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7PG15 & 7PG18 – Alpha Trip Relays

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The 7PG15 & 7PG18 Alpha type TR & TR-A relays, are a range of multi-contact attracted armature relays designed to both IEC 255-5 and BS142 Standards. A wide range of models are available to meet the requirements of the electric supply industry.

Low burden, TR series

Type TR1 relays are suitable for application for tripping and auxiliary duties where immunity to capacitance discharge is not required. These relays are not intended for use with current operated series follower relays.

High burden, TR2 & TR-A2 series

Type TR2 & TR-A2 are High burden relays with immunity to capacitance discharge currents. They are also suitable for certain applications where they are remote from the initiation signal.



A high burden also permits reliable operation of current operated series repeat relays. TR relays can be provided with an instantaneous or time-delayed cut-off.

Key Features

The TR / TR-A ranges are of electromechanical design with up to twenty self, hand or electrically reset contacts. They have a high speed positive action and are designed for a long and reliable life, withstanding in excess of 10.000 operations, within the maximum contact loading.

- TR1** – Low burden to ESI 48-4 EB1 & NGTS 3.6.15, ESI 1
- TR2** – High burden to ESI 48-4 EB2 & NGTS 3.6.15, ESI 2
- TR312** – NGC (CEGB) P15. (low burden trip relay)
- TR431** – NGC (CEGB) TDM 5/11. (switching relay)
- TR901** – Plant follower relay
- TR-A2** – High burden to ESI 48-4 EB2 & NGTS 3.6.15, ESI 2



7PG15 & 7PG18 – Alpha

Low burden relay, TR

Designed to meet the requirements of NGC specification P15, this is an electrically reset relay (no flag indicator) with additional terminals in the economy circuit to enable a direct connection to the dc supply.

This arrangement allows a reduction in the break duty of the initiating contact.

Switching Relay, TR

Designed to meet the requirements of NGC TDM 5/11, this is an electrically reset relay with a flag indicator which follows the contact operation. These relays are intended to switch protection and auto reclose equipment in and out of service when controlled over pilot wires from a remote point. They are intended to operate from a remote 50V d.c. battery with a pilot loop resistance of up to 200 ohms.

Special purpose relays, TR2 series

This designation identifies TR relays designed to meet a special purpose e.g. TR901 is a high burden repeat relay, a type TR231 with a 2 position flag indicator used as a plant follower relay for circuit breakers and disconnectors.

Standard relays						
Relay Type	No. of Contacts	Contact Reset	Operating Coil Cut-off	Specification	Burden Level	Modular Case Size
TR112	7 or 11	Self	Economy	EB1	low	E4
TR121	7 or 11	Hand	Instantaneous	EB1	Low	E2
TR131	6 or 10	Electrical	Instantaneous	EB1	Low	E2
TR141	6 or 10	Hand & electrical	Instantaneous	EB1	Low	E2
TR212	6, 10 or 20	Self	Economy	EB2	High	E2 or E4
TR214	5 or 10	Self	Economy 2s delayed reset	EB2	High	E4
TR221	7 or 11	Hand	Instantaneous	EB2	High	E2
TR223	7 or 11	Hand	40 / 60ms delay	EB2	High	E4
TR231	6 or 10	Electrical	Instantaneous	EB2	High	E2
TR233	6 or 10	Electrical	40/ 60ms delay	EB2	High	E4
TR241	6, 10 or 20	Hand & electrical	Instantaneous	EB2	High	E2 or E4
TR243	6 or 10	Hand & electrical	40 / 60ms delay	EB2	High	E4
TR312	5	Self	Economy	NGC P15	Low	E4
TR431	7	Electrical	Instantaneous	NGC TDM.5/11	Low	E4
TR901	10	Electrical	Instantaneous	EB2	High	E2

Standard relays						
Relay Type	No. of Contacts	Contact Reset	Operating Coil Cut-off	Specification	Burden Level	Modular Case Size
TR-A212	20	Self	Economy	EB2	High	4
TR-A214	20	Self	Economy 2s delay	EB2	High	4
TR-A221	20	Hand	Instantaneous	EB2	High	4
TR-A223	20	Hand	40 / 60ms delay	EB2	High	4
TR-A231	20	Electrical	Instantaneous	EB2	High	4
TR-A233	20	Electrical	40 / 60ms delay	EB2	High	4
TR-A241	20	Hand and Electrical	Instantaneous	EB2	High	4
TR-A243	20	Hand and Electrical	40 / 60ms delay	EB2	High	4

Siemens Protection Devices

P.O. Box 8
North Farm Road
Hebburn
Tyne & Wear
NE31 1TZ
United Kingdom

For enquires please contact our Customer Support Center

Phone: +49 180/524 8437
(24hrs)
Fax: +49 180/524 24 71
E-mail: support.ic@siemens.com
www.siemens.com/protection

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