

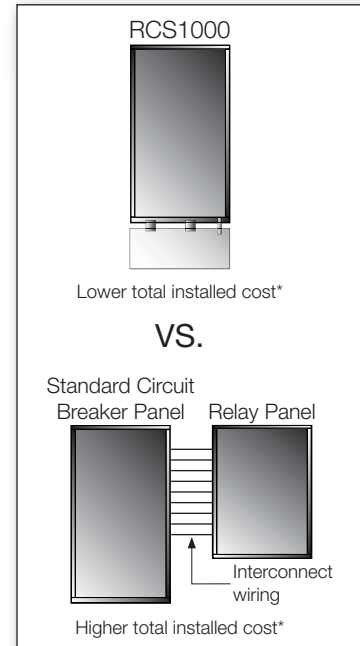
RCS1000 Series Controllable Circuit Breaker Panel

Overview

The RCS1000 Series Controllable Circuit Breaker Panels combines the benefits of traditional relay based load control and the benefits of circuit protection into a single panel assembly. This solution substantially reduces the installation time and the equipment foot-print over a separately mounted standard panelboard and relay panel.

RCS1000 Series Features

- Meets or exceeds NEC110-10
- Ships within 3 weeks
- Single point load termination, no need for interconnect wiring
- Factory mounted or remote mounted controller
- Low voltage controller electronics are isolated from high voltage
- Network ready for TRIA TEK® Lighting's Web-based BASnet® LightView or integration to most Building Automation Systems (BAS)
- No limitation on the placement of remote-control circuit breakers within a panelboard
- Controller can be mounted up to 50 feet from remote-control circuit breakers
- Up to 42 remote-control circuit breakers per panelboard
- Mix standard breakers and remote-control breakers in the same panel
- Up to 60 remote-control circuit breakers per controller
- Optional LEXP1-RCS on-board expansion for 32 additional programmable inputs
- Optional Digi-Touch Control board (on-board expansion) for a Digi-Touch Network



*Total installed cost = material + labor

RCS1000 with RCS-FM (Factory Mounted Controller)

The panelboard section can be provided with a Main Lug or Main Breaker. All branch circuit breakers shall be installed per the Ordering Chart (see page 6) prior to shipment. The controller, RCS-FM, shall be factory mounted to the panelboard at the end opposite the Main feed (top feed is pictured). The control harness between the controller and each remote-control circuit breaker shall be factory wired.

RCS-FM Benefits

- Ready to install, no field wiring between controller and remote-control circuit breakers
- Single point of load termination

RCS1000 with RCS-RM (Remote Mounted Controller)

The panelboard section can be provided with a Main Lug or Main Breaker. All branch circuit breakers will be installed per the Ordering Chart (see page 6) prior to shipment. The controller, RCS-RM, is shipped separately for field mounting up to 50 feet / 15.25 meters from any remote-control circuit breaker. The control harness between the controller and each remote-control circuit breaker shall be provided by the installing contractor per TRIA TEK® Lighting's specifications. Crimping tool and connector kit can be ordered from TRIA TEK® Lighting.

For added flexibility, the RCS-FM can be used to remotely control circuit breakers in other manufacturers panelboard enclosures, making it a great choice for retrofit applications. Contact your factory representative for more details.

RCS-RM Benefits

- Great for retrofit applications
- Reduced installation over relay panels
- Controller can be mounted up to 50 feet / 15.25 meters from any remote-control circuit breaker
- Single point of load termination

RCS1000 with RCS-FM



RCS1000 with RCS-RM*



*Parts displayed. Trim not shown

Specifications

Electrical

Controller	
Power	120/277VAC, 40VA, ± 10%, 60 Hz (Dual Primary), or 347 VAC, 40VA, ± 10%, 60 Hz
Standard Inputs	24 programmable (2 wire) or 12 programmable (3 wire), 1 analog (3 wire) for LS5 Photocell
Optional Inputs	32 programmable (2 wire) or 16 programmable (3 wire), Requires LEXP1-RCS added to panel
Input types	Programmable for 2 wire momentary, 2 wire maintained, 3 wire momentary, and Linked On; Field configurable jumper for dry contact or 24VDC signaling, one jumper for every group of 8 inputs
Output (Max)	60 remote-control circuit breakers
Breakers	
Ratings	Fully rated 14K AIC @ 277/480 or 65K AIC @ 120/208 (For Series Rating contact factory)
Panelboard	
Ratings	120/208Y 3P4W up to 400A MLO or MB; 277/480Y 3P4W up to 400A MLO or MB

Certifications

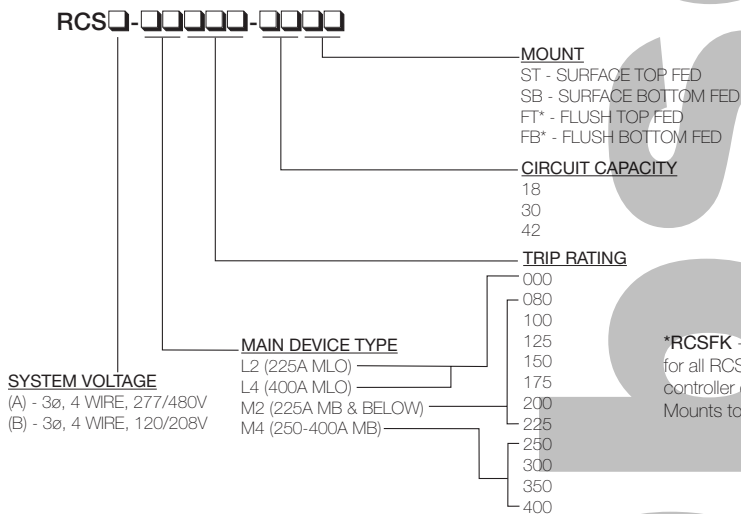
Panelboard/Enclosure	UL 67/UL 50
Circuit Breakers	UL 489
Controller / System	UL 916, New York City Approved #37908, CSA, CEC Approved
Installation	Meets or exceeds National Electric Code

Environmental

Operating Temperature	0° to 125° F
Operating Humidity	10% - 95% RH, Non-condensing

Ordering Instructions for RCS1000 with RCS-FM

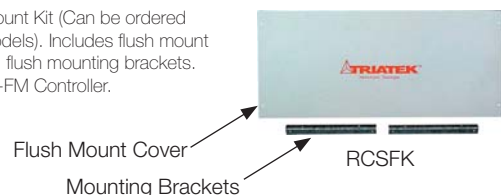
Step 1: Select Interior



RCSB-L2-000-42ST = 3ø, 4 wire, 120/208V, 225A Main Lug Only, 42 circuit interior for top feed, surface mount application



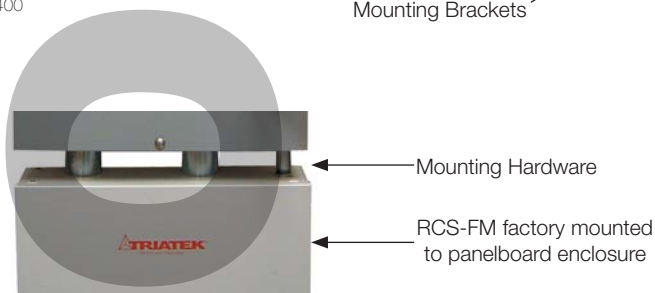
*RCSFK - Flush Mount Kit (Can be ordered for all RCS1000 models). Includes flush mount controller cover and flush mounting brackets. Mounts to the RCS-FM Controller.



Step 2: Select Controller

Controller

RCS-FM - Includes controller, controller enclosure, controller cover, and mounting hardware. Factory mounted as shown.



Step 2: Select Enclosure

Enclosure size depends on interior selected in Step 1. Use the Enclosure Selection Chart to select the correct enclosure.

Enclosures*

RCS-E48 - 48" High, enclosure only - NEMA 1

RCS-E72 - 72" High, enclosure only - NEMA 1



RCS-E48

Enclosure Selection Chart			
MB/MLO	18 Circuit	30 Circuit	42 Circuit
0-225A	RCS-E48	RCS-E48	RCS-E48
250-400A	RCS-E72	RCS-E72	RCS-E72

*The enclosures ordered here are shipped ahead of the interior. The interior will arrive in its enclosure as it is the preferred protection method during shipping.

Step 3: Select Controller

Controller

RCS-RM* - Includes controller, controller enclosure, and controller cover



RCS-RM (cover not shown)

*Note: Circuit breaker control wiring and mounting hardware are supplied by others. Each remote-control breaker requires a 3 wire connection (20 AWG stranded 600V insulation). It is recommended that each RCS-RM is ordered with (1) RCSCCK and that (1) RCSCCT be ordered for every (20) panels. The connector kit (RCSCCK) and one crimping tool (RCSCCT) can be ordered from TRIATEK Lighting (For more information refer to RCS1000 Installation Guide).

Required Tools and Kits

RCSCCK - 120 connectors (3 pin)

RCSCCT - Wire crimping tool



RCSCCK connector



RCSCCT

Step 4: Select Circuit Breakers

Use charts on page 6 to select breaker types and locations in the panelboard.

RCB1020

RCB2020

B1020

B3050



Remote-Control Circuit Breakers

Standard Circuit Breakers

Step 5: Select Options

Switch Input Expansion Boards

LEXP1-RCS - Factory mounted Expansion Board

Digi-Touch Control Board

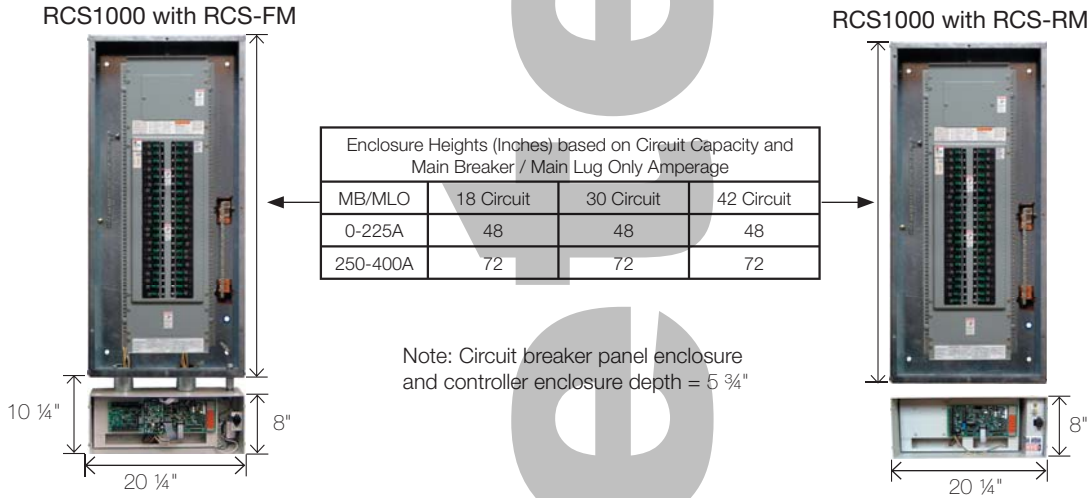
Factory mounted to the RCS Controller. Required when using Digi-Touch Addressable / Networkable switches



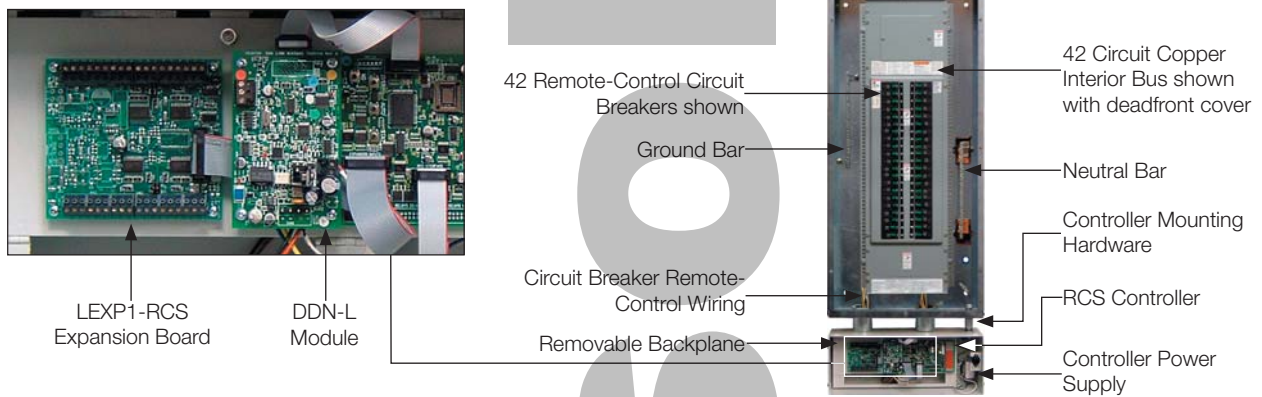
LEXP1-RCS Expansion Board

DDN-L Module

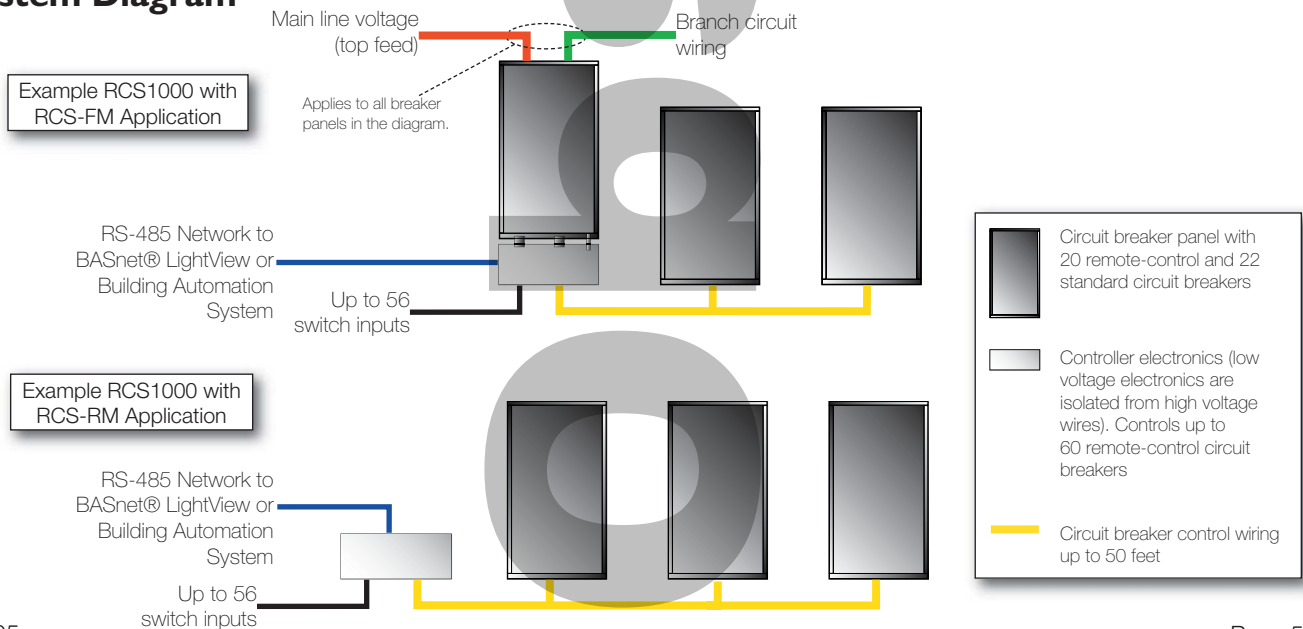
Dimensions



Panel Layout



System Diagram



Circuit Breaker Ordering Chart

Circuit Breaker Ordering Chart					
R/S	Breaker	Circuit	Circuit	Breaker	R/S
		1	2		
		3	4		
		5	6		
		7	8		
		9	10		
		11	12		
		13	14		
		15	16		
		17	18		
		19	20		
		21	22		
		23	24		
		25	26		
		27	28		
		29	30		
		31	32		
		33	34		
		35	36		
		37	38		
		39	40		
		41	42		

To complete the Circuit Breaker Ordering Chart, follow the example below. In this example, Circuit 1 is a remote-controlled, 20A, 1 pole breaker. Circuits 3 and 5 are a remote-controlled, 30A, 2 pole breaker. Circuit 2, 4 and 6 are a standard, 50A, 3 pole breaker.

R/S	Breaker	Circuit	Circuit	Breaker	R/S
R	20	1	2	50	S
R	30	3	4	50	S
	2	5	6	3	

Draw diagonal line across number of boxes that correspond to the number of poles

Amperes Number of Poles

R = Remote-control circuit breakers
 S = Standard circuit breakers

Remote-Control Circuit Breakers								
Number of Poles	Interrupt Rating (AIC) & Catalog Number				Terminal & Branch Type			
	Amps Rating	Volts AC (50/60 Hz)			Catalog Number	Term. Type	Wire Type	AWG Wire # Range
		120	240	480Y/277				
1	15	65,000		14,000	RCB1015	Clamp	Cu/Al	14-10
1	20	65,000		14,000	RCB1020	Clamp	Cu/Al	14-10
1	30	65,000		14,000	RCB1030	Box	Cu/Al	14-2
2	15		65,000	14,000	RCB2015	Clamp	Cu/Al	14-10
2	20		65,000	14,000	RCB2020	Clamp	Cu/Al	14-10
2	30		65,000	14,000	RCB2030	Box	Cu/Al	14-2
Standard Circuit Breakers								
1	15	65,000		14,000	B1015	Clamp	Cu/Al	14-10
1	20	65,000		14,000	B1020	Clamp	Cu/Al	14-10
1	25	65,000		14,000	B1025	Clamp	Cu/Al	14-10
1	30	65,000		14,000	B1030	Pressure	Cu/Al	14-1/0
1	35	65,000		14,000	B1035	Pressure	Cu/Al	14-1/0
1	40	65,000		14,000	B1040	Pressure	Cu/Al	14-1/0
1	50	65,000		14,000	B1050	Pressure	Cu/Al	14-1/0
1	60	65,000		14,000	B1060	Pressure	Cu/Al	14-1/0
1	70	65,000		14,000	B1070	Pressure	Cu/Al	14-1/0
1	80	65,000		14,000	B1080	Pressure	Cu/Al	14-1/0
1	90	65,000		14,000	B1090	Pressure	Cu/Al	14-1/0
1	100	65,000		14,000	B1100	Pressure	Cu/Al	14-1/0
2	15		65,000	14,000	B2015	Clamp	Cu/Al	14-10
2	20		65,000	14,000	B2020	Clamp	Cu/Al	14-10
2	25		65,000	14,000	B2025	Clamp	Cu/Al	14-10
2	30		65,000	14,000	B2030	Pressure	Cu/Al	14-1/0
2	35		65,000	14,000	B2035	Pressure	Cu/Al	14-1/0
2	40		65,000	14,000	B2040	Pressure	Cu/Al	14-1/0
2	50		65,000	14,000	B2050	Pressure	Cu/Al	14-1/0
2	60		65,000	14,000	B2060	Pressure	Cu/Al	14-1/0
2	70		65,000	14,000	B2070	Pressure	Cu/Al	14-1/0
2	80		65,000	14,000	B2080	Pressure	Cu/Al	14-1/0
2	90		65,000	14,000	B2090	Pressure	Cu/Al	14-1/0
2	100		65,000	14,000	B2100	Pressure	Cu/Al	14-1/0
3	15		65,000	14,000	B3015	Clamp	Cu/Al	14-10
3	20		65,000	14,000	B3020	Clamp	Cu/Al	14-10
3	25		65,000	14,000	B3025	Clamp	Cu/Al	14-10
3	30		65,000	14,000	B3030	Pressure	Cu/Al	14-1/0
3	35		65,000	14,000	B3035	Pressure	Cu/Al	14-1/0
3	40		65,000	14,000	B3040	Pressure	Cu/Al	14-1/0
3	50		65,000	14,000	B3050	Pressure	Cu/Al	14-1/0
3	60		65,000	14,000	B3060	Pressure	Cu/Al	14-1/0
3	70		65,000	14,000	B3070	Pressure	Cu/Al	14-1/0
3	80		65,000	14,000	B3080	Pressure	Cu/Al	14-1/0
3	90		65,000	14,000	B3090	Pressure	Cu/Al	14-1/0
3	100		65,000	14,000	B3100	Pressure	Cu/Al	14-1/0

Main Lugs			
Amp Rating	Interrupt Rating (AIC)		Catalog Number
	240V AC	480Y/277V AC	
225			L2000
400			L4000
Main Breakers			
100	65,000	25,000	M2100
225	65,000	25,000	M2225
250	65,000	35,000	M4250
400	65,000	35,000	M4400