

Rotary Cam Switches

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Series L2 Rotary Cam Switches

Attractive design,
reliable operation and
high quality for any
application



K
Rotary Cam
Switches

L2

TIP!



To learn the basic differences between control, load and fusible disconnect switches and how to apply them, ask your Sprecher + Schuh representative for publication no: Tech-LMSD

Sprecher + Schuh's comprehensive line of L2 rotary cam switches are available for all control and load applications up to 25 amps. The line is modular and has many convenience and safety features. A well thought out ordering system provides many standard and nonstandard configurations, that are many times available off the shelf.

Any switch configuration...

Two frame sizes provide control and load switching up to 25 amps, with as few as two, and as many as 16 contacts (recommended maximum). Both frame sizes are available in panel mount and base mount for total flexibility. A wide range of switching configurations are offered from stock and in many cases custom switches can be fabricated to order.

...For any application

L2 control and load switches are UL listed, CSA approved and comply with the most important international standards for use as:

- **Control switches** - for process control, making and breaking circuits and as instrument selector switches.
- **Motor switches** - as ON/OFF and reversing switches.
- **Multi-position load switches** - for the step control of loads such as heaters and furnaces.
- **Motor load disconnect switches** - for safely isolating circuits during repair and maintenance.
- **Emergency OFF switches** - for isolating circuits in case of danger or emergency situations. Can be equipped for locking in the OFF position.



Safety and quality

The L2's sturdy design incorporates a positive switching action with a clearly designed switching point. Switch bodies are touch-safe (IP20) and manufactured from self-extinguishing materials corresponding to Class UL 94 V0. All control knobs and shafts are spray proof and dust proof to IP65.

Modular and flexible

The same switch handle assemblies and shaft extension systems are used for both our L2 control switches and L3 disconnect switches. This reduces inventory, simplifies stocking and allows you to put together the ideal switch for your application quickly and easily.

Simple assembly and fast installation

Shaft extensions and door interlocks snap-on quickly without tools, saving time during assembly. Captive terminals are shipped open and are totally accessible regardless of whether the switch is base mounted or panel mounted. Screwdriver guides and clear terminal markings reduce wiring mistakes and speed installation.

In addition, most switch handle assemblies are available with either screw fixing or the new central nut mounting system for total flexibility.

How to order L2 control and load switches

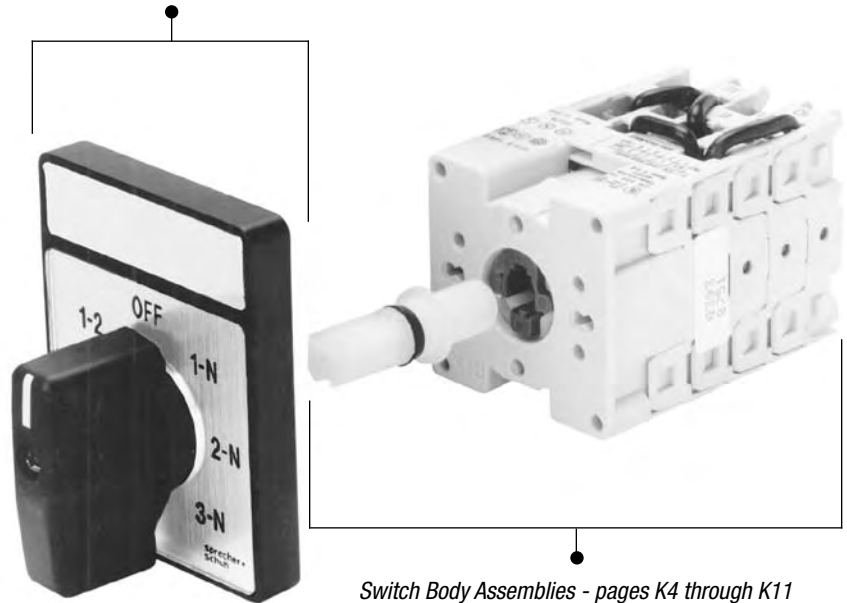
A complete L2 switch is ordered with just two catalog numbers. The first number specifies the switch body and the second specifies the switch handle assembly. All L2 switch bodies come standard with a shaft and mounting screws for the switch handle assembly. Accessories such as shaft extensions and enclosures are ordered separately.

First determine the switch body you need from pages K4 through K11. Then turn to page K12 to choose a switch handle assembly. If necessary, turn to page K24 and K25 to determine the type and length of shaft extension you require.

Custom made switches

Sprecher + Schuh can manufacture a full array of custom switches within reasonable time frames. Refer to the last chapter in this section entitled “Custom L2 and R-Line Rotary Cam Switches.” Before ordering a custom switch, always consult with your Sprecher + Schuh representative to determine if a stock or standard switch is practical for your application.

Switch Handle Assemblies - page K12



Switch Body Assemblies - pages K4 through K11

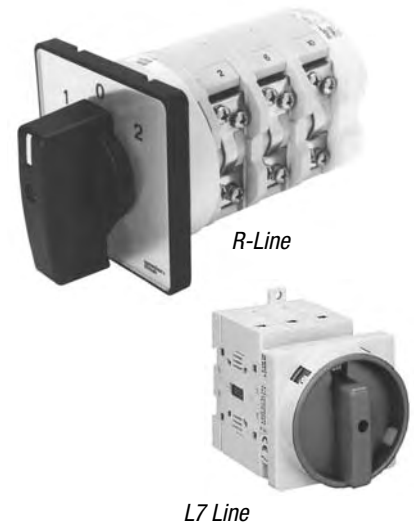
A comprehensive family of switches

The L2 line is part of an entire family of control and load switches available from Sprecher + Schuh.

For specialized switching requirements or large ampere applications up to 630A (@600V), our R-Line Rotary Cam Switches offer a broad selection and rugged quality. See the the next chapter in this section entitled “R-Line Rotary Cam Switches” for ordering information.

Our modular L7 disconnect switches are rated to 100 amps for motor, load and disconnect switching. They share many of the same components with the L2 line. A complete description and ordering information can be found in Section L of this catalog.

Rounding out our selection of “man-machine interfaces,” Sprecher + Schuh also offers a broad selection of 22mm pilot devices. See Section H in this catalog for ordering information.



R-Line

L7 Line

Switch Body Description			Circuit Diagram Number (▲)	Switch Body Catalog Number & Price								Switch Handle Code
Function	Switch Angle	Poles/Switch Wafers		Panel Mount				Base Mount				
				12 Amp	16 Amp	20 Amp	25 Amp	12 Amp	16 Amp	20 Amp	25 Amp	
				LE2-12-▲	LE2-16-▲	LE2-20-▲	LE2-25-▲	LA2-12-▲	LA2-16-▲	LA2-20-▲	LA2-25-▲	
ON - OFF												
	60°	1 / 1	1501	28.00	33.25	47.00	56.50					150
		2 / 1	1502	34.00	41.00	56.50	69.00					
		3 / 2	1503	45.00	55.00	74.50	89.00					
		4 / 2	1504	51.50	62.50	84.00	100.00					
		5 / 3	1505	62.00	76.50	102.00	120.00					
		6 / 3	1506	68.50	84.00	111.00	131.00					
	90°	1 / 1	1751	28.00	31.00	47.00	56.50	34.50	39.75	54.50	65.50	175 175I
		2 / 1	1752	34.00	41.00	56.50	69.00	41.00	47.50	64.00	76.50	
		3 / 2	1753	45.00	55.00	74.50	89.00	48.50	61.50	82.00	97.00	
		4 / 2	1754	51.50	62.50	84.00	100.00	58.00	69.00	92.00	107.00	
		5 / 3	1755	62.00	76.50	102.00	120.00	69.00	83.00	109.00	128.00	
		6 / 3	1756	68.50	84.00	111.00	131.00	75.00	90.50	119.00	138.00	
	90°	4 / 2	1764	51.50	62.50	84.00	100.00	58.00	69.00	92.00	107.00	175 175I
	90°	5 / 3	1765	62.00	76.50	102.00	120.00	69.00	83.00	109.00	128.00	175 175I
	90°	4 / 2	1774	51.50	62.50	84.00	99.00	58.00	69.00	92.00	107.00	175 175I
	90°	1 / 1	1781	28.00	31.00	47.00	56.50	34.50	39.75	54.50	65.50	178 178I
		2 / 1	1782	34.00	41.00	56.50	69.00	41.00	47.50	64.00	72.00	
		3 / 2	1783	45.00	55.00	74.50	89.00	51.50	61.50	82.00	97.00	
		4 / 2	1784	51.50	62.50	84.00	100.00	57.00	69.00	92.00	107.00	
Double Throw												
	45°	1 / 1	2251	34.00	41.00	56.50	69.00	41.00	47.50	64.00	72.00	225
		2 / 2	2252	51.50	62.50	84.00	100.00	58.00	69.00	92.00	107.00	
		3 / 3	2253	68.50	84.00	111.00	131.00					
		4 / 4	2254	86.00	106.00	136.00	162.00					
		5 / 5	2255	113.00	22.55	178.00	204.00					
	60°	1 / 1	2501	34.00	41.00	56.50	69.00					250
		2 / 2	2502	51.50	62.50	84.00	100.00					
		3 / 3	2503	68.50	84.00	111.00	131.00					
		4 / 4	2504	86.00	106.00	139.00	162.00					
		5 / 5	2505	113.00	137.00	178.00	204.00					

Ordering Instructions

- Specify Switch Body catalog# from top of column.
- Replace (▲) with Circuit Diagram Number (refer to pages K16-23 for diagrams).
- Select Switch Handle Assembly from pages K12-15 using Switch Handle Code.
- Example: **LE2-16-1753** (Switch Body)
LFS2-A-4-175 (Switch Handle Assembly)

Switch Body Description			Circuit Diagram Number (▲)	Switch Body Catalog Number & Price								Switch Handle Code
Function	Switch Angle	Poles/Switch Wafers		Panel Mount				Base Mount				
				12 Amp	16 Amp	20 Amp	25 Amp	12 Amp	16 Amp	20 Amp	25 Amp	
			LE2-12-▲	LE2-16-▲	LE2-20-▲	LE2-25-▲	LA2-12-▲	LA2-16-▲	LA2-20-▲	LA2-25-▲		
Double Throw (continued)												
	45°	1 / 1	3251	34.00	41.00	56.50	69.00	41.00	47.50	64.00	325 325R	
		2 / 2	3252	51.00	62.50	84.00	100.00	58.00	69.00	92.00		
		3 / 3	3253	68.50	84.00	111.00	131.00	75.00	90.50	119.00		
		4 / 4	3254	86.00	106.00	139.00	162.00	92.00	112.00	147.00		
	60°	1 / 1	3501	34.00	41.00	56.50	69.00				350	
		2 / 1	3502	51.00	62.50	84.00	100.00					
		3 / 2	3503	68.50	84.00	111.00	131.00					
		4 / 2	3504	86.00	106.00	139.00	162.00					
	90°	1 / 1	3751	34.00	41.00	56.50	69.00				375	
		2 / 2	3752	51.00	62.50	84.00	100.00					
		3 / 3	3753	68.50	84.00	111.00	131.00					
		4 / 4	3754	86.00	106.00	139.00	162.00					
	30°	1 / 1	3001	34.00	41.00	56.50	69.00				300	
		2 / 2	3002	51.00	62.50	84.00	100.00					
		3 / 3	3003	68.50	84.00	111.00	131.00					
	45°	1 / 1	3261	34.00	41.00	56.50	69.00				325	
		2 / 2	3262	51.00	62.50	84.00	100.00					
		3 / 3	3263	68.50	84.00	111.00	131.00					
3 Position												
	45°	1 / 2	4251	45.00	55.00	74.50	89.00	51.50	61.50	82.00	97.00	425
		2 / 3	4252	68.50	84.00	111.00	131.00					
		3 / 5	4253	106.00	129.00	168.00	193.00					
	45°	1 / 2	4291	45.00	55.00	74.50	89.00					429
	60°	1 / 2	4501	45.00	55.00	74.50	89.00					450
		2 / 3	4502	68.50	84.00	111.00	131.00					
		3 / 5	4503	106.00	129.00	168.00	193.00					

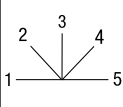
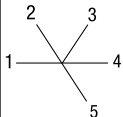
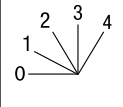
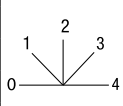
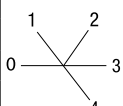
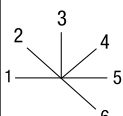
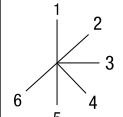
Ordering Instructions

- Specify Switch Body catalog# from top of column.
- Replace (▲) with Circuit Diagram Number (refer to pages K16-23 for diagrams).
- Select Switch Handle Assembly from pages K12-15 using Switch Handle Code.
- Example: **LE2-16-1753** (Switch Body)
LFS2-A-4-175 (Switch Handle Assembly)

Switch Body Description			Circuit Diagram Number (▲)	Switch Body Catalog Number & Price								Switch Handle Code
Function	Switch Angle	Poles/Switch Wafers		Panel Mount				Base Mount				
				12 Amp	16 Amp	20 Amp	25 Amp	12 Amp	16 Amp	20 Amp	25 Amp	
			LE2-12-▲	LE2-16-▲	LE2-20-▲	LE2-25-▲	LA2-12-▲	LA2-16-▲	LA2-20-▲	LA2-25-▲		
3 Position (with OFF)												
	45°	1 / 1	5251	34.00	41.00	56.50	69.00					525
		2 / 2	5252	51.00	62.50	84.00	100.00					
		3 / 3	5253	68.50	84.00	111.00	131.00					
	60°	1 / 1	5501	34.00	41.00	56.50	69.00					550
		2 / 1	5502	51.00	62.50	84.00	100.00					
		3 / 2	5503	68.50	84.00	111.00	131.00					
4 Position												
	45°	1 / 2	4261	51.00	61.50	84.00	100.00	58.00	69.00	92.00	107.00	426
		2 / 4	4262	86.00	106.00	139.00	162.00					
		3 / 6	4263	130.00	159.00	205.00	235.00					
	45°	1 / 2	4301	51.00	61.50	84.00	100.00					430
		2 / 4	4302	86.00	106.00	139.00	162.00					
		3 / 6	4303	130.00	159.00	205.00	235.00					
	60°	1 / 2	4511	51.00	61.50	84.00	100.00					451
		2 / 4	4512	86.00	106.00	139.00	162.00					
		3 / 6	4513	130.00	159.00	205.00	235.00					
4 Position (with OFF)												
	45°	1 / 2	5261	45.00	55.00	74.50	89.00	52.00	61.50	82.00	97.00	526
		2 / 3	5262	68.50	84.00	111.00	131.00					
		3 / 5	5263	106.00	129.00	168.00	193.00					
	60°	1 / 2	5511	45.00	55.00	74.50	89.00					551
		2 / 3	5512	68.50	84.00	111.00	131.00					
		3 / 5	5513	106.00	129.00	168.00	193.00					

Ordering Instructions

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- Select Switch Handle Assembly from pages K12-15 using Switch Handle Code.
- Example: **LE2-16-1753** (Switch Body)
LFS2-A-4-175 (Switch Handle Assembly)

Switch Body Description			Circuit Diagram Number (▲)	Switch Body Catalog Number & Price								Switch Handle Code
Function	Switch Angle	Poles/Switch Wafers		Panel Mount				Base Mount				
				12 Amp	16 Amp	20 Amp	25 Amp	12 Amp	16 Amp	20 Amp	25 Amp	
			LE2-12-▲	LE2-16-▲	LE2-20-▲	LE2-25-▲	LA2-12-▲	LA2-16-▲	LA2-20-▲	LA2-25-▲		
5 Position												
	45°	1 / 3	4271	62.00	76.50	102.00	120.00	69.00	83.00	109.00	128.00	427
	60°	1 / 3	4521	62.00	76.50	102.00	120.00					452
5 Position (with OFF)												
	30°	1 / 2 2 / 4 3 / 6	5001 5002 5003	51.00 86.00 130.00	62.50 106.00 159.00	84.00 139.00 205.00	100.00 162.00 235.00					500
	45°	1 / 2 2 / 4 3 / 6	5271 5272 5273	51.00 86.00 130.00	62.50 106.00 159.00	84.00 139.00 205.00	100.00 162.00 235.00	58.00	69.00	92.00	107.00	527
	60°	1 / 2 2 / 4 3 / 6	5521 5522 5523	51.00 86.00 130.00	62.50 106.00 159.00	84.00 139.00 205.00	100.00 162.00 235.00					552
6 Position												
	45°	1 / 3	4281	68.50	84.00	111.00	131.00	75.00	90.50	119.00	138.00	428
	45°	1 / 3	4311	68.50	84.00	111.00	131.00					431

6 Position switches continued on next page 

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Ordering Instructions









- Specify Switch Body catalog# from top of column.
- Replace (▲) with Circuit Diagram Number (refer to pages K16-23 for diagrams).
- Select Switch Handle Assembly from pages K12-15 using Switch Handle Code.
- Example: **LE2-16-1753** (Switch Body)
LFS2-A-4-175 (Switch Handle Assembly)

SSCDN8500E

Switch Body Description			Circuit Diagram Number (▲)	Switch Body Catalog Number & Price								Switch Handle Code
Function	Switch Angle	Poles/Switch Wafers		Panel Mount				Base Mount				
				12 Amp	16 Amp	20 Amp	25 Amp	12 Amp	16 Amp	20 Amp	25 Amp	
				LE2-12-▲	LE2-16-▲	LE2-20-▲	LE2-25-▲	LA2-12-▲	LA2-16-▲	LA2-20-▲	LA2-25-▲	
6 Position (continued)												
	60°	1 / 3	4531	68.50	84.00	111.00	131.00				453	
6 Position (with OFF)												
	30°	1 / 3	5011	62.00	76.50	102.00	120.00				501	
		2 / 5	5012	113.00	137.00	178.00	204.00					
		3 / 8	5013	158.00	194.00	251.00	286.00					
	45°	1 / 3	5281	62.00	76.50	102.00	120.00	69.00	83.00	109.00	128.00	528
		2 / 5	5282	113.00	137.00	178.00	204.00					
		3 / 8	5283	158.00	194.00	251.00	286.00					
	60°	1 / 3	5531	62.00	76.50	102.00	120.00				553	
		2 / 5	5532	113.00	137.00	178.00	204.00					
		3 / 8	5533	158.00	194.00	251.00	286.00					
7 Position (with OFF)												
	30°	1 / 3	5021	68.50	84.00	111.00	131.00				502	
		2 / 6	5022	130.00	159.00	205.00	235.00					
	45°	1 / 3	5291	68.50	84.00	111.00	131.00	75.00	90.50	119.00	138.00	529
		2 / 6	5292	130.00	159.00	205.00	235.00					
8 Position (with Off)												
	45°	1 / 4	5341	79.00	98.00	129.00	151.00				534	

Ordering Instructions

- Specify Switch Body catalog# from top of column.
- Replace (▲) with Circuit Diagram Number (refer to pages K16-23 for diagrams).
- Select Switch Handle Assembly from pages K12-15 using Switch Handle Code.
- Example: **LE2-16-1753** (Switch Body)
LFS2-A-4-175 (Switch Handle Assembly)

Switch Body Description			Circuit Diagram Number (▲)	Switch Body Catalog Number & Price								Switch Handle Code
Function	Switch Angle	Poles/Switch Wafers		Panel Mount				Base Mount				
				12 Amp	16 Amp	20 Amp	25 Amp	12 Amp	16 Amp	20 Amp	25 Amp	
				LE2-12-▲	LE2-16-▲	LE2-20-▲	LE2-25-▲	LA2-12-▲	LA2-16-▲	LA2-20-▲	LA2-25-▲	
START - STOP												
	30°	1 / 1	9001	28.00	33.25	47.00	58.00	34.50	39.75	54.50	65.50	900
	30°	1 / 1	9011	28.00	33.25	47.00	58.00	34.50	39.75	54.50	65.50	901
	30°	1 / 1	9021	34.00	41.00	56.50	69.00	41.00	47.50	64.00	76.50	902
	45°	1 / 1	9251	34.00	41.00	56.50	69.00	41.00	47.50	64.00	76.50	925
	90°/30°	1 / 1	9751	34.00	41.00	56.50	69.00	41.00	47.50	64.00	76.50	975
REVERSING												
	30°	3 / 3	7003	62.00	76.50	102.00	120.00					300
	45	3 / 3	7313	62.00	76.50	102.00	120.00	69.00	83.00	109.00	128.00	325
	45 °	3 / 3	7303	62.00	76.50	102.00	120.00	69.00	83.00	109.00	128.00	325

Reversing switches continued on next page 

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L2

Ordering Instructions

- Specify Switch Body catalog# from top of column.
- Replace (▲) with Circuit Diagram Number (refer to pages K16-23 for diagrams).
- Select Switch Handle Assembly from pages K12-15 using Switch Handle Code.
- Example: **LE2-16-1753** (Switch Body)
LFS2-A-4-175 (Switch Handle Assembly)

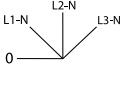
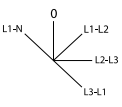
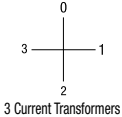
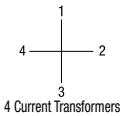

SSCDN8500E

Switch Body Description			Circuit Diagram Number (▲)	Switch Body Catalog Number & Price								Switch Handle Code
Function	Switch Angle	Poles/Switch Wafers		Panel Mount				Base Mount				
				12 Amp	16 Amp	20 Amp	25 Amp	12 Amp	16 Amp	20 Amp	25 Amp	
				LE2-12-▲	LE2-16-▲	LE2-20-▲	LE2-25-▲	LA2-12-▲	LA2-16-▲	LA2-20-▲	LA2-25-▲	
REVERSING (continued)												
	60°	3 / 3	7543	62.00	76.50	102.00	120.00					350
Two Speed Single Winding (Dahlander)												
	45°	3 / 4	7293	86.00	106.00	139.00	162.00					325
Voltmeter												
	30°	NA / 3	8001	68.50	84.00	111.00	131.00					800 800A
	45°	NA / 3	8251	68.50	84.00	111.00	131.00	75.00	90.50	119.00	138.00	825 825A
	30°	NA / 2	8021	51.00	62.50	84.00	100.00	58.00	69.00			802 802A
	45°	NA / 2	8271	51.00	62.50	84.00	100.00	58.00				827 827A
	30°	NA / 2	8031	51.00	62.50	84.00	100.00	58.00	69.00			803

Voltmeter switches continued on next page ➡

Ordering Instructions

- Specify Switch Body catalog# from top of column.
- Replace (▲) with Circuit Diagram Number (refer to pages K16-23 for diagrams).
- Select Switch Handle Assembly from pages K12-15 using Switch Handle Code.
- Example: **LE2-16-1753** (Switch Body)
LFS2-A-4-175 (Switch Handle Assembly)



Switch Body Description			Circuit Diagram Number (▲)	Switch Body Catalog Number & Price								Switch Handle Code
Function	Switch Angle	Poles/Switch Wafers		Panel Mount				Base Mount				
				12 Amp	16 Amp	20 Amp	25 Amp	12 Amp	16 Amp	20 Amp	25 Amp	
				LE2-12-▲	LE2-16-▲	LE2-20-▲	LE2-25-▲	LA2-12-▲	LA2-16-▲	LA2-20-▲	LA2-25-▲	
Voltmeter (continued)												
	45°	NA / 2	8291	51.00				58.00				829 829A
	45°	NA / 3	8332	62.00	76.50	102.00						833 833A
Ammeter												
	90°	1 / 3 2 / 5	8751 8752	68.50 106.00	84.00 129.00	111.00 130.00	131.00 193.00	75.00	90.50	119.00	138.00	875
	90°	1 / 4	8761	86.00	106.00	139.00	162.00	92.00	112.00	147.00	170.00	876
	90°	1 / 1	8771	34.00	41.00	56.50	69.00	41.00	47.50	64.00	76.50	178

Ordering Instructions

- Specify Switch Body catalog# from top of column.
- Replace (▲) with Circuit Diagram Number (refer to pages K16-23 for diagrams).
- Select Switch Handle Assembly from pages K12-15 using Switch Handle Code.
- Example: **LE2-16-1753** (Switch Body)
LFS2-A-4-175 (Switch Handle Assembly)

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




Switch Handle Assemblies

Switch Handle Assembly	Mounting Method	Frame Size	Catalog Number	Price	Switch Handle Assembly	Mounting Method	Frame Size	Catalog Number	Price
 <p>Type A - (IP66) Silver Legend Plate - Black Knob</p>	Screw ①②	48 x 48	LFS2-A-4-*	8.50	 <p>Type G - (UL Type 3R-IP66) Grey Frame - Black Handle</p>	Screw ①	67 x 67	LFS2-G-6-*	21.50
		64 x 64	LFS2-A-6-*	10.75			67 x 67	LFC2-G-6-175	32
 <p>Type E - (IP66) Silver Legend Plate - Black Knob</p>	Screw ①②	48 x 48	LFS2-E-4-*	12.50	 <p>Type N - (UL Type 3R-IP66) Yellow Frame - Red Handle</p>	Screw ①	67 x 67	LFS2-N-6-*	21.50
		64 x 64	LFS2-E-6-*	15.00			67 x 67	LFC2-N-6-175	32
 <p>Type I - (IP66) Yellow Legend Plate - Red Knob</p>	Screw ①②	48 x 48	LFS2-I-4-*	8.50	 <p>Type B - (IP66) Grey Ring - Black Knob</p>	Central Nut ②	NA	LFC2-B-001	8.50
		64 x 64	LFS2-I-6-*	10.75			48 x 48	LFC2-I-4-*	11.75
 <p>Type L - (IP66) Yellow Legend Plate - Red Knob</p>	Screw ①②	48 x 48	LFS2-L-4-*	12.50	 <p>Type C - (IP66) Silver Legend Plate</p>	Central Nut ②	48x48	LFC2-C◆-4-*	55
		64 x 64	LFS2-L-6-*	15.00			48 x 48	LFC2-L-4-*	18.60
 <p>Type S - (IP66) Silver Legend Plate - Black Knob</p>	Screw ①②	48 x 62	LFS2-S-4-*	11.50	 <p>Type D - (IP66) Grey Ring</p>	Central Nut ②	NA	LFC2-D◆-001	49
		64 x 78	LFS2-S-6-*	14.25					

Ordering Instructions

- Specify Switch Handle Assembly.
- Where applicable, replace (*) with Switch Handle Code (refer to pages K13-15 for Codes).

- Where applicable, replace (◆) with Key Withdraw Code.

C =  D =  G =  H =  K = 

- Example: **LFC2-CK-4-529**

- ① Mounting screws included with Switch Body Assy.
- ② Central Nut mounting method cannot be used on LA style Switch Body Assemblies.
- ◆ To order Switch Handle Assembly without legend plate, replace (*) with "001" and deduct \$2.40.

Switch Handle Codes

Switch Handle Code	Standard Legend Markings ❶	Frame Size ❷	Switch Handle Assembly Type																
			Screw Mount							Central Nut									
			A	E	I	L	S	G	N	A	E	I	L	C	G	N			
000		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
150		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
175		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
175I		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
178		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
178I		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
225		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
250		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
300		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
325		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
325R		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
350 ❸		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
375		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
425		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
426		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
427		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
428		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
429		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
430		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
431		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
450		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
451		Standard	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Larger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Rotary Cam Switches L2

❶ For custom legend markings not included here, add the following to the Switch Handle Assembly list prices noted on page K12:

Quantity:	1-4	5-19	20-99	100-199	200-499	500+
Price Adder:	\$19.20	\$10.60	\$7.00	\$3.40	\$2.20	\$0.00

NOTE: Types "N" and "G" are not available with custom markings.

❷ Frame Size descriptions:

Type:	A, E, I & L	C	S	N & G
Standard:	48x48	48x48	48x62	67x67
Larger:	64x64		64x78	

❸ Available with "MAN-O-AUTO" or "HAND-O-AUTO" legend marking.
 ❹ LFC2-G(N)-6-175 handles are marked "I-ON" and "O-OFF".

Switch Handle Codes

Switch Handle Code	Standard Legend Markings ❶	Frame Size ❷	Switch Handle Assembly Type															
			Screw Mount							Central Nut								
			A	E	I	L	S	G	N	A	E	I	L	C	G	N		
452		Standard	•				•				•				•			
		Larger	•				•											
453		Standard	•				•				•				•			
		Larger	•				•											
500		Standard	•				•				•				•			
		Larger	•				•											
501		Standard	•				•				•				•			
		Larger	•				•											
502		Standard	•				•				•				•			
		Larger	•				•											
525		Standard	•				•				•				•			
		Larger	•				•											
526		Standard	•				•				•				•			
		Larger	•				•											
527		Standard	•				•				•				•			
		Larger	•				•											
528		Standard	•				•				•				•			
		Larger	•				•											
529		Standard	•				•				•				•			
		Larger	•				•											
534		Standard	•				•				•				•			
		Larger	•				•											
550		Standard	•				•				•				•			
		Larger	•				•											
551		Standard	•				•				•				•			
		Larger	•				•											
552		Standard	•				•				•				•			
		Larger	•				•											
553		Standard	•				•				•				•			
		Larger	•				•											
800		Standard	•				•				•				•			
		Larger	•				•											
800A		Standard	•				•				•				•			
		Larger	•				•											
802		Standard	•				•				•				•			
		Larger	•				•											
802A		Standard	•				•				•				•			
		Larger	•				•											
803		Standard	•				•				•				•			
		Larger	•				•											
803A		Standard	•				•				•				•			
		Larger	•				•											
825		Standard	•				•				•				•			
		Larger	•				•											

❶ For custom legend markings not included here, add the following to the Switch Handle Assembly list prices noted on page K12:

Quantity:	1-4	5-19	20-99	100-199	200-499	500+
Price Adder:	\$19.20	\$10.60	\$7.00	\$3.40	\$2.20	\$0.00

NOTE: Types "N" and "G" are not available with custom markings.

❷ Frame Size descriptions:

Type:	A, E, I & L	C	S	N & G
Standard:	48x48	48x48	48x62	67x67
Larger:	64x64		64x78	

Switch Handle Codes

Switch Handle Code	Standard Legend Markings ❶	Frame Size ❷	Switch Handle Assembly Type																	
			Screw Mount							Central Nut										
			A	E	I	L	S	G	N	A	E	I	L	C	G	N				
825A		Standard	•				•		•											
		Larger	•				•													
827		Standard	•				•		•											
		Larger	•				•													
827A		Standard	•				•		•											
		Larger	•				•													
829		Standard	•				•		•											
		Larger	•				•													
829A		Standard	•				•		•											
		Larger	•				•													
833		Standard	•				•		•											
		Larger	•				•													
833A		Standard	•				•		•											
		Larger	•				•													
875		Standard	•				•		•	•										
		Larger	•				•													
876		Standard	•				•		•	•										
		Larger	•				•													
900		Standard	•				•													
		Larger	•				•													
901		Standard	•				•													
		Larger	•				•													

Switch Handle Code	Standard Legend Markings ❶	Frame Size ❷	Switch Handle Assembly Type																	
			Screw Mount							Central Nut										
			A	E	I	L	S	G	N	A	E	I	L	C	G	N				
902		Standard	•				•		•											
		Larger	•				•													
925		Standard	•				•		•											
		Larger	•				•													
975		Standard	•	•			•		•	•			•			•				
		Larger	•	•			•													

❶ For custom legend markings not included here, add the following to the Switch Handle Assembly list prices noted on page K12:

Quantity:	1-4	5-19	20-99	100-199	200-499	500+
Price Adder:	\$19.20	\$10.60	\$7.00	\$3.40	\$2.20	\$0.00

NOTE: Types "N" and "G" are not available with custom markings.

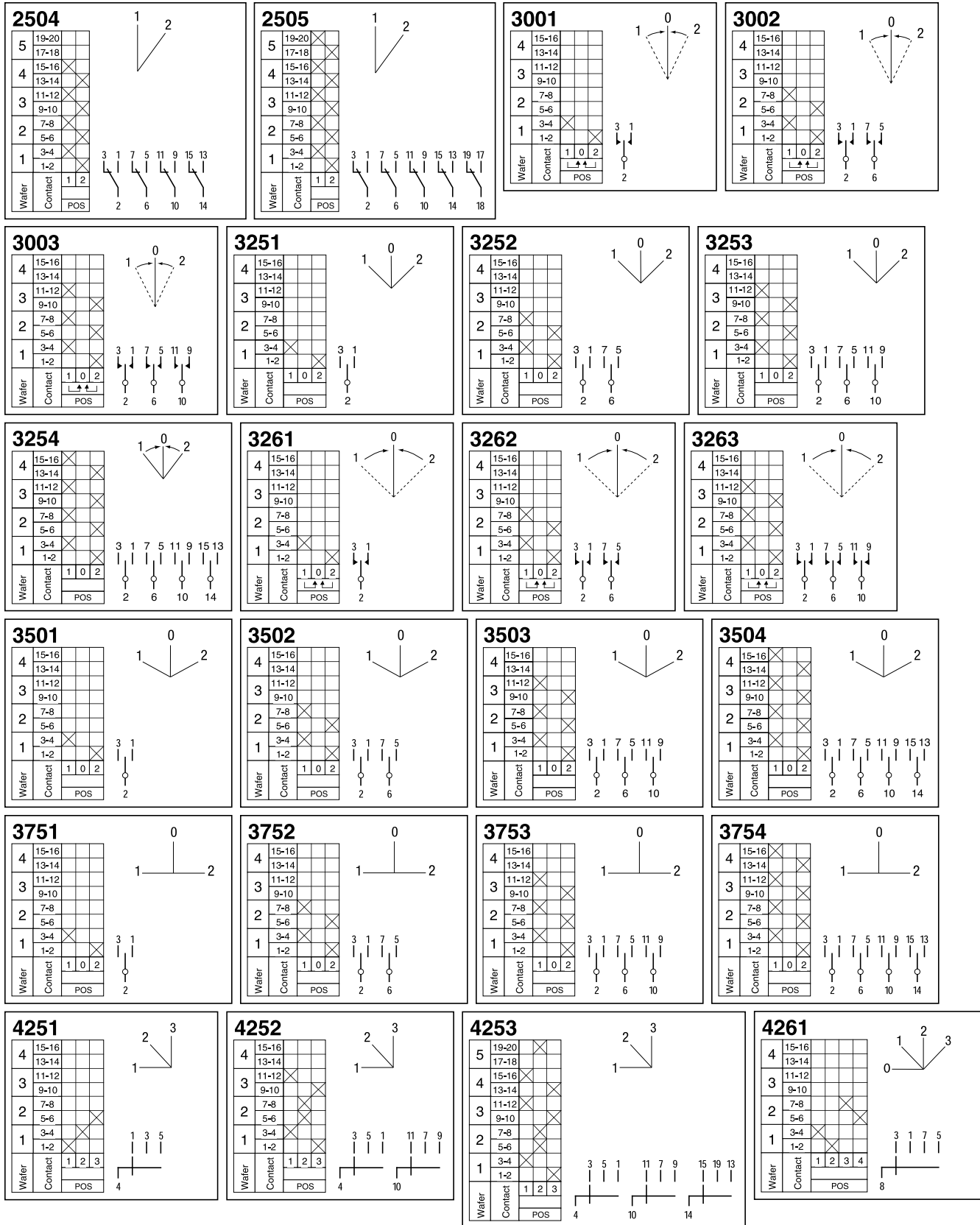
❷ Frame Size descriptions:

Type:	A, E, I & L	C	S	N & G
Standard:	48x48	48x48	48x62	67x67
Larger:	64x64		64x78	

Circuit Diagrams

1501 	1502 	1503 	1504 	1505
1506 	1751 	1752 	1753 	1754
1755 	1756 	1764 	1765 	1774
1781 	1782 	1783 	1784 	
2251 	2252 	2253 	2254 	
2255 	2501 	2502 	2503 	

Circuit Diagrams

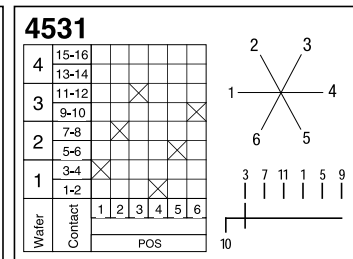
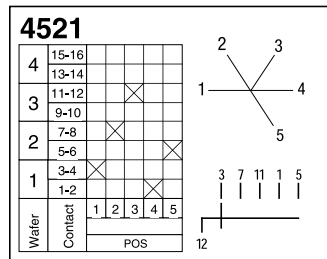
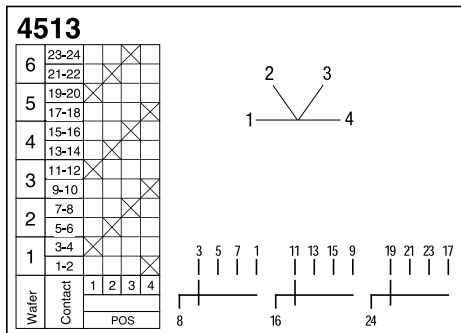
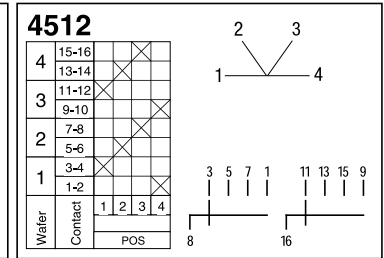
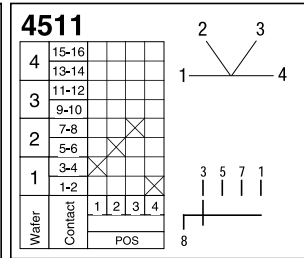
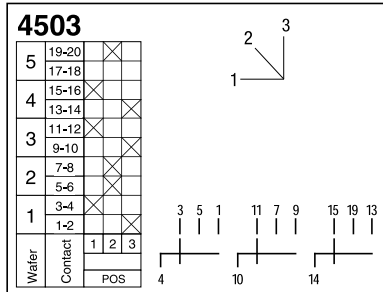
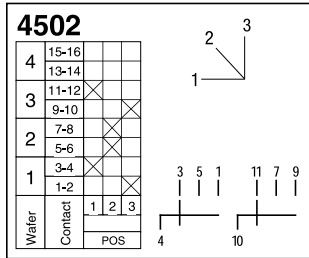
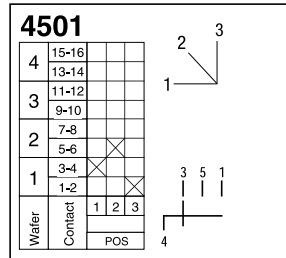
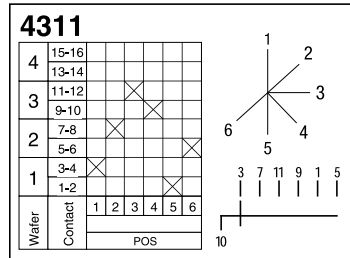
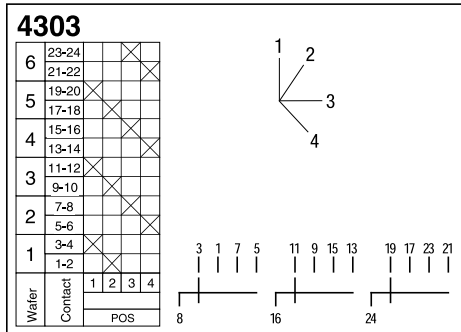
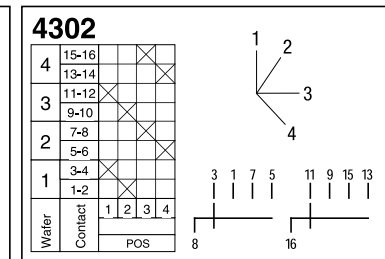
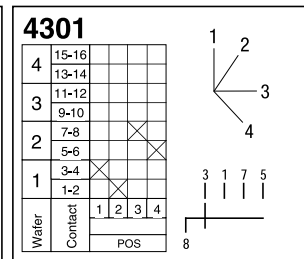
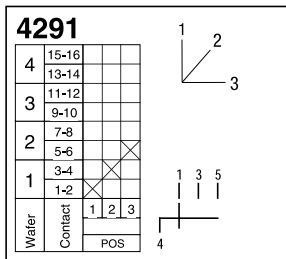
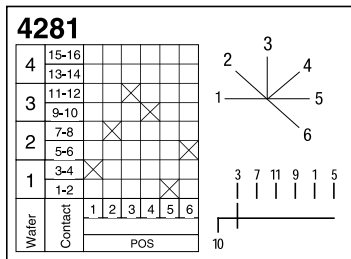
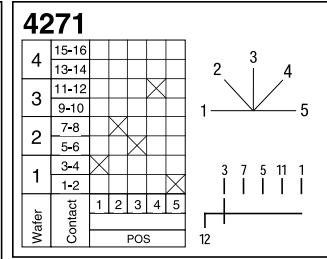
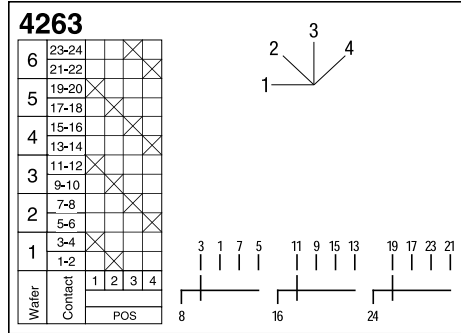
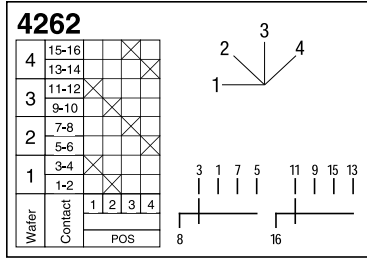


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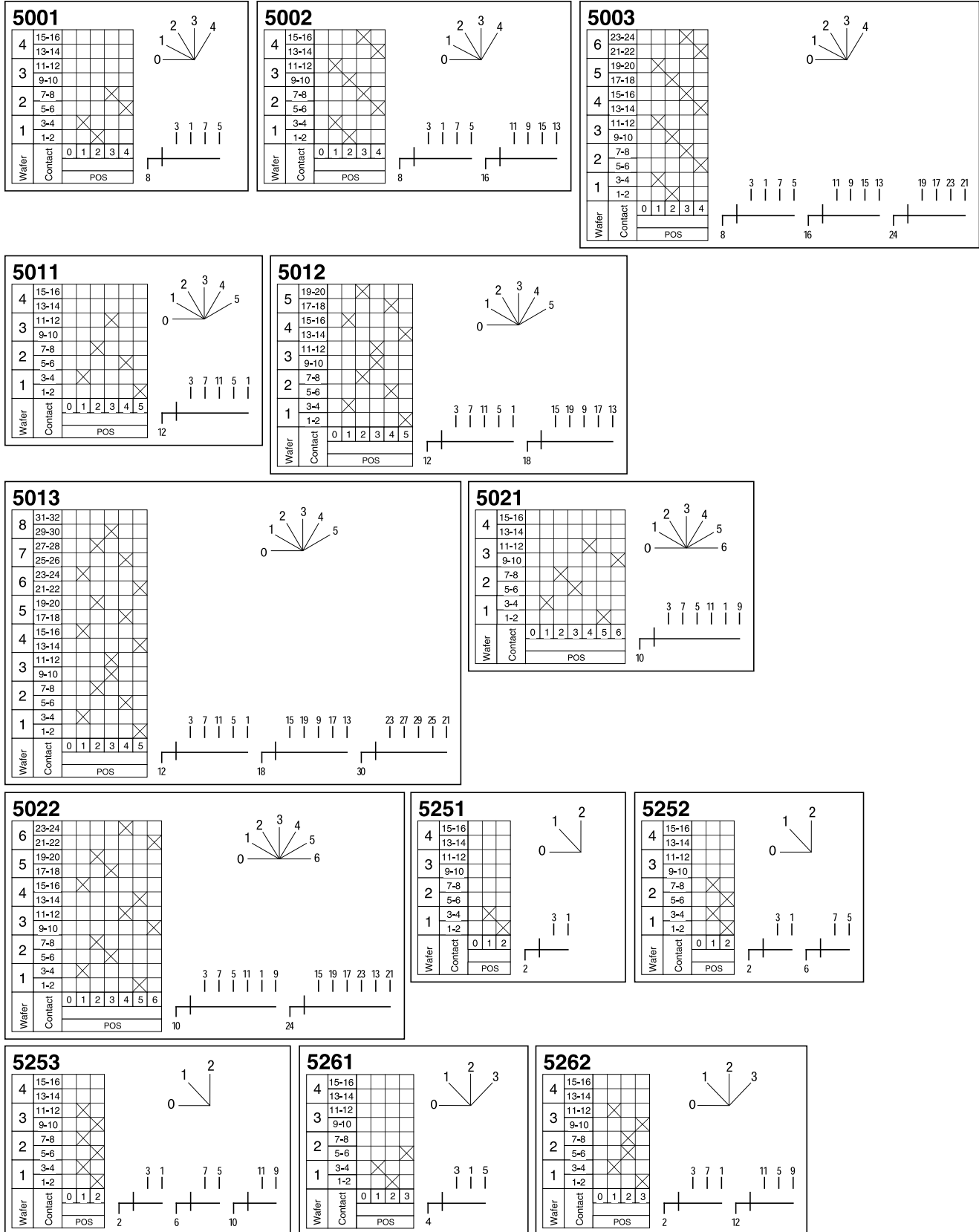
K
Rotary Cam
Switches

L2

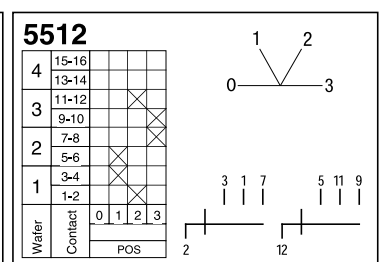
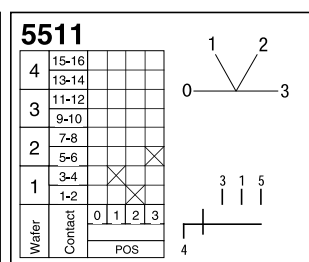
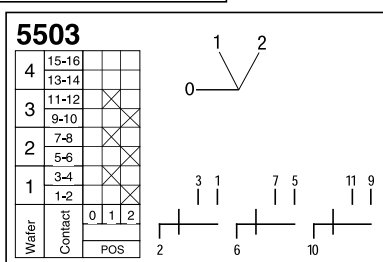
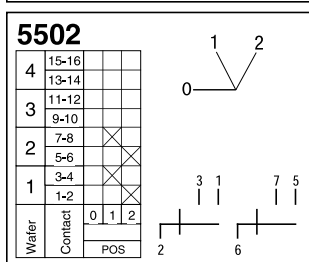
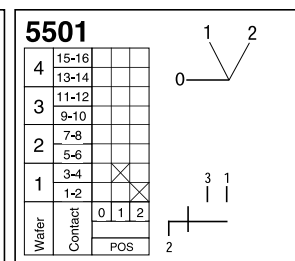
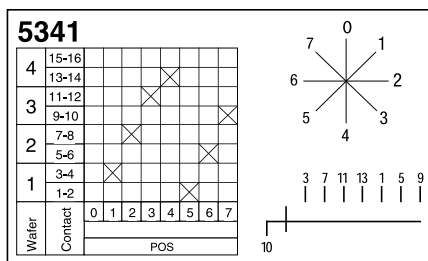
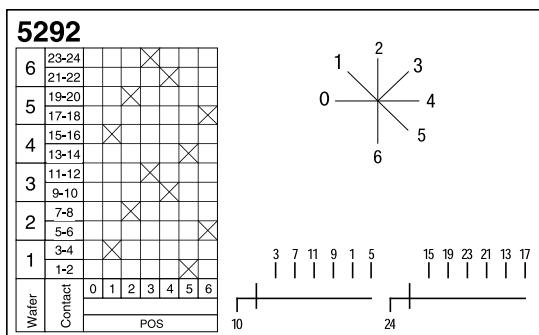
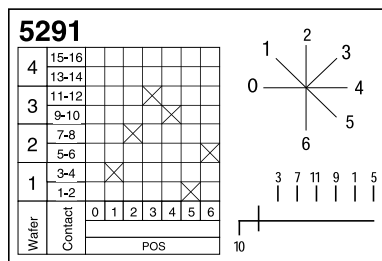
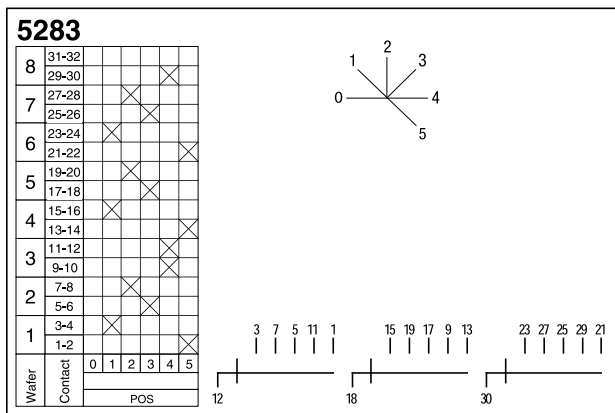
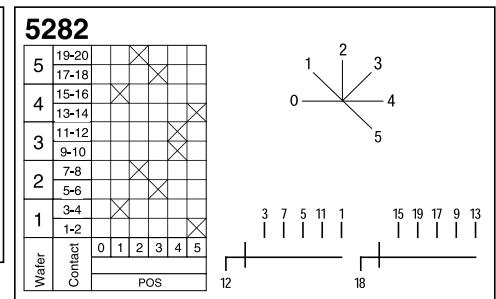
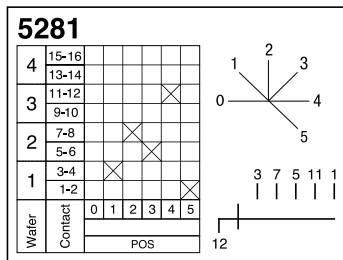
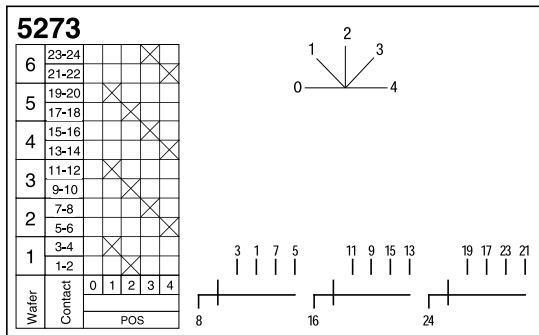
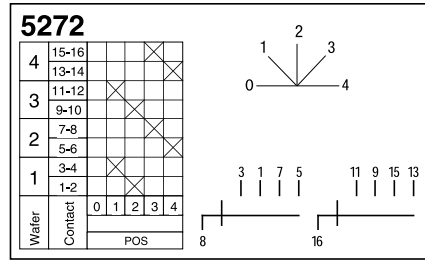
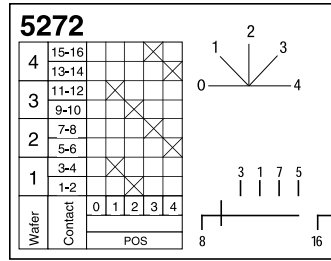
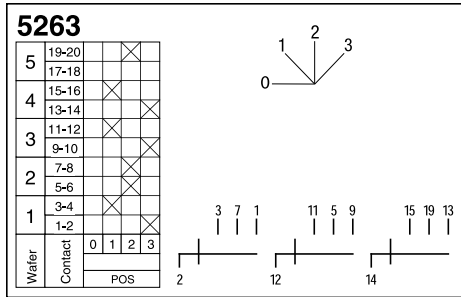
Circuit Diagrams



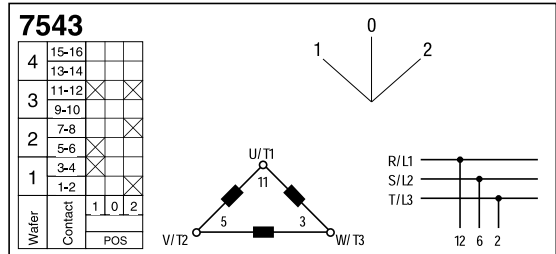
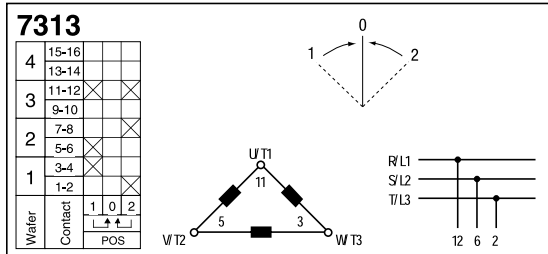
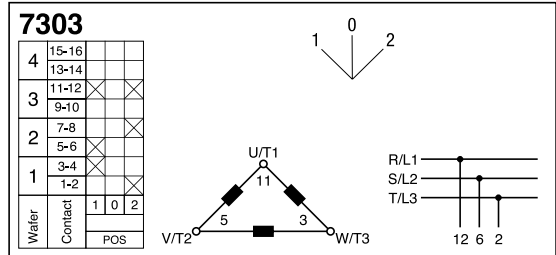
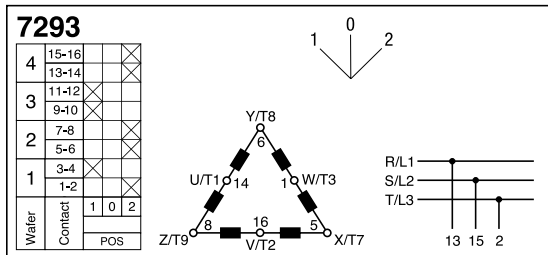
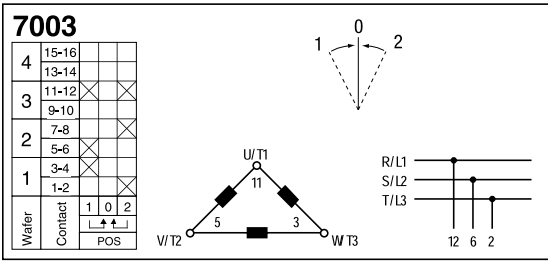
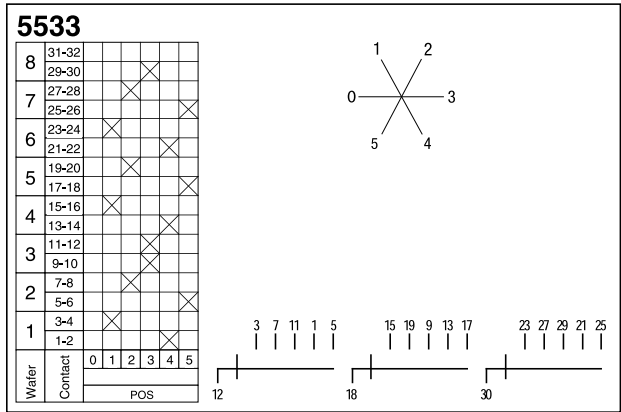
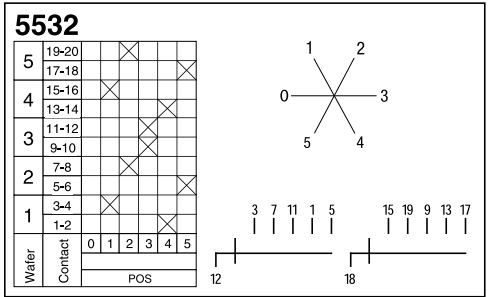
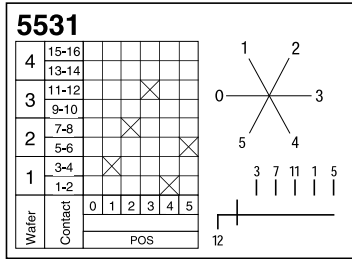
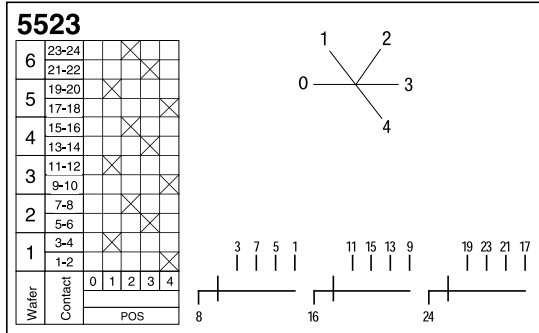
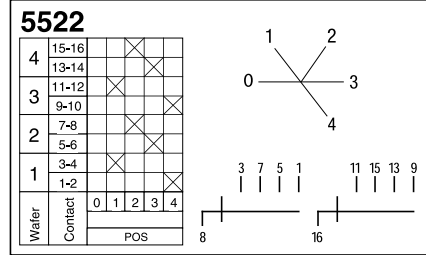
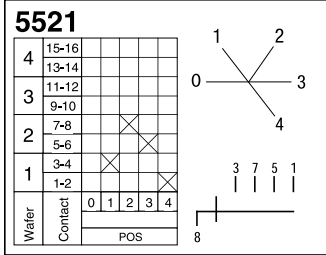
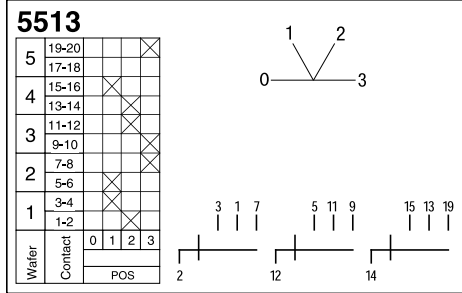
Circuit Diagrams



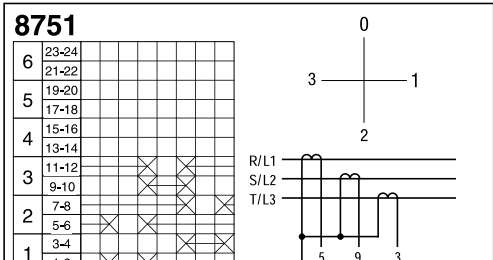
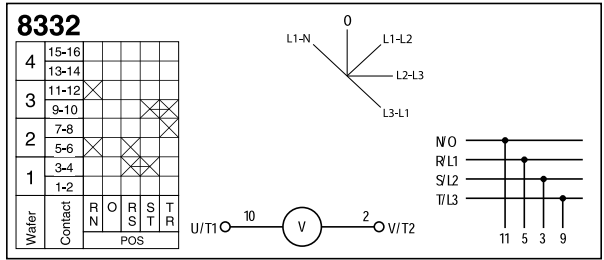
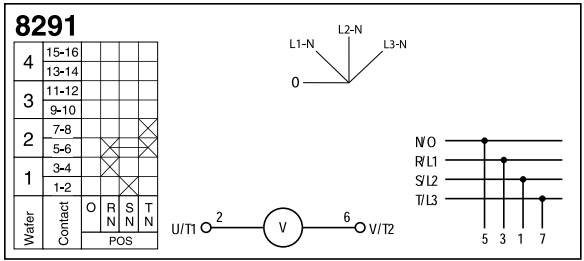
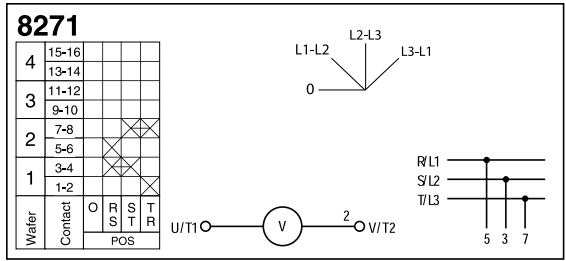
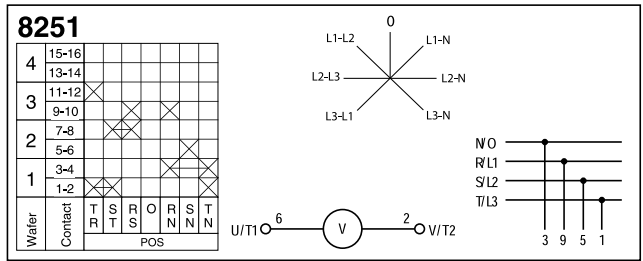
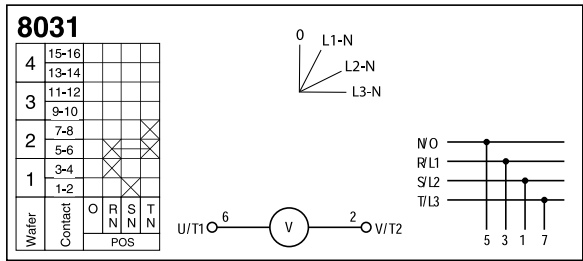
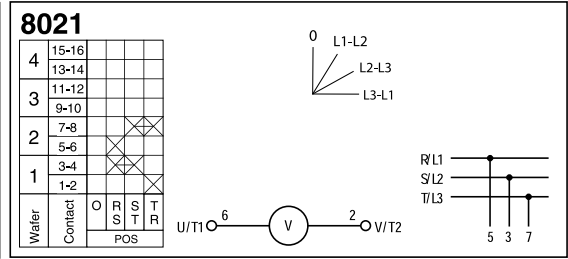
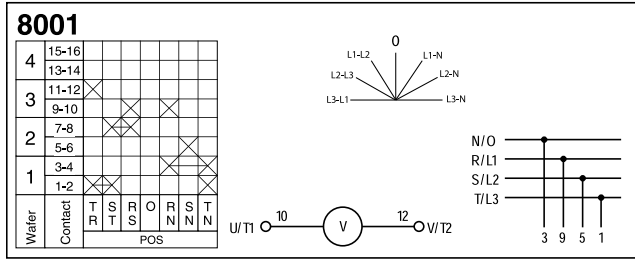
Circuit Diagrams



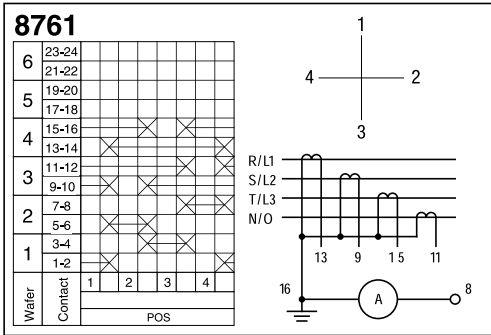
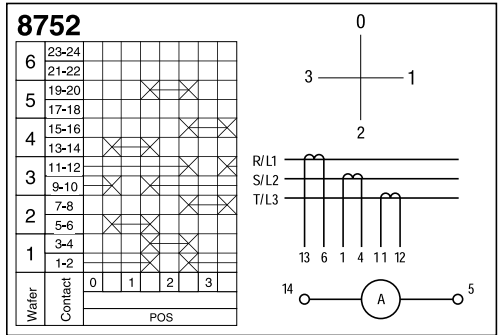
Circuit Diagrams



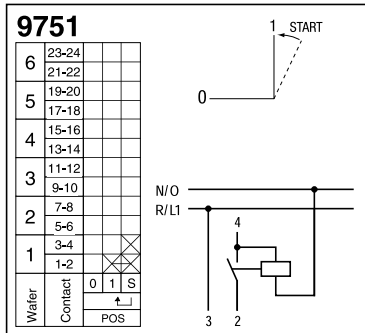
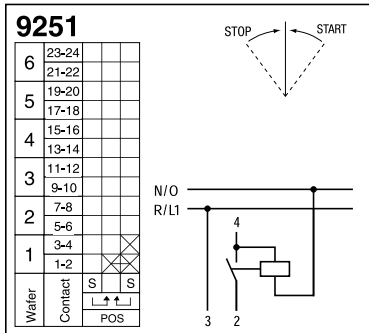
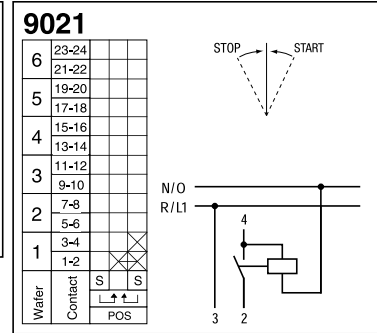
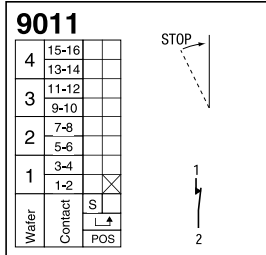
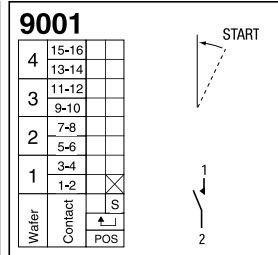
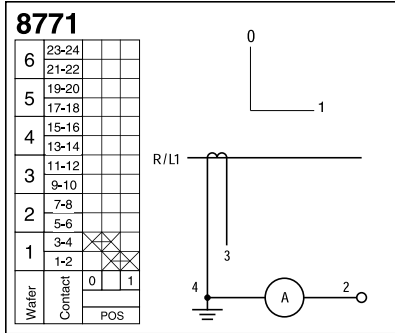
Circuit Diagrams



L2



Circuit Diagrams



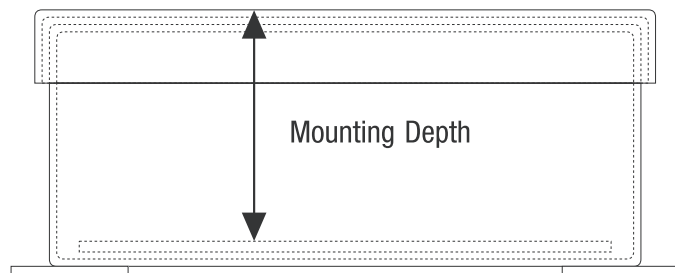
Modular shaft extension system

Shaft Extension Modules are ideal for lengthening the shaft of an LA2 switch up to 144mm (≈5.5”). These rugged polycarbonate modules are 24mm (≈15/16”) long and snap on “piggyback” to one another without the use of tools. Strong center shafts interlock as each module is snapped together. The standard 44mm End Shaft supplied with every LA2 switch connects the last Extension Module with the Switch Handle Assembly. End Shafts of 52 and 57mm are also available, making this modular system versatile, fast and economical. Shaft Extension Modules are supplied two per package.



Determining modular shaft extension components

- Determine Mounting Depth. This is the distance from the inside mounting surface of the enclosure to the **outside surface** of the enclosure cover. See diagram below for details ❶.



- If necessary convert Mounting Depth inches to millimeters (inches x 25.4 = millimeters).
- In the Modular Shaft Extension Table to the right, find the Mounting Depth in the column under the appropriate LA2 Switch Body.

NOTE: Table is based on an LA2 switch body with two wafers (3 or 4 pole). For a switch body with more or less wafers, add or subtract the following from overall Mounting Depth before referring to table:

LA2-12/16 Switch Body- ±10mm per wafer
 LA2-20/25 Switch Body- ±12.5mm per wafer

- Order the End Shaft and number of Extension Modules required for that Mounting Depth.

Modular Shaft Extension Components

Component	Catalog Number	Price
44mm End Shaft (supplied with Switch Body Assembly)	LA2-G2830	3.25
52mm End Shaft	LA2-G3194	4.00
57mm End Shaft	LA2-G3195	4.00
Extension Module (two per pkg - priced per pkg)	LA2-G2853	9.00

Modular Shaft Extension Table

Number of Extension Modules	Required End Shaft	Mounting Depth (mm) ❶	
		Switch body LA2-12/16	Switch Body LA2-20/25
0	44mm ❷	71.5 - 77.5	75 - 80.5
0	52mm	77 - 87	80 - 90
0	57mm	82 - 92	85 - 95
1	44mm ❷	99.5 - 101.5	99 - 105
1	52mm	97.5 - 111	101 - 114.5
1	57mm	102.5 - 116	106 - 119.5
2	44mm ❷	119.5 - 125.5	123 - 129
2	52mm	121.5 - 135	125 - 138.5
2	57mm	126.5 - 140	130 - 143.5
3	44mm ❷	143.5 - 149.5	147 - 153
3	52mm	145.5 - 159	149 - 162.5
3	57mm	150.5 - 164	154 - 167.5
4	44mm ❷	167.5 - 173.5	171 - 177
4	52mm	169.5 - 183	173 - 186.5
4	57mm	169.5 - 183	178 - 191.5
5	44mm ❷	191.5 - 197.5	195 - 201
5	52mm	193.5 - 207	197 - 210.5
5	57mm	198.5 - 212	202 - 215.5
6	44mm ❷	215.5 - 221.5	219 - 225
6	52mm	217.5 - 231	221 - 234.5
6	57mm	222.5 - 236	226 - 239.5

❶ For DIN rail mounted devices, remember to deduct the offset distance provided by the rail. For example, deduct 2.5mm from the Mounting Depth for switch bodies mounted on DIN 46277 rail.

❷ One 44mm End Shaft is supplied with all Switch Body Assemblies.

Metal shaft extension system

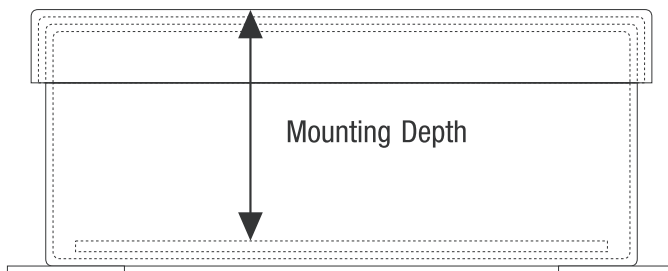
Adjustable metal shaft extensions snap on securely to LA2 switches via the same quick-connect design as shaft extension modules. Metal shafts are equipped with a door interlock and a padlock hasp for locking out the switch after the enclosure is opened (for outside lockout, select a Switch Handle Assembly with lockout capability).



Two standard lengths of these unique adjustable shafts are available. Metal shaft extensions mate with any of the standard Switch Handle Assemblies. All necessary hardware is supplied with the shaft.

Determining metal shaft extension

- Determine Mounting Depth. This is the distance from the inside mounting surface of the enclosure to the **outside surface** of the enclosure cover. See diagram below for details ❶.







- If necessary convert Mounting Depth inches to millimeters (inches x 25.4 = millimeters).
- In the Metal Shaft Extension Table to the right, find the Mounting Depth in the column under the appropriate LA2 Switch Body.

NOTE: Table is based on an LA2 switch body with two wafers (3 or 4 pole). For a switch body with more or less wafers, add or subtract the following from overall Mounting Depth before referring to table:

LA2-12/16 Switch Body- ±10mm per wafer
 LA2-20/25 Switch Body- ±12.5mm per wafer

- Order the Metal Shaft Extension required for that Mounting Depth.

Metal Shaft Extension Components

Component	Catalog Number	Price
 Length: 110 ... 235mm	LA2-G3393	38
 Length: 230 ... 350mm	LA2-G3394	47
 Insert - For modifying metal shaft to switch position	LA2-G3398	4
 Insert - For modifying metal shaft to switch any position (not lockable)	LA2-G3399	4











Metal Shaft Extension Table

Metal Shaft Extension	Mounting Depth (mm) ❶	
	Switch body LA2-12/16	Switch Body LA2-20/25
LA2-G3393	178 ❷ - 309	181.5 ❷ - 312.5
LA2-G3394	298 - 424	301.5 - 427.5

❶ For DIN rail mounted devices, remember to deduct the offset distance provided by the rail. For example, deduct 2.5mm from the Mounting Depth for switch bodies mounted on DIN 46277 rail.

❷ This dimension can be reduced by another 55mm by cutting the plastic sleeve and further cutting the metal shaft.

L2 Switch Accessories

Accessory	Description	Catalog No.	Price	Accessory	Description	Catalog No.	Price
	Shaft for LE switch (One supplied with each LE switch)	L2-G3380	5.00		Switch handle assembly for 45mm standard cutout		
	Terminal cover 3 or 4 pole LE2-12/16 LE2-20/25 LA2-12/16 LA2-20/25	LE2-12-CU LE2-20-CU LA2-12-CU LA2-20-CU	6.00 6.00 6.00 7.00		0-1 OFF-ON Blank	LFS2-P-4-175 LFS2-P-4-175I LFS2-P-4-000	11.50 11.50 11.50
	Standard knob Black 37.5mm Black 48mm Red 37.5mm Red 48mm	L2-G3154N L2-G3155N L2-G3154R L2-G3155R	3.50 3.50 3.50 3.50		ABS Enclosure – For High Impact Applications (IP66, UL 94 Flame Resistance - HB) With pre-drilled holes for 64 x 64 operator or larger 95x150x86mm 95x150x111mm Without holes 95x150x86mm 95x150x111mm	LA2-G3572 LA2-G3573 LA2-G3574 LA2-G3575	50.50 50.50 44.00 48.50
	Padlockable knob Black Red	L2-G2864N L2-G2864R	7.15 7.15		Noryl Enclosure – For Corrosion Prone Applications (IP66, UL 94 Flame Resistance - V0) With pre-drilled holes for 64 x 64 operator or larger 95x150x86mm 95x150x111mm Without holes 95x150x86mm 95x150x111mm	LA2-G3576 LA2-G3577 LA2-G3578 LA2-G3579	69.00 83.00 67.75 76.25
	Type "P" knob Black Red	L2-G2888N L2-G2888R	5.00 5.00	Enclosure Selection Guide			
	Self contained knob - allows mounting LE2 switches without Switch Handle Assembly IP40 protection IP65 protection	L2-G2851N L2-G2854N	6.50 9.00	<i>Determine switch & number of poles; order enclosure and shaft required</i>			
	Legend Plate - Blank for engraving Silver For 48 x 48 (or 62) For 64 x 64 (or 78) Yellow For 48 x 48 (or 62) For 64 x 64 (or 78)	LL2-A-4-000 LL2-A-6-000 LL2-I-4-000 LL2-I-6-000	2.55 2.95 2.55 2.95	Base Mount Switch	Poles	Use Enclosure...	Shaft Required ①
				LA2-12 & 16	1 2	LA2-G357(2,4,6,8)	LA2-G3195 Standard
				LA2-20 & 25	1 2		LA2-G3194 Standard
				LA2-12 & 16	3 4	LA2-G357(3,5,7,9)	LA2-G3195 LA2-G3194 Standard
				LA2-20 & 25	3 4		LA2-G3194 Standard

① Order shafts from page K24.

Technical Information

				L2-12	L2-16	L2-20	L2-25	
Rated Operating Voltage		UL/CSA	(V)	600	600	600	600	
		IEC/VDE/BS	(V)	660	660	660	660	
		SEV maximum	(V)	660	660	660	660	
		CEE 24/NEMKO	(V)	500	500	500	500	
Rated Isolation Voltage		VDE Isolation conditions are fulfilled up to a rated impulse voltage U_{imp} of:		(V)	660	660	660	
Rated Thermal Current I_{th}		UL/CSA	(A)	12	16	20	25	
		IEC/VDE/BS	(A)	16	20	25	30	
		SEV 380V	(A)	—	—	—	—	
		660V	(A)	—	—	—	—	
Rated Thermal Current I_{the}		IEC/VDE/BS	(A)	12	16	20	25	
Rated Operating Current I_e								
AC-1/ AC21A	Switching resistive loads with slight overload	IEC947	690V	(A)	12	16	20	25
AC-21	Switching resistive loads with slight overload	IEC/VDE/BS		(A)	12	16	20	25
AC-1	Non-inductive or slightly inductive loads	SEV	380V	(A)	—	—	—	—
			500V	(A)	—	—	—	—
			690V	(A)	12	16	20	25
AC-22A	Switching mixed resistive and inductive loads at slight overload	IEC947						
			220-500V	(A)	12	16	20	25
			600V	(A)	12	16	20	25
AC-22	Switching mixed resistive and inductive loads at slight overload	IEC/VDE/BS						
			220-500V	(A)	—	—	—	—
			600V	(A)	12	16	20	25
AC-15	Switching magnetic drives, motors, valves and solenoids	IEC	220-240V	(A)	5	6	7	8
			380-415V	(A)	3	4	5	6
			500V	(A)	2	2.5	3	4
AC-11	Switching magnetic drives, motors, valves and solenoids	IEC/VDE						
			220-240V	(A)	5	6	7	8
			380-415V	(A)	3	4	5	6
			380-440V	(A)	—	—	—	—
	500V	(A)	2	2.5	3	4		
Pilot Duty		UL/CSA – Heavy VAC		A600	A600	—	—	
Rated current	Non-inductive or slightly inductive loads	UL/CSA ①	(A)	12	16	20	25	
	Resistive loads	CEE 24	(A)	12	16	20	25	
	Motor loads	CEE 24	(A)	8	10	10	10	
Short Circuit Current								
	Max. fuse rating of circuit	(gL characteristic)	(A)	20	20	20	25	
	Rated conditional		(kA)	6	6	5	5	
Rated Operating Powers		IEC/VDE/BS						
AC-2	Starting induction motors, reversing and plugging, wye-delta starting		240V	(kW)	3	4	5.5	5.5
			380V	(kW)	5.5	7.5	9	13
		3Ø	415V	(kW)	5.5	7.5	9	13
		3 pole	440V	(kW)	5.5	7.5	9	13
			500V	(kW)	7.5	10	11	15
			660V	(kW)	7.5	10	11	15
AC-3	Starting squirrel-cage motors, interruption while running	3Ø	220-240V	(kW)	2.2	3	4.5	5.5
		3 pole	380-440V	(kW)	4	5.5	7.5	11
			500V	(kW)	5.5	7.5	10	13
			660V	(kW)	5.5	7.5	8	11
		1Ø	110V	(kW)	0.75	1.1	1.2	1.6
			2 pole	220-240V	(kW)	1.3	2.2	2.5
	380-440V	(kW)		2.2	3.7	4.5	5.5	

① Suitable for switching off load (AC-20) above 660V, but only up to 660V for switches with screws at the rear (LE switches).



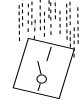

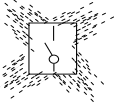
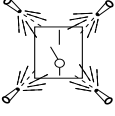
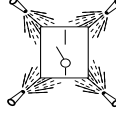

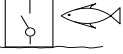

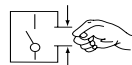
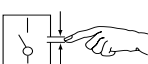
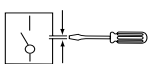
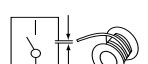


Technical Information

				L2-12	L2-16	L2-20	L2-25								
Rated Operating Loads (cont.)		IEC/VDE/BS													
AC-4	Starting squirrel-cage motors, reversing, braking, plugging	3Ø	220-240V (kW)	0.75	1.5	3	4								
		3 pole	380-440V (kW)	1.5	2.2	3.7	5.5								
			500V (kW)	1.5	2.2	3.7	5.5								
			660V (kW)	—	—	—	—								
AC-23	Periodic switching of motors or other highly inductive loads.	3Ø	220-240V (kW)	2.2	3	4.5	5.5								
		3 pole	380-440V (kW)	4	5.5	7.5	11								
			500V (kW)	5.5	7.5	10	13								
			660V (kW)	5.5	7.5	8	11								
			1Ø	110V (kW)	0.75	1.1	1.2	1.6							
		2 pole	220-240V (kW)	1.3	2.2	2.5	3.2								
			380-440V (kW)	2.2	3.7	4.5	5.5								
Rated Power		UL/CSA													
Normal motor load full voltage rating (similar to AC-3)	3Ø	120V (HP)	1	1.5	2 (13.6 FLA)	3 (19.2 FLA)									
		240V (HP)	2	3	4 (12.4 FLA)	6 (18.0 FLA)									
		480V (HP)	5	7.5	8 (11.6 FLA)	12 (17.0 FLA)									
		600V (HP)	5	7.5	10 (11.0 FLA)	15 (17.0 FLA)									
		1Ø	120V (HP)	0.5	0.75	1 (16 FLA)	1.5 (20.0 FLA)								
		2 pole	240V (HP)	1	1.5	2 (12 FLA)	3 (17.0 FLA)								
		277V (HP)	—	—	—	—									
DC Switch Ratings															
				Contacts in Series											
				1	2	3	4	5	6	8					
Rated Current I_e															
DC-21A	For resistive loads T ≤ 1ms $U_{e,max} = 660V$	Rated Voltage [V]	24	48	72	96	120	144	192	[A]	12	16	20	22	
			48	96	144	192	240	288	384	[A]	10	12	16	18	
			60	120	180	240	300	360	450	[A]	8	10	12	14	
			110	220	330	440	550	660	—	[A]	2	2.5	4	5	
			220	440	660	—	—	—	—	[A]	0.5	0.6	0.7	0.8	
			440	—	—	—	—	—	—	[A]	0.35	0.4	0.45	0.5	
Rated Making/Breaking Capacity (=1.5 x I_e)															
1.05 x rated voltage [V]				25.2	50.4	75.6	100.8	126	151.2	201.6	[A]	18	24	30	33
				50.4	100.8	151.2	201.6	252	302.4	403.2	[A]	15	21	24	27
For resistive loads T ≤ 1ms $U_{e,max} = 660V$				63	126	189	252	315	378	504	[A]	12	18	18	21
				115.5	231	346.5	462	577.5	—	—	[A]	3	4.5	6	7.5
				231	462	—	—	—	—	—	[A]	0.75	1.12	1.05	1.2
				462	—	—	—	—	—	—	[A]	0.52	0.78	0.47	0.75
Rated Current I_e															
For inductive loads T = 50ms $U_{e,max} = 660V$	Rated voltage [V]	24	48	72	96	120	144	192	[A]	8	10	12	14		
		30	60	90	120	150	180	240	[A]	4.5	5.5	7	8		
		48	96	144	192	240	288	384	[A]	1.5	2	2.5	3		
		60	120	180	240	300	360	450	[A]	1	1.2	1.5	1.8		
		110	220	330	440	550	660	—	[A]	0.4	0.5	0.6	0.7		
Rated Making/Breaking Capacity (=1.1 x I_e)															
1.1 x rated voltage [V]				26.4	52.8	79.2	105.6	132	158.4	184.8	[A]	8.8	11	13.2	1.54
				33	66	99	132	165	198	231	[A]	4.95	6.05	7.7	8.8
For inductive loads T = 50ms $U_{e,max} = 660V$				52.8	105.6	158.4	211.2	264	316.8	369.6	[A]	1.65	2.2	2.75	3.3
				66	132	198	264	330	396	462	[A]	1.1	1.32	1.65	1.98
				121	242	363	484	605	—	—	[A]	0.44	0.55	0.66	0.77
Rated Power P_e															
DC-23A, DC-3, DC-5 For inductive loads T ≤ 7.5ms	Rated voltage [V]	Contacts in Series													
		1						[kW]	0.12	0.15	0.20	0.25			
		2						[kW]	0.20	0.25	0.30	0.37			
		2						[kW]	0.25	0.30	0.37	0.50			
		3						[kW]	0.30	0.37	0.50	0.75			
		2						[kW]	0.25	0.30	0.37	0.50			
		4						[kW]	0.37	0.50	0.75	1.00			
		4						[kW]	0.50	0.75	1.00	1.20			
		6						[kW]	1.00	1.20	1.40	1.60			
		4						[kW]	0.37	0.50	0.75	1.00			
		6						[kW]	1.00	1.20	1.40	1.50			

Technical Information

				L2-12	L2-16	L2-20	L2-25	
Rated Making/Breaking Capacity (=4 x I _n)								
	1.05 x rated voltage [V]	Contacts in Series						
	25.2	1	[kW]	20.0	25.0	33.3	41.6	
	25.2	2	[kW]	33.3	41.6	50.0	61.6	
DC-23A, DC-3, DC-5	50.4	2	[kW]	21.0	25.0	30.8	41.6	
For inductive loads T ≤ 15ms	50.4	3	[kW]	25.0	30.8	42.0	62.4	
	63	2	[kW]	16.6	20.0	24.6	33.2	
	63	4	[kW]	24.6	33.3	50.0	66.4	
	115.5	4	[kW]	18.1	27.2	36.4	44.0	
	115.5	6	[kW]	36.4	43.6	51.0	58.2	
	231	4	[kW]	6.7	9.1	13.6	18.2	
	231	6	[kW]	18.1	21.8	25.2	27.2	
Maximum Wire Gauges								
	Single or multi-core wire		mm ²	2 x 2.5	2 x 2.5	6	6	
			AWG	12	12	10	10	
	Stranded fine wire with ferrule		mm ²	2 x 2.5	2 x 2.5	2 x 4	2 x 4	
			AWG	14	14	12	12	
Minimum Wire Gauges								
	Single or multi-core wire		mm ²	2 x 1.0	2 x 1.0	2 x 1.5	2 x 1.5	
			AWG	2 x 18	2 x 18	2 x 16	2 x 16	
	Stranded fine wire with ferrule		mm ²	2 x 0.75	2 x 0.75	2 x 1.5	2 x 1.5	
			AWG	2 x 20	2 x 20	2 x 16	2 x 16	
Max. Torque Ratings				[lb-in]	9	9	10.6	10.6
				[Nm]	1	1	1.2	1.2
Protection Class								
	Switch Handle Assembly							
	LFS2-G(N)-6...	UL		3 / 3R / 12	3 / 3R / 12	3 / 3R / 12	3 / 3R / 12	
	All others	IEC 529		IP66	IP66	IP66	IP66	
	Switch Body	IEC 529		IP20	IP20	IP20	IP20	
Mechanical Life				Millions of operations	10	10	10	10
Rated Breaking Capacity				220V (A)	72	96	128	176
	Power factor			0.65	0.65	0.65	0.35	
	380V (A)			72	96	128	176	
	Power factor			0.65	0.65	0.65	0.35	
	660V (A)			53	72	86	112	
	Power factor			0.65	0.65	0.65	0.65	
Ambient Temperature								
	Operation	Min...Max	(C°)	-20...+60	-20...+60	-20...+60	-20...+60	
	Storage only	Min...Max	(C°)	-40...+80	-40...+80	-40...+80	-40...+80	
Maximum Altitude (without derating)				(m)	≤2000	≤2000	≤2000	≤2000
				(ft.)	≤6561	≤6561	≤6561	≤6561
Maximum Mechanical Operations (without derating)				(cycle/hr.)	1200	1200	1200	1200
Maximum Electrical Operation (without derating)				(cycle/hr.)	120	120	120	120

IP Ratings Definitions

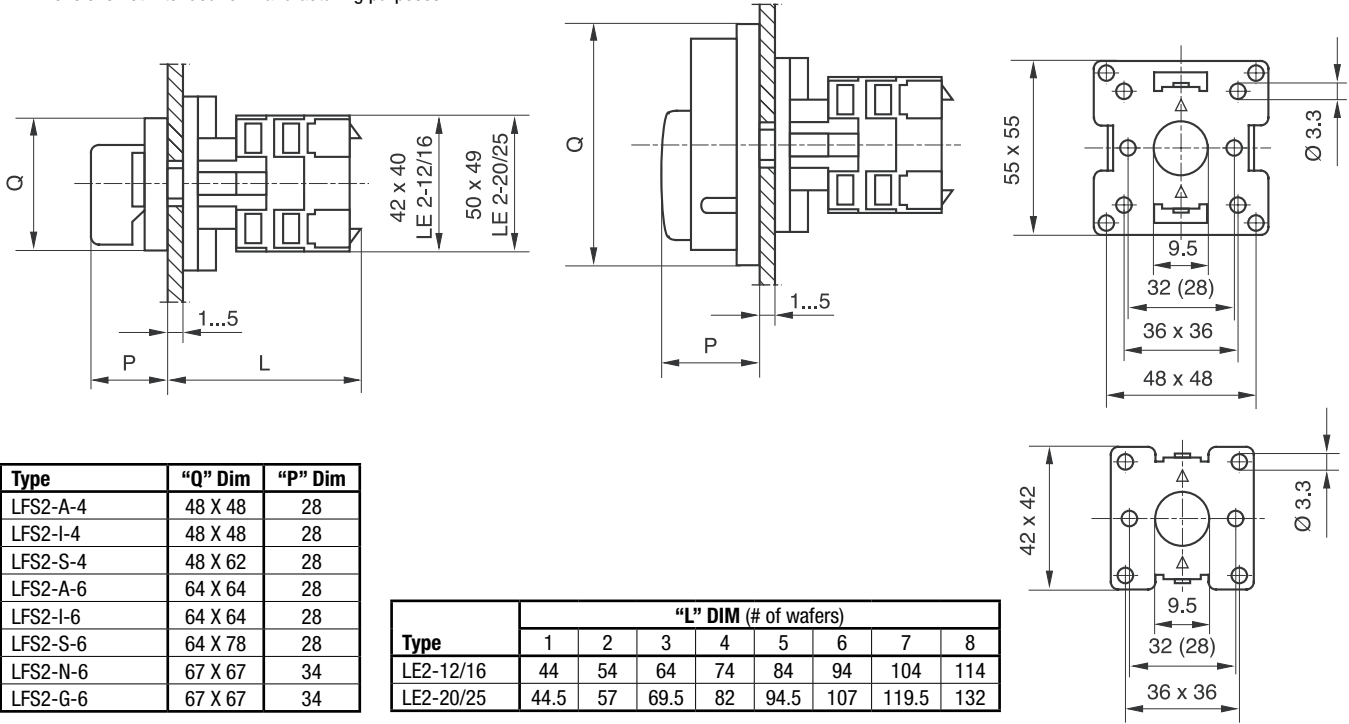
<p>IP Ratings Definitions</p> <p>The first IP number (left side of chart) is protection against solid objects. The second IP number (across top) is protection against liquids. The chart itself shows degrees of protection according to IEC 529.</p>	 No protection IP...0	 Protected against vertically falling drops of water (condensation) IP...1	 Protected against dripping water with enclosure up to 15° from vertical IP...2	 Protected against sprayed water up to 60° from vertical IP...3	 Protected against sprayed water from all directions (limited ingress permitted) IP...4	 Protected against low pressure water jets from all directions (limited ingress permitted) IP...5	 Protected against strong jets of water from all directions IP...6	 Protected against immersion up to one meter IP...7	 Protected against long periods of immersion under pressure IP...8
<p>IP0...</p>  No protection IP00									
<p>IP1...</p>  Protected against solid objects up to 50mm (accidental touch by hands) IP10	IP11	IP12							
<p>IP2...</p>  Protected against solid objects up to 12mm (fingers, knuckles) IP20	IP21	IP22	IP23						
<p>IP3...</p>  Protected against solid objects up to 2.5mm (tools, wires) IP30	IP31	IP32	IP33	IP34					
<p>IP4...</p>  Protected against solid objects up to 1mm (wires) IP40	IP41	IP42	IP43	IP44					
<p>IP5...</p>  Protected against dust (limited ingress permitted) IP50			IP53	IP54	IP55	IP56			
<p>IP6...</p>  Totally protected against dust IP60					IP65	IP66	IP67		

NEMA / UL Type Definitions

For a degree of protection against:	NEMA / UL Type								
	Indoor Use			Outdoor Use		Indoor or Outdoor Use			
	1	12	13	3R	3	4	4X	6P	6
Incidental contact with enclosed equipment	•	•	•	•	•	•	•	•	•
Falling dirt	•	•	•	•	•	•	•	•	•
Rust	•	•	•	•	•	•	•	•	•
Circulating dust, lint, fibers and flyings		•	•		•	•	•	•	•
Windblown dust					•	•	•	•	•
Falling liquids and light splashing		•	•		•	•	•	•	•
Rain (limited water allowed inside)				•	•	•	•	•	•
Rain (no water allowed inside)					•	•	•	•	•
Snow and sleet				•	•	•	•	•	•
Hosedown and splashing water						•	•	•	•
Occasional prolonged submersion								•	•
Oil or coolant spraying or splashing			•						
Corrosive agents							•	•	
Occasional temporary submersion								•	•

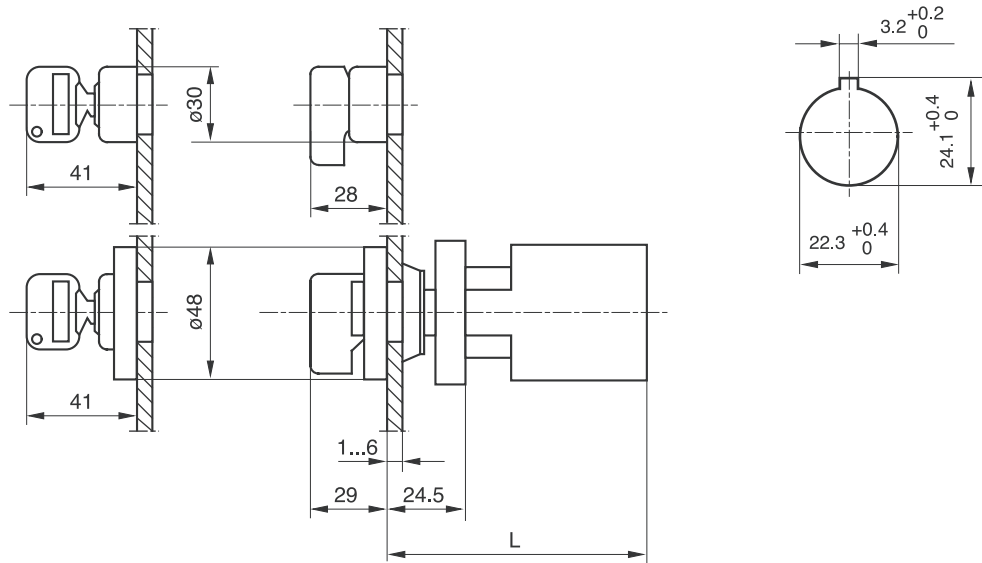
LE2 Panel Mount - Screw Fixing

- Dimensions are in millimeters
- Dimensions not intended for manufacturing purposes



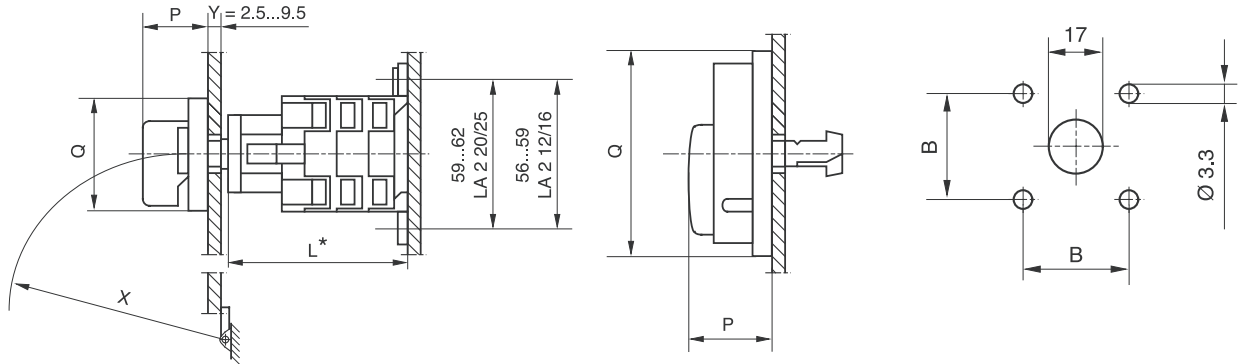
LE2 Panel Mount - Central Nut Fixing

- Dimensions are in millimeters
- Dimensions not intended for manufacturing purposes



LA2 Base Mount

- Dimensions are in millimeters
- Dimensions not intended for manufacturing purposes



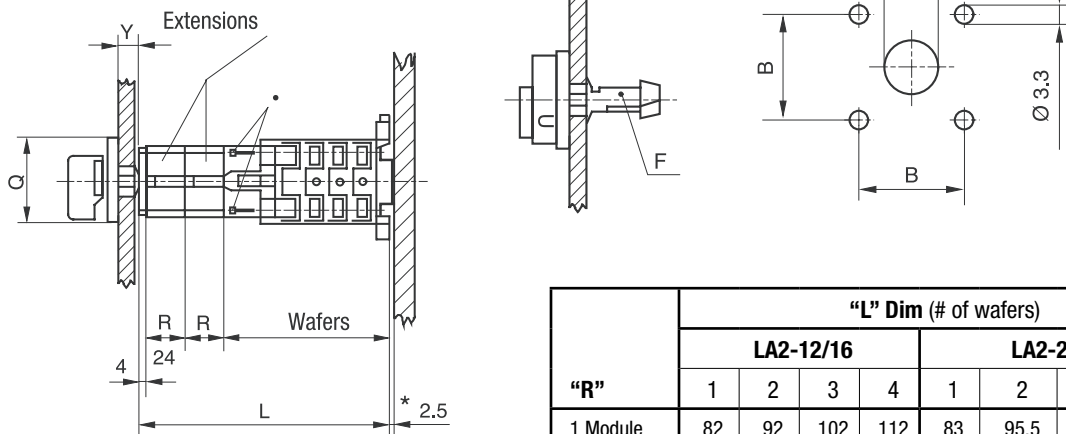
Type	"Q" Dim	"P" Dim	"B" Dim
LFS2-A-4	48 X 48	28	36
LFS2-I-4	48 X 48	28	36
LFS2-S-4	48 X 62	28	36
LFS2-A-6	64 X 64	28	48
LFS2-I-6	64 X 64	28	48
LFS2-S-6	64 X 78	28	48
LFS2-N-6	67 X 67	34	48
LFS2-G-6	67 X 67	34	48

Type	"L" DIM (# of wafers)			
	1	2	3	4
LA2-12/16	58	68	78	88
LA2-20/25	59	71.5	84	96.5

* Add 2.5mm for DIN rail 46277.

LA2 Base Mount with Modular Shaft Extensions

- Dimensions are in millimeters
- Dimensions not intended for manufacturing purposes



Type	"Q" Dim	"B" Dim
LFS2-A-4	48 X 48	36
LFS2-I-4	48 X 48	36
LFS2-S-4	48 X 62	36
LFS2-A-6	64 X 64	48
LFS2-I-6	64 X 64	48
LFS2-S-6	64 X 78	48
LFS2-N-6	67 X 67	48
LFS2-G-6	67 X 67	48

Shaft "F"	"Y" Dim
LA2-G2830	2.5-9.5
LA2-G3194	9 - 18
LA2-G3195	14 - 23

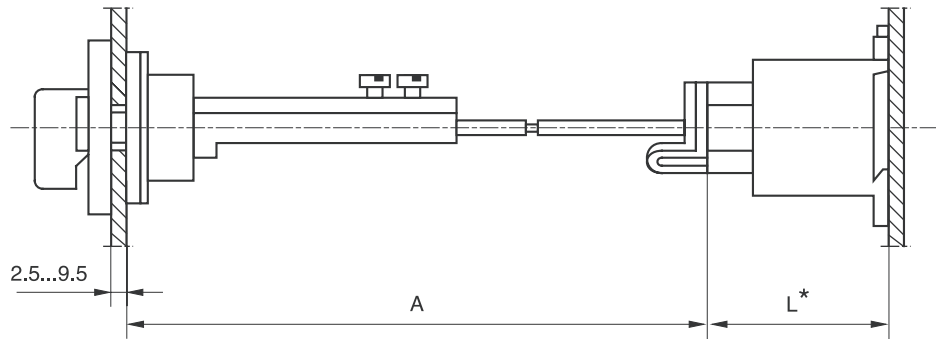
"R"	"L" Dim (# of wafers)							
	LA2-12/16				LA2-20/25			
	1	2	3	4	1	2	3	4
1 Module	82	92	102	112	83	95.5	108	120.5
2 Modules	106	116	126	136	107	119.5	132	144.5
3 Modules	130	140	150	160	131	143.5	156	168.5
4 Modules	154	164	174	184	155	167.5	180	192.5
5 Modules	178	188	198	208	179	191.5	204	216.5
6 Modules	202	212	222	232	203	215.5	228	240.5

* Add 2.5mm for DIN rail 46277.

- With more than 4 modules attach the first one to the switch with the screws supplied with the LA2-G2853.

LA2 Base Mount with Metal Shaft Extension

- Dimensions are in millimeters
- Dimensions not intended for manufacturing purposes



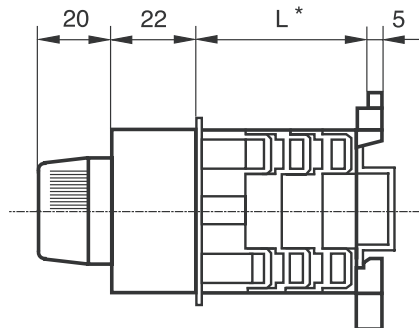
Type	"L" DIM (# of wafers)			
	1	2	3	4
LA2-12/16	54	64	74	84
LA2-20/25	55	67.5	80	92.5

Type	"A" Dim
LA2-G3393	110 - 235
LA2-G3394	230 - 350

* Add 2.5mm for DIN rail 46277.

LA2 Base Mount with LFS2-P-4

- Dimensions are in millimeters
- Dimensions not intended for manufacturing purposes



Type	"L" DIM (# of wafers)			
	1	2	3	4
LA2-12/16	35	45	55	65
LA2-20/25	35.5	48	60.5	73

* Add 2.5mm for DIN rail 46277.

R-Line Series Rotary Cam Switches

Rugged and dependable switches for large ampere applications

Sprecher + Schuh's rugged R-Line rotary cam switches are available for most control and load applications up to 630 amps. Larger switches can often be configured as well, depending on the application. As with our smaller L2 Series switches, a well thought out ordering system provides many standard and nonstandard configurations, that are often available "off the shelf."



- **Wye-Delta switches** - To manually control reduced voltage starting of a motor.

A comprehensive line...

Three frame sizes provide switching up to 630 amps. All frame sizes are available in panel mount and base mount for total flexibility. Many popular switching configurations are offered from stock and many times custom switches can be made to order.

Rugged quality

The R-Line's sturdy design incorporates a positive switching action with a clearly defined switch position. The two largest frame sizes are designed with a solid steel shaft that provides instantaneous operation of double-break silver alloy contacts, while powerful springs assure complete contact closure. The contact assemblies themselves are brass plated and have generous copper content to help dissipate heat.



...For many applications

R-Line control and load switches comply with the most important international standards for use as:

- **Changeover Switches** - for switching between alternate electrical supplies.
- **ON/OFF switches** - to connect and disconnect any electrical supply.
- **Multi-position load switches** - for the step control of loads such as heaters and furnaces.
- **Motor load disconnect switches** - for safely isolating circuits during repair and maintenance.
- **Reversing switches** - to change the direction or rotation of a motor.

Solid connections

"Strip-free" saddleclamp terminals guarantee reliable connections on R-40 through R-125 switches. In the larger frame sizes (R-250 through R-630), bolt-on lugs are standard. "Ring-tongue" connectors can be installed with ample torque to assure the tightest connection.


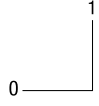

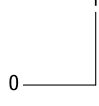



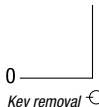

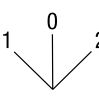

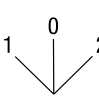

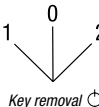
Choose from various switch handle assemblies

Switch handle assemblies for our Changeover and ON-OFF switches are available with either traditional screw fixing or the new central nut fixing system (on RA-40). All switch handles offer IP66 protection. A UL 4X handle is also available.

K
Rotary Cam
Switches
R-Line



R-Line Rotary Switches (Panel Mount) ①


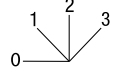

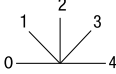

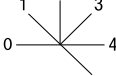

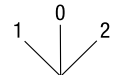

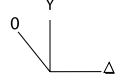

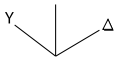

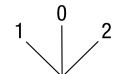
Switch Description ②				Circuit Diagram Number (▲)	Handle Code (♣)	Catalog Number & Price ①						
Switch Handle ②	Function	Switch Angle	Poles/Switch Wafers			Panel Mount						
						40 Amp	50 Amp	80 Amp	125 Amp	250 Amp	400 Amp	630 Amp
						RE-40-▲-♣	RE-50-▲-♣	RE-80-▲-♣	RE-125-▲-♣	RE-250-▲-♣	RE-400-▲-♣	RE-630-▲-♣
ON - OFF												
 Screw Fixing		90°	1 / 1	1751	A	101						
		90°	2 / 1	1752	A	118	257	268	762			
		90°	3 / 2	1753	A	135	276	314	794	1089	1686	2602
		90°	4 / 2	1754	A	149	320	371	893	1285	2068	3167
		90°	6 / 3	1756	A	192	382	460	1110	1589		
 Screw Fixing		90°	3 / 2	1753	N	160	295	333	829	1114	1716	2629
		90°	4 / 2	1754	N	187	339	285	914	1315	2087	3188
		90°	6 / 3	1756	N	232	398	475	1137	1608		
 Central Nut Fixing		90°	2 / 1	1752	B	149						
		90°	3 / 2	1753	B	166						
		90°	4 / 2	1754	B	181						
		90°	6 / 3	1756	B	223						
 Central Nut Fixing		90°	2 / 1	1752	DD	194						
		90°	3 / 2	1753	DD	211						
		90°	4 / 2	1754	DD	225						
		90°	6 / 3	1756	DD	268						
Changeover												
 Screw Fixing		45°	1 / 1	3251	A	118	302	336				
		45°	2 / 2	3252	A	156	312	376	1109			
		45°	3 / 3	3253	A	193	403	489	1138			
		45°	4 / 4	3254	A	250	483	596	1394			
		60°	3 / 3	3503	A					1621	2816	4408
		60°	4 / 4	3504	A					2187	3954	6997
 Screw Fixing		45°	3 / 3	3253	B	225						
		45°	3 / 4	3254	B	281						
 Central Nut Fixing		45°	3 / 3	3253	DC	269						
		45°	3 / 4	3254	DC	326						

Ordering Instructions ①

- Specify Switch Body catalog number from top of column.
- Replace (▲) with Circuit Diagram Number (refer to pages K37 for diagrams).
- Replace (♣) with Handle Code letter.
- Example: **RE-40-1751-A**
(Complete catalog number)

① Rated current can be lower depending on application. Check R-Line Technical Section before selecting switch size.
② See page K12 for description of switch handles.

R-Line Rotary Switches (Panel Mount) ①

Switch Body Description ②				Circuit Diagram Number (▲)	Handle Code (▲)	Catalog Number & Price ①						
Switch Handle ②	Function	Switch Angle	Poles/Switch Wafers			Panel Mount						
						40 Amp	50 Amp	80 Amp	125 Amp	250 Amp	400 Amp	630 Amp
						RE-40-▲-▲	RE-50-▲-▲	RE-80-▲-▲	RE-125-▲-▲	RE-250-▲-▲	RE-400-▲-▲	RE-630-▲-▲
Step												
 <i>Screw Fixing</i>		45°	1 / 2	5261	A	175						
 <i>Screw Fixing</i>		45°	1 / 2	5271	A	187						
 <i>Screw Fixing</i>		45°	1 / 2	5281	A	200						
Reversing												
 <i>Screw Fixing</i>		45°	3 / 3	7303	A	187	382	468	1070			
Wye-Delta												
 <i>Screw Fixing</i>		45°/90° 90°	3 / 4 3 / 4	7323 7503	A A	238	491	618	1428			
 <i>Screw Fixing</i>		60°	3 / 4	7553	A	238	491	618				
Single Winding (Two Speed)												
 <i>Screw Fixing</i>		45°	3 / 4	7293	A	238	491	618	1309			


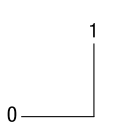

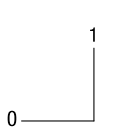
K
Rotary Cam
Switches
R-Line

SSCDN8500E

See **Ordering Instructions** on opposite page.

- ① Rated current can be lower depending on application. Check R-Line Technical Section before selecting switch size.
- ② See page K12 for description of switch handles.

R-Line Rotary Switches (Base Mount) ❶

Switch Description ❷				Circuit Diagram Number (▲)	Handle Code (▲)	Catalog Number & Price ❶						
Switch Handle ❷	Function	Switch Angle	Poles/Switch Wafers			Base Mount						
						40 Amp	50 Amp	80 Amp	125 Amp	250 Amp	400 Amp	630 Amp
						RA-40-▲-▲	RA-50-▲-▲	RA-80-▲-▲	RA-125-▲-▲	RA-250-▲-▲	RA-400-▲-▲	RA-630-▲-▲
ON - OFF												
 <i>Screw Fixing</i>		90°	3 / 2	1753	A	179	331	371	877	1230	1840	2857
		90°	4 / 2	1754	A	194	365	419	987	1407	2205	3357
		90°	6 / 3	1756	A	236	422	506	1205	1747		
 <i>Screw Fixing</i>		90°	3 / 2	1753	N	187	344	382	926	1257	1857	2889
		90°	4 / 2	1754	N	200	394	445	1034	1428	2227	3372
		90°	6 / 3	1756	N	240	457	523	1255	1768		

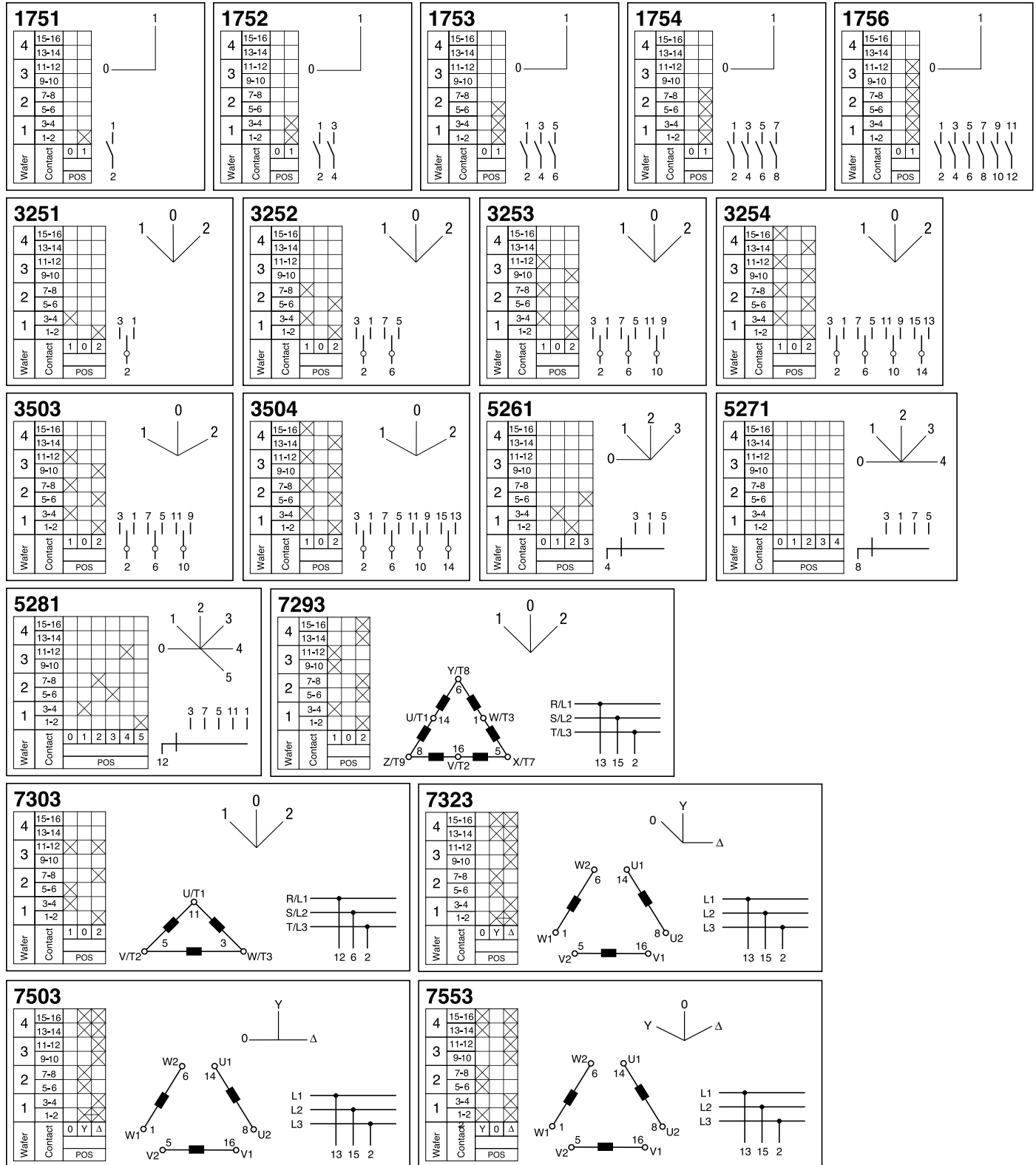
A UL Type 4X switch handle is available for RA-40 switches. First select switch from this page, then turn to Accessories Section (page K42) and order Type R switch handle separately.

Ordering Instructions ❶

- Specify Switch Body catalog number from top of column.
- Replace (▲) with Circuit Diagram Number (refer to pages K37 for diagrams).
- Replace (▲) with Handle Code letter.
- Example: **RA-40-1753-A**
(Complete catalog number)

- ❶ Rated current can be lower depending on application. Check R-Line Technical Section before selecting switch size.
- ❷ See page K12 for description of switch handles.

Circuit Diagrams



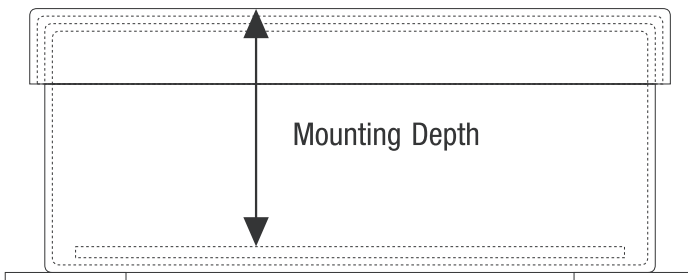
Modular Shaft Extension system ①②

Shaft Extension Modules are ideal for lengthening the shaft of an RA-40 switch up to 144mm (≈5.5”). These rugged polycarbonate modules are 24mm (≈15/16”) long and snap on “piggyback” to one another without the use of tools. Strong center shafts interlock as each module is snapped together. The standard 44mm end shaft supplied with every RA-40 switch connects the last Extension Module to the Switch Handle Assembly. End shafts of 52 and 57mm are also available, making this modular system versatile, fast and economical. Shaft Extension Modules are supplied two per package.



Determining modular shaft extension components

- Determine mounting depth. This is the distance from the inside mounting surface of the enclosure to the **outside surface** of the enclosure cover. See diagram below for details.







- If necessary, convert mounting depth inches to millimeters (inches x 25.4 = millimeters).
- In the Modular Shaft Extension Table to the right, find the correct range for your enclosure in the Mounting Depth column.

NOTE: Table is based on an RA-40 switch body with two wafers (3 or 4 pole). For a switch body with more or less wafers, add or subtract the following from overall Mounting Depth before referring to table:

RA-40 Switch Body - ±17.5mm per wafer

- Order the End Shaft and number of Extension Modules required for that mounting depth.

Modular Shaft Extension Components

Component	Catalog Number	Price
44mm End Shaft (supplied with RA-40 Switch Body Assembly) 	LA2-G2830	3.25
52mm End Shaft 	LA2-G3194	4.00
57mm End Shaft 	LA2-G3195	4.00
Extension Module (two per pkg - priced per pkg) 	LA2-G2853	9.00

Modular Shaft Extension Table

Number of Extension Modules	Required End Shaft	Mounting Depth (mm)
		Switch Body RA-40
0	44mm Ⓢ	98.5 - 104.5
	52mm	100.5 - 114
	57mm	109 - 119
1	44mm Ⓢ	122.5 - 128.5
	52mm	124.5 - 138
	57mm	133 - 143
2	44mm Ⓢ	146.5 - 152.5
	52mm	148.5 - 162
	57mm	157 - 167
3	44mm Ⓢ	170.5 - 176.5
	52mm	172.5 - 186
	57mm	181 - 191
4	44mm Ⓢ	194.5 - 200.5
	52mm	196.5 - 210
	57mm	205 - 215
5	44mm Ⓢ	218.5 - 224.5
	52mm	220.5 - 234
	57mm	229 - 239
6	44mm Ⓢ	242.5 - 248.5
	52mm	244.5 - 258
	57mm	253 - 263

- ① Only for RA-40 switches. To extend RA-50 through RA-630 switches, see “Extensions to Mounting Plate” in Accessories Section.
- ② For Type R (4X) switch handle shaft extensions, see “Type R Switch Handle Extension” table on opposite page.
- ③ One 44mm End Shaft is supplied with all Switch Body Assemblies.

Metal shaft extension system ①②

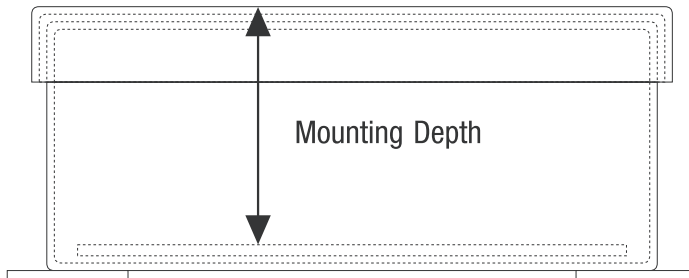
Adjustable metal shaft extensions snap on securely to RA-40 switches via the same quick-connect design as shaft extension modules. Metal shafts are equipped with a door interlock and a padlock hasp for locking out the switch after the enclosure is opened (for outside lockout, select a Switch Handle with lockout capability).



Two standard lengths of these unique adjustable shafts are available. Metal shaft extensions mate with any of the standard Switch Handles. All necessary hardware is supplied with the shaft.

Determining metal shaft extension

- Determine Mounting Depth. This is the distance from the inside mounting surface of the enclosure to the **outside surface** of the enclosure cover. See diagram below for details ①.





- If necessary convert Mounting Depth inches to millimeters (inches x 25.4 = millimeters).
- In the appropriate table to the right, find the correct range for your enclosure in the Mounting Depth column.

NOTE: Tables are based on an RA-40 switch body with two wafers (3 or 4 pole). For a switch body with more or less wafers, add or subtract the following from overall Mounting Depth before referring to table:

RA-40 Switch Body- ±17.5mm per wafer

- Order the Metal Shaft Extension required for that Mounting Depth and switch handle.

Metal Shaft Extension Components

Component	Catalog Number	Price
Short Metal Shaft  Length: 110 ... 235mm	LA2-G3393	38
Long Metal Shaft  Length: 230 ... 350mm	LA2-G3394	47

Metal Shaft Extension Table

Metal Shaft Extension	Mounting Depth (mm)
	Switch Body RA-40
LA2-G3393	205 ③ - 336
LA2-G3394	325 - 451

Type R Switch Handle Shaft Extensions






Only select shaft extension from this table if ordering the Type R (UL Type 4X) Switch Handle from the Accessories Section (page K42). Select shaft after figuring overall Mounting Depth.






Type R Switch Handle Shaft Extension (typical)		
Mounting Depth (mm)	Catalog Number	Price
Switch Body RA-40		
119 - 143	LA2-G194R1-67	32.25
124 - 148	LA2-G194R1-72	
131 - 155	LA2-G194R1-79	
139 - 163	LA2-G194R1-87	
142 - 166	LA2-G194R1-90	
149 - 173	LA2-G194R1-97	
156 - 180	LA2-G194R1-104	
167 - 191	LA2-G194R1-115	

NOTE: Shafts of any length up to 457mm (18") can be ordered. Contact your Sprecher + Schuh representative.

① Only for RA-40 switches. To extend RA-50 through RA-630 switches, see "Extensions to Mounting Plate" in Accessories Section.
 ② Not for Type R (UL 4X) switch handles. Use Type R Switch Handle Extension table on this page.
 ③ This dimension can be reduced by another 55mm by cutting the plastic sleeve and further cutting the metal shaft.

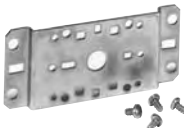
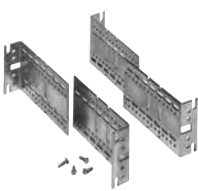


R-Line Switch Accessories

Accessory	Description	Catalog No.	Price
	Shaft for RE switch (One supplied with each LE switch)	L2-G3380	5.00
	Standard knob Black 37.5mm For R-40 For R-50/80 For R-125/250/400 and 630	L2-G3154N R-G3518N	3.50 15.15
	Red For R-40 For R-50/80 For R-125/250/400 and 630	R-G3519N	23.50
		L2-G3155R R-G3518R	3.50 15.15
		R-G3519R	23.50
	Padlockable knob Black Red	L2-G2864N L2-G2864R	7.15 7.15
	Self-contained knob allows mounting RE-40 switches without Switch Handle Assembly IP40 protection IP65 protection	L2-G2851N L2-G2854N	6.50 9.00
	Pistol Grip Handle for R125/250/400 and 600 switches Black Red	R-G3520N R-G3520R	40.75 40.75
	"ON-OFF" Switch Handle Assembly - accepts 3 padlocks Yellow and Red For R-40 For R-50/80 For R-125/250/400 and 630	LFS2-N-6-175 LFS2-N-8-175	21.00 67.00
		LFS2-N-13-175	118
	Gray and black For R-40 For R-50/80 For R-125/250/400 and 630	LFS2-G-6-175 LFS2-G-8-175	21.00 67.00
		LFS2-G-13-175	118

Accessory	Description	Catalog No.	Price
	Nameplate & holder -Snaps on to top of escutcheons with Handle Code "N" or "G"		
	For R-40... 80 For R-125...630	R-G3667 R-G3515	15.75 18.00
	Type R UL Rated 4X Switch Handle Defeatable door interlock, for base mount switches only For RA-40		L10-HS4E 56.00
	Front frame (blank nameplate) For R-40 For R-50/80		L2-G3196 L2-G3197 11.50 16.15
	Legend plate - blank for engraving Silver For R-40 For R-50/80 For R-125/250/400 and 630		LL2-A-6-000 LL2-A-8-000 LL2-A-13-000 43.25
	Yellow For R-40 For R-50/80 For R-125/250/400 and 630		LL2-I-6-000 LL2-I-8-000 LL2-I-13-000 2.95 31.95 43.25
	Legend plate - 0 - I, 90° Yellow For R-40 For R-50/80 For R-125/250/400 and 630		LL2-I-6-175 LL2-I-8-175 LL2-I-13-175 2.95 31.95 43.25
	Terminal cover - 3 or 4 pole For RA-40 For RA-50 For RA-80 For RA-125/250		RA-40-C4 RA-50-C4 RA-80-C4 RA-125-C4 15.50 12.15 13.00 17.25
	For RE-40 For RE-50 For RE-80 For RE-125/250		RE-40-C4 RE-50-C4 RE-80-C4 RE-125-C4 11.35 13.45 14.75 56.75

① Only for RA-40 switches. Order shaft from "R"-type Shaft Extension table on page K39.

R-Line Switch Accessories

Accessory	Description	Catalog No.	Price
	Mounting plate for converting RE-type switches to RA-type (1 supplied with each RA-type switch)		
	For R40	R-G1722	8.40
	For R50/80	R-G1724	23.60
	For R-125/250 (max. 6 elements)	R-G1462	16.85
	For R-400/630 and R-125/250 with more than 6 elements	R-G1474	149.00
	Extensions to mounting plate - minimum 35mm, maximum 171mm		
	For R-40/50/80	R-G1761	29.00
	Mounting tool for mounting central nut switch handles		
	For RE-40	D7-AW2	8.60
	Dust Cover (not IP rated)		
	1 or 2 switch wafers		
	For RE-40	RE-G3180	32.75
	For RE-50	RE-P10891	27.00
	For RE-80	RE-P10892	31.00
	3 switch wafers		
	For RE-40	RE-G3181	37.00
	For RE-50	RE-P10892	31.00
	For RE-80	RE-P10892	31.00
	4 switch wafers		
For RE-40	RE-G3181	37.00	
For RE-50	RE-P10892	31.00	
For RE-80	RE-P12792	37.00	
5 or 6 switch wafers			
For RE-40	RE-G3182	43.00	
For RE-50	RE-P12792	37.00	

Technical Information

				R-40	R-50	R-80	R-125	R-250	R-400	R-630	
Rated Operating Voltage	UL/CSA	[V]		600	600	600	600	600	600	600	
	IEC/VDE/BS	[V]		690	690	690	690	690	690	690	
Rated Isolation Voltage											
Impulse		[V]		8	8	8	8	8	8	8	
Continuous				690	690	690	690	690	690	690	
Rated Thermal Current I_{th}	UL/CSA	[A]		40	50	63	115	200	250	315	
	IEC/VDE/BS	[A]		45	50	80	125	250	400	630	
Rated Thermal Current I_{me}	IEC/VDE/BS	[A]		45	50	75	120	200	315	500	
Rated Operating Current I_e											
AC-1/ AC21A	Switching resistive loads with slight overload	IEC947	690V	[A]	40	50	75	120	200	250	315
AC-22A	Switching mixed resistive and inductive loads at slight overload	IEC947	220-500V 600V	[A]	40	50	80	125	200	400	630
Short Circuit Current											
	Rated conditional (note type & fuse size)			[kA]	5	5	5	6	8	12	15
	Maximum fuse rating of circuit, non-enclosed			[A]	40	50	63	100	160	250	315
	UL fuse type				Class J	Class J	Class J	Class J	Class J	Class J	Class J
Rated Operating Powers P_e											
AC-3	Starting squirrel-cage motors, interruption while running	3Ø 3 pole	220-240V	[kW]	7.5	11	15	22	30		
			400-440V	[kW]	15	18.5	22	37	45		
			500V	[kW]	18.5	22	30	45	55		
			660V	[kW]	18.5	22	30	45	55		
AC-4	Starting squirrel-cage motors, reversing, braking, plugging	3Ø 3 pole	220-240V	[kW]	3	5.5	7.5	11			
			400-440V	[kW]	5.5	7.5	11	18.5			
			440-500V	[kW]	5.5	9	15	22			
AC-23A	Periodic switching of motors or other highly inductive loads.	3Ø 3 pole	220-240V	[kW]	11	11	18.5	30	37		
			400-440V	[kW]	18.5	22	30	45	55		
			500V	[kW]	22	30	37	55	75		
			660V	[kW]	22	30	37	55	75		
Rated Power		UL/CSA									
	Normal motor load		120V	[HP](FLA)	~	~	~	~	~	~	
	full voltage rating (similar to AC-3)	3Ø 3 pole	240V	[HP](FLA)	10 (28)	15 (42)	20 (54) ②	30 (80)	50 (130)		
480V			[HP](FLA)	20 (27)	30 (40)	40 (52) ②	60 (77)	75 (96)			
600V			[HP](FLA)	20 (22)	40 (41)	50 (52)	75 (77)	100 (99)			
1Ø			[HP](FLA)	2 (24)	3 (34)	5 (56) ①	7.5 (80)	10 (100)			
	General use	2 pole	240V	[HP](FLA)	5 (28)	7.5 (40)	10 (50) ②	15 (68)	20 (88)		
480V			[HP](FLA)	10 (26)	15 (34)	20 (44) ②	30 (68)	40 (88)			
600V			[HP](FLA)	10 (20)	20 (35)	25 (44)	35 (62)	50 (86)			
	General use		600VAC	[A]	40	50	63	115	200		
Rated Breaking Capacity											
	690V			[A]	196	260	316	456	616		
	Power factor				0.45	0.45	0.45	0.35	0.35		
DC-20 Switching											
	Rated operating current I_e			[A]	40	50	75	120	200		
DC-1 Switching											
DC-21A Switching											
	Rated operating current I_e			[A]	?	?	?	?	?	~	
	V max pole			[V]	60	60	60	48	42	~	
DC-23 Switching											
	Rated power		24VDC	[kW]	0.3 (1)	0.3 (1)	0.7 (1)	1 (1)	~	~	
	(the numbers in brackets indicate the number of poles that must be connected in series)		48VDC	[kW]	0.5 (2)	0.5 (2)	1.4 (2)	2 (2)	~	~	
		60VDC	[kW]	1 (2)	1 (2)	2 (2)	2.7 (2)	~	~		
		110VDC	[kW]	2 (3)	2 (3)	3 (3)	4 (3)	~	~		
		220VDC	[kW]	2.2 (5)	2.2 (5)	6 (6)	8 (6)	~	~		

① For UL only
② For CSA 220V and 440V

Technical Information continued on next page

Technical Information

			R-40	R-50	R-80	R-125	R-250	R-400	R-630
DC-13 Switching L/R = 40ms	24VDC	[A]	16	~	~	~	~	~	~
	48VDC	[A]	8	~	~	~	~	~	~
	60VDC	[A]	4.8	~	~	~	~	~	~
	110VDC	[A]	2	~	~	~	~	~	~
	220VDC	[A]	0.6	~	~	~	~	~	~
	380VDC	[A]	0.4	~	~	~	~	~	~
	500VDC	[A]	0.3	~	~	~	~	~	~
Maximum Wire Gauges									
Single/multi-core wire	(1 wire)	[mm ²]	10/6	10/6	25/16	50/35			
		[AWG]	8/8	8/8	4/6	1/2			
Single/multi-core wire	(2 wires)	[mm ²]	10/10	10/10	16/16				
		[AWG]	8/8	8/8	8/8	6/6			
Minimum Wire Gauges									
Single/multi-core wire	(1 wire)	[mm ²]	4/2.5	4/2.5	1.5/2.5	1.5/1.5			
		[AWG]	12/14	12/14	16/14	16/16			
Terminals			Screw	Screw	Screw	Screw	Lug	Lug	Lug
Terminal Type			M4	M5	M4x2	M6x2	M10	M12	M14
Protection Class									
Switch Handle Assembly									
LFS2-G(N)-6...	UL		3R	~	~	~	~	~	~
L10-HS4E	UL		4X	~	~	~	~	~	~
LFS(C)2-...4(6, 8, 13)...	IEC 529		IP66	IP66	IP66	IP66	IP66	IP66	IP66
Switch Body	IEC 529		IP20	IP20	IP20	IP20	IP20	IP20	IP20
Mechanical Life		[Millions of ops.]	3	3	3	1	1		
Maximum Mechanical Operations (without derating)									
		[cycle/hr.]	1200	1200	1200	600	600	600	600
Maximum Electrical Operation (without derating)									
		[cycle/hr.]	120	120	120	30	30	30	30
Ambient Temperature									
Operation	Min...Max	[C°]	-25...+60	-25...+60	-25...+60	-25...+60	-25...+60	-25...+60	-25...+60
Storage only	Min...Max	[C°]	-40...+80	-40...+80	-40...+80	-40...+80	-40...+80	-40...+80	-40...+80
Maximum Altitude (without derating)									
		[m]	≤2000	≤2000	≤2000	≤2000			
		[ft.]	≤6561	≤6561	≤6561	≤6561			

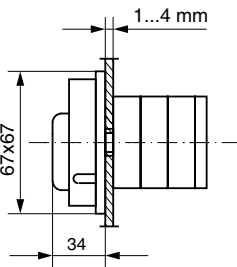
Approvals

Switch	CE	UL	RU	SA
R-40	A	A		A
R-50	A		A	A
R-80	A		A	A
R-125	A		A	A
R-250	A		A	A
R-400	A		A	A
R-630	A		A	A

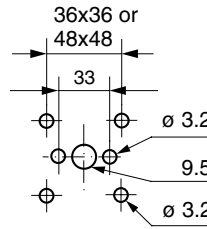
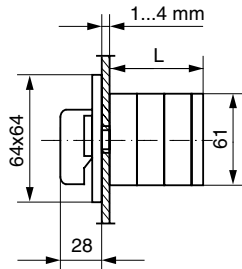
A = approved resp. testing successful

RE-40 Panel Mounting

Type G/N



Type A



Drill Plan (operator)

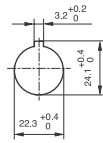
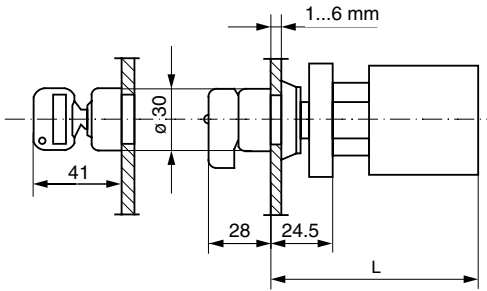
- Dimensions are in millimeters
- Dimensions not intended for manufacturing purposes

Screw Fixing (RE-40)

Type	"L" Dim (# of wafers)			
	1	2	3	4
RE-40	41	58.5	76	93.5

Type D (RC-40)

Type B (RC-40)



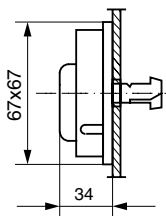
Drill Plan (operator)

Central Fixing (RC-40)

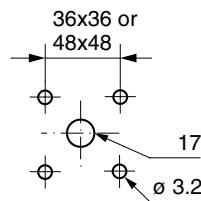
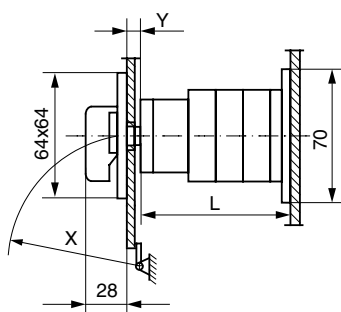
Type	"L" Dim (# of wafers)							
	1	2	3	4	5	6	7	8
RC-40	86	103.5	121	138.5	156	173.5	191	208.5

RA-40 Base Mounting

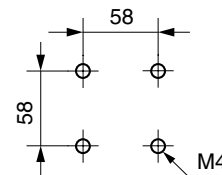
Type G/N



Type A



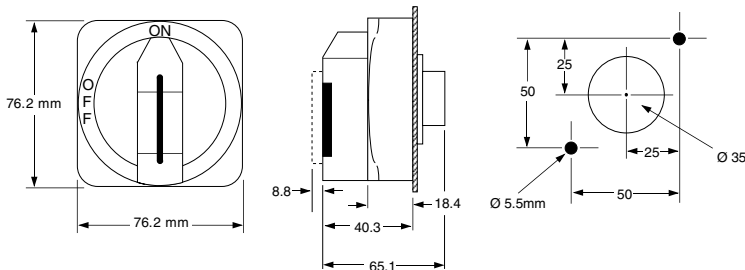
Drill Plan (operator)



Drill Plan (base)

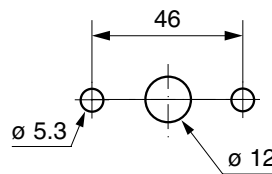
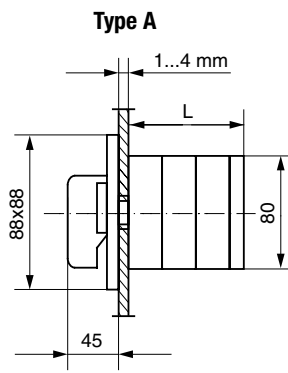
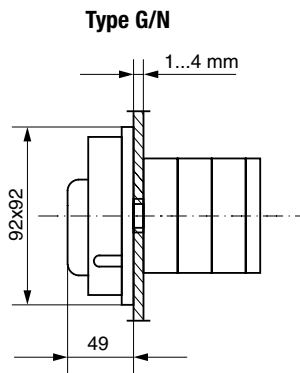
- Dimensions are in millimeters
- Dimensions not intended for manufacturing purposes

Type R



Type	"L" Dim (# of wafers)			
	1	2	3	4
RA-40	74	91.5	109	126.5

RE-50/80 Panel Mounting

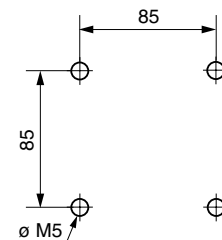
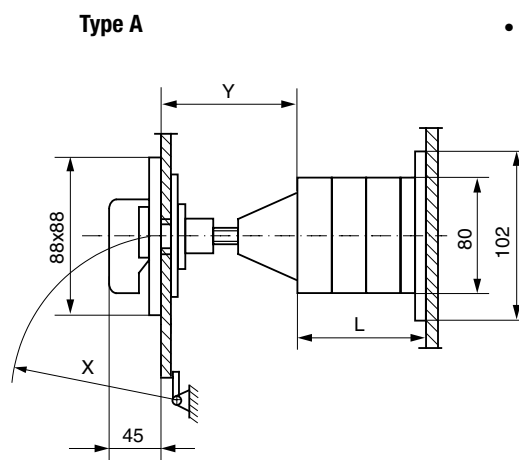
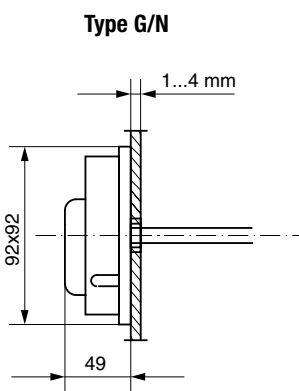


Drill Plan (operator)

- Dimensions are in millimeters
- Dimensions not intended for manufacturing purposes

Type	"L" Dim (# of wafers)			
	1	2	3	4
RE-50	51	69	87	105
RE-80	60	87	114	141

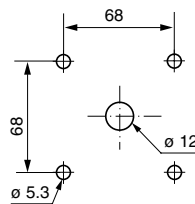
RA-50/80 Base Mounting



Drill Plan (base)

- Dimensions are in millimeters
- Dimensions not intended for manufacturing purposes

Y min.	X ≥	Y max.	X ≥
75	150	78	150



Drill Plan (operator)

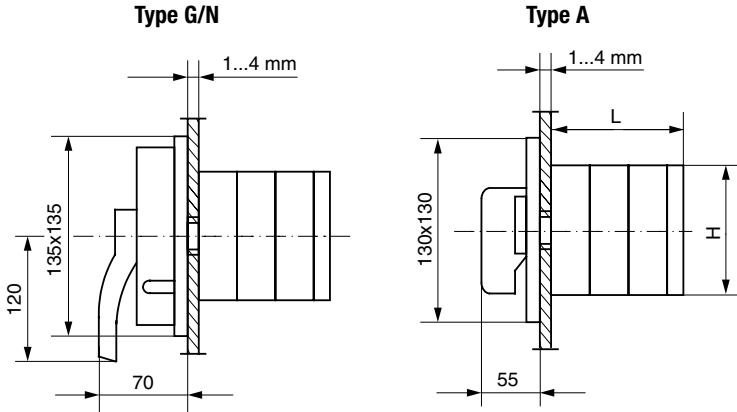
Type	"L" Dim (# of wafers)			
	1	2	3	
RE-50	59	77	95	
RE-80	68	95	122	

SSCDN8500E

K
Rotary Cam
Switches

R-Line

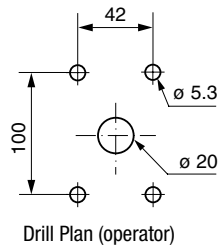
RE-125 / 250 / 400 / 630 - Panel Mounting



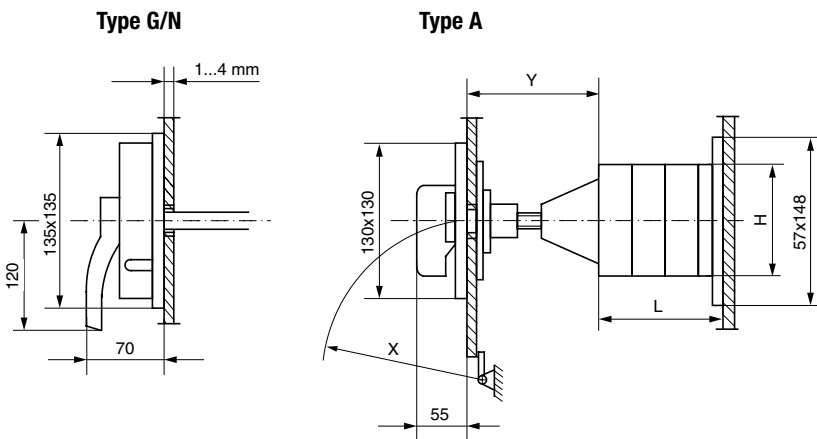
- Dimensions are in millimeters
- Dimensions not intended for manufacturing purposes

Type	"L" Dim (# of wafers)			
	1	2	3	4
RE-125	83	113	143	173
RE-250	83	113	143	173
RE-400	113	173	233	293
RE-630	143	233	323	413

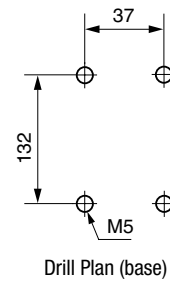
Type	"H" Dim
RE-125	102x118
RE-250	191x118
RE-400	180x118
RE-630	180x118



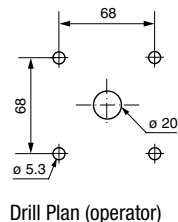
RA-125 / 250 / 400 / 630 - Base Mounting



- Dimensions are in millimeters
- Dimensions not intended for manufacturing purposes



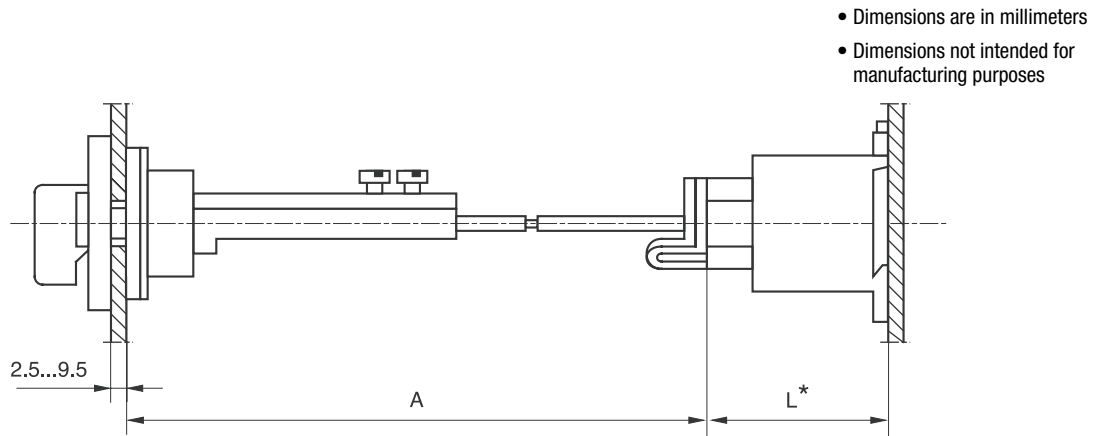
Y min.	X ≥	Y max.	X ≥
75	150	78	150



Type	"H" Dim
RA-125	102x118
RA-250	191x118
RA-400	180x118
RA-630	180x118

Type	"L" Dim (# of wafers)			
	1	2	3	4
RA-125	~	123	153	
RA-250	~	123	153	
RA-400	~	183	~	
RA-630	~	243	~	

RA-40 Base Mount with Metal Shaft Extension



Type	"L" Dim (# of wafers)			
	1	2	3	4
RA-40	74	91.5	109	126.5

Type	"A" Dim
LA2-G3393	110 - 235
LA2-G3394	230 - 350

* Add 2.5mm for DIN rail 46277.

Custom L2 and R-Line Rotary Cam Switches

Ask us about custom applications or switches you don't see in the catalog

Sprecher + Schuh offers custom configurations of our L2 and R-Line rotary cam switches for special applications. Whether you are switching a heavy motor load or providing a set of dry contacts, we can build a switch to suit your needs. You specify your requirements using our custom switch ACCU-FORM and we build to your exact requirements.

Wide product selection

Examples of L2 switches from 12-25A:

Motor load switching

- ON-OFF
- Changeover
- Bypass

Control switching

- ON-OFF
- Step
- Changeover
- Ammeter phase selectors
- Voltmeter

Examples of R-Line switches from 40-630A and beyond:

- ON-OFF
- Changeover
- Bypass
- Welding
- UPS
- Generator voltage selectors



Customizing from simple to complex

Several categories of custom switches are available:

Modified standard switches - The fastest service is available by modifying a standard switch to better suit your application. This would include adding poles (wafers) or providing special jumpering. In most cases, this service is offered from our modification facility in Houston, TX.

Standard Component Custom Switches - Our facility in Houston also has the capability to assemble custom L2 switches from standard components. You specify your requirements using an Accu-form and we build to your specification.

Engineered Custom Switches - Sometimes you require a very specialized switch. This might entail custom switching configurations plus customized mechanical items such as bus tabs, shafts or mounting brackets. With assistance from your Sprecher + Schuh sales representative or Customer Service, your exact needs will be met. We will work with you from configuration to delivery.



Our modification facility in Houston is available for quick turnaround on many custom L2 rotary cam switches

Custom R-Line Rotary Cam Switch Accu-Form (copy this form)

Customer: _____	Date: _____	sprecher+schuh
Quantity: _____	Delivery Date: _____	

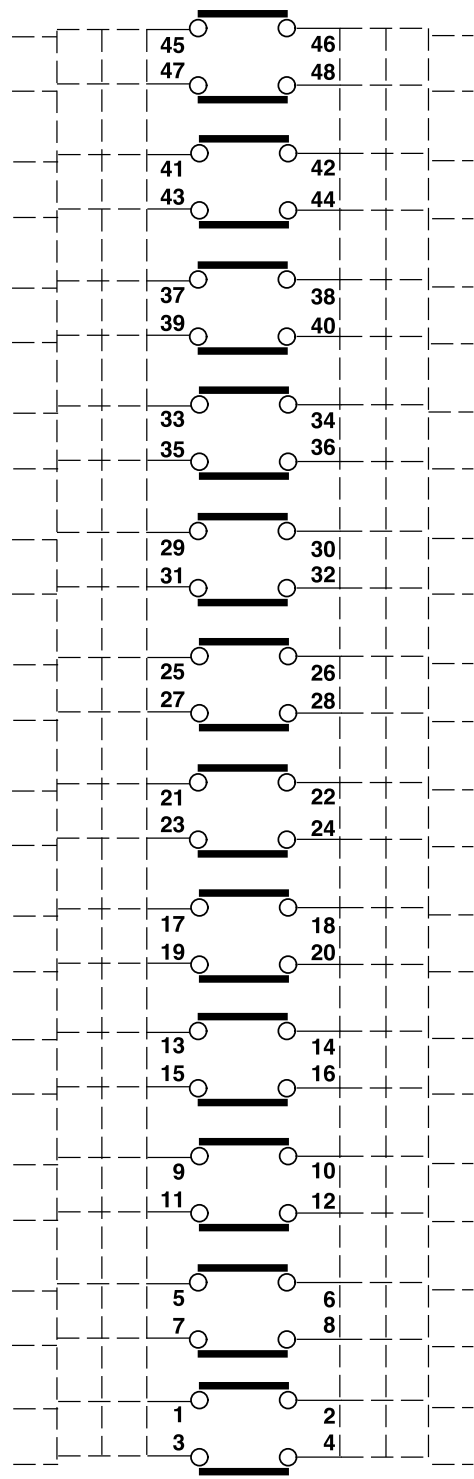
	Legend Plate	Quantity												
	<input type="checkbox"/> 30°	<input type="checkbox"/> 60°	<input type="checkbox"/> 45°	<input type="checkbox"/> 90°										

Wafers	Contacts	Positions
12	45-46 47-48	
11	41-42 43-44	
10	37-38 39-40	
9	33-34 35-36	
8	29-30 31-32	
7	25-26 27-28	
6	21-22 23-24	
5	17-18 19-20	
4	13-14 15-16	
3	9-10 11-12	
2	5-6 7-8	
1	1-2 3-4	

X Contact closed ↶ ↷ Return
 X — X Contact closed in several positions

Notes

Switch Type	Rated Current
R	A



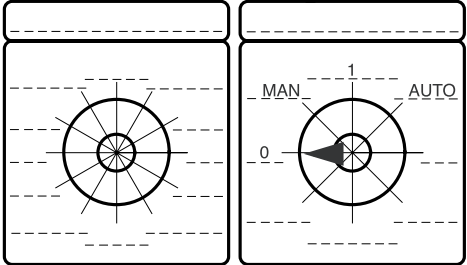
FAX Completed Accu-Form to 1-800-739-7370

Rotary Cam Switches

Custom Rotary Cam Switch Accu-Form Instructions

1 Customer: *Smith & Jones, Inc.* Date: *7/1/97*
Quantity: *50* Delivery Date: *7/21/97* Cust. Order No: *99-9999*

3 Legend Plate
Quantity

3 

2 30° 60° 45° 90°

	31 - 32	29 - 30	27 - 28	25 - 26	23 - 24	21 - 22	19 - 20	17 - 18	15 - 16	13 - 14	11 - 12	9 - 10	7 - 8	5 - 6	3 - 4	1 - 2
8																
7																
6																
5																
4																
3											X	X	X	X		
											X	X	X	X		
2											X	X	X	X		
											X	X	X	X		
1											X	X	X	X		
											X	X	X	X		

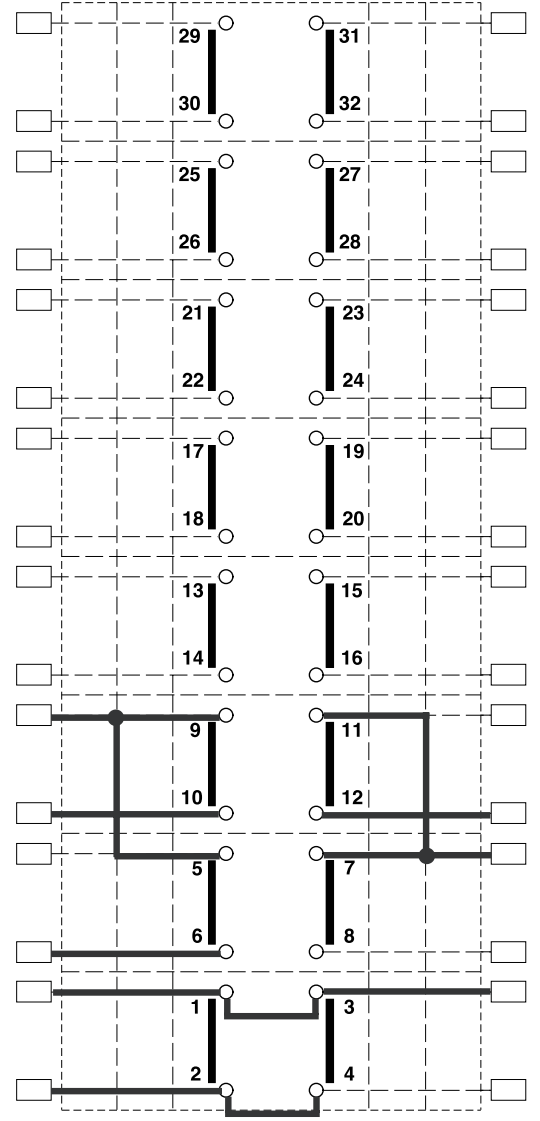
4 Water Contacts O M 1 A

Positions

X Contact closed ↗ Return
X—X Contact closed in several positions

Notes

5 Switch Type: L E 2 — 1 6 A Rated Current: 16 Switch Handle Assembly: L F S 2 — A — 4



- 1** Complete all customer and ordering information.
- 2** Determine the switching angle of the switch you require.
- 3** Fill in legend information (use legend appropriate to the switching angle you choose). Indicate "at rest" position.
- 4** Complete the contact switch development chart.
- 5** Indicate switch type and amp rating.
- 6** Indicate switch handle assembly.
- 7** If required, show terminal jumper arrangement.

FAX completed form to

1-800-739-7370