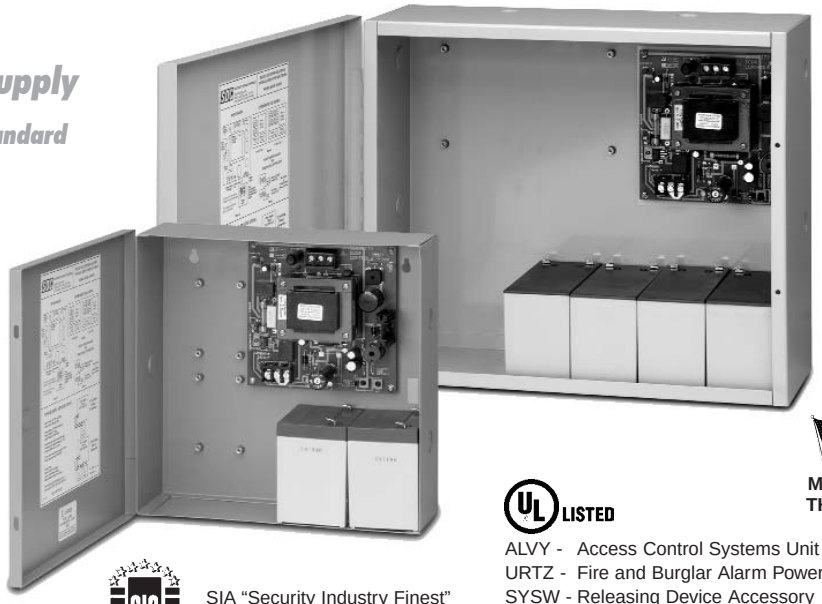
631RF - 1.5 Amp Power Supply

Modular Access Control Power Supply

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

Quality, Performance and 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.



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UL LISTED

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

MADE IN THE USA

Manufactured and 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.

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.

The AC input is protected by a fuse and secondary DC output is protected by auto resetting poly fuse.

250 mA Battery Charger Output
A separate PTC protected, battery charger output provides 13.5VDC or 27VDC.

Low Battery Disconnect
Batteries are automatically disconnected from the secondary output circuit when the voltage decreases below 70%. This ensures batteries are capable of recharging.

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

Value Added Features

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 de-rated when charging batteries.

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

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

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

Large Heavy Gauge Enclosure
Model 631RF**A** 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.

Ordering Information

631RF 1.5 Amp Power Supply
11.25"W x 11.25"H x 3.5"D

631RFA 1.5 Amp Power Supply
16"W x 14"H x 6.5"D

Options

PTC4-075 Four 0.75 Amp auto resetting PTC protected outputs. 2 modules provide 8 outputs. Combined output may not exceed 1.5 Amp.

FB-4 Four fuse protected outputs for precisely calculated protection. 2 modules provide 8 outputs.

MR Manual reset fire alarm release

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)

Dual 12VDC and 24VDC Outputs (optional)

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

Standby Power

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, 4 Amp Hour Battery
631RF capacity, 4 maximum

RB12V7 12VDC, 7 Amp Hour Battery
631RFA capacity, 6 maximum

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

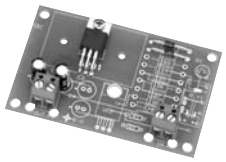
631RF:
11.25"W x 11.25"H x 3.5"D
(285.7 x 285.7 x 88.9mm)

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)

PTC4



12VR

631RF x PC x PTC4-075 x 2 RB12V4

631RFA x UR4A x 4 RB12V7

Table 1: Control Module Capacity

Power Supply	ACM-1	CR	CR-4	PTC4	FB-4	LR	PB	TD	UR
631RF	NA	2	1	2	2	2	2	2	NA
631RFA	4	6	2	2	2	6	2	6	1

How to Order

Specify model, options, modules and batteries.

631RF x KL/PS-1 x 2 PTC4-075 x 2 RB12V4

631RFA x KL x CR4 x 4 RB12V7

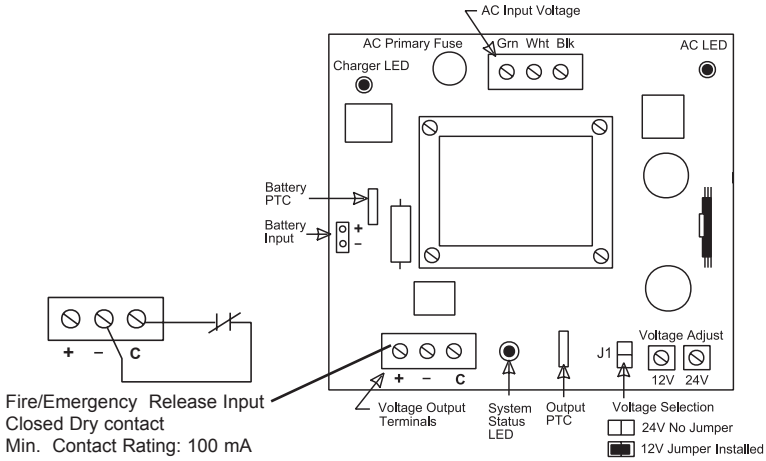


Table 2: 12VDC Standby Power

4.5 Ah Batteries	1	2	3	4	5	6	7	8	9	10
Amp Hours	4.5Ah	9Ah	13.5Ah	18Ah						
Load/Amps	**Power Back-up Time in Hours**									
0.25	17	33	49	65						
0.50	8	15	23	31						
1.00	3	6	9	12						
1.50	2	4	7	10						
7 Ah Batteries	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Amp Hours	**7Ah**	**14Ah**	**21Ah**	**28Ah**	**35Ah**	**42Ah**	**49Ah**	**56Ah**	**63Ah**	**70Ah**
Load/Amps	**Power Back-up Time in Hours**									
1.00	5.7	14	20	30	33	41	48	55	62	69
1.50	3.6	8	13	18	23	29	33	37	39	4

Table 3: 24VDC Standby Power

4.5 Ah Batteries	2	4	6	8	10
Amp Hours	4.5Ah	9Ah			
Load/Amps	**Power Back-up Time in Hours**				
0.25	17	33			
0.50	8	15			
1.00	3	6			
1.50	2	4			
7 Ah Batteries	**2**	**4**	**6**	**8**	**10**
Amp Hours	**7Ah**	**14Ah**	**21Ah**	**28Ah**	**35Ah**
Load/Amps	**Power Back-up Time in Hours**				
1.00	5.6	14	20	30	33
1.50	3.6	8	13	18	23

Access Hardware Controller

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

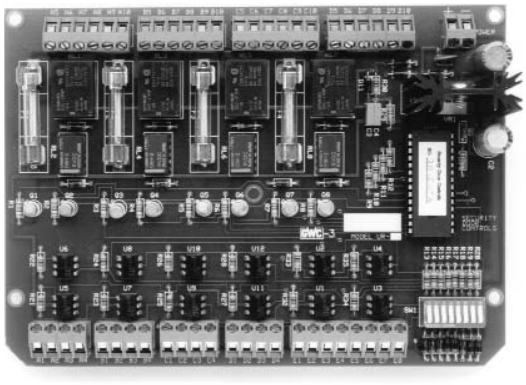
The UR series is a microprocessor based controller that provides six different, field selectable application modes for two, three or four stations. The controller installs in 600 series power supplies. Or, individual access hardware controllers may be mounted in remote junction boxes and powered by a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

Interface and 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.

Reduced Components and Engineering

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.



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

Time Delay Logic

Latching or Conventional Relay Logic

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.

Documentation

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

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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

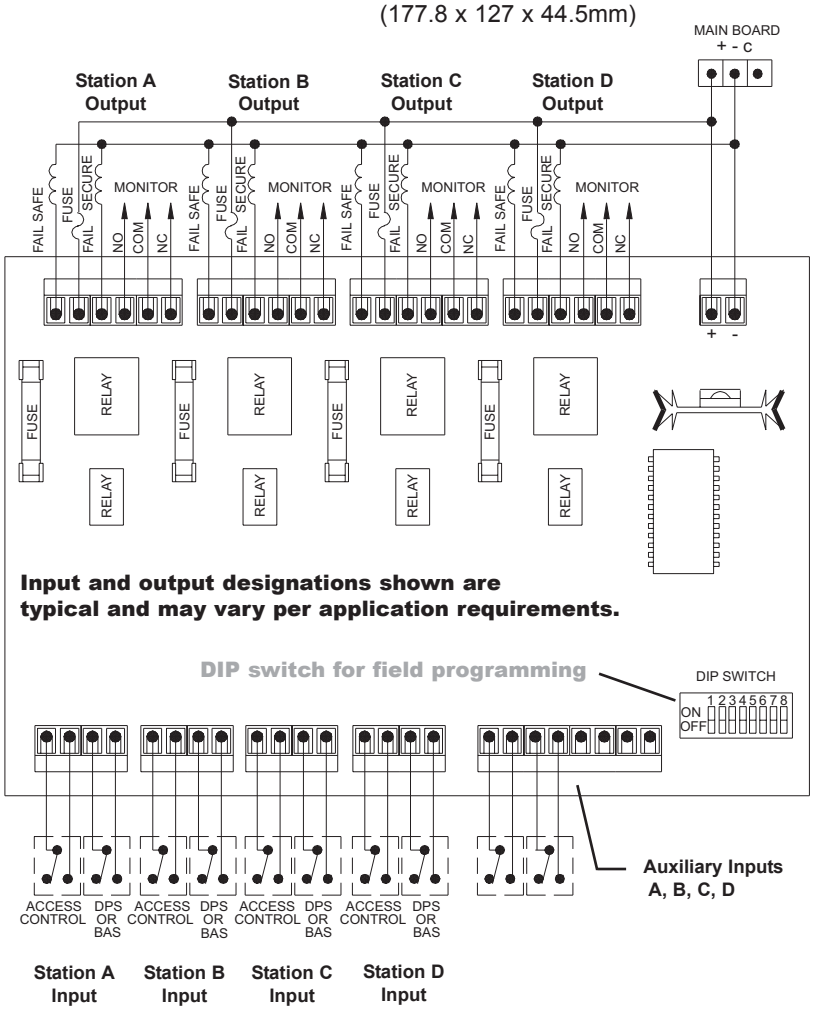
Input Voltage: 12 or 24VDC +/- 10%

Input Current: 350mA, at rest
430mA, operating

Trigger Inputs: N.O. Dry
Optically Isolated
(2) Inputs per output, (8) Total plus
(4) Auxiliary inputs

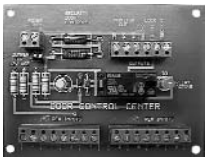
Outputs:
4 Fused SPDT Dry, 5 Amp @ 30VDC
4 Non-fused, SPDT Dry,1 Amp @ 30VDC

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 20 gauge wire up to 1000 feet from the trigger device to the module. **See Table 4 to determine the wire gauge for electric locks.**



ACM-1 Access Control Interface Module

Input Voltage: 12 or 24VDC

Input Current: 45mA

Eight Trigger Inputs:
Four - N.C. and Four - N.O. Dry

Voltage/Lock Output:
SPDT, 5 Amps @ 30VDC

Auxiliary Output:
SPDT Dry, 5 Amps @ 30VDC

Dimensions: 4.25"W x 3.75"H (108mm x 111mm)

LR Latching Relay Module

Input Voltage: Specify 12 or 24VDC

Input Current: 35mA

Trigger input:
Two position, Center off, N.O., Dry, Momentary pulse to latch on and off

Voltage/Lock Output:
Fused SPDT, 5 Amps @ 30VDC

Dimensions:
3.25"W x 2"H (83mm x 51mm)

TD Time Delay Relay Module

Input Voltage: 12 or 24VDC

Input Current: 35mA

Dry Trigger Inputs:
One - N.O. Dry, One - N.C. Dry

Wet Trigger Input: Normally Off
The trigger voltage must be the same as the lock and supply voltage.

Anti-Tailgate/Reset Input: N.O. Dry
When the door opens the magnetic contact closes, resetting the timer. The door locks when closed.

Voltage/Lock Output:
Fused SPDT, 5 Amps @ 30VDC

Auxiliary Output: Non-fused
SPDT Dry, 5 Amps @ 30VDC

Dimensions:
3.25"W x 2"H (83mm x 51mm)

CR Control Relay Module

Input Voltage: Specify 12 or 24VDC

Input Current: 35mA

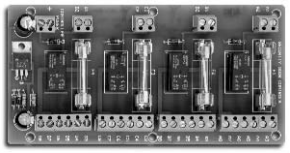
Dry Trigger Input: One N.O. Dry

Wet Trigger Input: Normally Off
Trigger Voltage must be the same as the relay and supply voltage, AC or DC

Voltage/Lock Output:
Fused SPDT, 5 Amps @ 30VDC

Auxiliary Output: Non-fused SPDT
Dry, 5 Amps @ 30 VDC

Dimensions:
3.25"W x 2"H (83mm x 51mm)



CR4 Four Station Relay Module

Input Voltage: 12 or 24VDC
Input Current: 120mA
Trigger Inputs: Four N.O. Dry
Lock Outputs: Four, Fused
SPDT Dry, 2 Amps @ 30VDC
Auxiliary Outputs: Four, Non-fused,
SPDT Dry, 2 Amps @ 30VDC
Dimensions:
6"W x 3.25"H (153mm x 83mm)

PB-8 8 Amp Power Booster

Input Voltage: 24VDC
Input Current: 85mA
Trigger Input: N.O. Dry
Lock Output: SPDT, 24VDC
1 Amp Continuous
8 Amps Surge
Dimensions:
3.25"W x 2"H (83mm x 51mm)

PB-16 16 Amp Power Booster

Input Voltage: 24VDC
Input Current: 85mA
Trigger Input: N.O. Dry Contact
Lock Output: SPDT, 24VDC
1 Amp Continuous
16 Amps Surge
Dimensions:
3.25"W x 2"H (83mm x 51mm)

Table 4: Wire Gauge Chart (AWG) — **Distance in feet for 2 conductors from power source to the locking device.**

AMPS	25	50	75	100	150	200	250	300	400	500	25	50	75	100	150	200	250	300	400	500	1000
0.25	18	18	18	18	18	18	16	16	14	14	18	18	18	18	18	18	18	18	18	16	16
0.50	18	18	18	18	16	14	14				18	18	18	18	18	18	18	16	16	14	
0.75	18	18	18	16	14	14					18	18	18	18	18	16	16	14	14		
1.00	18	18	16	14	14						18	18	18	18	16	16	14	14			
1.50	18	18	16	14							18	18	18	16	16	14					
2.00	18	16	14	Minimum Wire Gauge							18	18	16	16	14	Minimum Wire Gauge					
2.50	18	16	for 12V AC / DC								18	18	16	14	for 24V AC / DC						
3.00	16	14									18	16	14	14							
3.50	16										18	16	14								

SECURITY DOOR CONTROLS

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