



CSA INTERNATIONAL

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Descriptive and Test Report

REPORT: 165850-2500002106 (LR 14385)

PROJECT: 2500002106

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PRODUCTS

CLASS 3211 07 - INDUSTRIAL CONTROL EQUIPMENT - Miscellaneous Apparatus

Relays, Series PT... with suffixes, open type with dust cover, 2, 3 and 4 pole, magnetically operated relays provided with double throw contacts (NO, NC) with socket mount and pcb types; rated as follows:

Maximum Voltage	Load	Contact Ratings		No. of Operations
		(NO)	(NC)	
150 Vac	Resistive	12 A (2 NO)	12 A (2 NC)	100,000
250 Vac	Resistive	10 A (2 NO)	10 A (2 NC)	100,000
250 Vac	Resistive	10 A (3 NO)	10 A (3 NC)	100,000
250 Vac	Resistive	6 A (4 NO)	6 A (4 NC)	100,000

Coil - 6 Vdc to 220 Vdc max or 6 Vac to 230 Vac max..

Notes:

1. Open type devices certified as components for use in assemblies where the suitability of the combination is to be determined in the end product evaluation.
2. Ambient temperature -70 °C max. for relays without sockets and 50 °C max for relays with EH Schrack ES 15 relay sockets
3. The total connected load shall not exceed 20 A at 151-300 V.
4. Suffixes denote mechanical and electrical variations.

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APPLICABLE REQUIREMENTS

CSA Standard C22.2 No 0-M91
14-95

-General Requirements - Canadian Electrical Code, Part II
-Industrial Control Equipment

MARKINGS

The submitter's name, type designation, electrical ratings and the CSA Monogram ink-printed, die stamped, or laser marked in a legible permanent manner on the dust cover of each relay.

ALTERATIONS

Markings are as described under Markings above.

FACTORY TESTS

Not required.

DESCRIPTION

These devices are open type, 2, 3 and 4 pole, magnetically operated relays provided with double throw contacts. They are intended for use in industrial control equipment, vending machines, office equipment, data processing equipment, appliance applications and temperature indicating and regulating equipment.

NOMENCLATURE

They are designated:

\overline{PT}					
<u>PR</u>	<u>2</u>	<u>7</u>	<u>0</u>	<u>012</u>	<u>--XXXX</u>
I	II	III	IV	V	VI

I - Basic Type

PT relay with cover

II - Contact configuration

- 2 - Two(2) changeover (Form - C) contacts
- 3 - Three (3) changeover (Form - C) contacts
- 5 - Four (4) changeover (Form - C) contacts

III - Contact Material

- 2 - Silver-Nickel (90/10)
- 3 - Silver-Nickel (90/10), 4-6um gold-plated
- 7 - Silver-Nickel (90/10), with test button, with mechanical indicator
- 8 - Silver-Nickel (90/10), 4-6um gold-plated, with test button, with mechanical indicator

IV - Termination Type

- 0 - Standard 2.8mm combination solder, socket or spade terminals
- 1 - Printed circuit mounting terminals

V - Three digit number which designates coil voltage

VI - May be followed by a dash and up to four (4) numbers and/or kettters which do not indicate any electircal characteristic differences.

Electrical Spacings: All spacings between bare live parts of opposite polarity and between bare live parts and grounded metal parts conform to Group B of Table 6 of CSA Standard No 14-95.

DC Coil Design Data (0.75 W nominal)

<u>Catalog No.</u>	<u>Rating, Volts</u>	<u>Current</u>	<u>Power</u>
PT +++006	6V dc	125mA	0.75W
PT +++012	12V dc	62.5mA	0.75W
PT +++024	24V dc	30.9mA	0.75W
PT +++048	48V dc	15.6mA	0.75W
PT +++060	60V dc	12.5mA	0.75W
PT +++110	110V dc	6.8mA	0.75W
PT +++220	220V dc	3.4mA	0.75W

AC Coil Design Data (1.0 VA Nominal)

AC Coil Design Data (1.0 VA Nominal)

<u>Catalog No.</u>	<u>Rating, Volts</u>	<u>Current</u>	<u>Power</u>
PT +++506	6V dc	166.5mA	1.0VA
PT +++512	12V dc	83.3mA	1.0VA
PT +++524	24V dc	41.6mA	1.0VA
PT +++548	48V dc	21.3mA	1.0VA
PT +++560	60V dc	16.7mA	1.0VA
PT +++615	120V dc	8.8mA	1.06VA
PT +++730	230V dc	4.3mA	0.99VA

Note: + - Denotes any valid value from Nomenclature

See Figure 1 PR RELAY - FIG. 1

General - The following description includes all devices covered by this Report.

1. Enclosure (Cover) - Manufactured by Bayer AG, designated Makrolon 2405. 0.78mm thick minimum.

Alternate - Manufactured by GE Plastics Korea, designated Lexan 920A.

2. Coil Assembly - Consists of bobbin, magnet wire and terminals described following:

Bobbin - Manufactured by DuPont, designated Zytel HTN FR 51G35L. 0.55mm thick minimum. Provided with "start" and "finish" lead slots to protect magnet wire.

Alternate - Manufactured by GE (General Electric), designated Valox 420 SEO.

Alternate - Manufactured by Huels, designated Vestodur X 7212.

Magnet Wire - R/C magnet wire - Type MW 79 or MW 80, temperature class 155°C, various manufacturers.

Terminals (2) - Solder/Socket terminal - Copper alloy, may be tin dipped or plated, formed and inserted into bobbin slot. 5.7mm minimum length outside base, 2.15mm minimum width, 0.50mm minimum thickness, pierced with a solder tab hole 0.95 by 2.1mm.

Alternate - PCB terminal - Same as above except 4.8mm long outside base with terminal 0.78mm wide by 4mm long formed on end.

3. Base - Manufactured by DuPont, designated Zytel HTN FR 51G35L. 0.75mm thick minimum.

Alternate - Manufactured by GE (General Electric), designated Valox 420 SEO.

Alternate - Manufactured by Huels, designated Vestodur X 7212.

4. Armature - "L" shaped plated steel.
5. Frame/Core - "L" shaped plated steel.
6. Shader - Plated copper. (AC coils only)