

#### D85 Series—Alternating Relays



3

#### Product Description

Alternating relays are used in applications where the optimization of load usage is required by equalizing the run time of two loads. They are also used where additional capacity is required in case of excess load requirements. This alternating action is initiated by a control switch—such as a float switch, manual switch, timing relay, pressure switch or other isolated contact. Each time the initiating switch is opened, the output relay contacts will change state, thus alternating the two loads. Two LED indicators show the status of the output relay.

The D851 and D852 Series Relays are used with one control switch and are available in either SPDT or DPDT output configurations with or without a selector switch to lock in one sequence. The D852X Series Relays are available in DPDT cross-wired output configurations for use with one or two control switches (LEAD and LAG).

The D853 Series is designed for use with three-switch applications (LEAD, LAG and STOP). The D853 Series combines a standard DPDT Cross-Wired alternating relay, contactor auxiliary contacts, and a control relay into one compact and economical product. This saves space and labor, while reducing the number of components needed. The D853 Series uses Sequence On—Simultaneous Off (S.O.S.O.) operation, where the two loads are energized sequentially, but remain on together until the STOP switch is opened. This device also protects against failure of the STOP and LEAD switches. If both switches fail, the two pump motors will be energized simultaneously when the LAG switch is closed.

#### Contents

##### Description

	<i>Page</i>
D85 Series—Alternating Relays	
Product Selection . . . . .	<b>V7-T3-189</b>
Accessories . . . . .	<b>V7-T3-189</b>
Technical Data and Specifications . . . . .	<b>V7-T3-190</b>
Wiring Diagrams . . . . .	<b>V7-T3-190</b>
Dimensions . . . . .	<b>V7-T3-192</b>

Each of the D85 Series alternating relays is available with an optional three-position selector switch, which allows the unit to alternate the two loads as normal, or lock the relay to one load or the other. By locking the alternating relay to one load, the other load can be removed for service without rewiring the first load for continuous operation. The selector switch has a low profile to prevent any accidental actuation.

#### Features

- For duplex loads
- Works with one-, two-, or three-switch applications
- Compact plug-in design using industry standard sockets
- 10 A SPDT or DPDT output configurations
- Optional low profile selector switch to lock in one sequence
- Two LEDs indicate relay status
- D853 Series replaces separate components in duplex panel—saving space and reducing labor

#### Standards and Certifications

- CE
- cRUus
- UL listed ①
- RoHS compliant



##### Note

① When used with appropriate Eaton socket.

## Product Selection

### D85 Series—Alternating Relays <sup>①</sup>

Output Contacts	Control Voltage	Socket	Catalog Number
SPDT	12 Vac	8-pin	<b>D851NR</b>
SPDT	24 Vac	8-pin	<b>D851NT</b>
SPDT	120 Vac	8-pin	<b>D851NA</b>
SPDT	240 Vac	8-pin	<b>D851NB</b>
SPDT w/selector switch	12 Vac	8-pin	<b>D851LR</b>
SPDT w/selector switch	24 Vac	8-pin	<b>D851LT</b>
SPDT w/selector switch	120 Vac	8-pin	<b>D851LA</b>
SPDT w/selector switch	240 Vac	8-pin	<b>D851LB</b>
DPDT	12 Vac	11-pin	<b>D852NR</b>
DPDT	24 Vac	11-pin	<b>D852NT</b>
DPDT	120 Vac	11-pin	<b>D852NA</b>
DPDT	240 Vac	11-pin	<b>D852NB</b>
DPDT w/selector switch	12 Vac	11-pin	<b>D852LR</b>
DPDT w/selector switch	24 Vac	11-pin	<b>D852LT</b>
DPDT w/selector switch	120 Vac	11-pin	<b>D852LA</b>
DPDT w/selector switch	240 Vac	11-pin	<b>D852LB</b>
DPDT cross-wired	12 Vac	8-pin	<b>D852XNR</b>
DPDT cross-wired	24 Vac	8-pin	<b>D852XNT</b>
DPDT cross-wired	120 Vac	8-pin	<b>D852XNA</b>
DPDT cross-wired	240 Vac	8-pin	<b>D852XNB</b>
DPDT cross-wired w/selector switch	12 Vac	8-pin	<b>D852XLR</b>
DPDT cross-wired w/selector switch	24 Vac	8-pin	<b>D852XLT</b>
DPDT cross-wired w/selector switch	120 Vac	8-pin	<b>D852XLA</b>
DPDT cross-wired w/selector switch	240 Vac	8-pin	<b>D852XLB</b>

## Accessories

### D85 Series—Alternating Relays

Description	Standard Pack	Catalog Number
8-pin socket	10	<b>D3PA2</b>
11-pin socket	10	<b>D3PA3-A2</b>
Hold-down spring	10	<b>D65CHDS</b>

#### Note

<sup>①</sup> Contact Eaton for relays for 3-switch applications (Lead-Lag-Stop).

# 3.9

## Control Relays and Timers

### Alternating Relays

#### Dimensions

Approximate Dimensions in Inches (mm)

#### D85 Series—Alternating Relays

3

