



## 631RF 1.5 Amp Power Supply

### Modular Access Control Power Supply

Field Selectable 12VDC or 24VDC Output - Standard  
Dual 12VDC and 24VDC Output - Optional

#### Quality, Performance & Versatility

The SDC 631RF Power Supplies have been developed specifically to support electric locks and access controls. The high performance, heavy-duty circuitry is ideal for inductive loads and multi-door applications. The modular design is built around several different application control modules to meet your specific needs for virtually any electric lock system. SDC power supplies are designed to provide a well organized installation for individual or multi-door systems that may include locking devices, access controls, station controls and consoles for remote control, annunciation and fire/life safety system interface.

#### Manufactured & Tested to Rigorous Standards

SDC 600 Series power supplies are manufactured according to ISO 9001 certified quality standards.

Tests are conducted according to tough UL 1481 criteria for specific use with access controls, fire and burglary applications.

#### Modular Design

Ten different, individually fused door control modules are available for virtually any application. Time delays, latching relays and multiple station circuit breaker modules are available for custom configuration in the field or at the factory.

#### Dip Switch Select System Operation

Specification of the UR Universal Access Hardware Controller provides for six standard DIP switch selectable system and mantrap variations for multiple door systems.



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ALVY - Access Control Systems Unit  
URTZ - Fire and Burglar Alarm Power Supply  
SYSW - Releasing Device Accessory

#### Features

##### Filtered and Regulated

The output filtering stabilizes the DC output voltage and eliminates AC line noise. The solid state regulator maintains the selected output voltage at 12VDC or 24VDC regardless of the output load changes, including battery charging.

##### Field Selectable 12 or 24VDC

The output is field selectable for 12 or 24VDC output.

##### 250 mA Battery Charger Output

A separate PTC protected, battery charger output provides 13.5VDC or 27VDC.

##### LED System Status Indicator

Amber - AC and DC voltages are OK  
Green - No DC output  
Red - No AC input, powered by batteries

##### Class 2 Outputs

Where permitted by code, conduit is not required when using Class 2 outputs.

##### Large Heavy Gauge Enclosure

Model 631RFA is housed in a 16 gauge, 16"W x 14"H x 6.5"D cabinet large enough to accommodate several additional modules and six 7 Amp hour batteries with plenty of room for wiring.

#### Value Added Features

##### Emergency Release Input

The Fire/Life Safety emergency release input is standard on all SDC power supplies.

##### Low Battery Disconnect

Batteries are disconnected from the output circuit prior to deep discharge preventing battery destruction.

##### Isolated Charging Circuit

While the charging output is 13.5VDC or 27VDC, the secondary output is unaffected and precisely maintained at the selected 12 or 24VDC. This ensures system components are powered by their specified voltage.

The secondary output current is maintained at the full 1.5 Amp capacity and is not derated when charging batteries.



#### Scan Me for

- Product Video
  - Datasheet
  - Install Instructions
- Use QR Code Phone App

SECURITY DOOR CONTROLS



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### Ordering Information

- 631RFL** 1.5 Amp Power Supply Only  
Less Box
- 631RF** 1.5 Amp Power Supply  
12"W x 12"H x 4"D
- 631RFA** 1.5 Amp Power Supply  
16"W x 14"H x 6.5"D

### Options

- PC** 6 foot Power Cord.
- KL** Key locked cover.
- 14-2** 7-day skip-a-day timer.
- PS-1** On-Off Push switch inside cabinet. 631RFA only.
- PS-1A** On-Off push switch on cover.
- 230V** 220/230VAC, 50/60 Hz input. (Not UL Listed)



**RB12V4**



**RB12V7**

SDC power supplies equipped with batteries provide continuous operation of access controls, locking devices and peripheral components during a power failure. See Table 2 & 3 to determine battery requirements for standby power.

- RB12V4** 12VDC, 5 Amp Hour Battery  
**631RF** capacity, 4 maximum
- RB12V7** 12VDC, 8 Amp Hour Battery  
**631RFA** capacity, 6 maximum

### How to Order

Specify model, options, modules and batteries.

**631RF x KL x PS-1 x 2 RB12V4**

**631RFA x KL x CR4 x 4 RB12V7**

### Electrical Specifications

**Input:**  
115VAC @ 800mA, 50/60 Hz, Fused  
(220/230VAC 50/60 Hz optional, not UL Listed)

**Selectable Secondary Output:**  
12VDC or 24VDC @ 1.5 Amp,  
poly fuse protected, Class 2

**Battery Charger Output:**  
250mA @ 13.5 or 27VDC,  
PTC protected

### Mechanical Specifications

**631RF:** 12"W x 12"H x 4"D  
(305 x 305 x 102mm)

**Material:** Steel, 20 Ga., (.912mm)

**631RFA:** 16"W x 14"H x 6.5"D  
(406.4 x 355.6 x 165.1mm)

**Material:** Steel, 16 Ga., (1.52mm)



**631RFL**  
1.5 Amp Power Supply  
Less Box



**631RF x PC x CR4 x 2 RB12V4**



**631RFA x UR4A x 4 RB12V7**

**Table 1: Control Module Capacity \***

Power Supply:	631RF		631RFA	
	Battery Qty.		Battery Qty.	
	0-2	3-4	0-2	3-6
	RB12V4		RB12V7	
<b>FB4</b>	4	2	4	4
<b>12VR</b>	1	1	1	1
<b>PSM</b>	1	1	1	1
<b>UR-2A, UR-4A</b>	NA	NA	1	1
<b>TD</b>	4	2	8	4
<b>CR</b>	4	2	8	4
<b>CR-4</b>	2	1	4	2
<b>ACM-1</b>	2	1	4	2
<b>LR</b>	4	2	8	4
<b>PB-8, PB-16</b>	1	1	1	1

\* Total combined load of modules and access control hardware may not exceed 1.5 amp.

**Table 2: 12VDC Standby Power**

5 Ah Battery Qty	1	2	4	
Amp Hours	5Ah	10Ah	20Ah	
Load/Amps	Power Back-up Time in Hours			
<b>0.25</b>	19.6	49	124	
<b>0.50</b>	7.8	20	49	
<b>1.00</b>	3.1	11.3	19.4	
<b>1.50</b>	1.8	4.5	11.3	
8 Ah Battery Qty	1	2	4	6
Amp Hours	8Ah	16Ah	32Ah	48Ah
Load/Amps	Power Back-up Time in Hours			
<b>0.25</b>	36.7	92	232	400
<b>0.50</b>	14.5	36	92	157
<b>1.00</b>	5.7	14.4	36	62
<b>1.50</b>	3.3	8.4	21	36

**Table 3: 24VDC Standby Power**

5 Ah Battery Qty	2	4	
Amp Hours	5Ah	10Ah	
Load/Amps	Power Back-up Time in Hours		
<b>0.25</b>	19.6	49	
<b>0.50</b>	7.8	20	
<b>1.00</b>	3.1	11.3	
<b>1.50</b>	1.8	4.5	
8 Ah Battery Qty	2	4	6
Amp Hours	8Ah	16Ah	24Ah
Load/Amps	Power Back-up Time in Hours		
<b>0.25</b>	36.7	92	158
<b>0.50</b>	14.5	36	62.7
<b>1.00</b>	5.7	14.4	24.8
<b>1.50</b>	3.3	8.4	14.4

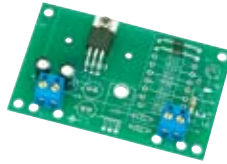
### Fused Outputs



FB-4

**FB-4** Four 2 Amp fuse protected outputs provide precisely calculated circuit protection. Four modules provide 16 outputs.

### Dual 12VDC & 24VDC Outputs (optional)



12VR

**12VR** 12VDC Regulated and Filtered Output Module  
With the power supply output set at 24VDC for locking devices and components, the addition of the 12VR provides a separate 12VDC, 500 mA output for 12VDC access controls and components. Total combined load may not exceed 1.5 Amps.  
**Input:** 24VDC **Output:** 500 mA @ 12VDC

### Remote Monitoring



PSM

#### PSM Power Supply Remote Monitoring Module

The PSM Power Supply Monitoring module provides 2-SPDT, 1 Amp contacts to remotely monitor power supply and battery status.

Remote annunciation conditions include:

- System OK
- AC Fail – No DC Output
- Battery Powered
- System Off – No Battery

### Field Programmable Access Hardware Controller



The UR4A is capable of providing the logic of 8 relays.

#### Time Delay Logic



#### Latching or Conventional Relay Logic



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**UR-2A** Two Station Controller  
**UR-4A** Four Station Controller

The UR series is a microprocessor based controller that provides six different, field selectable application modes for two, three or four stations. The controller installs in 600 series power supplies. Or, individual access hardware controllers may be mounted in remote junction boxes and powered by a single power supply.

#### Interface & Centralized Wiring

The Access Hardware Controller provides complete system interface capability and centralized wiring of all components, including: access controls, electric locks, peripheral equipment and monitoring contacts.

#### Interface & Centralized Wiring

Applications that require several individual relays may be costly and complicated, requiring additional engineering time to produce the proper system logic. The UR eliminates the need for multiple or different relays. All system logic is reduced to one controller.

#### Selectable Output Modes

- Conventional Relay
- Latching Relay (pulse on, pulse off)  
Latch individual station or all stations
- Time Delay Relay 1-35 seconds
- \*Dual - Latching & Time Delay Relay
- Mantrap - All doors normally locked
- Interlock - All doors normally unlocked  
\*Primary input triggers the Time Delay  
Auxiliary input triggers latch function  
The relay mode may be different per individual station. When mantrap or interlock mode is selected, all outputs operate the same.

#### Interface & Centralized Wiring

Several access control and mantrap system wire diagrams are provided for common applications.

#### UR-2A Specifications

**Input Voltage:** 12 or 24VDC +/- 10%  
**Input Current:** 280mA, at rest  
 350mA, operating  
**Trigger Inputs:** N.O. Dry,  
 Optically Isolated  
 (2) Inputs per output, (4) Total plus  
 (4) Auxiliary inputs  
**Outputs:**  
 2 Fused SPDT Dry, 5 Amp @ 30VDC  
 2 Non-fused, SPDT Dry, 1 Amp @ 30VDC

#### UR-4A Specifications

**Input Voltage:** 12 or 24VDC +/- 10%  
**Input Current:** 350mA, at rest  
 430mA, operating  
**Trigger Inputs:** N.O. Dry  
 Optically Isolated  
 (2) Inputs per output, (8) Total plus  
 (4) Auxiliary inputs  
**Outputs:**  
 4 Fused SPDT Dry, 5 Amp @ 30VDC  
 4 Non-fused, SPDT Dry, 1 Amp @ 30VDC  
**Dimensions:** 7"L x 5"W x 1.75"H  
 (177.8 x 127 x 44.5mm)

**Door Control Modules**

Door control relay modules ensure compatibility of access hardware components and simplify system installation and troubleshooting. Different modules may be specified for one power supply. **See Table 1 to determine the module capacity of the power supply.** The isolated relay design allows small gauge cable runs of 22 gauge wire up to 1000 feet from the trigger device to the module.

Contacts: 2.5 Amps inductive, 5 Amps resistive @ 30VDC unless specified otherwise.

**TD Time Delay Relay Module**

Voltage input: 35mA @12/24VDC  
 Timer Adj: 1-120 seconds  
 (1) Non-Fused, SPDT dry contact  
 (1) Fused SPDT voltage output  
 (1) N.O. dry trigger input  
 (1) N.C. dry trigger input  
 (1) Normally off voltage trigger input  
 (1) Anti-Tailgate N.O. timer reset input  
 3.25"W x 2"H (83 x 51mm)

**CR-12, CR-24 Relay Module**

Voltage input: 35mA, specify 12V or 24VDC  
 (1) Fused, SPDT voltage output  
 (1) SPDT dry contact  
 (1) N.O. dry trigger input  
 (1) Normally off, voltage trigger input  
 3.25"L x 2"W (83 x 51mm)

**CR4 Four Station Relay Module**

Voltage input: 120 mA @ 12/24VDC  
 (4) Fused, 2A SPDT dry outputs or voltage outputs  
 (4) 2A SPDT dry outputs  
 (4) N.O. dry trigger inputs  
 3.25"L x 2"W (83 x 51mm)

**ACM-1 Access Control Module**

Voltage input: 45mA @ 12/24VDC  
 (1) SPDT voltage output  
 (1) SPDT dry contact  
 (8) SPDT trigger inputs (4-NC,4-NO)  
 (1) LED status indicator  
 5"L x 3.25"W (127 x 83mm)

**LR-12, LR-24 Latching Relay Module**

Voltage input: 45mA, specify 12V or 24VDC  
 (1) Fused, SPDT voltage output  
 (1) N.O. dry trigger input  
 3.25"L x 2"W (83 x 51mm)

**PB-8 8 Amp Power Booster**

Voltage input: 85mA @ 24VDC input  
 (1) N.O. Dry trigger Input:  
 (1) Fused SPDT voltage output  
 8 Amp Surge  
 1 Amp Continuous  
 3.25"W x 2"H (83 x 51mm)

**PB-16 16 Amp Power Booster**

Voltage input: 85mA @ 24VDC input  
 (1) N.O. Dry trigger Input:  
 (1) Fused SPDT voltage output  
 16 Amp Surge  
 1 Amp Continuous  
 3.25"W x 2"H (83 x 51mm)

**14-212 14-224 Seven Day Timer**

Field programmable, 7 day timer module recommended for automatic timed locking and unlocking of one door or all doors on the same circuit. Schedule up to 6 events maximum on single or multiple days, manual on-off override. Replaceable lithium battery maintains time and schedule during power outage.  
 Input: 30mA, specify 12V or 24V AC/DC  
 SPDT dry contact, 16 Amps @ 30VDC  
 2.375"H x 2.375"W x 1.25"D (60.3 x 60.3 x 32mm)



TD



CR



CR4



ACM-1



LR



PB-8



PB-16



14-2

**Table 4: Lock & Strike Wire Gauge Chart (AWG)**

Distance in feet for 2 conductors from power source to the locking device.

AMPS	25ft	50	75	100	150	200	250	300	400	500	750	1000
0.15	20	20	20	20	20	20	20	20	20	20	18	16
0.25	20	20	20	20	20	20	20	20	18	16	16	14
0.50	20	20	20	20	18	18	18	16	16	14		
0.75	20	20	20	18	18	16	16	14	14			
1.00	20	20	18	18	16	16	14	14				
1.50	20	18	18	16	14	14						

**Signal Wires:** SDC recommends 22 gauge for all signal wiring.