

Duplex Pump Controllers

Sprecher + Schuh duplex pump control panels are specifically designed to meet multi-starter combination requirements as defined in demanding outdoor environmental conditions.

Duplex pump controllers are typically designed for two specific requirements: duplexing and alternation.

Duplexing provides capacity for above normal demand or system peaking by allowing both motors to run simultaneously. It also provides standby capacity if one unit fails. Typically multiple pressure or float switches are required to provide electrical signals to the controller.

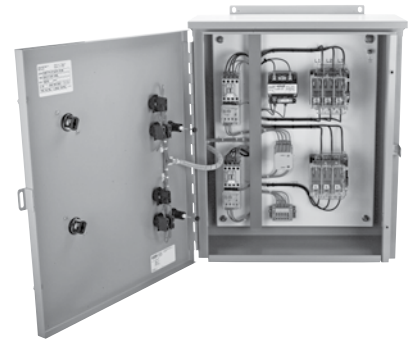
Alternation provides for equal wear on the two machines being controlled by reversing the lead and lag role of the specific motors. Alternation occurs at any time the two motors come to rest.

Duplex Pump Controllers from Sprecher + Schuh offer through-the-door operators and rugged Type 3R rain-proof metal or Type 4X non-metallic enclosures.

Three models of Duplex Controllers

- **Thermal-magnetic circuit breakers (MCCB)** instead of a motor circuit protector (MCP) to comply with new short-circuit requirements from UL and NEC.
- **Heavy duty fusible or non-fusible L10 disconnect switches** providing improved short-circuit protection when used with J fuses.
- **Self-protected Combination Controllers (Type E)** KTA7 models which offers superior fuseless short-circuit protection in a smaller more economical package (See page F107).

Duplex pump panels feature our CA7 and CA6 line of contactors, which are UL Listed and sized to match all the available HP sizes of motors. Alternately, we can provide NEMA Sized (CAN7 and CAN6) contactors which comply with all requirements by UL

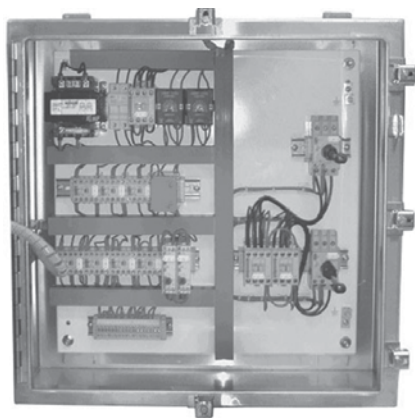


and are labeled with the applicable NEMA (00, 0, 1, 2, 3, 4 & 5) size in our pump panels.

Our MCCB models and the L11/L10 models utilize the CEP7 solid state overload relay providing state-of-the-art overload and single-phase protection. See Section B in this catalog for a full description of these excellent motor protection relays.

Our KTA7 model utilizes the high speed current limiting capabilities providing short-circuit protection, branch-circuit disconnect, and overload protection in one compact device. These Type E panels are smaller than classic models and therefore represent an economical solution to duplexing. See Section F in this catalog for application details for these Type E Combos.

Experience has shown us that duplex pump panels often require customization to accommodate unique components and unique control schematic diagrams. In the following pages you will find a catalog number structure showing standard models with standard options to help guide your selection. We have also provided a check list which can be utilized to request a similar model except customized to meet your application by contacting your Sprecher + Schuh representative.



Custom Control Panels

Sprecher + Schuh custom control facility manufactures custom panels for almost any need, including this duplex control panel in a custom Type 4 stainless steel enclosure.

Duplex Pump Panel Checklist	
Customer Name: _____	Location: _____
Project Name: _____	_____
Contact Person: _____	Phone No.: _____
Email: _____	Date: _____

Standard catalog number selected from the following pages: _____

with the exceptions noted below

Application Data: Motor HP: _____ Voltage: _____ Phase: _____ FLA _____
 Disconnect? Yes No
 If yes, type of disconnect: J-Type Fusible Non-Fusible Circuit breaker Type E combination controller

Starting Method: Across-the-line
 Softstarter

Control Transformer: Yes No
 If Yes, is there any extra VA capacity required other than what is provided as standard? _____ Extra VA required

Options: H-O-A
 Pilot Light; Color _____ Function _____
 Terminal Points; Qty _____
 Phase Monitor
 Hour Meter
 Lightning Arrestor
 Alternator
 Number of float switches 1 2 3
 Alarm Circuit Horn Light Type _____ Alarm Silence Button
 Other _____ Custom Schematic (Must be attached)

Enclosure: Type 1 Type 12 Type 13 Type 3R Type 4
 Type 4X If Type 4X, non-metallic 304 stainless steel 316 stainless steel
 Door-in-door (dead front)

Special Features:

C
Starters & Enclosed Prod.
PUMP

Series CADPT7 and CADPT6

Maximum Horsepower Three Phase			Type 3R (M3) Rainproof (Metal)	D I M	Type 4X (F4) Watertight Corrosion Resistant Non-metallic	D I M
230V	460V	575V	Catalog No.		Price	
			CADPT		CADPT	
2	5	7.5	7-9-*◆-RO	R/F	7-9-*◆-CO	R/F
3	7.5	10	7-12-*◆-RO	R/F	7-12-*◆-CO	R/F
5	10	15	7-16-*◆-RO	R/F	7-16-*◆-CO	R/F
~	~	~	7-23-*◆-RO	R/F	7-23-*◆-CO	R/F
7.5	15	15	7-23-*◆-RO	R/F	7-23-*◆-CO	R/F
10	20	25	7-30-*◆-RO	R/F	7-30-*◆-CO	R/F
10	25	30	7-37-*◆-RO	R/F	7-37-*◆-CO	R/F
~	30	30	7-43-*◆-RO	R/F	7-43-*◆-CO	R/F
15	~	~	7-43-*◆-RO	R/F	7-43-*◆-CO	R/F
20	40	50	7-60-*◆-RO	R/F	7-60-*◆-CO	R/F
25	50	60	7-72-*◆-RO	R/F	7-72-*◆-CO	R/F
~	~	60	7-85-*◆-RO	R/F	7-85-*◆-CO	R/F
30	60	~	7-85-*◆-RO	R/F	7-85-*◆-CO	R/F
~	75	75	7-97-*◆-RO	R/F	7-97-*◆-CO	R/F
40	75	100	6-115-*◆-RO	R/F	6-115-*◆-CO	R/F
50	100	125	6-140-*◆-RO	R/F	6-140-*◆-CO	R/F
60	150	150	6-180-*◆-RO	R/F	6-180-*◆-CO	R/F
75	150	200	6-210-EI-*◆-RO	R/F	6-210-EI-*◆-CO	R/F
100	200	250	6-250-EI-*◆-RO	R/F	6-250-EI-*◆-CO	R/F

Duplex Pump Controller includes:

- (2) Contactors (AC coil)
- (2) Overload relay protection
- (1) Electronic alternating relay
- (1) UL type rated enclosure
- Designed per alternation control diagram shown at bottom of page C103

Starters & Enclosed Prod. PUMP

Note: Catalog numbers, list prices and enclosure dimensions reflect contactors with AC coils. For DC coils, select Coil Code from the DC Coil Code table on page C86 and follow the instructions for modifying catalog numbers and list prices.

Ordering Instructions

Specify Catalog Number	
Replace (*) with Coil Code	See page C86
Replace (◆) with O/L Relay	See pages C87-C88
Factory Modifications available	See pages C89-C92

R/F - Experience has shown that applications requiring duplex pump panels often require customization. (i.e.: unique components and control circuits). Contact your Sprecher + Schuh representative for a customized price.

Series CADPT7 and CADPT6 with Thermal-Magnetic Circuit Breaker

Maximum Horsepower Three Phase			MCCB Amps	Type 3R (M3) Rainproof (Metal)	D I M	Type 4X (F4) Watertight Corrosion Resistant Non-metallic	D I M
230V	460V	575V		Catalog Number		Price	
				CADPT		CADPT	
2	5	7.5	15	7-9-*◆-TB15R0	R/F	7-9-*◆-TB15C0	R/F
3			15	7-12-*◆-TB15R0	R/F	7-12-*◆-TB15C0	R/F
	7.5	10	20	7-12-*◆-TB20R0	R/F	7-12-*◆-TB20C0	R/F
5	10		25	7-16-*◆-TB25R0	R/F	7-16-*◆-TB25C0	R/F
		15	30	7-16-*◆-TB30R0	R/F	7-16-*◆-TB30C0	R/F
		15	30	7-23-*◆-TB30R0	R/F	7-23-*◆-TB30C0	R/F
7.5	15		35	7-23-*◆-TB35R0	R/F	7-23-*◆-TB35C0	R/F
			40	7-30-*◆-TB40R0	R/F	7-30-*◆-TB40C0	R/F
10	20	25	50	7-30-*◆-TB50R0	R/F	7-30-*◆-TB50C0	R/F
10		30	50	7-37-*◆-TB50R0	R/F	7-37-*◆-TB50C0	R/F
	25		60	7-37-*◆-TB60R0	R/F	7-37-*◆-TB60C0	R/F
		30	50	7-43-*◆-TB50R0	R/F	7-43-*◆-TB50C0	R/F
15	30		60	7-43-*◆-TB60R0	R/F	7-43-*◆-TB60C0	R/F
			70	7-43-*◆-TB70R0	R/F	7-43-*◆-TB70C0	R/F
20	40	50	80	7-60-*◆-TB80R0	R/F	7-60-*◆-TB80C0	R/F
			90	7-60-*◆-TB90R0	R/F	7-60-*◆-TB90C0	R/F
25	50	60	100	7-72-*◆-TB100R0	R/F	7-72-*◆-TB100C0	R/F
			125	7-72-*◆-TB125R0	R/F	7-72-*◆-TB125C0	R/F
30		60	100	7-85-*◆-TB100R0	R/F	7-85-*◆-TB100C0	R/F
	60		125	7-85-*◆-TB125R0	R/F	7-85-*◆-TB125C0	R/F
30	75	75	125	7-97-*◆-TB125R0	R/F	7-97-*◆-TB125C0	R/F
	75	100	150	6-115-*◆-TB150R0	R/F	6-115-*◆-TB150C0	R/F
40			175	6-115-*◆-TB175R0	R/F	6-115-*◆-TB175C0	R/F
			200	6-115-*◆-TB200R0	R/F	6-115-*◆-TB200C0	R/F
50	100	125	200	6-140-*◆-TB200R0	R/F	6-140-*◆-TB200C0	R/F
		150	225	6-180-*◆-TB225R0	R/F	6-180-*◆-TB225C0	R/F
60			250	6-180-*◆-TB250R0	R/F	6-180-*◆-TB250C0	R/F
	150		300	6-180-*◆-TB300R0	R/F	6-180-*◆-TB300C0	R/F
75	150	200	300	6-210-EI-*◆-TB300R0	R/F	6-210-EI-*◆-TB300C0	R/F
			350	6-250-EI-*◆-TB350R0	R/F	6-250-EI-*◆-TB350C0	R/F
100	200	250	400	6-250-EI-*◆-TB400R0	R/F	6-250-EI-*◆-TB400C0	R/F
		300	450	6-300-EI-*◆-TB450R0	R/F	6-300-EI-*◆-TB450C0	R/F
125	250		500	6-300-EI-*◆-TB500R0	R/F	6-300-EI-*◆-TB500C0	R/F
		400	600	6-420-EI-*◆-TB600R0	R/F	6-420-EI-*◆-TB600C0	R/F
175	350		700	6-420-EI-*◆-TB700R0	R/F	6-420-EI-*◆-TB700C0	R/F

Duplex Pump Controller with circuit breaker includes:

- (2) Contactors (AC coil)
- (2) Overload relay protection
- (2) Thermal magnetic circuit breakers
- (1) Electronic alternating relay
- (1) UL type rated enclosure
- Designed per alternation control diagram shown at bottom of page C103

Note: Catalog numbers, list prices and enclosure dimensions reflect contactors with AC coils. For DC coils, select Coil Code from the DC Coil Code table on page C86 and follow the instructions for modifying catalog numbers and list prices.

Ordering Instructions

Specify Catalog Number	
Replace (*) with Coil Code	See page C86
Replace (◆) with O/L Relay	See pages C87-C88
Factory Modifications available	See pages C89-C92

R/F - Experience has shown that applications requiring duplex pump panels often require customization. (i.e.: unique components and control circuits). Contact your Sprecher + Schuh representative for a customized price.

Series CADPT7 and CADPT6 with Fusible Disconnect (J-Type) ①②

Maximum Horsepower Three Phase				Fuse clip Amps	Type 3R (M3) Rainproof (Metal)	D I M	Type 4X (F4) Watertight Corrosion Resistant Non-metallic	D I M
200V	230V	460V	575V		Catalog Number		Price	
					CADPT		CADPT	
2	2	5	7.5	30	7-9-*◆-JF61RO	R/F	7-9-*◆-JF61CO	R/F
3	3	7.5	10	30	7-12-*◆-JF61RO	R/F	7-12-*◆-JF61CO	R/F
5	5	10	15	30	7-16-*◆-JF61RO	R/F	7-16-*◆-JF61CO	R/F
5	~	~	~	30	7-23-*◆-JF61RO	R/F	7-23-*◆-JF61CO	R/F
~	7.5	15	15	60	7-23-*◆-JF62RO	R/F	7-23-*◆-JF62CO	R/F
7.5	10	20	25	60	7-30-*◆-JF62RO	R/F	7-30-*◆-JF62CO	R/F
10	10	25	30	60	7-37-*◆-JF62RO	R/F	7-37-*◆-JF62CO	R/F
10	~	30	30	60	7-43-*◆-JF62RO	R/F	7-43-*◆-JF62CO	R/F
~	15	~	~	100	7-43-*◆-JF63RO	R/F	7-43-*◆-JF63CO	R/F
15	20	40	50	100	7-60-*◆-JF63RO	R/F	7-60-*◆-JF63CO	R/F
20	25	50	60	100	7-72-*◆-JF63RO	R/F	7-72-*◆-JF63CO	R/F
~	~	~	60	100	7-85-*◆-JF63RO	R/F	7-85-*◆-JF63CO	R/F
25	30	60	~	200	7-85-*◆-JF64RO	R/F	7-85-*◆-JF64CO	R/F
30	30	75	75	200	7-97-*◆-JF64RO	R/F	7-97-*◆-JF64CO	R/F
40	40	75	100	200	6-115-*◆-JF64RO	R/F	6-115-*◆-JF64CO	C48
40	50	100	125	200	6-140-*◆-JF64RO	R/F	6-140-*◆-JF64CO	R/F
50	60	150	150	400	6-180-*◆-JF65RO	R/F	6-180-*◆-JF65CO	R/F
60	75	150	200	400	6-210-EI-*◆-JF65RO	R/F	6-210-EI-*◆-JF65CO	R/F
75	100	200	250	400	6-250-EI-*◆-JF65RO	R/F	6-250-EI-*◆-JF65CO	R/F

Duplex Pump Controller with disconnect switch includes:

- (2) Contactors (AC coil)
- (2) Overload relay protection
- (2) J-type fusible disconnect switch (excluding line fuses)
- (1) Electronic alternating relay
- (1) UL type rated enclosure
- Designed per alternation control diagram shown at bottom of page C103

Note: Catalog numbers, list prices and enclosure dimensions reflect contactors with AC coils. For DC coils, select Coil Code from the DC Coil Code table on page C86 and follow the instructions for modifying catalog numbers and list prices.

R/F - Experience has shown that applications requiring duplex pump panels often require customization. (i.e.: unique components and control circuits). Contact your Sprecher + Schuh representative for a customized price.

Ordering Instructions

Specify Catalog Number	
Replace (*) with Coil Code	See page C86
Replace (◆) with O/L Relay	See pages C87-C88
Factory Modifications available	See pages C89-C92

- ① Fusible combo starters use the L10 Disconnect. Fuse clips accept "J" type fuses. Power fuses not supplied.
- ② A Red and Yellow Handle may be selected instead of the standard Gray and Black handle. Change "JF" to "LF" in catalog number.