



DG-ea100/200/300

**Easy Version Standalone PROX Keypad Controllers
Operation Manual**



1. General Features:

- ◇ **DG-ea100/200/300** are Easy version of standalone door access proximity keypad controllers.
- ◇ **DG-ea100** is designed for universal standard size configuration, particularly for ANSI standard size.
DG-ea200 is designed for Asian or European standard size configuration.
DG-ea300 is a slim and narrow style controller for narrow door frame configuration.
- ◇ Waterproof designed, but not to be exposed in outdoor under severe sunlight.
- ◇ The audible keypad applies touch sensor technology compared with traditional physical rubber keypad and overcomes any possible mechanical problems.
- ◇ Infra-red light tamper design overcomes possible mechanical problems.
- ◇ **3 operation modes: (1.) Card or PIN, (2.) Card only, (3.) PIN only.**
- ◇ Program setting: Adding or deleting a PIN number by the audible touch sensor keypad.
- ◇ Up to 5 Master cards can be registered onto a reader. If a user forgets his Master password, just tap in * * , < Use the Master card >, and # to enter the program mode. The Master card is also equal to a valid access card.
- ◇ **500-cardholder capacity.** 32-bit card serial number which can be saved at a memory location from 1 to 500.
- ◇ **100 door access PINs.** The length of a PIN number is capable from 1 to 6 digits, and you can set the value from 1 to 999999. A PIN number can be saved at a memory location from 501 to 600.
- ◇ To enter the program mode by key in the Master password or use a Master card. The Master password is capable from 1 to 8 digits, and you can set the value from 0 to 99999999.
- ◇ Password lockout threshold. 3 failed attempts in a roll will cause the reader to be locked, and then the reader cannot be used until 60 seconds.
- ◇ These 3 readers DG-ea100/200/300 are combined with two technologies in one system, 125 KHz of low frequency and 13.56 MHz high frequency.
- ◇ The function of Master Reset is only to reset the Master password but still remain the records of door access PINs.

Note: If the Card Serial Number (CSN) is more than 32-bit, take the lower 32-bit as the card number, else leading zero appended.

2. Technical Specifications:

- Power input: 12 to 24V DC/AC, 2A DC
- Operating current: less than 80mA DC for controller, 1.5A DC for electrified locks
- Operating temperature: -10°C to +65°C
- Operating humidity: 0 to 95%
- RFID technology: EM + Mifare

- Read range: 40mm+ for 13.56MHz ISO card
80mm+ for 125KHz ISO card
- Response time: < 0.2 seconds
- Alarm output: 5VDC with 25mA DC
- Relay specification: 12VDC, 2A DC
- Product Dimensions: DG-ea100-80mm x 115mm x 20mm
DG-ea200-85mm x 85mm x 20mm
DG-ea300-45mm x 140mm x 20mm

- Weatherproof
- Color: Black

Keypad Operation

1. System will monitor keypad input, it will not accept invalid input.
2. Each key-in waiting time is 10 seconds. If key in timeout, program will exit with 5 beeps.

LED Indications

LED Status	Description
Red	Ready mode
Yellow	Program mode
Green	During electrified lock release

Buzzer Indications

Beep Sound	Description
1	Key-In, or Access Granted
2	Return to Program Mode
3	Access Denied, Invalid Password, or Invalid key in value
4	Power on, or Reset to factory setting

Sound Duration

Beep Sound	Description
Short	10ms
Medium	20ms
Long	40ms

3. Installation Diagrams:

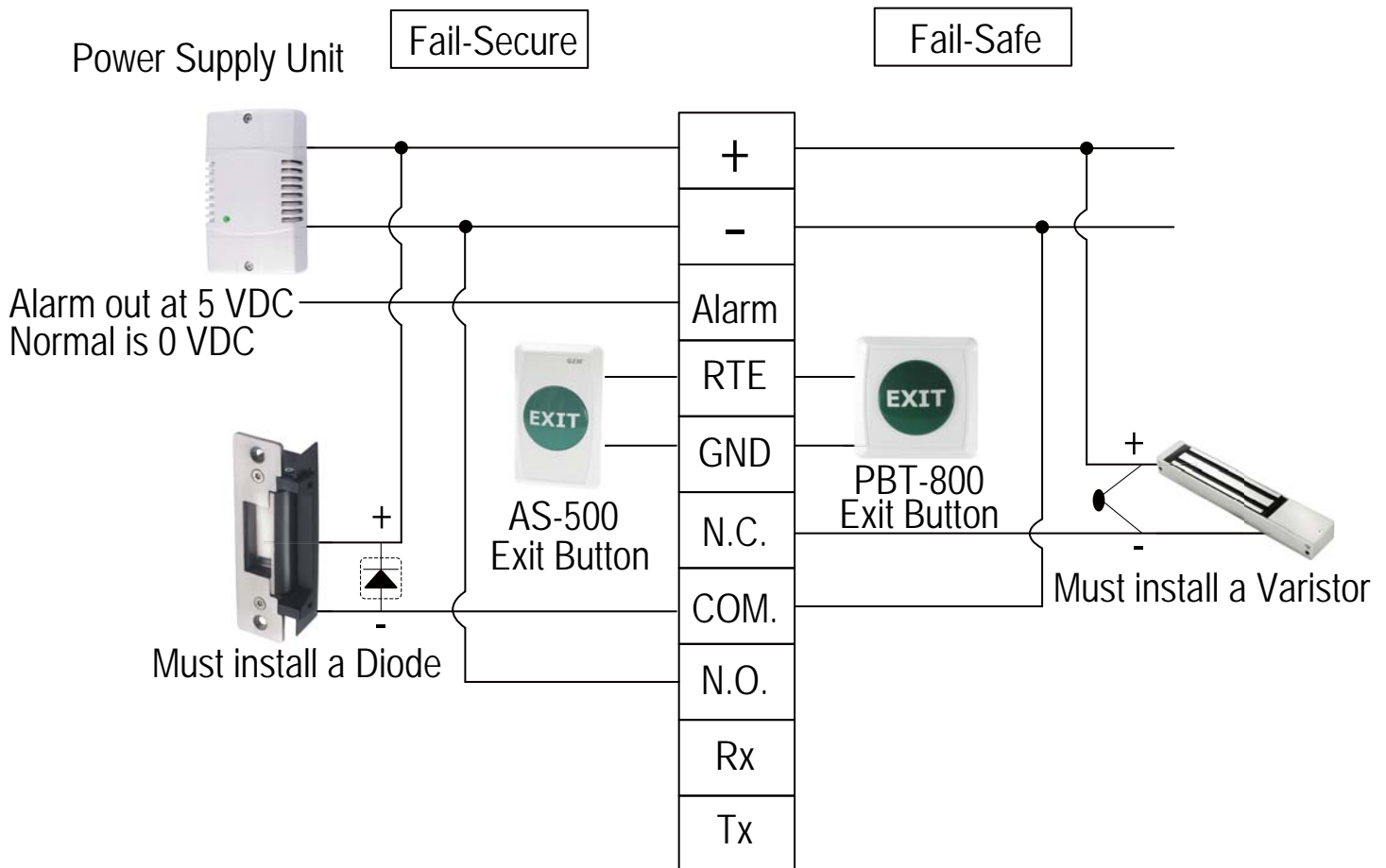
PIN Assignments

Color	Definition	Description
Red	Power IN	Power IN, 12~24VDC/AC, 2ADC
Grey		
Orange	ALARM	Alarm output, 5VDC output if alarm, 0VDC in normal
Green	RTE	Request to Exit
Black	GND	COM(Ground) for ALAM and RTE
Yellow	NC	Relay Normal Close, dry contact
White	COM	Relay Common, dry contact
Blue	NO	Relay Normal Open, dry contact
Purple	Rx	RS232, Reader's Terminal Rx
Brown	Tx	RS232, Reader's Terminal Tx

Notes:

1. Red and Grey wires are for power, and no polarity.
2. Black wire is the reference ground for signals.

DG-ea Series Controller



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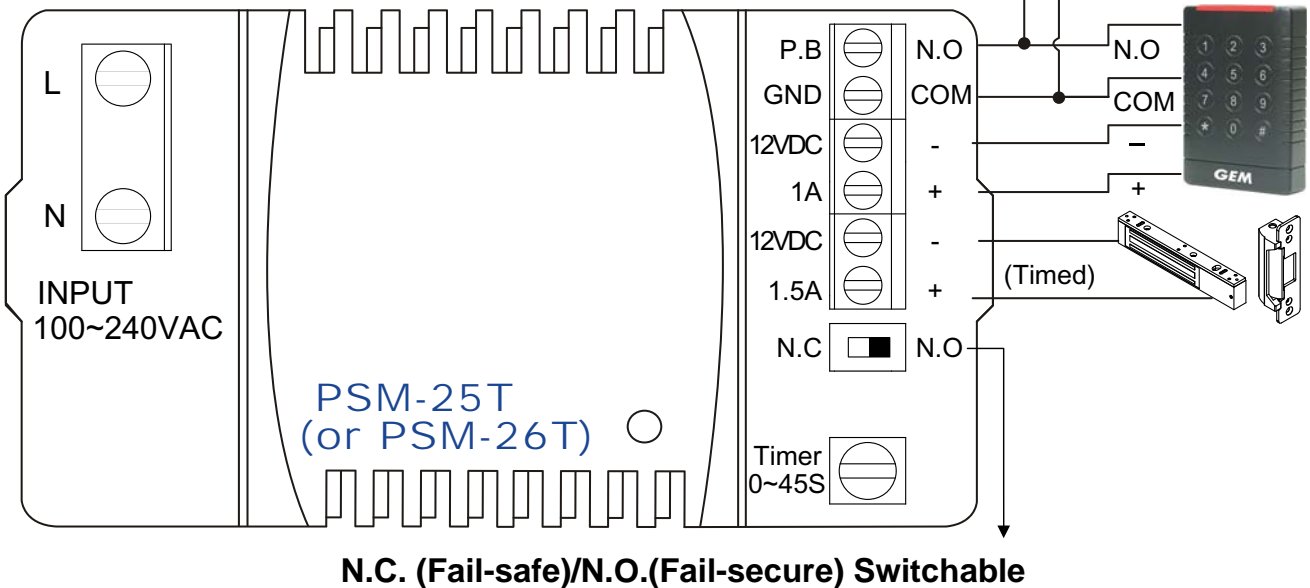
Notes:

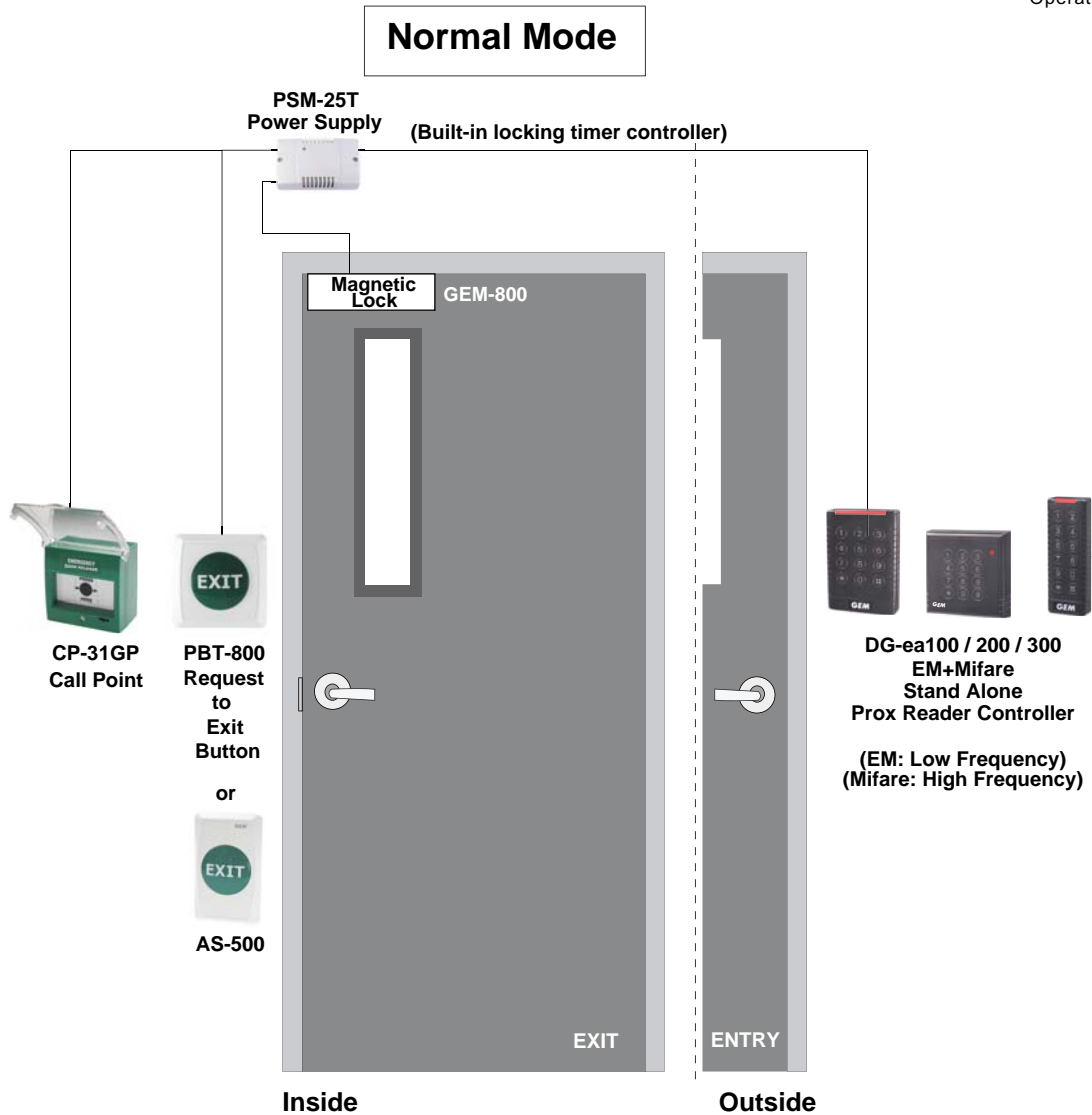
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DG-ea Series Controller

Wiring diagram:

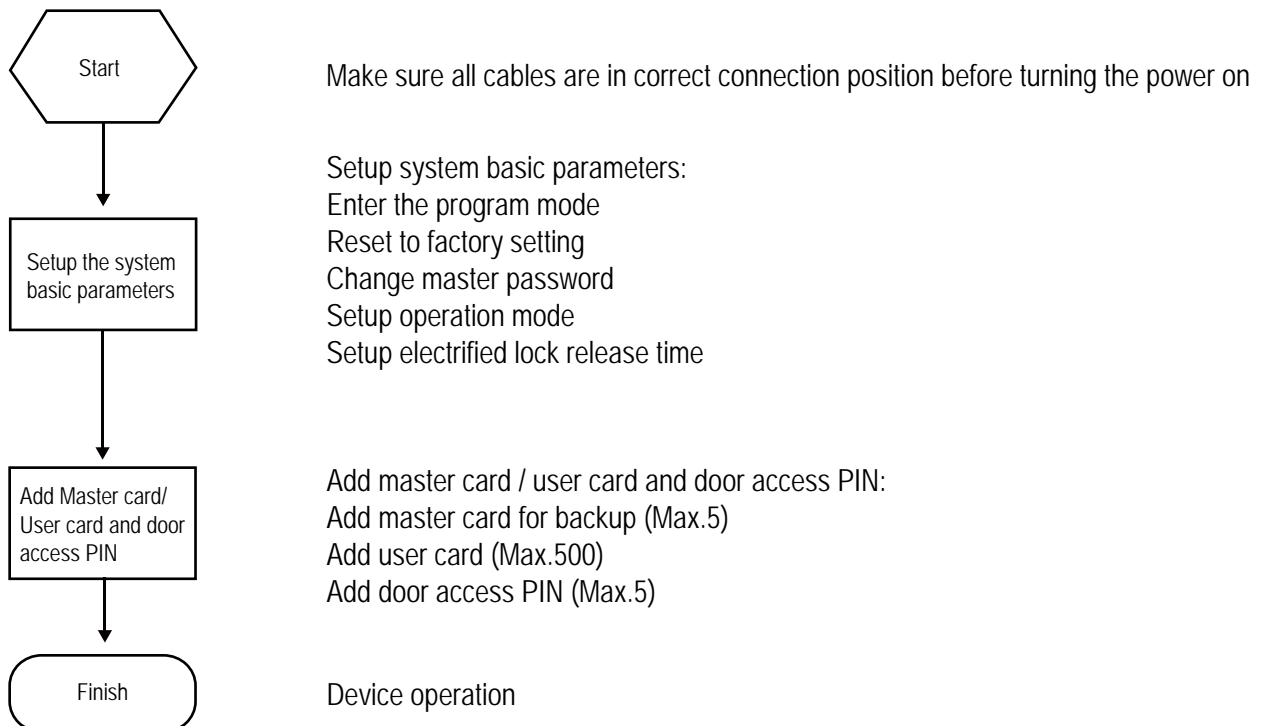
PBT-800	European Standard Size
AS-500	ANSI Size





4. Setup Parameters:

Operation Flow for Setup GEM Standalone Controller



Enter / Exit the program mode

1. Press "*" * "*" + "Master password" or "present master card" + "#". Reader LED in Yellow color.
Note: Default master password is "12345678".
2. Press "*" * "*" # " to exit or 30 seconds timeout for auto exit.
3. In ready mode, Master password can also open door.

Note: All the operations in the following are in the program mode.

Reset to factory setting

1. Press "*" * 801 # "801 # " (clear all cardholder info and reset the factory setting)
2. Press "*" * 802 # 802 # " (remain the cardholder info but reset to factory setting)

Master reset

First turn off the power of the controller. Keep the RTE and GND wires connected and then turn on the power. Wait for 5 seconds. The reader will remain all cardholder info and reset the master password to "12345678" after 5 beeps and 5 LED flashes.

Change master password

Press "*" * 9" + "New Master Password" + "#" + "New Master Password" + "#"

Note: Master Password for 1 to 8 digits

Set operation mode

Input "*" * 01 # " (Default Setting)

– Card or PIN

Input "*" * 02 # "

– Card Only

Input "*" * 03 # "

– PIN Only

Set electrified lock release time

Press "*" * 81" + Electrified lock release time (00 to 30 sec) + "#"

Note: Electrified lock release time default is 5 sec

Enable alarm function

Enable – Press "*" * 31 # " (Default)

Disable – Press "*" * 41 # "

Use a valid PIN to reset alarm

5. Add card and door access PIN:

Note: Please prepare the card numbers, user list info table before you add / delete a card!

Add master card

Press "*" * 10" + "use master card" + "#"

Note: If continue adding master card, no need to press "*" * 10" again.

Press "*" * "*" return to program mode and hear 2 beeps, press "*" * "*" # " again to exit program mode.

Add user card

Press “ * 11 ” + Location ID + “ # ” + “use user card” or “key in 10 digits card number.” + “ # ”
 (Location ID from ‘1’ to ‘500’)

Note: If continue adding user card, no need to press “ * 11 ” and next Location ID, only use user card” or “key in 10 digits card no.” + “ # ”.

If the location ID has card holder record, reader will sound 4 beeps, and return to program mode by pressing “ # ”
 Press “ # ” return to program mode and hear 2 beeps, press “ * * # ” again to exit program mode.

Add door access PIN

Press “ * 12 ” + Location ID + “ # ” + “Door access PIN” + “ # ” + “Door access PIN” + “ # ”. (Location ID from ‘501’ to ‘600’)

Note: If continue adding door access PIN, no need to press “ * 12 ” and next Location ID only key in next+“ Door access PIN” + “ # ” + “Door access PIN” + “ # ”.

Press “ # ” return to program mode and hear 2 beeps, press “ * * # ” again to exit program mode.

6. Delete card and door access PIN:

Delete master card

Press “ * 20 ” + “use master card” + “ # ”

Note: If continue deleting master card, no need to press “ * 20 ” again, only “use master card” + “ # ”
 Press “ # ” return to program mode and hear 2 beeps, press “ * * # ” again to exit program mode.

Delete user card

Press “ * 21 ” + “use user card” or “key in 10 digits card no.” + “ # ”

Note: If continue deleting user card, no need to press “ * 21 ” again, only “use user card” or “key in 10 digits card no.” + “ # ”

Press “ # ” return to program mode and hear 2 beeps, press “ * * # ” again to exit program mode.

Delete door access PIN

Press “ * 22 ” + “Door access PIN” + “ # ” + “Door Access PIN” + “ # ”.

Note: If continue deleting door access PIN, no need to press “ * 22 ” again, only key in “Door Access PIN” + “ # ” + “Door Access PIN” + “ # ”.

Press “ # ” return to program mode and hear 2 beeps, press “ * * # ” again to exit program mode.

Empty location ID

Press “ * 23 ” + Location ID + “ # ” + Location ID + “ # ”.

(Location ID from ‘1’ to ‘600’)

Note: If continue erasing Location ID content, no need to press “ * 23 ” again, only key in Location ID + “ # ” + Location ID + “ # ”.

Press “ # ” return to program mode and hear 2 beeps, press “ * * # ” again to exit program mode.

Delete all master cards

Press “ * 27 # 27 # ”

Delete all user cards

Press “ * 28 # 28 # ”

Delete all door access PINs

Press “ * 29 # 29 # ”

7. Users List:

Please update the card numbers, and PINs for reference.

User Card Numbers. Maintenance (500 card holders)

Location ID	Card No.	User Name	Expiry Date
1			
2			
3			
.			
.			
.			
.			
499			
500			

Door Access PIN Maintenance (100 PIN numbers)

Location ID	PIN	User Name	Expiry Date
501			
502			
503			
.			
.			
.			
.			
599			
600			

8. Device Operation:

- No need to input leading zero for card number and PIN.
- When input a PIN number on the device, press "#" at the end to complete operation.
- The length of a master password is from 1 to 8 digits, and no need to input leading zeros.
- The length of the 100 door access PINs is from 1 to 6 digits, and no need to input leading zeros.
- Electrified lock operation. After a valid card or password is confirmed, the electrified lock will be locked when its release time finished.

9. HOW TO ORDER




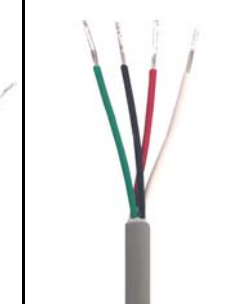

Part Number	Description
DG-ea100	Easy Version PROX Reader Controllers
DG-ea200	
DG-ea300	

Optional Accessories




Part Number	Description	
P-CB-10AE	10 Conductors	24 Gauges
P-CB-8	8 Conductors	24 Gauges
P-CB-6-2	6 Conductors	24 Gauges
P-CB-4	4 Conductors	22 Gauges
P-CB-2-RE-BA P-CB-2-BA-WI	2 Conductors	22 Gauges
P-PL-UT	2 way butt terminal	0.4~0.9mm wire
P-PL-UR-3P	3 way butt terminal	0.4~0.9mm wire
PSM-25T	Power Supply Unit	1.5A Relock timer for electrified locks (Field selectable for Fail-safe or Fail-secure)
PSM-26T	Power Supply Unit with Cable	
P-CB-US-1.8	Cable for US Standard Cable	For PSM-26T
P-CB-EU-1.8	Cable for EU Standard Cable	For PSM-26T
P-CB-UK-1.8	Cable for UK Standard Cable	For PSM-26T

Optional Accessories:

Wires Available:






 <p>P-CB-10AE</p> <ul style="list-style-type: none"> ■ 10 Conductors (Standard) ■ 24 Gauges 	 <p>P-CB-8</p> <ul style="list-style-type: none"> ■ 8 Conductors ■ 24 Gauges 	 <p>P-CB-6-2</p> <ul style="list-style-type: none"> ■ 6 Conductors ■ 24 Gauges 	 <p>P-CB-4</p> <ul style="list-style-type: none"> ■ 4 Conductors ■ 22 Gauges 	 <p>P-CB-2-RE-BA P-CB-2-BA-WI</p> <ul style="list-style-type: none"> ■ 2 Conductors ■ 22 Gauges
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Available Crimp Butt Splice Terminals:

 <p>P-PL-UT</p> <ul style="list-style-type: none"> ■ 2 way butt terminal ■ 0.4~0.9mm wire 	 <p>P-PL-UR-3P</p> <ul style="list-style-type: none"> ■ 3 way butt terminal ■ 0.4~0.9mm wire 	 <p>Note: Use the butt terminals with extended wires to connect the reader and the controller.</p>
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Available Power Supply Units & Power Cables:

Special designed with re-locking timers for electrified locks (Field selectable for Fail-safe or Fail-secure)

 <p>PSM-25T Power Supply Unit</p>	 <p>PSM-26T Power Supply Unit with Cable</p>	 <p>P-CB-US-1.8 US Standard Cable Cable length: 1.8M</p>	 <p>P-CB-EU-1.8 EU Standard Cable Cable length: 1.8M</p>	 <p>P-CB-UK-1.8 UK Standard Cable Cable length: 1.8M</p>
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