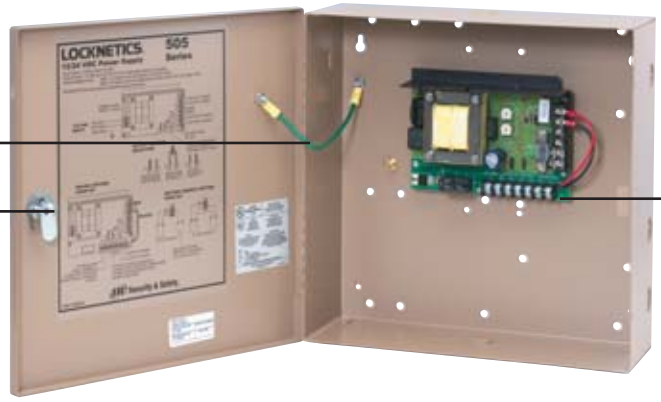
LOCKNETICS® by SCHLAGE

505 Series Power Supply



505 Series

Locknetics provides modular power supplies, designed to make it easy and cost effective to power electrical locking systems. The 500 Series Power Supplies are available in three models each UL Listed as a General Purpose Power Supply. The 505, 510 and 515 Series all feature low voltage DC, regulated, filtered power supplies with a built in battery charging circuit. Each is designed to provide easy system interface with Locknetics locking devices, station controls and consoles.

A NEMA Grade 1 approved enclosure is universal throughout the line, measuring 12"x12"x4". The 500 Series provides a built in battery charging circuit as a standard feature. Standby battery packs are optional and can be added in the field. Additional information on standby battery power is available on page H8.

The 505 model provides 1 amp of output current at 12 and 24 volts. Output voltage is field selectable by moveable jumpers. It is UL Listed, filtered and regulated, with a built in battery charging circuit.

Standby battery kits (SBP1 or SBP2) may also be added to the 505 Series power supply at the factory or in the field. See page H9 for recommended battery power to meet specific job requirements. A key lock cover, power line cord and emergency interface relay module (EIR-5) are available as factory installed options.

To provide the proper power supply, be sure to select sufficient output current. See the current Capacity Chart for Locknetics locking devices on page H7. Select options required, outlined on pages H6 and H7, and determined standby battery power requirements shown on page H8.

c UL us MEA 100-95-E

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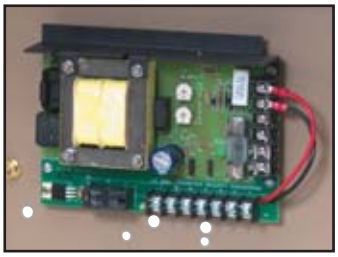
505 Series Power Supply

Specifications

505 KLC EIR-5

SBP2



EIR-5

ELECTRICAL

INPUT POWER*	120VAC 60HZ 5amp
OUTPUT VOLTAGE	12VDC Nominal (13.8VDC) 24VDC Nominal (27.6VDC) Field Selectable Filtered and Regulated
OUTPUT CURRENT	1amp @ rated voltage
PRIMARY FUSE SIZE	800mA, 5 x 20mm
BATTERY FUSE SIZE	2amp, 3AG
SECONDARY PROTECTION	Output overload protected by the regulator circuit
CHARGING CIRCUIT	Built-in standard

* E versions available for environments which require 220VAC, 50/60HZ input power. Call Factory for details.

MECHANICAL

ENCLOSURE	12" x12" x 4 steel NEMA Grade 1 with conduit knockouts & hinged cover with lock down screws
COLOR/FINISH	Beige/baked enamel
WEIGHT (Power Supply)	8.0 lbs.
WEIGHT (Each battery)	4.0 lbs.
INPUT TERMINALS	Barrier strip with (2) #6 screw terminals and Protective cover and 1 #10 ground screw
OUTPUT TERMINALS	Barrier strip with (6) #6 screw terminals

DESCRIPTION OF OPERATIONS

Output voltage is field selectable by moveable jumpers. With line power applied, a green LED on the circuit board will be illuminated. When line power is present the built-in recharging circuit will keep the batteries charged.

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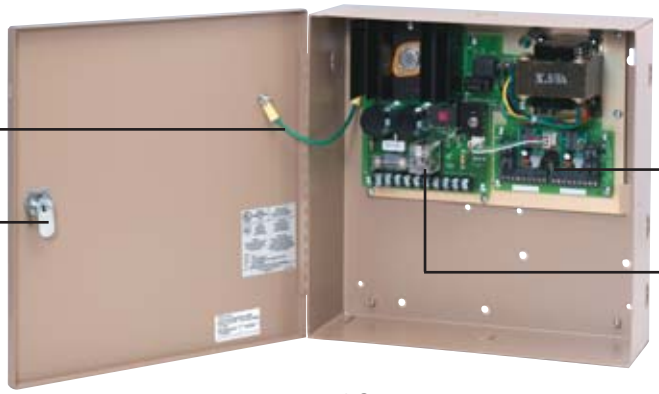
510 Series Power Supply



510 Series

The 510 Series Power Supply offers the ultimate in versatility. Output voltage is field selectable with an on board switch: 3amp @ 12VDC and 2amp @ 24VDC. Like each of the of Locknetics power supplies the 510 is UL listed, filtered and regulated, with a built in battery charging circuit.

The 510 Series features modular electronics which offer flexibility, ease and convenience to power electronic locking systems. Plug-in dual control modules can be added for independent control of up to six zones. Each dual control module (DCM) can provide control for two independent zones. Up to three dual control modules can fit into a control module rack (CMR). A plug-in adjustable relock time delay module (TDM) is available with a 0 to 30 second delay. It plugs into each zone of the dual control module to provide up to six TDM's in each power supply. An emergency interface relay (EIR) module plugs into the main circuit board to provide interface with approved fire or other emergency systems. A signal from the emergency systems will automatically and instantly unlock all locks connected to the power supply. All of the modules – DCM, CMR, TDM, and EIR – can be easily configured in the factory or in the field. In some installations, it may be required by code that the locking device (fail safe type) be immediately unlocked upon actuation of an approved fire emergency system. Whenever this installation is required use the Emergency Interface Relay (EIR) and check with the authority having jurisdiction for approval of the proposed system hookup.

Standby battery kits (SBP2) may be added to the 510 Series power supply at the factory or in the field. See page H8 for recommended battery power to meet specific job requirements. A key lock cover is available as a factory installed option.

To select the proper power supply, be sure to supply sufficient current output. See the current capacity for Locknetics locking devices on page H7. Select the options required, which are outlined on pages H9 and H10, and determine standby battery power requirements, shown on page H8.

LOCKNETICS® by SCHLAGE

510 Series Power Supply

Specifications

505 KLC EIR

SBP2

ELECTRICAL

INPUT POWER*	120VAC 60HZ 1amp
OUTPUT VOLTAGE	12VDC Nominal (13.8VDC) 24VDC Nominal (27.6 VDC) Field Selectable Filtered and Regulated
OUTPUT CURRENT	3amp max. @ 13.8VDC 2amp max. @ 27.6VDC
PRIMARY FUSE SIZE	1amp, 5 x 20mm
BATTERY FUSE SIZE	6amp, 3AG
SECONDARY PROTECTION	Output overload protected by the regulatory circuit
CHARGING CIRCUIT	Built-in standard

* E versions available for environments which require 220VAC, 60HZ input power. Call factory for details.

MECHANICAL

ENCLOSURE	12"x12"x4" steel NEMA Grade 1 with conduit knockouts and hinged cover with lock down screws
COLOR/FINISH	beige/baked enamel
WEIGHT (Power Supply)	11 lbs.
WEIGHT (Each battery)	4 lbs.
INPUT TERMINALS	Barrier strip with (2) #6 screw terminals, protective cover (1) #10 ground screw
OUTPUT TERMINALS	Barrier strip with (10) #6 screw terminals (Basic unit only)

DESCRIPTION OF OPERATIONS

Output voltage is field selectable by slide switch. With line power applied, a green LED on the circuit board will be illuminated. This indicates constant power on the output terminals. When batteries are included power may be present on output terminals with the green LED illuminated and on line power present. When line power is present the built-in recharging circuit will keep the batteries charged.

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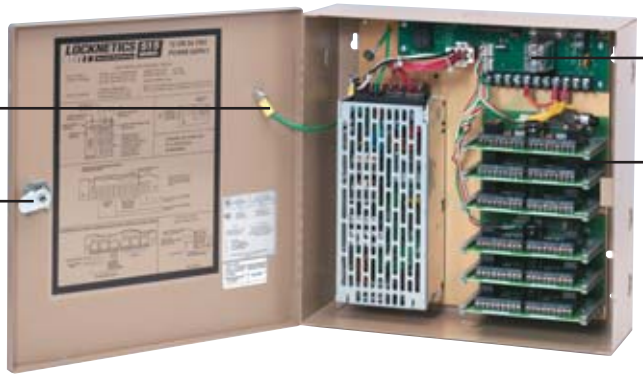
515 Series Power Supply



515 Series

The 515 Series Power Supply provides the greatest current output in the Locknetics line of power supplies. Select from 10amp @ 12VDC or 5amp @ 24VDC. The 515 is UL listed, filtered and regulated, with a built-in battery-charging unit.

The 515 Series features modular electronics which offer flexibility, ease and convenience to power electronic locking systems. Plug-in dual control modules can be added for independent control of up to twelve (12) zones. Each dual control module (DCM) can provide control for two independent zones. Up to three dual control modules can plug into a control module rack (CMR) and up to two control module racks can fit into a 515 power supply. A plug-in adjustable relock time delay module (TDM) is available with a 0 to 30 second delay. It plugs onto each zone of the dual control module to provide up to twelve TDM's in each power supply, and an emergency interface relay (EIR) module plugs into the main circuit board to provide interface with approved fire or other emergency systems. A signal from the emergency system will automatically and instantly unlock all locks connected to the power supply. All of the modules – DCM, CMR, TDM and EIR – can be easily configured in the factory or in the field.

Standby battery power may also be added to the 515 Series power supply at the factory or in the field. A Standby Battery Enclosure (SBE) is available which holds up to eight (8) batteries. Each standby battery kit (SBP2) contains two batteries, which provide 4amp/hr at 24VDC and 8amp/hr at 12VDC.

In some installations it may be required by code that the locking device (fail-safe type) be immediately unlocked upon actuation of an approved fire emergency system. Whenever this installation is required use the Emergency Interface Relay (EIR) and check with the authority having jurisdiction for approval of the proposed system hookup.

To select the proper power supply, be sure to supply sufficient current output. See the current capacity for Locknetics locking devices on page H7. Select the options required, which are outlined on pages H9 and H10, and determine standby battery power requirements shown on page H8.

c UL us MEA 186-92-E

LOCKNETICS® by SCHLAGE

515 Series Power Supply

Specifications

SBE

SBP2

ELECTRICAL

INPUT POWER*	110VAC 60HZ 2amp
OUTPUT VOLTAGE	12VDC Nominal (13.8VDC) 24VDC Nominal (27.6VDC) Filtered and Regulated
OUTPUT CURRENT	10amp max. @ 13.8VDC 5amp max. @ 27.6VDC
PRIMARY FUSE SIZE	6.3amp (non-removable)
BATTERY FUSE SIZE	12amp, 3AG
SECONDARY CIRCUIT	Output overload protected by the regulator circuit
CHARGING CIRCUIT	Built-in standard

* E versions available for environments which require 220VAC, 60HZ input power. Call Factory for details.

MECHANICAL

ENCLOSURE	12"x12"x4" Steel NEMA Grade 1 with conduit knockouts and hinged cover with lock down screws
COLOR/FINISH	Beige/baked enamel
WEIGHT (Power Supply)	9 lbs.
INPUT TERMINALS	Barrier strip with (2) #6 screw terminals with protective cover (1) #10 ground screw
OUTPUT TERMINALS	Barrier strip with (10) #6 screw terminals (basic unit only)

DESCRIPTION OF OPERATIONS

With line power applied, a green LED on the circuit board will be illuminated. This indicates constant power on the output terminals. When batteries are included power may be present on output terminals with the green LED illuminated and no line power present. When line power is present the built-in recharging circuit will keep the batteries charged.

LOCKNETICS® by SCHLAGE

500 Series Power Supplies

Power Supply Options

Module Options	Description	Model
CMR1 ***Control Module Rack*** 	The Control Module Rack (CMR1) interfaces with the main board and power assembly via a 5" long plug-in cable assembly. It accepts up to three Dual Control Modules (DCM.)	510 515
DCM ***Dual Control Module*** 	The Dual Control Module (DCM) is a plug-in pc card providing separate sections for control of two individual doors. Each section includes a nine (9) position screw terminal block for output power, control hookup and SPDT dry contact outputs (rated 5amps @ 30VDC.) Included is a plug to accept a Time Delay Module (TDM) for each section. A plug for interfacing a single card (without the CMR option) to the main board and power assembly is included.	510 515
RCM ***Relay Control Module*** 	The Relay Control Module (RCM) has all the features of the DCM except that, instead of providing output power and SPDT contact, it provides a DPDT dry contact for use in systems that require relay logic control.	510 515
TDM ***Time Delay Module*** 	The Time Delay Module (TDM) is a plug-in pc card providing an adjustable (0 –30 seconds) delay on relock. It may be added to each individual section of the DCM or RCM card.	510 515
EIR ***Emergency Interface Relay Module*** 	The Emergency Interface Relay Module (EIR) is a plug-in relay allowing interfacing with fire or other emergency override systems. Upon opening a closed dry contact from an override system, the EIR will cut power at designated output terminals on the power supply, and/or DCM card. The EIR also provides SPDT dry contact outputs (rated 3amp @ 30VDC.)	510 515
EIR-5 ***Emergency Interface Relay Module*** 	The Emergency Interface Relay Module (EIR-5) is a pc board relay allowing interfacing with fire or other emergency override systems. Upon opening a closed dry contact from an override system, the EIR-5 will cut power at designated output terminals on the power supply. The EIR-5 also provides SPDT dry contact outputs (rated 3amp @ 30VDC.)	505

LOCKNETICS® by SCHLAGE

500 Series Power Supplies

Power Supply Options

Module Options	Description	Model
SBP1/SBP2 ***Standby Battery Enclosure*** 	The Standby Battery Pack (SBP1) option provides one 12VDC, 4amps/hr battery for 12VDC systems. The Standby Battery Pack (SBP2) options provides a pair of 12VDC, 4amps/hr batteries for 12VDC or 24VDC systems (provides 24VDC, 4amps/hr.) Additional batteries may be used to increase the amps/hr output. The cable kit (CAB) provides hardwire for the proper hookup of up to two batteries. It consists of (2) quick connect terminals and (4) one foot long leads with quick connect lugs.	505 510 515
SBE ***Standby Battery Enclosure*** 	The Standby Battery Enclosure (SBE) is a 12"x12"x4" steel NEMA Grade 1 enclosure with conduit knockouts and hinged cover with lock down screws. It will hold up to eight SBP batteries, and provides a fused circuit board with screw type output terminals. Quick connect type terminal are provided for easy hookup of batteries for 12VDC or 24 VDC configurations.	

Factory Installed Options	Description	Model
KLC ***Key Lock Cover*** 	Cam lock supplied with two keys provides additional security. Includes grounding wire from cover to enclosure.	505 510 515 SBE
PLC ***Power Line Cord*** 	Where codes permit, the Power Line Cord provides a convenient and easy installation by plugging into a standard outlet.	505
WCM 	The WCM is designed to provide higher security by accepting a scrambled 32-bit Wiegand protocol output. This plug-in pc card is specifically used with the HandKey® II or HandKey CM. It is installed at the factory in either a 510 or 515 power supply or in a CMR rack and provides 2 wet and 2 dry contact outputs (or 4 dry) form “C” contact outputs. It incorporates spike suppression (MOV) and is rated 5 Amp.	510 515

LOCKNETICS® by SCHLAGE

500 Series Power Supplies

How To Select Options for 510 and 515 Power Supplies

The versatile 510 and 515 power supplies offer several options and accessories that can be configured at the factory or ordered as modular components and assembled by an authorized distributor. The unique Dual Control Module (DCM) system makes it more convenient than ever to power electronic locking systems.

Dual Control Module (DCM)	Control Module Rack (CMR)	Time Delay Module (TDM)	Emergency Interface Relay Module EIR
Each DCM provides control of two individual zones. Each zone has a 5 amp DPDT control relay	A single DCM Card can attach directly to the main board or a CMR can attach to the main board and accept up to (3) DCM cards. This upgrade is ideal for interlock application	A plug-in TDM providing an adjustable (0-30 seconds) delay on relock can be added to each individual zone of the DCM card	The EIR is a plug-in relay to provide an interface with fire or other emergency override systems

510 Series Options
Each 510 Power Supply is prepped to accept (1) DCM option directly mounted to the box or (1) CMR option (which holds up to (3) DCM, RCM or WCM options in any combination)

DCM, RCM, WCM	AVAILABLE ZONES	CMR	TDM	EIR
0-Basic	1	0	0	0 or 1
1	2	0 to 1	Up to 2	0 or 1
2	4	1	Up to 4	0 or 1
3	6	1	Up to 6	0 or 1

515 Series Options
Each 515 Power Supply is prepped to accept (2) DCM option directly mounted to the box, or up to (2) CMR options (which holds up to (3) DCM, RCM or WCM options each in any combination)

DCM, RCM, WCM	AVAILABLE ZONES	CMR	TDM	EIR
0-Basic	1	0	0	0 or 1
1	2	0 to 1	Up to 2	0 or 1
2	4	0 or 1	Up to 4	0 or 1
3	6	1	Up to 6	0 or 1
4	8	1 or 2	Up to 8	0 or 1
5	10	2	Up to 10	0 or 1
6	12	2	Up to 12	0 or 1

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500 Series Power Supplies

Current Capacity: Power Supply and Component Selection Chart

MAXIMUM NUMBER OF COMPONENTS PER 12 VOLT POWER SUPPLY				
COMPONENT CODE	**COMPONENT CURRENT DRAW** @12 VDC	**505 POWER SUPPLY** 1 amp@12 VDC	**510 POWER SUPPLY** 3amp @12 VDC	**515 POWER SUPPLY** 10amp @12 VDC
Electromagnetic Locks				
40	.32 amps	3	9	31
70	.25 amps	3	11	39
101+	.80 amps	1	3	12
280+	.90 amps	1	3	11
320+	.75 amps	1	3	13
390G+	.67 amps	1	4	14
320M	.23 amps	4	12	43
350+	.75 amps	1	3	13
390+	.60 amps	1	4	16
390DEL	.80 amps	1	3	12
390PIR	.80 amps	1	3	12
GF3000+	.90 amps	1	3	11
PowerBolts				
405/406	.90 amps	1	3	11
Cabinet Locks				
442S Cabinet Lock	.50 amps	1	5	19

MAXIMUM NUMBER OF COMPONENTS PER 24 VOLT POWER SUPPLY				
COMPONENT CODE	**COMPONENT CURRENT DRAW** @24 VDC	**505 POWER SUPPLY** 1 amp@24 VDC	**510 POWER SUPPLY** 3amp @24 VDC	**515 POWER SUPPLY** 10amp @24 VDC
Electromagnetic Locks				
40	.15 amps	6	12	33
70	.12 amps	8	16	41
101+	.50 amps	1	3	9
280+	.45 amps	2	4	11
320+	.38 amps	2	5	13
390G+	.35 amps	2	5	14
320M	.45 amps	2	4	11
350+	.38 amps	2	5	13
390+	.30 amps	3	6	16
390DEL	.50 amps	1	3	9
390PIR	.50 amps	1	3	9
GF3000+	.45 amps	2	4	11
PowerBolts				
405/405S/406	.45 amps	2	4	11
Cabinet Locks				
442S Cabinet Lock	.25 amps	3	7	19

LOCKNETICS® by SCHLAGE

500 Series Power Supplies

505 POWER SUPPLY: STANDBY TIME IN HOURS				
CURRENT DRAW OF LOAD IN AMPS	12VDC SYSTEMS		24VDC SYSTEMS	
	HRS.	HRS.	HRS.	HRS.
1.0	6	12	3	6
.50	12	24	6	12
.33	24	48	12	24
.22	36	72	18	36
.16	48	96	24	48
NO. OF SBP2's REQUIRED	1	2	1	2
NO. OF SBE's REQUIRED	0	1	0	1

510 POWER SUPPLY: STANDBY TIME IN HOURS								
CURRENT DRAW OF LOAD IN AMPS	12VDC SYSTEMS				24VDC SYSTEMS			
	HRS	HRS	HRS	HRS	HRS	HRS	HRS	HRS
3.0	2	4	6	8	-	-	-	-
2.0	3	6	9	12	1.5	3	4.5	6
1.0	6	12	18	24	3	6	9	12
.50	12	24	36	48	6	12	18	24
.33	24	48	72	96	12	24	36	48
.22	36	72	108	144	18	36	54	72
.16	48	96	144	192	24	48	72	96
NO. OF SBP2's REQUIRED	1	2	3	4	1	2	3	4
NO. OF SBE's REQUIRED	0	1	1	1	0	1	1	1

515 POWER SUPPLY: STANDBY TIME IN HOURS								
CURRENT DRAW OF LOAD IN AMPS	12VDC SYSTEMS				24VDC SYSTEMS			
	HRS	HRS	HRS	HRS	HRS	HRS	HRS	HRS
10.0	.20	.40	.60	.80	-	-	-	-
8.0	.44	.88	1.3	1.8	-	-	-	-
5.0	.84	1.7	2.6	3.4	.42	.84	1.3	1.7
4.0	1.2	2.4	3.6	4.8	.6	1.2	1.8	2.4
2.0	3	6	9	12	1.5	3	4.5	6
1.0	6	12	18	24	3	6	9	12
.50	12	24	36	48	6	12	18	24
NO. OF SBP2's REQUIRED	1	2	3	4	1	2	3	4
NO. OF SBE's REQUIRED	1	1	1	1	1	1	1	1

How to Calculate Standby Battery Power Time in Hours

1. Select Power Supply 505, 510, 515
2. Determine voltage to be used
3. Determine current draw of load in amps
4. Read across to select standby time in hours desired
5. Reference your selection by matching the amp load row to the stand by hours column

LOCKNETICS by SCHLAGE

500 Series Power Supplies

How To Order 500 Series Power Supplies

510 – DCM3 – CMR1 – SBP2

Select Power Supply
Select Option(s)
Select Standby Battery Power

Note: To select the appropriate Power Supply – multiply the component amp rating for 12VDC or 24VDC by the number of components that will be connected to the Power Supply (see Current Capacity Chart in this section.)

505 Series Power Supply

1. Select Power Supply

505 12/24VDC Field Selectable (shipped 12V unless specified)1amp @ 12VDC / 1amp @ 24VDC

2. Select Options

PLC Power Line Cord (factory installed)
KLC Keylock Cover
EIR-5 Emergency Interface Relay Module (cannot be added in the field)

3. Select Accessories

CAB Cable kit for batteries
SBP1 Standby Battery Pack 12VDC with Cable Kit (4amp/hr)
SBP2 Standby Battery Pack 12/24VDC with Cable Kit (4amp/hr)

510 Series Power Supply

1. Select Power Supply

510 12/24VDC field Selectable (shipped 12V unless specified) 3amp @ 12VDC / 2amp @ 24VDC

2. Select Options

DCM Dual Control Module (up to 3 DCM to Control stations - add number required after option i.e. DCM3.)
RCM Relay Control Module (up to 3 RCM to control 6 stations – add number required after option i.e. RCM 3.)
TDM Adjustable Time Delay Module (up to 6 must plug into DCM or RCM – add number required after option i.e. TDM6.)
CMR Control Module Rack (use 1 CMR for 2 or 3 DCM or RCM, – add number required after option i.e. CMR1.)
EIR Emergency Interface Relay
KLC Keylock Cover
WCM Wiegand Control Module

3. Select Accessories

SBP2 Standby Battery Pack – 2 batteries
SBE Standby Battery Pack Enclosure (use when more that 4 batteries required)

Ordering Information
Example of fully equipped factory configured 510 Power Supply: 1 each 510 DCM3 – CMR1 – TDM6 – EIR – KLC, 1 each SBP2

515 Series Power Supply

1. Select Power Supply

515-12 10amp @ 12VDC
515-24 5amp @ 24VDC

2. Select Options

DCM Dual Control Module (up to 6 DCM to Control stations - add number required after option i.e. DCM6.)
RCM Relay Control Module (up to 6 RCM to control 12 stations – add number required after option i.e. RCM 6.)
TDM Adjustable Time Delay Module (up to 12 must plug into DCM or RCM – add number required after option i.e. TDM12.)
CMR Control Module Rack (use 1 CMR for 2 or 3 DCM or RCM, 2 CMR for 4 to 6 DCM or RCM – add number required after option i.e. CMR2.)
EIR Emergency Interface Relay
KLC Keylock Cover
WCM Wiegand Control Module

3. Select Accessories

SBP2 Standby Battery Pack – 2 batteries
SBE Required standby Battery Pack Enclosure (use when more that 4 batteries required)

Ordering Information
Example of fully equipped factory configured 515 Power Supply: 1 each 515-24 – DCM6 – CMR2 – TDM12 – EIR – KLC, 1 each SBE – KLC, 4 each SBP2

Transformers

Hardwired Transformers

592-12

Hardwired
Input: 120 VAC, 60Hz
Output: 12VAC @ 2.8A
Height: 3.0156"
Length: 2.5"
Width: 2.0625"

592-24

Hardwired
Input: 120 VAC, 60Hz
Output: 24VAC @ 2.8A
Height: 3.0156"
Length: 2.5"
Width: 2.0625"

592-12RC

Hardwired
Input: 120 VAC, 60Hz
Output: 12VAC @ 2.8A
Height: 2 5/8"
Length: 4"
Width: 2 1/4"

592-24RC

Hardwired
Input: 120 VDC, 60Hz
Output: 24VDC @ 2.8A
Height: 2 5/8"
Length: 4"
Width: 2 1/4"

591-24-3A

Hardwired
Input: 120 VDC, 60Hz
Output: 24VDC @ 3.2A
Height: 3.0156"
Length: 2.5"
Width: 2.0625"

Plug-in Transformers

593PI-24

Plug-in Transformer
Input: 120 VAC, 60Hz,
Output: 24VAC

593PI-12DC

Plug-in Transformer
Input: 120 VDC, 60Hz
Output: 12VDC @ 1A
Height: 3.21"
Length: 2.31"

593PI-12

Plug-in Transformer
Input: 120 VAC, 60Hz, 0.22A
Output: 12VAC
Height: 1.96"
Length: 2.20"
Width: 1.88"

593PI-24DC

Plug-in Transformer
Input: 120 VDC, 60Hz
Output: 24VDC @ .50A
Height: 3-1/32"
Length: 2-7/32"
Width: 1-15/16"