for front testing. Contacts are internally wired to accommodate circuitry; contact US&S for details.



Specifications and Applications

- Refer to the ordering tabulation for operating specifications.

Ordering Information

- Standard relay and plug-in base order numbers listed in tabulation and **RSE-4R1**.
- When writing your order, specify the required contacts and coil resistance.
- Relay bases are ordered separately. Indicate the type of relay to be used with that base.
- For detailed specifications and complete parts lists, request ASTS USA Service Manual SM-4571.

PN-150SO Relays and Base				
Order No.	Coil Res. Operating (Ohms)	Coil Res. Stick (Ohms)	Operating Time (± 10%) (Sec.)	Notes
N322512-001	5	65	8 sec. @ 12A	(1)
N322512-002	5	65	6 sec. @ 20A	(2)
N451376-0302	Plug-In base for PN-150SO (ref. RSE-4R1)			
Note (1): For switch machine having clutch adjusted to 12 Amps. Note (2): For switch machine having clutch adjusted to 20 Amps.				

(See reverse side for general features of ASTS USA electro-mechanical vital relays.)

RSE-4L1
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General Features of ASTS USA PN-Series Electro-Mechanical Vital Relays

ASTS USA vital and non-vital plug-in relays serve a multitude of functions in both railroad and transit control circuit applications. These time-proven relays are space-saving, easily installed or removed and can be handled in the field without disturbing coil or contact wiring.

In addition to production of PN-series electro-mechanical relays at the same high standards, ASTS USA also provides high-quality remanufacturing services for these relays so that they can be returned to service in like-new condition. Refer to the "Remanufacturing Services" section of this catalog or call 1-800-652-7276 for additional information.

Advantages

- Wide selection available for every application
- Meets or exceeds applicable AREMA (AAR) requirements
- Plug-in design permits quick installation or removal
- Indexed to assure proper mounting
- Sturdy plug-in base for every relay model
- Operates over wide temperature range

High Quality Design and Assembly

All components of ASTS USA plug-in relays are constructed according to rigid quality control standards and are thoroughly tested before shipment. Coils are encapsulated for protection against mechanical damage and moisture. Magnetic circuits are constructed of non-aging materials. The air gap is not disturbed when the coil is removed or the contact springs adjusted. Those relays with an adjustable magnetic shunt may be adjusted for degree of magnetic hold-down force without changing the contact adjustment or the hold-down pole-piece position.

Contact fingers and springs utilize a simple, reliable design and are heat treated to assure uniformity of material and contact stability. The heavy contact fingers extend through the base to serve as plug connectors. Heel contacts are actuated by operating arms pivoted to the armature. Contact surfaces have sufficient wiping action to be self-cleaning. "Standard" contact materials include fine silver heels and backs, and silver-impregnated carbon (S.I.C.) fronts with a typical capacity of 4A @ 30 Vdc or 175 Vac. "Heavy Duty" (H.D.) contact materials also include fine silver heels and backs and silver-impregnated carbon (S.I.C.) fronts with a typical capacity of 15A @30 Vdc or 30 Vac.

Other types of contact material for special application are described with the particular relay. Standard contacts are factory-adjusted to standard minimum opening and conform to AREMA (AAR) requirements.

All vital plug-in relays incorporate a transparent molded cover over the relay contacts and armature structure. The cover is sealed to the frame with a gasket that assures a tight, dust-proof and moisture-proof seal.

Contact Designations

Front and back contacts of plug-in relays are designated "F" and "B", respectively. The dependent contacts are denoted FB, while the independent contacts are denoted "F" or "B" alone.

Testing

Many ASTS USA vital relays are provided a front testing capability. The front testing facility is in series with the coil control circuit to permit deenergization of the relay while it is in its service mounting, without disturbing the relay or wiring. Testing may also be accomplished through the rear of the relay mounting base without opening a contact or coil circuit. Refer to **RSE-4S1** for special tools utilized in maintaining ASTS USA plug-in relays.

Latch

A spring-operated latch holds each plug-in relay securely to its mounting base. The latch is released by pressing a button on the front of the relay.

Indexing

All plug-in relays are equipped with indexing pins to prevent insertion of an incorrect relay into the mounting base. Each relay is accompanied by an indexing plate that is applied to the base at the initial installation.

System Voltage

This voltage, which is listed in the relay ordering tabulation specifications, is prescribed for relays in locally energized circuits. Higher voltage may be used, if required, up to 10 watts power dissipation.