631RF 1.5 Amp Power Supply

Modular Access Control Power Supply

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

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UL LISTED

MADE IN THE USA

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

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 Quality Assurance 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 Swith 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.

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 de-rated when charging batteries.

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 programmable 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 UR4-8 x 4 RB12V7

Table 1: Control Module Capacity *

Power Supply:	631RF		631RFA	
Battery Qty.	0-2	3-4	0-2	3-6
	RB12V4		RB12V7	
FB4	4	2	4	4
12VR	1	1	1	1
PSM	1	1	1	1
UR-1, UR-2A, UR-4A	NA	NA	1	1
CR-4	2	1	4	2
ACM-1	2	1	4	2
PB-8, PB-16	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			
0.25	19.6	49	124	
0.50	7.8	20	49	
1.00	3.1	11.3	19.4	
1.50	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			
0.25	36.7	92	232	400
0.50	14.5	36	92	157
1.00	5.7	14.4	36	62
1.50	3.3	8.4	21	36

Table 3: 24VDC Standby Power

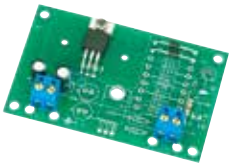
5 Ah Battery Qty	2	4	
Amp Hours	5Ah	10Ah	
Load/Amps	Power Back-up Time in Hours		
0.25	19.6	49	
0.50	7.8	20	
1.00	3.1	11.3	
1.50	1.8	4.5	
8 Ah Battery Qty	2	4	6
Amp Hours	8Ah	16Ah	24Ah
Load/Amps	Power Back-up Time in Hours		
0.25	36.7	92	158
0.50	14.5	36	62.7
1.00	5.7	14.4	24.8
1.50	3.3	8.4	14.4

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

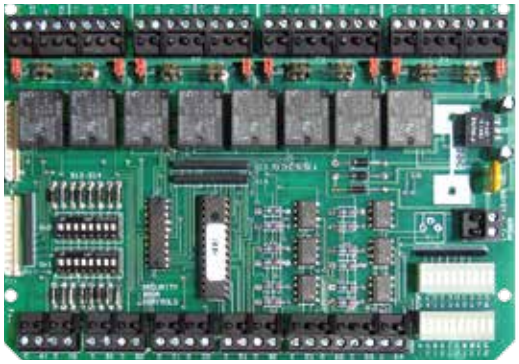
Remote Monitoring

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 UR4-8 is capable of providing the logic of 8 relays.

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UR2-4 Two Station Controller
UR4-8 Four Station Controller

The UR series is a microprocessor based controller that provides 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.

UR2-4 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

UR4-8 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.

UR1 Universal Door Controllers
Voltage input: Automatic Voltage Sensing
12VDC @ 120mA, 24VDC @ 175mA
Trigger Inputs:
a) Two (2) N.O. dry inputs for individual relay
b) Tandem: Either N.O. dry input triggers both relays
Outputs : 2 form "C" SPDT outputs,
(N.C. failsafe, N.O. failsecure)
- 10 Amps (resistive), 7 Amp (inductive) @ 30VDC
- Wet (voltage) and/or Dry output
- Wet output voltage is same as module input voltage
- Two (2) LED relay active indicators

Relay Mode Output Configuration:
a) Two (2) Wet (power) and/or Dry outputs.
b) Tandem: Simultaneously activates both SPDT outputs
3.2" W x 2" L x 1" H (81.28 x 50.8 x 25.4 mm)

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)

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)

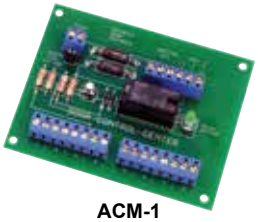
14-2-12 14-2-24 Seven Day Timer
Field programmable, 7 day timer module recommended for automatic timed locking and unlocking of one door or all doors on the same circuit. Schedule up 6 events maximum on single or multiple days, manual on-off override. Replaceable lithium battery maintains time and schedule 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)


UR1


PB-8


CR4


PB-16


ACM-1


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						

Wire Gauge

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

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