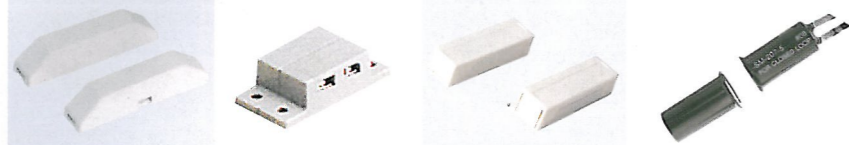


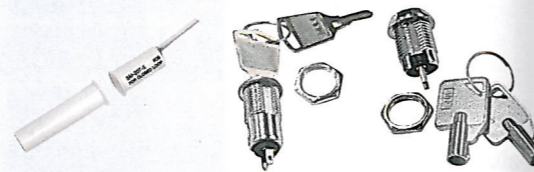
MAGNETIC SWITCHES

NEW Plastic

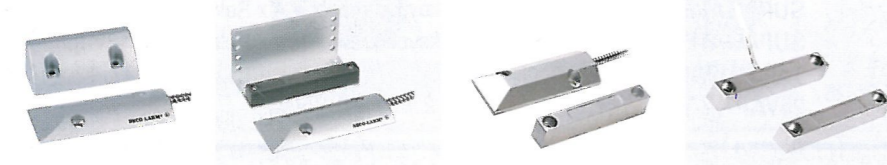


| HO-03M (N/C) | MC-10 (N/O) MC-01 (N/C) | IM-140 | SM-207-5Q | SM-207-5LQ | S-1091B | S-102 |
|---|--|--|--|--|--|-------|
| <ul style="list-style-type: none"> N/C 500mA Base mounted Operating distance: 15mm ± 5mm | <ul style="list-style-type: none"> Wide Actuating distance: 20mm 100mA @ 35VDC Operating distance: 15mm ± 5mm | <ul style="list-style-type: none"> Flange mounted Operating distance 16mm ± 5mm N/C 150mA | <ul style="list-style-type: none"> Magnet contact Operating Gap 1" (25mm) N/C Contact | <ul style="list-style-type: none"> Magnet contact Operating Gap 3/8" (10mm) N/C Contact | <ul style="list-style-type: none"> Zinc Alloy Die Cast Housing, Chrome Plated 2 Position Off/On Contact Rating: 0.5A @ 250VAC Key removal in both 'On' and 'Off' positions Each key switch uniquely coded | |

Key Switches



NEW Metal



| HO-03D | HO-03P | IM-136 | IM-141 | MC-02 (N/C) | IM-15 |
|--|--|--|--|--|---|
| <ul style="list-style-type: none"> 1 C/O (500mA) Armoured cable Size: 111 x 45 x 12mm | <ul style="list-style-type: none"> 1 C/O (500mA) Armoured cable Size: 111 x 45 x 12mm | <ul style="list-style-type: none"> 20" (50cm) Stainless steel armoured cable Size: 106 x 38 x 10mm | <ul style="list-style-type: none"> Magnet contact Operating distance 40mm ± 5mm Size: 106 x 38 x 10mm | <ul style="list-style-type: none"> Mounting hole: Ø 9.5mm Body height: 25mm 100mA @ 35VDC | <ul style="list-style-type: none"> Anti-Tamper Switch Voltage: 12VDC Load current: 1.25A |

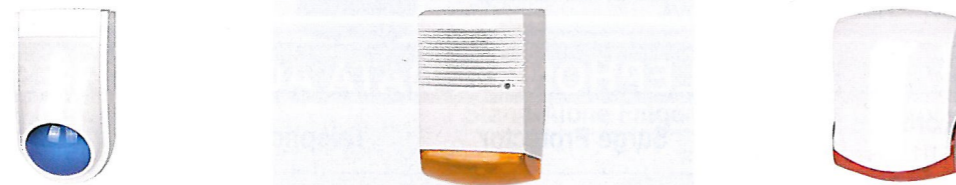
Concealed

Anti-Tamper Switch



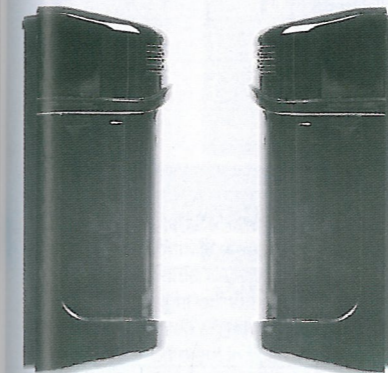
OUTDOOR SIRENS WITH STATUS INDICATORS IP65

NEW



| Code | IM-301 | IM-303 | IM-302 |
|-----------------|--|--|--|
| Voltage | 10-15VDC | 13.8-14.2VDC | 10-15VDC |
| Siren Current | 220mA @ 12VDC | 1300mA @ 13.5V | 230mA @ 12VDC |
| Flash Current | 180mA @ 12VDC | 250mA @ 13.5V | 190mA @ 12VDC |
| Siren Output | 115dB @ 1m | 120dB @ 1m | 115dB @ 1m |
| Flash Rate | Once per sec | Once per sec | Once per sec |
| Timer | 5 sec, 3min, 20min, continuous | 5 sec, 3min, 20min, continuous | 5 sec, 3min, 20min, continuous |
| Battery Back-up | No | Yes, 12V up to 1.3Ah | Yes, 7.2V up to 500mA |
| Dimensions (mm) | 210 x 130 x 78 | 270 x 193 x 100 | 300 x 250 x 65 |
| Features | <ul style="list-style-type: none"> ABS housing with UV resistance 4 kinds of sounder time selection Separate strobes provided for indication Battery back-up | <ul style="list-style-type: none"> High UV-resistant PC housing 4 kinds of sounder Internal / External tamper trigger selectable Battery back-up | <ul style="list-style-type: none"> High UV-resistant ABS housing UV resistance 3-way tamper switch prevention Internal / External tamper trigger selectable Battery back-up |

TWIN PHOTOBEAM DETECTORS IP55



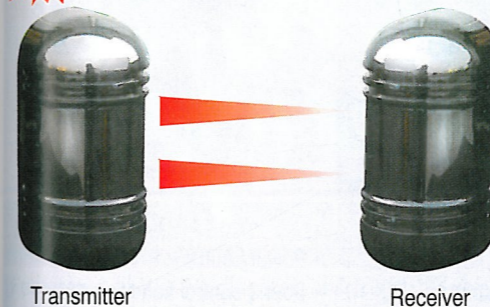
Specifications

| Code | E960-D90 | E960-D190 | E960-D290 | E960-D390 |
|-----------------------|---|-----------|-----------|-----------|
| Max. range outdoor | 30m | 60m | 90m | 120m |
| Max. range indoor | 60m | 120m | 180m | 240m |
| Current | 47mA | 56mA | 60mA | 62mA |
| Power | 10-30VDC (non-polarity) | | | |
| Interrupt Speed | 50msec~700msec (variable) | | | |
| Alarm Output | N.O./N.C. relay, 1A @ 250VAC | | | |
| Tamper Output | N.C. relay, 1A @ 250VAC | | | |
| LEDs | Alarm (red), Tuning (yellow), Operation (green) | | | |
| Laser Wavelength | 650nm | | | |
| Laser Output Power | 5mW | | | |
| Alignment Angle | Horizontal: ±90°, Vertical: ±5° | | | |
| Operating Temperature | -25° ~ 55°C | | | |

- Twin beams provide reliable perimeter security, minimizing false alarms from falling leaves, etc.
- Weatherproof, sunlight-filtering case for indoor and outdoor use.
- Quick & easy installation with built-in laser beam alignment system.

NEW

INFRARED BEAM DETECTION



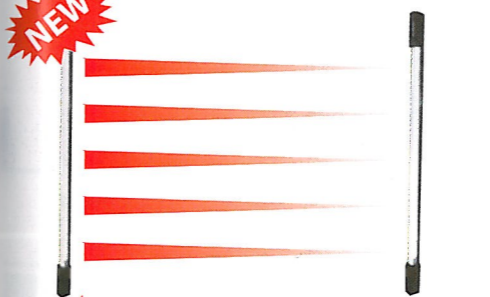
Weatherproof Double Infrared Beam Detector IP44 - supply volts 10-28VDC

| Code | Detect Distance (m) | | Height (mm) |
|----------|---------------------|--------|-------------|
| | Outdoor | Indoor | |
| FL-IR30 | 30 | 90 | 170 |
| FL-IR60 | 60 | 180 | 170 |
| FL-IR80 | 80 | 240 | 170 |
| FL-IR100 | 100 | 300 | 170 |

Specifications

- Alarm Output: Relay output, AC/DC 30V 0.5A
- Work Temperature: -25-55°C
- Light Source: Infrared
- Light Angle: Horizontal 180°±90, Vertically 20°±10
- Detect Speed: 50-700ms (adjustable)

NEW



Infrared Beam Detector supply volts 9-15VDC

| Code | Detect Distance (m) | | Height (mm) |
|------------|---------------------|--------|-------------|
| | Outdoor | Indoor | |
| FL-IR250-3 | 8 | 16 | 685 |
| FL-IR250-5 | 8 | 16 | 1200 |
| FL-IR250-8 | 8 | 16 | 1720 |

Specifications

- Alarm Output: Relay output, AC/DC 30V /10A
- Work Temperature: -25-55°C
- Light Source: Infrared
- Light Angle: Horizontal 180±90, Vertically 20±10
- Detect Speed: 50-300ms (adjustable)

NEW



4 -Tech Outdoor Detector

| Code | DT7225 | DT7435 | DT7450C | Features |
|----------------|-----------------|-----------------|-----------------|--|
| Max. Range | 7.6m x 9m | 11m x 11m | 15m x 18m | <ul style="list-style-type: none"> Two-PIR and MW Detection Total view: 90° Universal connector for corner and wireless 18 beam and 4 planes level Solid relay output Anti-white light Alternative LED-off mode |
| Current | 301mA | 301mA | 301mA | |
| Power | 9-16VDC | 9-16VDC | 9-16VDC | |
| M.W Frequency | 10.525GHz | 10.525GHz | 10.525GHz | |
| Detect Speed | 0.2µs to 3.5µs | 0.2µs to 3.5µs | 0.2µs to 3.5µs | |
| Install Height | 1.5m-2.4m | 1.5m-2.4m | 1.5m-2.4m | |
| Sensitivity | H/L Select | H/L Select | H/L Select | |
| Dimension | 160 x 65 x 51mm | 160 x 65 x 51mm | 160 x 65 x 51mm | |
| Pet Immune | No | Yes (45kg) | No | |
| Alarm Output | - | - | NC/NO | |

NEW

ONE BEAM INFRARED DETECTOR



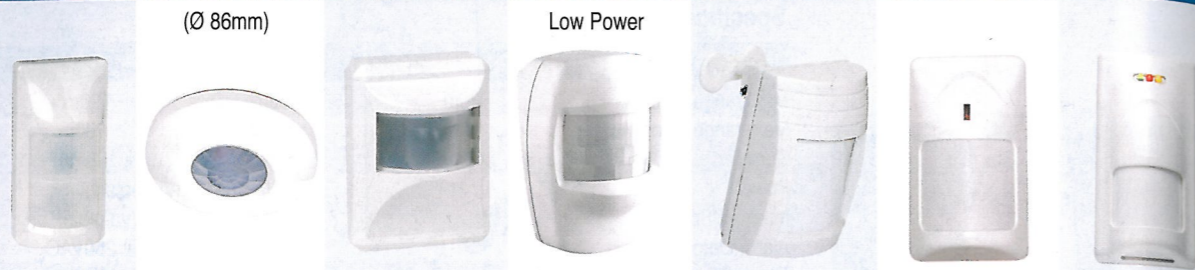
Suitable for external ranges up to 30m outdoors. Perfect for gate automation and pre-selection access.

| Code | AX-30KD |
|----------|--|
| Features | <ul style="list-style-type: none"> Voltage: 9-16VDC Weatherproof White-light protection |

PASSIVE INFRARED & MICROWAVE DETECTORS

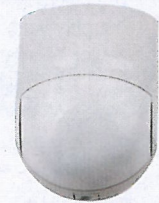
NEW RANGE

- Micro-processors Design
- Microwave range is adjustable
- Top view window
- Creep Zone



| Code | PIR-9822 | PIR-9236 | PIR-2712 | LP-991 | CQ-86 | PR-210 | PT-111 |
|--------------|----------------|----------------------------|-----------------|-----------------|--------------|--------------|---------------|
| Type | Dual Passive | Dual Passive | General Purpose | General Purpose | Dual Passive | Dual passive | Dual Passive |
| Volts | 9 - 16VDC/15mA | 9 - 16VDC | 8 - 16VDC | 8 - 16VDC/5mA | 12VDC/16mA | 9-16VDC | 9-16VDC |
| Range/angle | 15m/110° | 11m mounted 3.6m high/360° | 12m/120° | 12m/120° | 12m/120° | 10m/ 110° | 10m/110° |
| Size (mm) | 127 x 64 x 45 | Ø86 x 22.5 | 105 x 60 x 42 | 102 x 72 | 70 x 60 x 37 | 89 x 52 x 39 | 128 x 64 x 40 |
| Pet Immunity | Under 11Kg | - | - | - | - | 20kg | 40kg |

Security PIR Detector



| Code | FL-AC03 |
|----------------------|-----------|
| Power supply: | 8-16VDC |
| Static current: | 30mA |
| Sense distance: | 12m (max) |
| Sense angle: | 160° |
| Work temperature: | -10~+40°C |
| Working humidity: | <93%RH |
| Installation height: | 1.5~3.5m |

PIR & Glass Break Detector



| Code | FL-AL7 |
|----------------------|------------|
| Power supply: | 8-16VDC |
| Static current: | 30mA |
| Sense distance: | 12m (max.) |
| Sense angle: | 120° |
| Sense motion speed: | 0.6~1.5m/s |
| Work temperature: | -20~+40°C |
| Relative humidity: | <93%RH |
| Installation height: | 2m |

Microwave & PIR Detector



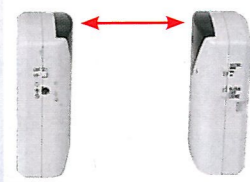
| Code | FL-AC09 |
|----------------------|--|
| Power supply: | 8-16VDC |
| Static current: | 30mA |
| Sense distance: | 12m (max) |
| Sense angle: | 140° |
| Installation height: | 1.5~3.5m |
| LED indicator: | yellow top detector detects signal red alarm output signal green lower detector detects signal |

Glass Break Detector



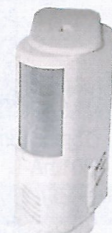
| Code | FL-AC12 |
|----------------------------|--------------|
| Power sources: | 8-16VDC |
| Sound control sensitivity: | 70~80dB (3m) |
| Work temperature: | -10~+40°C |
| Working humidity: | <93%RH |

Wireless PIR Doorbell & Alarm



| Code | FL-A06 |
|-------------------|-------------------|
| Battery operated: | 3 x AAA (excl.) |
| 20m range | |
| Easy installation | |
| Detect distance: | 20m |
| Light source: | Infrared beam |
| Detect speed: | 80m/s |
| Sound output: | Chime/ Off/ Alarm |
| Work temperature: | -10~+40°C |

Door Entry Alarm/Chime



| Code | FL-A01 |
|------------------|------------------|
| Battery operated | 9V (excl.) |
| Detect distance: | 8m |
| Max at | 22°C |
| Detection range: | 140° (H) 5° (V) |
| Alarm sound: | >60dB |
| Switch function: | Alarm/ Off/Chime |

PIR LED Night Lamp



| Code | FL-A08B |
|------------------|-----------------|
| Battery operated | 3 x AAA (excl.) |
| Detect angle: | 160° |
| Detect distance: | 8~10m |
| Switch function: | On/ Auto/Off |

Automatic LED Night Light



| Code | 335NL |
|------------------------|---|
| With photocell sensor, | automatically on at sunset, off at dawn |
| Long life LED | |

3-IN-1 LED Power Failure Light with Night Light



| Code | 236 |
|------------------------|--|
| When power failure | automatically turn on super bright LED emergency light |
| With photocell sensor, | soft LED night light automatically on at dark, off at dawn |
| Built-in rechargeable | batteries for continuous use over 10hrs |
| Super bright LED torch | |
| AC power indicate LED | |

WIRELESS ALARM KITS

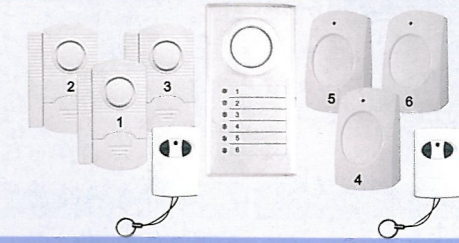
NEW

Inductive Light and Alarm



| Code | RL-0313B |
|--|--|
| Working distance: | ± 30m |
| Working frequency: | 434MHz |
| Three working statuses: | Light/ Off/ Light & Alarm |
| Light will turn on and sharp alarm will be heard | when someone passes by in an armed status |
| Different indication sounds | for arming and disarming the unit |
| Remote control | in all directions, energy-saving and long working distance |

6-Zone Wireless Alarm System



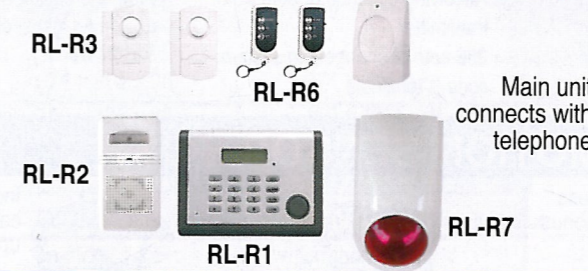
| Code | RL-0506AB |
|--|--------------------|
| Working frequency: | 434MHz |
| Remote distance | is above 60m |
| 8-chord melody ring options | |
| 360° direction wireless signal sending and receiving | |
| Magnet sensor with 3 functions | |
| Working as wireless alarm and door chime | |
| Alarm volume | is more than 100dB |

Kit Includes

- 1 x Main alarm 6 zones
- 2 x Remote key ON/OFF
- 3 x Magnetic sensor and alarm
- 3 x PIR sensors

Wireless Auto-Dial Alarm System

NEW



| Code | RL-0503F |
|------------------------------------|---|
| Working distance | is above 60m, the range for main unit is above 100m in an open area |
| Dial telephone or cell phone | automatically when receiving alarm signals |
| Alarm in emergency | |
| All settings and recorded messages | will not be lost when power fails |
| RL-R6 Remote Control | - wirelessly turn unit ON or OFF |
| RL-R2 Indoor Siren | - will sound immediately when alarm is triggered |
| RL-R7 Outdoor Siren | - will sound immediately when alarm is triggered |
| RL-R5 PIR sensor | - detection up to 10m |
| RL-R3 Audible Magnetic Contact | |
| RL-R1 Main Control Unit | - can accommodate up to 38 accessories |



| Code | RL-0503C-D |
|--|--|
| Working distance | is above 60m, the range for main unit is above 100m in an open area |
| Dial telephone or cell phone | automatically when receiving alarm signals |
| Alarm in emergency | |
| Adopts GPRS wireless transmission technology | . It can dial telephone or send SMS automatically for alarm without telephone line, wirelessly arm/disarm the system and monitor the voice from site |
| Voice recording function | |
| Up to 38 accessories | (such as remote control and transmitter) can be used in the system |
| The system will call the saved 6 groups of phone numbers | in arming mode when someone intrudes illegally |
| ALARM button | is available for instant alarm in emergency |

MOTION DETECTORS/ALARMS

NEW



| Code | 115R | 123SK | 133A | 135P | 5200 | 436 |
|---|------|-------|------|------|------|-----|
| Motion detector alarm with remote control | | | | | | |
| Built-in alarm output up to 100dB | | | | | | |
| Alarm/ Chime/ Off Switch | | | | | | |
| Built-in super flasher | | | | | | |
| 4 x AA batteries (not incl.) | | | | | | |
| Infrared remote | | | | | | |
| Ceiling 360° motion detector alarm with remote control | | | | | | |
| Built-in alarm output up to 105dB | | | | | | |
| 9V battery operation (not incl.) | | | | | | |
| Optional-outdoor siren 120dB | | | | | | |
| Remote control | | | | | | |
| Built-in alarm output 100dB | | | | | | |
| Alarm/ Chime/ Off switch control | | | | | | |
| 9V battery operation (not incl.), DC Jack | | | | | | |
| Motion detector with alarm | | | | | | |
| Motion detector alarm with remote control | | | | | | |
| Motion sensor with up to 6 digit security code | | | | | | |
| 2-Pair magnetic Infrared remote control with panic button | | | | | | |
| Built-in alarm output 105dB | | | | | | |
| Dual motion detectors with magnetic sensor | | | | | | |
| 1 x wide range sensor | | | | | | |
| 1 x curtain range sensor | | | | | | |
| Remote control | | | | | | |
| Built-in alarm up to 105dB | | | | | | |
| Programmable codes | | | | | | |
| Panic button | | | | | | |
| 2 x pair magnetic 9V back-up and AC power adaptor | | | | | | |
| 5-in-1 alarm | | | | | | |
| Box alarm | | | | | | |
| Personal alarm | | | | | | |
| Bicycle alarm | | | | | | |
| Door alarm | | | | | | |
| Travel alarm | | | | | | |
| Cable-lock with vibration sensor | | | | | | |
| Built-in alarm output up to 100dB | | | | | | |
| Panic button | | | | | | |

SECURITY

SECURITY

WIRELESS MOTION SENSOR/RECIEVER

NEW



Max. loading: 10A

| Code | AEC-3006RZD | AEC-3004RZD | RC02DC | RC03 |
|-------------|---|--|---|---|
| Description | PIR Motion Sensor (RF Transmitting) ±60m | PIR Motion Sensor (RF Transmitting) ±60m | DC Alarm/Chime warning device (RF Receiving) ±60m | Outdoor/Indoor AC Power-Receiver (RF Receiving) ±60m |
| Features | <ul style="list-style-type: none"> Plastic construction IP55 Sensor range: 10m x 140° Control receivers up to 60m away 256 sets of changeable system code is available Standard voltage: 4pcs AA 1.5V batteries (not included) Able to control RC02DC, RC03 | <ul style="list-style-type: none"> Plastic construction IP21 Sensor range: 8m x 360° Control receivers up to 60m away 256 sets of changeable system code is available Standard voltage: 1pc 9V battery (not included) Able to control RC02DC, RC03 | <ul style="list-style-type: none"> Plastic construction (Indoor) Power source: adapter 6V 300mA or AA 1.5V 4 pcs or AA 1.2V 4pcs (adapter and batteries not included) With chime/off/alarm switch Volume adjustment: 90dB maximum Time adjustment: 5secs to 2mins Receiving distance of 60m from transmitter 256 sets of changeable system code is available | <ul style="list-style-type: none"> Plastic construction (Indoor) Power source: 240VAC 50Hz Function: transmitter controls ON/OFF function Time adjustment: 5secs to 7mins Control receivers up to 60m away 256 sets of changeable system code is available Plug and socket not included, and users can install other power cables into RC03 |

NIGHT-WATCHER MOTION SENSOR IP54

NEW

Units 240V RX7s Lights can be fitted



R7S-9W



+ Wireless alarm bonus feature



Includes wireless camera transmitting up to 80-100m

| Code | FS69-W | FS70-W | AEC-9331-SP8 | AEC-9336C-D |
|-------------|--|---|---|---|
| Description | Motorised Floodlight | Motorised Floodlight & Alarm | Motorised LED Floodlight | 24W Motorised CFL Floodlight |
| Features | <ul style="list-style-type: none"> 3 x Passive Infrared sensors Light activates for 3mins Programmable functions for day and night Detection 210° up to 10m 9W CFL Daylight Lamp (included) | <ul style="list-style-type: none"> 3 x Passive Infrared sensors Light activates for 3mins Programmable functions for day and night, auto resets after 30secs Includes audible alarm Detection 210° up to 10m Receiver range: 15m 9W CFL Daylight Lamp (included) | <ul style="list-style-type: none"> Auto trading light head 8pc x 1W Litron LED 80lm/pc Detection 210° up to 10m Pushbutton for programmable functions Lamp output up to 200W | <ul style="list-style-type: none"> Built-in camera, 2.4GHz wireless SD card storage up to 2G max Sensor 10m x 160° Camera spec: 640 x 480 @ 10fps motion jpeg Multi-sensor technology with 210° detection up to 10m Camera activates for 30secs Night mode with light on at 3mins 24W CFL light Spare CFL lamp: R7S-9W Works with receivers: AEC711C, AEC707C, AEC752C |
| Code | R7S-9W | | | |
| Description | Spare CFL Lamp (Daylight) | | | |

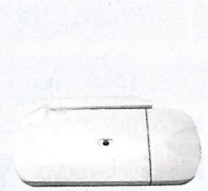
Receivers for AEC-939BSD



AEC711C



AEC707C



AEC752C

| Code | Description |
|----------------|--------------------------------------|
| AEC711C | Digital 2.4GHz wireless LCD monitor |
| AEC707C | Digital 2.4GHz wireless TV reciever |
| AEC752C | Digital 2.4GHz wireless USB reciever |

SECURITY CABLE

NEW



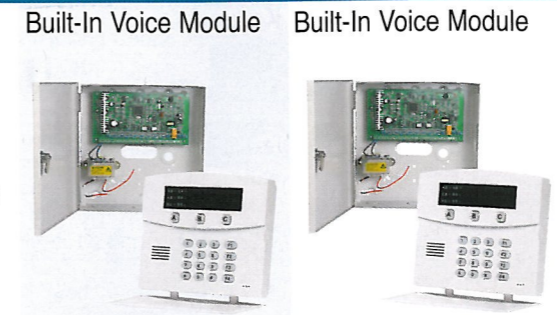
ACDC Security cable supplied in rolls of 100m, range from 4-12 core (7/0.20mm BC + 1.20mm PVC)

| Code | Description | Length |
|------------------|---------------------------------|--------|
| 4C-24AWG | 4 Cores + Al foil + Drain wire | 100m |
| 6C-24AWG | 6 Cores + Al foil + Drain wire | 100m |
| 8C-24AWG | 8 Cores + Al foil + Drain wire | 100m |
| 12C-24AWG | 12 Cores + Al foil + Drain wire | 100m |

DIY INTRUSION ALARM PANEL

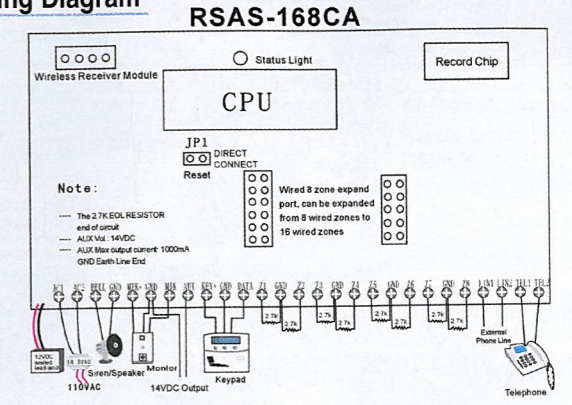
NEW

Wired and Wireless zone alarm panels



| Code | RSAS-168CA | RSAS-1616 |
|--------------------|--|--|
| Wired Zones | 8 | 16 |
| Wireless Zones | 16 | 16 |
| Power Supply | AC220V± 10% | AC220V± 10% |
| Current | <120mA | <120mA |
| Power | <1.5W | <1.5W |
| Alarm Output | 14V, 800mA | 14V, 800mA |
| Output Voltage | DC 12V~15V | DC 12V~15V |
| Size (mm) | 274 x 264 x 86 | 274 x 264 x 86 |
| Keyboard Size (mm) | 159 x 136 x 33 | 159 x 136 x 33 |
| Features | Battery excluded Compatible ADEMCO4+1 Contact ID, communication protocol Maximum 32 wired zones | Battery excluded Compatible ADEMCO4+1 Contact ID, communication protocol Maximum 32 wired zones |

Wiring Diagram



Optional Extras



RSAS-29216



SY1270

| Code | Description |
|-------------------|--------------------------|
| RSAS-29216 | Expansion Module 8 Zones |
| SY1270 | Battery 12V 7Ah |

For Sirens – see pages 247.
Magnetic Contacts & Panic/emergency Buttons – see above.
V-Motion PIR's – see page 543-544

DIY ALARM KITS



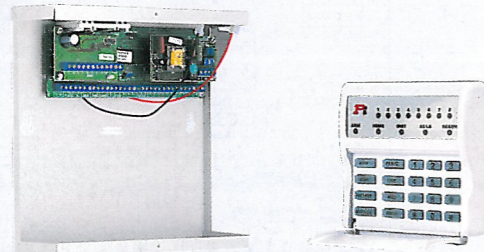
| Code | IN001A | PIR-9312K | PIR-3312K | HA982 |
|--------------|--|--|---|---|
| Kit includes | <ul style="list-style-type: none"> 1 x Base unit (for parents) 1 x Wrist bracelet (for children) Extra bracelet (IN001AB) <p>3 Functions:</p> <ol style="list-style-type: none"> Anti-drowning alarm - Base unit flashes, sound alarms and vibrates when wrist bracelet is immersed in water Anti-loss Alarm - Base unit flashes, sounds alarm and vibrates when wrist bracelet is leaving a presettable distance (0-50m) Personal Alarm - When parents experience an emergency, they can press HELP button to alert people to ask for help, like an SOS. <p><i>Audible alarm of 100dB, with water-resistant, durable and harmless to children</i></p> | <ul style="list-style-type: none"> 1 x PIR-9312 Alarm Control Unit 1 x 12V DC output power adaptor 5 pairs magnetic contacts 1 x external Piezo Siren 1 x connection plug for optional remote key 2 x 15 metre wires | <ul style="list-style-type: none"> 1 x 2 Zone PIR Alarm Controller. An infrared (IR) remote controlled passive, infrared intrusion alarm with wide detection coverage, 8x12m 2 x IR Remote Control Keys. Infrared remote Arm/Disarm controller with 6 561 address code, 8 metres control distance, Home-Away-Off operations. It is also a panic button to trigger alarm in emergency, no matter if the system is in armed or disarmed status 1 x 12VDC Output Power Adaptor 5 Magnetic contacts (Door/Window Sensors) 1 x External Piezo Siren. Resets automatically after 1 minute, 108dB 30 metres of wire (2 pieces, each 15 metres) | <ul style="list-style-type: none"> 8 Zone Alarm Control Panel with remote Control Console Programmable Master Code & 8 User Codes Full Memory for Alarm Event Zone(s) Programmable Response Time for each Protection Zone Instant Arming Codes for Home or Away Operation On Board Activation of Panic Alarm 2 x Mini PIR Detector 1 x Electronic Siren (15W) 2 x Panic/Emergency Button 2 x Magnetic Reed Switches 1 x AC Power Adaptor (16V/40A) Battery included |

SECURITY

SECURITY

8 & 16 ZONE + EXPANDABLE ALARM

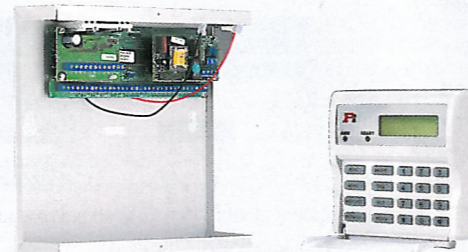
Panel & LCD Keypad



| | |
|----------------|----------------------------------|
| Code (8 Zone) | S-HSC505 |
| Code (16 Zone) | S-HSC505E (Expands to 32) |

With Communicator

Panel & LED Keypad



| | |
|----------------|--------------------|
| Code (8 Zone) | S-HSC505-NC |
| Code (16 Zone) | - |

Without Communicator
(Communicator optional extra - Code: **CE852**)

Key Panel & Control Panel. Battery excluded

Features

| | LCD | LED | | LCD | LED |
|---|-----|-----|--|-----|-----|
| • 8 Programmable EOL inputs | ✓ | ✓ | • Home zones | ✓ | ✓ |
| • Expandable to 32 zones | ✓ | ✗ | • Arm when faulted for exit purposes per partition | ✓ | ✗ |
| • 2 Dedicated normally open 24-hour inputs (programmable) | ✓ | ✓ | • Bypass enable per zone | ✓ | ✓ |
| • Tamper programmable per zone input (dual EOL) | ✓ | ✓ | • Independent entry and exit timers per partition | ✓ | ✗ |
| • Local keypad buzzer zones | ✓ | ✗ | • Home automation | ✓ | ✗ |
| • 4 partitions plus common area | ✓ | ✗ | • Siren trip counter | ✓ | ✓ |
| • 4 programmable voltage trigger outputs | ✓ | ✓ | • Remote encrypted code arming per partition with audible indications | ✓ | ✗ |
| • Voltage trigger outputs expandable to 32 | ✓ | ✗ | • New serial bus line radio transmitter capable of point ID format reporting | ✓ | ✓ |
| • Triggers programmable per zone and/or globally | ✓ | ✓ | • Local or remote up/down loading | ✓ | ✓ |
| • Programmable positive or negative trigger switching as latched, timed or toggle functions | ✓ | ✓ | • Plug-in landline communicator 4x1 express, 4x2 express, ademco point ID and 4x2 pulse format | ✓ | ✓ |
| • 8 programmable LCD display keypads | ✓ | ✗ | • Extensive lightning and panel input protection | ✓ | ✓ |
| • Keypads have an EOL in/out and a trigger output | ✓ | ✗ | • Remote 8-in 4-out expander with on-board power supply | ✓ | ✗ |
| • Single key emergency functions | ✓ | ✓ | • SAIDSA Bylaw 25 compliant | ✓ | ✓ |
| • Programmable quick arming functions | ✓ | ✓ | | | |
| • Auto arm | ✓ | ✓ | | | |

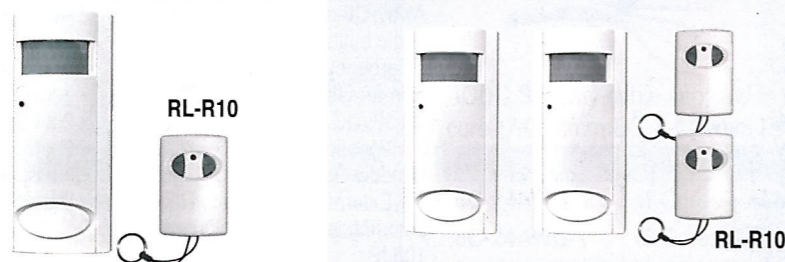
Optional Extra's



| Code | Description |
|----------------------|---|
| CE862 | 8 to 16 Zone Plug in Expander for S-HSC505E |
| S-HSC505-XMOD | Remote 8-in 4-out Zone Expander for S-HSC505E includes on-board Power Supply |
| CE852 | ICASA/Telkom approved plug-in on-board landline communicator |
| SY1270 | Battery 12V 7Ah |
| 30HTRF40/16 | 16V/40VA Transformer (with surge protection) |

For Sirens, see pages 247.
Magnetic Contacts & Panic/emergency Buttons, see page 542.
V-Motion PIR's, see page 543-544
For Remote Panic Alarm, see page 562.

WIRELESS INFRARED ALARM



| | | | |
|------|----------------|-------------------|-----------------------------|
| Code | RL-9830 | RL-9830RF2 | Spare Remote: RL-R10 |
|------|----------------|-------------------|-----------------------------|

- Working frequency: 434Mhz
- Working distance: ± 30m
- Remote control in all directions
- Arm or disarm the system by transmitter with different indication sounds
- Infrared inductive angle is 120°
- Alarm volume is more than 100dB
- Indicator will turn on when the batteries run out
- Simple DIY installation

WIRELESS AUTO-DIAL ALARM SYSTEM

60 Metre Range (Rolling Code)

Code **AM-100**

Kit Includes:

- 1 Control Panel (**AM-001**)
- 1 Motion Sensor (**PS-101**)
- 2 Door/Window Sensors (**WD-101**)
- 1 4-Button Remote (**4B-101**)
- 1 AC Adaptor + batteries for all accessories (included)

Max. Accessories Allowed:

- 10 Sensors • 5 Keychain Remotes • 5 Control Modules

Features:

- Arm, Away Mode • 45sec exit delay and 30sec entry delay • Delay alarm, Instant alarm, bypass
- Audio and visual warning to indicate locations of triggered zones & sensors
- Built-in auto dialer • 5 programmable telephone numbers for voice message
- User can call in to check system status, to arm or disarm security function, or to turn on/off power devices
- 5 programmable zones • Siren: 100dB • Low Battery Indication • Frequency: 433.93MHz

Alarm (When not at home)
Emits alarm sound and calls pre-programmed telephone numbers in an emergency

Alert (When at home)
Instant notifications (Beeps) for indoor and outdoor incidents surrounding the premises

AM-001



Smart Control Panel
Slim design.

+ **Communicator**

Calls for help during emergency

Emergency Dialer

Plays emergency message to friends, relatives and you.

Automation

- Turns on/off electrical devices easily. (requires Control Module SW-100)
- Controls or checks the Home Smart Centre by any touch tone phone or mobile phone when away from home.

Optional Extra:

Home Automation Control Module



SWG-101G

- Turns on/off up to 5 electrical devices by wireless control modules
- Remotely control appliances by calling in from any touch tone telephone
- Event Trigger Automation

Accessories Audio Alarms Emergency Dialer Remote Motion Sensor Door/Window Sensor Remote Keypad

| Code | AA433 | AD-433S | 4B-101 | PS-101 | WD-101 | KP-434D |
|------------------|---|--|--|---|---|---|
| Power: | AC Power & 9V Battery | AC Power & 9V Battery | 12V Alkaline Battery | 9V Alkaline Battery | Lithium Battery | Lithium Battery |
| Features: | <ul style="list-style-type: none"> • Audio Alarm acts as a secondary siren or external siren • Wireless operation, no need to run wires • 110dB alarm sound • Adaptor operated with backup battery • Low Battery detection | <ul style="list-style-type: none"> • Dials up to 9 different numbers • Records up to 40 sec. messages • Redials up to 9 times, each time replaying pre-recorded message • Automatically overrides occupied lines for emergency calls | <ul style="list-style-type: none"> • 4-button keychain transmitter • Arm, Disarm, Panic, Auxilliary • Operates one control Module | <ul style="list-style-type: none"> • Monitors area up to 12.2m at an arc of 110° • Adjustable Sensitivity | <ul style="list-style-type: none"> • Protects doors, windows & other entrances • Sends signal to the Control Panel or dialer when contact is broken | <ul style="list-style-type: none"> • Arm, Disarm & Panic • 3 consecutive incorrect password entries will activate alarm • Low Battery Detection • Battery life: 2-3 years |

Tailor make your own security system in seconds



| Code | Description |
|------------------|---|
| LS-2500-2 | Basic System consisting of: • Control Unit c/w mains adaptor. • Wireless PIR. • Wireless door magnetic switch. • Wired extension siren 110dB. |

Basic System Features

- Simple to set up and easy to use wireless system
- Advanced SAW technology for reliable transmission, 433.92MHz Frequency
- Built-in 110dB alarm will frighten intruders away and extension siren will alert neighbours in remote locations
- 4-digit code for disarming. No key or remote is required
- 9V Battery required (not included) for backup in case of power failure

Optional Enhancements

| | |
|---------------|--|
| AD2510 | Auto Voice Dialler. Automatically dials your mobile, your office or your neighbour to report any alarm event. Provides user monitoring without additional fees |
| LS1005 | Remote Emergency Panic Button. Provides added security for elderly people and doubles as personal attack alarm |
| LS1003 | Smoke Detector with Transmitter. Sounds the basic system siren in the event of fire |
| LS1002 | Additional Curtain Lens Wireless PIR. Specially designed to protect against intruders while giving the user the freedom to move around inside the house |
| LS083E | Wired intergrated siren/strobe extension unit giving audio and visual warning in case of a break-in. This unit is suitable for outdoor use. |

DOOR ENTRY AND SECURITY SYSTEMS

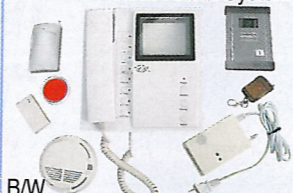
Wired Video Doorphones with Wireless Alarm

With Surveillance Cameras



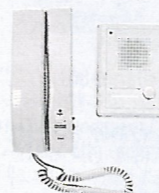
B/W Colour

With Wireless Alarm System



B/W

Wireless Audio Door Phone System



PDP-1120B

| | | |
|---|---|----------------------|
| 1 Apartment | PDP-113-03 | PDP-113C-03 |
| | 1 Monitor & 1 Button Camera | |
| 2 Apartments (for house & servants quarters) | PDP-113-03/2 | PDP-113C-03/2 |
| | 2 Monitor & 2 Button Cameras | |
| Display: | 4" B/W | 4" Colour |
| Power Supply: | AC110 or 220V (external adaptor) included | |
| Size: | 255 x 190 x 58.50mm | |

| | |
|--|--|
| Bi-directional speaking system | ✓ |
| Door Lock Release | ✓ |
| With Contrast, Brightness & volume control | ✓ |
| Intruder Warning Alarm Function | ✓ |
| Additional Features | • Can connect with up to 3 security cameras for monitoring purposes • With AV output that can connect to TV for monitoring purposes |

| |
|------------------------------------|
| PDP-112-03 |
| 1 Monitor & 1 Button Camera |
| B/W 4" CRT Monitor |
| AC110 or 220V (ext. adaptor) incl. |
| 255 x 190 x 58.50mm |

- Can connect with up to 4 zones wireless alarm system
- Can connect to external siren
- With AV output that can connect to TV for monitoring purposes
- 4 Wire to door station

Code Description

| | |
|---------------|----------------------|
| PIP-03 | Internal Phone only |
| PR-01 | PIR Motion Detector |
| WD-01 | Window/Door Detector |
| SD-01 | Smoke Detector |
| ES-01 | External Siren |
| PM-01 | Remote Controller |

Indoor Use:

- No wiring required for instant operation
- 100m operating distance
- Bi-directional speaking system
- Door lock release function
- Can connect up to a max. of 3 additional inside door phone units
- Power supply: DC6V
- 230/6VDC adaptor (included)
- Size: 215 x 90 x 60mm

Outdoor Unit:

- Power Supply: DC6V
- 230/6V adaptor (included)
- Weatherproof
- With transparent name plate on the front panel
- Size: 126 x 97 x 33mm

Code Description

| | |
|-------------------|---|
| PDP-1120IN | Additional Internal Phones |
| | Supply Volts: 230/9V adaptor (included) |
| | Can connect up to 3 phones |

Optional Extras:

| Code | Description |
|---------------|---|
| PC01 | CCD B/W dome camera with IR night vision. • Lens: 3.6mm •TV Resolution: 420TVL |
| PC02 | CCD B/W camera with IR night vision and microphone. • Lens: 3.6mm •TV Resolution: 470TVL |
| PC01C | CCD Colour dome camera with IR night vision. • Lens: 3.6mm •TV Resolution: 480TVL |
| PC02C | CCD Colour camera with IR night vision and microphone. • Lens: 3.6mm •TV Resolution: 470TVL |
| PIP-03 | Internal Phone only. Can connect up to 3 phones |

SMOKE GENERATOR

| | | |
|-------------|--------------|----------------------|
| Code | WY-15 | Smoke Generator Unit |
|-------------|--------------|----------------------|

Application:

Security: On entry by intruder into the premises, the alarm is triggered and the smoke system is activated. Within a few seconds the room will be filled with smoke. The intruder will be unable to see any articles intended to be stolen and will leave the premises immediately.

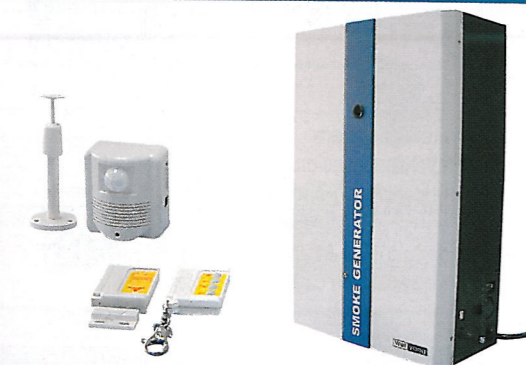
Stage Theatre: Unit can be positioned in remote places on stage to maximise use during shows by way of the remote button facility.

Features:

- Wireless or wired control
- Wireless code system – 64 codes
- Smoke made of inflammable, non toxic substance
- Effective range 7 metres
- Smoke consists of a plant vapour causing no harm to the human body, furniture and electrical equipment

Optional Extras:

| Code | Description |
|-----------------------|-------------------------|
| WY-SMOG-RC | Key remote controller |
| WY-SSS-YW | Window sensor |
| WY-SSS-YP | PIR motion detector |
| TFAD091155 | AC adaptor for PIR unit |
| FG-004-02 | Liquid 450cc bag |
| JBS-100R 12VDC | Flashing light (DC12V) |
| KPS-112 | Siren 110dB |
| WY-SMOG-CT | Counter (spray times) |
| FD-601-B02B | Software with USB cable |
| WY-SMOG-BU | Buzzer |



Specifications:

| | |
|---------------------------|---|
| Operating Frequency | 433.92MHz |
| Smoke effectiveness | 30 minutes, self extinguishing |
| Power Source | 110V/220VAC |
| Warm up Consumption | 1000W |
| Average Power Consumption | 50W |
| Spray time | 55 sec / 5 times / 450cc |
| Dimensions | 400W x 330H x 620L (mm) |
| Weight | 20kg |
| Kit consists of: | 1 x smoke generator, 1 x key remote, 1 x cradle, 1 x manual, 1 x PIR, 1 x window sensor, 1 x chemical 450cc |

BOX CAMERAS

NEW RANGE



| Code | TP-2000EWD-MIR | TP-550TVL-DN | TP-2006AX-G3 | LEE-111CAN | LEE-481CNN | LEE-361CAN |
|-----------------|-----------------------|------------------------|-----------------------|---------------|------------------|------------------|
| Sensor | 1/3" Sony CCD | 1/3" Sony CCD | 1/3" Sony CCD | 1/3" CCD | 1/3" CCD | 1/4" CCD |
| Lens | C/CS | C/CS - Direct Drive | C/CS - Direct Drive | C/CS | C/CS | C/CS |
| Resolution | 680TVL | 550TVL | 400TVL | 420TVL | 480TVL | 420TVL |
| Illumination | 0.1lux/ f1.0 - B.L.C. | 0.05lux/ f1.0 - B.L.C. | 0.4lux/ f1.4 - B.L.C. | 0.5lux/ f1.2 | 0.1lux/ f1.2 | 0.05lux/ f1.2 |
| S/N Ratio | +52dB | +50dB | +48dB | +48dB | +48dB | +48dB |
| Voltage/Current | DC 12V, AC 24V | DC 12V, AC 24V | DC 12V, AC 24V | DC 12V, 150mA | DC 12V, 150mA | DC 12V, 150mA |
| Size (mm) | 62 X 56 X 120 | 60 x 50 x 110 | 58 x 50 x 106 | 120 x 57 x 54 | 103 x 56 x 50 | 130 x 64 x 53 |
| Focal Iris | Auto | Auto | Auto | Auto | DC/ Video Driver | DC/ Video Driver |

NEW RANGE



| Code | BS-103B | BS-302B | BS-904B | BS-905B | BS-906B | LEE-111AAN |
|-----------------|----------------|----------------|------------------|------------------|------------------|---------------|
| Sensor | 1/3" Sony CCD | 1/3" Sony CCD | 1/3" Sony CCD | 1/3" Sony CCD | 1/3" Sony CCD | 1/3" CCD |
| Lens | C/CS | CS | CS | C/CS | C/CS | C/CS |
| Resolution | 540TVL | 540TVL | 540TVL | 540TVL | 540TVL | 420TVL |
| Illumination | 0.1lux/ f1.2 | 0.001lux/ f1.2 | 0.01lux/ f1.2 | 0.01lux/ f1.2 | 0.01lux/ f1.2 | 0.02lux/ f1.2 |
| Voltage/Current | DC 12V, AC 24V | DC 12V, AC 24V | DC 12V, AC 24V | DC 12V, AC 24V | DC 12V, AC 24V | DC 12V, 150mA |
| Size (mm) | 130 x 60 x 50 | 130 x 60 x 50 | 110 x 55 x 48 | 110 x 55 x 48 | 110 x 55 x 48 | 120 x 57 x 54 |
| Focal Iris | Auto | DC Drive | DC/ Video Driver | DC/ Video Driver | DC/ Video Driver | Auto |

TRUE DAY/NIGHT (LPR) COLOUR

NEW RANGE



| Code | TP-2000MIR-EX | TP-550SS-MIR | TP-550SS-DN | TP-3600XLA |
|-----------------|-----------------------|--------------------------|---------------------|--------------------------|
| Sensor | 1/3" Sony Ex view CCD | 1/3" Sony CCD | 1/3" Sony CCD | 1/4" Sony CCD |
| Lens | CS/C - Direct drive | CS/C - Direct Drive | CS/C - Direct drive | ICR |
| Resolution | 550TVL | 550TVL | 550TVL | 550TVL |
| Illumination | 0.05lux/ f1.0 | 0.08lux/ f1.0 | 0.08lux/ f1.2 | 0.7lux/ f1.6 |
| S/N Ratio | +50dB | +55dB | +55dB | +50dB |
| Voltage/Current | DC 12V/ AC 24V | DC 12V/ AC 24V | DC 12V/ AC 24V | DC 12V |
| Size (mm) | 60 x 50 x 110 | 60 X 50 X 120 | 60 x 50 x 120 | 57 x 61 x 110 |
| Focal Iris | Auto | Mechanical IR Cut Filter | Auto | Mechanical IR Cut Filter |

IR CAMERAS (COLOUR)

NEW RANGE



| Code | TP-H788VIC | TP-989WIR-MIR | TP-H100WIR-C | TP-101IR | BS-4003R |
|-----------------|-------------------|-------------------|-------------------|-------------------|---------------|
| Sensor | 1/3" Sony CCD | 1/3" Sony CCD | 1/3" Sony CCD | 1/3" Sharp CCD | 1/3" Sony CCD |
| Lens | 6mm fixed lens | 2.9-10mm | 4.3mm fixed lens | 6mm | 4-9mm |
| Resolution | 550TVL | 550TVL | 480TVL | 420TVL | 540TVL |
| Illumination | 0.3lux/ f1.2 | 0.4lux/ f1.2 | 0.3lux/ f1.2 | 0.2lux/ f2.0 | 0lux (IR on) |
| Infrared LEDs | 40pcs IR (40-50m) | 15pcs IR (25-30m) | 21pcs IR (15-20m) | 20pcs IR (20-25m) | 48pcs (40m) |
| Voltage/Current | DC 12V/AC 24V | DC 12V | DC 12V | DC 12V | DC 12V |
| Size (mm) | 90 x 195 | 210 x 62 | 92 x 95 | 115 x 80 | 152 x 88 x 86 |
| Focal Iris | Auto | DC Drive | DC/Video | DC/Video | DC/Video |

DAY/ NIGHT CAMERAS

Colour Weather Proof

B/W Weather Proof

Power supplies to be ordered separately, see page 561

| Code | TIR-500VD | CD345R | JK-219 | CD338LR | TIR-302VD | CD338L |
|-----------------------|--------------------------------------|-----------------|------------------|------------------|--------------------------------------|----------------|
| Sensor | 1/3" Sony CCD | 1/3" Sharp CCD | 1/4" Sony CCD | 1/3" Sharp CCD | 1/3" CCD | 1/3" Sharp CCD |
| Lens | Varifocal DC AUTO IRIS Lens, f=4~9mm | 12mm Fixed Lens | 6mm Fixed Lens | 3.6mm Fixed Lens | Varifocal DC AUTO IRIS Lens, f=4~9mm | 4mm Fixed Lens |
| Resolution | 330 TV Lines | 420 TV Lines | 480 TV Lines | 420 TV Lines | 380 TV Lines | 380 TV Lines |
| IR Illumination | 0 Lux(IR on) | 0 Lux(IR on) | 0 Lux(IR on) | 0 Lux(IR on) | 0 Lux(IR on) | 0 Lux(IR on) |
| Infrared LEDs | 40 Pcs IR LEDs | 70 Pcs IR LEDs | 52 Pcs IR LEDs | 24 Pcs IR LEDs | 40 Pcs IR LEDs | 24 LEDs |
| Voltage & Current | 12VDC, 500mA | 12VDC, 500mA | 12VDC, 300mA | 12VDC, 500mA | 12VDC, 500mA | 12VDC, 500mA |
| Size (mm) | 195W x 70H x 70D | 215 x 114 | 195W x 70H x 70D | D63 x 108 | 195W x 70H x 70D | D63 x 108 |
| Illumination Distance | 25M | 50M | 15-30M | 10-15M | 25M | 15-15M |

Infrared Illuminator Camera

Code TIR-300 30 Metres Weatherproof, indoor or outdoor

Code QA320 10-15 Metres Indoor

Features

- An effective way of discreetly illuminating an area where B/W cameras are in the dark
- Detection in areas without light as well as automatic CDS control lighting-sources sensor for 24 hours detection & monitoring
- Weatherproof outdoor housing



TIR-300



QA320

NEW RANGE DOME CAMERAS

Colour

Power supplies to be ordered separately, see page 561

| Code | TP-H201VPC-MOR | TP-550VDC | CD888MR | BS-603D | BS-805D |
|------------------|----------------|----------------|--------------------|----------------|----------------|
| Sensor | 1/3" Sony CCD | 1/3" Sony CCD | 1/3" CCD | 1/3" Sharp CCD | 1/3" Sony CCD |
| Lens | 3.5-9.3mm | 2.9-10mm | 3.6mm | 6mm | 3.6-6mm |
| Resolution | 550TVL | 480TVL | 420TVL | 420TVL | 540TVL |
| Illumination | 0.5lux/ f1.2 | 0.08lux/ f1.2 | 0.5lux/ f1.2 (15m) | 0.5lux/ f1.2 | 0.01lux/ f1.2 |
| Voltage/ Current | DC 12V, 200mA | DC 12V/ AC 24V | DC 12V/ AC 24V | DC 12V, 200mA | DC 12V, 500mA |
| Size (mm) | 153 x 82 | 188 x 88 | 72 x 117 | 68 x 110 | 100 x 100 x 68 |
| Focal Iris | Auto | Auto | Auto | Auto | Auto |

Colour

Power supplies to be ordered separately, see page 561

| Code | BS-2005D | QA888MB | LEE-690LOA | SW-691LIM | SW-68HOS | KC-12 |
|------------------|-----------------|--------------------|--------------|--------------|---------------------|---------------------------------------|
| Sensor | 1/3" colour DPS | 1/3" CCD | 1/3" CCD | 1/4" CCD | 1/4" IT CCD | • Max. 255 Speed Dome Camera Receiver |
| Lens | 3.6-6mm | 3.6mm | F = 4mm | F = 4mm | F = 4.1-73.8mm, 18X | • LED Display |
| Resolution | 540TVL | 420TVL | 420TVL | 420TVL | 480TVL | • RS-485 Multi-protocol |
| Illumination | 0.01lux/ f1.0 | 0.5lux/ f1.2 (10m) | 0.5lux | 0.5lux | 0.7lux | • Power Input 12VDC |
| Voltage/ Current | DC 12V, 200mA | DC 12V, 150mA | DC 12V, 1.5A | DC 12V, 1.5A | AC 24V, 1.5A | |
| Size (mm) | 75 x 117 | 120 x 80 | 118 x 100 | 105 x 100 | 219 x 219 | |
| Focal Iris | Auto | Auto | Auto | Manual | Auto | |

Dome Camera Receiver



- Max. 255 Speed Dome Camera Receiver
- LED Display
- RS-485 Multi-protocol
- Power Input 12VDC

COLOUR IP CAMERAS

NEW RANGE

Power supplies to be ordered separately, see page 561



| Code | TOP-788HMP | TOP-757VPC-MIR | TOP-23XIP | TP-H787VPC-MIR |
|------------------|---|--|---|--|
| Sensor | 1/4" CMOS | 1/4" CMOS | 1/4" Sony CCD | 1/3" Sony CCD |
| Lens | 6mm fixed lens | 2.7-9mm Auto Iris | 3.8-87.4mm | 2.9-10mm Auto Iris |
| Voltage/ Current | DC 12V/ POE | DC 12V/ POE | DC 24V | DC 12V/ AC 24V |
| Size (mm) | 90 x 195 | 145 x 103 | 300 x 320 | 112 x 140 |
| Construction | IP67 | IP66 | IP66 | IP66 |
| Temperature | - | - | Heater & Fan | - |
| Features | <ul style="list-style-type: none"> • H.264 Megapixel IR Weatherproof camera • Built-In 40pcs IR LED for night viewing 40-50m • Power over ethernet • Double globes design • Video compression for H.264, Mpeg4, Jpeg • 30fps for 9 profiles | <ul style="list-style-type: none"> • H.264 Mpeg-4, MJpeg multi-resolution streaming • Built-In 24pcs IR LED for night viewing 10-15m • Power over ethernet • Video compression for H.264, Mpeg4, Jpeg (CIP4) • 30 fps for 9 profiles • 23 x optical zoom | <ul style="list-style-type: none"> • High speed outdoor IP camera • H.264/ Mpeg-4, Mjpeg multi-resolution streaming • Video compression for H.264, Mpeg4, Jpeg (CIF4) • Comprehensive I/O ports • Supports various protocols | <ul style="list-style-type: none"> • Super-vandal-proof IP66 • Waterproof • Built-in 10pcs IR LED for night viewing 15m • High resolution IR colour dome |

NEW RANGE HIGH-SPEED CAMERA DOME IP66

NEW RANGE

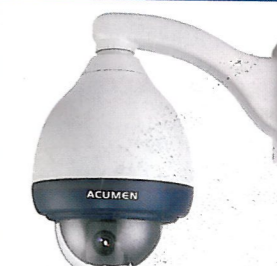
Module inside
Power supplies to be ordered separately, see page 561



Outdoor



Indoor



Mini 10x High speed



Outdoor

| Code | AN-SD7800D3/S4B | AN-SD7800D2/C2A | AN-SD7800M1/S1B | AN-SD7800D5/C2B |
|------------------|---|---|------------------------------|------------------------------|
| Sensor | 1/3" Exview CCD | 1/4" Super HAD CCD | 1/4" Sony CCD | 1/4" Super HAD CCD |
| Lens | 4.7-84mm | 4.0-88mm | 4.2-42mm (10 x Optical zoom) | 4.0-88mm (22 x Optical zoom) |
| Resolution | 540TVL | 540TVL | 480TVL | 480TVL |
| Voltage | AC19-30V | AC19-30V | AC19-30V | AC19-30V |
| Illumination | 0.01Lux B/W, 0.7Lux colour | 0.01Lux B/W, 0.7Lux colour | 1.0Lux Colour | 0.01Lux B/W, 1.0Lux Colour |
| Day & Night mode | ICR Infrared filter | N/A | ICR Infrared filter | N/A |
| Features | <ul style="list-style-type: none"> • Adopt 1/4" Super HAD CCD, Advanced Digital Signal Processing Technology • Support OSD Intelligent Menu • Pan Range: 0~360°, Tilt Range: -2°~90° • Pan Speed: 0~400°/sec, Tilt Speed: 0~120°/sec • Automatic vertical 180° flip • 256 Preset points • 4 Lines scanning function • 16 Point preset position tour • 4 Pattern scanning paths • Automatic homing function • Compass localisation function | <ul style="list-style-type: none"> • 4ch Alarm input and 2ch Alarm output • One-key recovery function • 24 Privacy zones • Support low temperature startup • Adopt precision stepper motors • RS-485 communication, support multiple control protocol such as Pelco-P/D ACUMEN • Modular structure design, easy installation and maintaining • Grade 3 Anti-thunder, Anti-surge and Anti-4000V high voltage • Double aluminium alloy shield. | | |

NEW



| Code | AN-MC5101 |
|-----------|---|
| Supply | DC 12V±10% |
| Interface | RS 48S (semi-duplex) |
| Terminal | 5 Pin copper connector |
| Display | LCD-Indication |
| Dimension | 305L x 148W x 82H mm |
| Features | Controls max. 255 speed dome Parallel connection 128 devices |

COVERT CAMERAS

| | Downlight with Built-in Colour Camera | Colour Camera with PIR Sensor | Colour | | | |
|---|---------------------------------------|-------------------------------|----------------------|---------------------|------------------|------------------|
| Power supplies to be ordered separately, see page 561 | | PIR distance: 6m | | | | |
| Code | JK-302 | LEE-232DAL | TP-6360WBC-DN | TP-902 PIR-C | TP-300HMD | TP-6430SC |
| Sensor | 1/4" Sharp CCD | 1/4" CMOS | 1/3" Sony CCD | 1/3" Sharp CCD | 1/3" Sony CCD | 1/3" Sony CCD |
| Lens | 6mm fixed | 3.6mm fixed | 3.6mm | 4.3mm | 3.7mm | 4.3mm |
| Resolution | 420TVL | 420TVL | 420TVL | 380TVL | 420TVL | 420TVL |
| Illumination | 1.0Lux/ F1.2 | 0.8Lux (IR LED) | 0.01Lux @ f1.4 | 3.0Lux @ f1.2 | 0.4Lux @ f2.0 | 0.1Lux @ f2.0 |
| S/N Ratio | +48dB | 42dB | +48dB | +48dB | +48dB | +48dB |
| Voltage/ Current | DC12V, 120mA | DC 12V, 300mA | DC 12V, 150mA | DC 12V, 150mA | DC 12V, 120mA | DC 12V, 200mA |
| Size (mm) | 54Ø x 100mm | 86 x 70 x 37mm | 31 x 100mm | 70 x 120 x 43mm | 45 x 51mm | 150 x 50mm |
| Facial Iris | Auto | Auto | Auto | Auto | Auto | Auto |

| | Sunshield Bullet Type | Mini Camera | Bullet Type | Mini type | Black & White | |
|---|----------------------------|--------------------|---------------|----------------|-----------------|----------------|
| Power supplies to be ordered separately, see page 561 | | | | | | |
| Code | LEE-3524CNN | LEE-3525CNN | JK-915 | CD882R | TBC-340W | CD882 |
| Sensor | 1" CCD | 1/3" CCD | 1/3" CCD | 1/3" CCD | 1/3" CCD | 1/3" CCD |
| Lens | 3.6mm (92°) Fixed lens | 2.5mm | F = 3.6mm | 3.6mm | F=3.6mm | 3.6mm |
| Resolution | 420TVL | 420TVL | 420TVL | 420TVL | 420TVL | 380TVL |
| Illumination | 0.1Lux | 0.5Lux | 0.8Lux @ f1.2 | 0.1Lux @ f1.2 | 0.8Lux @ f1.4 | 0.1Lux @ f1.2 |
| Voltage/ Current | DC 12V, 150mA | DC 12V, 150mA | DC 12V, 120mA | DC 12V, 200mA | DC 12V, 200mA | DC 12V, 150mA |
| Size (mm) | 110 x 85 x 60mm (box size) | 100 x 75 x 50mm | 23 x 75mm | 40 x 35 x 44mm | 23 x 75mm | 40 x 35 x 44mm |
| Facial Iris | Auto | Auto | Auto | Auto | Auto | Auto |

COLOUR AND B&W HOME TV SURVEILLANCE SYSTEM

| Code B/W | Code Colour | Talk & Alarm | Lens |
|-----------|-------------|--------------|------------------|
| TTC-361N | TTC-261N | ✓ | 4.3mm Fixed Lens |
| TTC-361NM | TTC-261NM | ✓ | 6mm C-Mount Lens |

Features:

- An intelligent & cost effective system with Alarm and Video recording to be used for home, store, etc.
- Connects to household VCR & TV.
- Built-in VCR Controller Function to operate household VCR automatically (no triggering/no recording to avoid unnecessary recording).
- Built-in Passive Infrared Detector.
- Built-in Alarm Buzzer sound to remind user of triggered situation.
- Built-in Microphone & Speaker allows user to communicate with camera & distribution box via home TV.

System Configuration



- Kit consists of: Camera & Distribution Box

WIRELESS COLOUR CAMERA KITS

| | 2 Cameras | 4-Channel Selectable | 5-Hour built-in Battery | Night Vision & Weatherproof | Night Vision & Weatherproof | 1000m Transmission |
|---|------------------|----------------------|-------------------------|-----------------------------|-----------------------------|--------------------|
| • Min 100 metres transmission without obstruction | | | | | | |
| Code | ZT-803G | ZT-803CT | ZT-805D | ZT-830D | ZT-817D | ZT-906D |
| Transmission Frequency | ISM-2.4GHz | | | ISM-2.4GHz | | 1.2GHz |
| Imaging Sensor | | | | 1/3" CMOS | | 1/3" CMOS |
| Horizontal Resolution | | | | 380TV Lines | | 380TV Lines |
| View Angle | | | | 62° | | 62° |
| Transmission Power | 10mW/CE; 2mW/FCC | | | 10mW/CE; 2mW/FCC | | 1000mW |
| Modulation Type | | | | FM | | |
| Weather-proof | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ |
| Night Vision | ✗ | ✗ | ✗ | ✗ | ✓ | ✗ |
| Channel Selectable | ✗ | ✗ | ✓ | ✓ | ✓ | ✗ |
| Lithium Battery | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ |
| Audio | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| PLL System | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Night Range | - | - | - | - | 3m | 15m |

Kit consists of: Camera, Receiver, AV Cable, Adaptor for camera and receiver. Spare Wireless Receiver: R707



Wireless Palm Baby Monitor

| Code | Description |
|---------|-------------------------------------|
| ZT-822E | 2.5" LCD Palm size Wireless Monitor |

Features

- Small palm sized receiver for mobile usage
- 2.5" LCD screen with 480 x 234 resolution

- Rechargeable Li-Battery in receiver, enables at least 2 hrs continuous operation
- 380TV lines sharp picture display
- Built-in microphone in camera and speaker in receiver for audio monitoring
- Min 100m transmission distance without block



Wireless Transmission Module 1000 metres

| Code | Description |
|-----------|--|
| ZT-F1500A | 1000 metres Transmitter & Receiver without obstruction |

Features

- 1000mW transmission power for long distance surveillance
- Frequency: 900MHz-1.230MHz 4 CH
- Modulation Mode: FM

Wireless Long Range Colour Camera 2.4GHz

1-2Km (Open Area) Standard. 1-5Km (Open Area) Using Antenna



Specification:

- GWL-200**
 - Use the 2.4GHz band without the hassle of messy cables
 - Weather resistant camera for indoor/outdoor use
 - IR distance: 30m
 - 0 Lux with IR
- GWL-205SC**
 - Same as GWL-200 with scramble protection
- GWA-214/GWA-217**
 - 2.4GHz Directional Panel Antenna
 - Hi gain / low profile
 - Pole mount
 - Rugged and weatherproof
 - Vertical polarization
 - Type N Female connector
 - Optimised for 2.4GHz ISM band

| Code | Description |
|-----------|--|
| GWL-200 | Long-range wireless camera + receiver |
| GWL-205SC | Long-range wireless camera + receiver, with scramble |
| GWL-212 | Indoor wireless camera with receiver |
| GWA-214 | 14dBi directional panel antenna |
| GWA-217 | 17dBi directional panel antenna |
| GWL-73 | 1000mW RF Power Booster, 2.4GHz multi-purpose application, compatible with wireless A/V transmission |

GWL-212

- Use the 2.4GHz ISM band without the hassle of messy cables
- Solid aluminium housing
- Weather resistant camera for indoor or undercover outdoor usage
- Built-in microphone for audio monitoring
- 4 channels can be arranged by yourself
- Easy plug and play installation takes only minutes

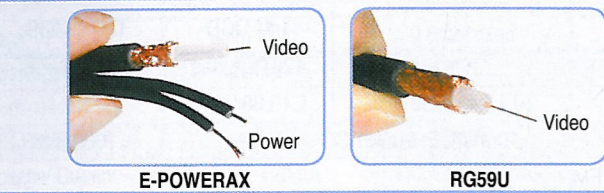


CAMERA ACCESSORIES



Connectors & Adaptors

| Code | Description |
|-----------|---|
| ZD-805068 | Connector BNC Male crimp type for RG58, 59, 6/U |
| ZD-805075 | Connector BNC Male twist type for RG58, 59, 6/U |
| ZD-805073 | Adaptor BNC Male / RCA Female |
| ZD-805074 | Adaptor RCA Male / BNC Female |
| ZD-805081 | Adaptor T BNC Female to 2 x BNC Male |
| ZD-805082 | Adaptor T BNC Male to 2 x BNC Female |
| PL259 | UHF Male Plug |
| S0239CH | UHF Female Socket |
| SP2104 | 12V Male Plug |
| SP2105 | 12V Female Plug |



Cables 75V

| Code per m | Code per 100m Roll | Conductor/ Insulation |
|-------------|--------------------|--|
| E-POWERAX/1 | E-POWERAX/100 | Video: 0.81 copper clad steel/ 3.7mm foamed PE Cable: 24 x 0.20mm stranded copper/ 1.7mm PE |
| RG59U/1 | RG59U/100 | RG59U Coax Cable |



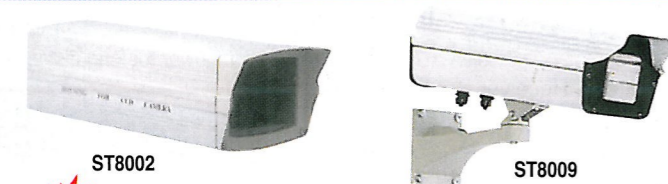
Camera Brackets

| Code | Description |
|--------|------------------|
| J-106 | Mounting Bracket |
| J-107 | Mounting Bracket |
| ST8111 | Mounting Bracket |
| J-109 | Mounting Bracket |



Camera Brackets

| Code | Description | Type |
|---------|------------------|---------|
| TP-203B | Mounting bracket | Plastic |
| TP-203I | Mounting bracket | Plastic |
| TP-206 | Mounting bracket | Plastic |
| TP-205N | Mounting bracket | Metal |
| TP-207 | Mounting bracket | Metal |
| TP-208 | Mounting bracket | Metal |



Camera Housings

| Code | Description |
|--------|--|
| ST8002 | Camera Housing |
| ST8009 | Outdoor Camera Housing with 20W Heater Blower 230VAC |



Outdoor Aluminium Camera Housing

| Code | Description | Size (mm) |
|----------|---------------------------------|-----------------|
| TP-603 | Housing with movable top 8 lock | 131 x 106 x 300 |
| TP-6031R | Housing with built-in IR Lens | 142 x 115 x 370 |
| TP-208H | Housing with movable top | 138 x 117 x 375 |

Wireless Converter

| Code | Description |
|---------|------------------------|
| ZT-401D | Transmitter & Receiver |

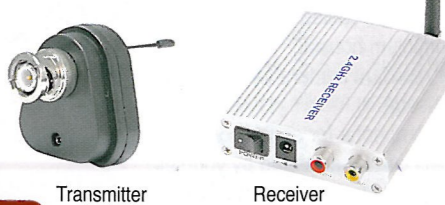
Specifications

| | |
|----------------------|-----------------------|
| Output VSWR: | 02:01 |
| Frequency: | ISM 2.400MHz-2.483MHz |
| Transmission Power: | 10mW/CE; 2mW/FCC |
| Modulation Type: | FM |
| Bandwidth: | 18MHz |
| Video Input Level: | 1Vp-p@75V |
| Audio Input Level: | 1Vp-p@600V |
| Power Supply: | DC +12V |
| Consumption Current: | 50mA |

Features

- Transmits AV signal by 2.4GHz frequency band
- With BNC Connector Plug
- 4-Channel available to avoid interference
- Unobstructed Effect Range: 100m (min)
- Suitable for CCTV Camera and other video device

Example: Transmitter fitted to camera



Transmitter

Receiver

CAMERA ACCESSORIES

Passive Video Balun

| Code | Description |
|----------|---|
| EVT-PB1 | Transmits a CCTV camera video signal long distances over low cost cable |
| BS-T-223 | Passive VGA Balun Set |

Features

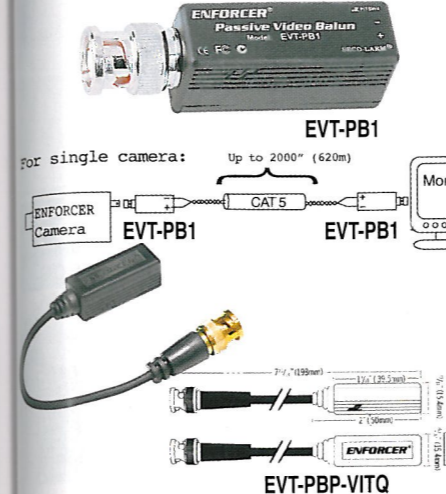
- Ideal for full-motion colour and black & white cameras.
- Transmits monochrome video up to 600 metres, or colour up to 400 metres.
- Uses low-cost CAT5e/6 unshielded twisted pair (UTP) cable. Works over existing UTP cable.
- Includes BNC connector and spring clamp terminal block (no need to crimp RJ-45 connectors). Reduces wiring time.
- High immunity from interference. Built-in impedance coupled device and noise filter.

Code Description

EVT-PBP-VITQ 6" BNC Digital connection

Features

- 6" BNC pigtail connector.
- Transmits a monochrome video signal up to 610m.
- Passive operation - No external power required.
- Built-in impedance coupled device and noise filter.



CCTV MICROPHONE & ACCESSORIES

CCTV Microphone

The CCTV Microphone is the ideal way to add sound pick-up to existing camera installations.



CCTV Accessories

| Code | VM-101Q | EVA-WBOBI-08 | CA-161R | MC-1101-09FQ |
|----------|---|--|---|---|
| Features | <ul style="list-style-type: none"> • Omni-directional pick-up pattern • RCA jack for audible output • 12VDC jack for power | <ul style="list-style-type: none"> • BNC male to BNC female connector • 205mm wire length • Gold-plated for longer lifespan | <ul style="list-style-type: none"> • DC Plug to terminal block for easy connection from terminal to plug | <ul style="list-style-type: none"> • HDMI cables • Supports HDMI v1.3 for type A • Gold-plated connector |

CCTV LENSES



HTS-0818NI



HT-0612



HTS-0358

| Code | Focal Length (mm) | Aperture f | Mount | Angle of View (Horizontal) 1/3" | Operation | | |
|--|-------------------|------------|-------|---------------------------------|------------------|--------|--------|
| | | | | | Iris | Focus | Zoom |
| Mono Focal Lens / Manual, Video, Direct Auto Iris | | | | | | | |
| HTS-0618NI | 6mm | 2 | CS | 24 | Fixed | Fixed | No |
| HTS-0818NI | 8mm | 2 | CS | 24 | Fixed | Fixed | No |
| HTS-1212NI | 12mm | 2 | CS | 36 | Fixed | Fixed | No |
| HTS-1612NI | 16mm | 2 | CS | 45.61 | Fixed | Fixed | No |
| HT-0612 | 6mm | 1.2 | CS | 53.2 | Manual | Manual | No |
| HT-0812 | 8mm | 1.2 | CS | 42 | Manual | Manual | No |
| HT-1212 | 12mm | 1.2 | CS | 43 | Manual | Manual | No |
| HT-1614 | 16mm | 1.4 | CS | 45.6 | Manual | Manual | No |
| Vari Focal Lens / Manual, Direct Auto Iris | | | | | | | |
| HTS-0358 | 3.5-8mm | 1.4 | CS | 44.6-95.45 | Manual | Manual | Manual |
| HTS-0358D | 3.5-8mm | 1.4 | CS | 44.6-95.45 | Direct Auto Iris | Manual | Manual |
| HTS-0615 | 6-15mm | 1.4 | CS | 23-54 | Manual | Manual | Manual |
| HTS-0615D | 3.5-8mm | 1.4 | CS | 23-54 | Direct Auto Iris | Manual | Manual |
| Vari Focal Lens / Manual, DC, Video Auto Iris | | | | | | | |
| TP-2812VASO | 2.8-12mm | 1.4 | CS | - | Direct Auto Iris | Manual | Manual |
| TP-C550WOE | 5-50mm | 1.6 | CS | - | Direct Auto Iris | Manual | Manual |

NEW VIDEO SERVER

1CH Video server with POE H.264



| Code | TOP-100HVS |
|---------------------|---|
| Video Input/ Output | BNC |
| Video Compression | H.264, MPEG-4, MPEG Multi-prolific |
| Image | 702 x 480 @ 30FPS |
| Comm's | RS-485, MiniSD slot DI/ DO, Analogue |
| Power Input/ Output | DC 12V, 1.5A camera max (400mA) |
| Dimensions | 127 x 90 x 35mm |
| Features | <ul style="list-style-type: none"> Provides 2 region of interest (ROI) for saving bandwidth Mouse scroll digital zoom function Free 65CH management software 10 Zones hardware motion detection |

NEW ACTIVE IP BALUN



IPB-A1200Q

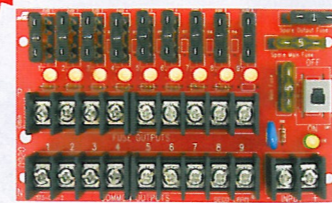


IPB-A1100Q

| Code | Description | Input | Output | Voltage |
|------------|------------------------------------|-------|--------|---------|
| IPB-A1100Q | Active IP Balun over CAT 5e/6 | RJ45 | RJ45 | 5VDC |
| IPB-A1200Q | Active IP Balun over coax (RG59/U) | RJ45 | BNC | 5VDC |

Active IP Baluns are designed to extend any TCP/IP devices beyond the 100m range to 1200m. The unit does not filter out any protocols, codes or applications, so this ensures compatibility with any IP camera and its software.

NEW CCTV POWER DISTRIBUTION BOARDS



Central Supply Connection

Power indicator for main board green and terminals

| Code | Output | Max. Amps/ Channel | Output Amps |
|---------|--------|--------------------|-------------|
| PD-9BSQ | 9 | 1.1 | 10A |

10A, 240VAC Main fuse. Includes circuit board only

Camera Fuse Code: F600-1A

NEW LOW BATTERY CUT-OFF MODULE



- Selectable input 12 or 24VDC
- Adjustable cut-off/ restore voltage range
- Dual colour output LED indicator
- Relay contact rating: 7A @ 30VDC

| Code | I/O Connection | Size |
|----------|------------------|----------------|
| ST-BD01Q | AC input/ output | 60 x 45 x 22mm |

5-IN-1 MULTI-PURPOSE 12VDC TESTER



- LED indicators
- Reverse polarity protection
- Indicates the condition of rechargeable gel 12VDC batteries
- Built-in digital cable with alligator clip for easy connection

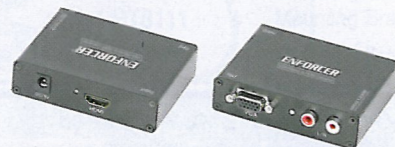
| Code | Test for |
|----------|---|
| ST-BT01Q | 1. Voltage 2. Battery load 3. Voltage drop 4. PTC Fuse 5. Polarity test |

NEW HDMI VIDEO

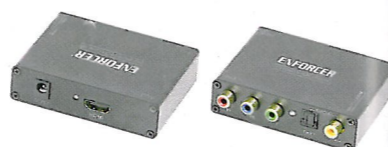
HDMI Over CAT 5e/6



VGA Input & Stereo Audio to HDMI Converter



Video Input & Digital Audio to HDMI Converter



| Code | MVE-AH010Q | MVA-WH01Q | MVA-EH01Q |
|--------------------|--|---|--|
| Video Input signal | 0.5-1.0Vpp | 0.5-1.0Vpp | 1.2Vpp |
| DDC Input Signal | 5Vpp (TTL) | 5Vpp | 5Vpp |
| HDMI Output | HDMI 1.3 | HDMI 1.2A + HDCP 1.0/1.1 | HDMI 1.2A + HDCP 1.0/1.1 |
| Resolution | 480p, 576p, 720p, 1080p | 480i, 576i, 1080i, 480p, 576p, 720p, 1080p | 480i, 576i, 1080i, 480p, 576p, 720p, 1080p |
| Power Adapter | 5VDC @ 2A | 5VDC @ 1A | 5VDC @ 1A |
| Link Connection | RJ-45 x 2 | Video: VGA, Audio: Dual RCA Stereo | Video: 3 RCA, Audio: Spdif (Toslink or RCA) |
| Features | <ul style="list-style-type: none"> Works with full-motion Video and audio signal up to 60m Connect HDMI equipment using low-cost CAT 5e/ 6 UTP cables | <ul style="list-style-type: none"> The MVA-WH01Q VGA and stereo audio to HDMI convertor takes a VGA and stereo audio signal input and outputs and HDMI signal | <ul style="list-style-type: none"> The MVA-EH01Q component and digital audio to HDMI converter takes a component video and digital audio signal input and outputs as HDMI signal |

NEW VIDEO DISTRIBUTOR



VA-1102B-WQ



VA-1104B-WQ

- Distributes video feed for NTSC or PAL
- Compatible with colour or Black & White signals
- LED to indicate power 12VDC or 24VDC
- 1 Video input to 2 or 4 video outputs

| Code | No. of Video | | Video Input Level |
|-------------|--------------|--------|--------------------|
| | Input | Output | |
| VA-1102B-WQ | 1 | 2 | 0.8 ~ 102Vp-p, 75Ω |
| VA-1104B-WQ | 1 | 4 | 0.8 ~ 102Vp-p, 75Ω |

BNC TO VGA CONVERTER

- Converts almost any LCD Monitor into a security monitor
- Video auto-configure NTSC or PAL Input
- On-screen display function: colour, contrast and brightness



| Code | Input Signal | Output Signal | Power |
|---------|--------------|--------------------------|-------|
| VC-IBAQ | BNC | VGA (DBIS VGA connector) | 5VDC |

VOLTAGE BOOSTER

- Compensates DC voltage drops over long cable run
- LED indicator with built-in overload, short-circuit protection



| Code | Input Voltage | Output Voltage | Current (A) |
|--------------|---------------|--------------------------|-------------------|
| ST-HB105-TTQ | 7-24VDC | 12 or 24VDC (adjustable) | 500mA @ 12/ 24VDC |

NEW VOLTAGE CONVERTER



ST-LA105-TTQ



ST-LA110-TTQ

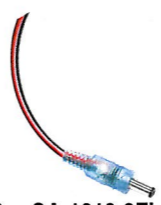
- Converts 12/ 24 VAC/DC to a regulated 5/ 12/ 24 VDC output
- LED indicator with built-in overload, short-circuit protection

| Code | Input Voltage | Output Voltage | Current (A) |
|--------------|---------------|----------------|-------------|
| ST-LA105-TTQ | 12/ 24 VAC/DC | 5/ 12/24 VDC | 0.5Amp |
| ST-LA110-TTQ | 12/ 24 VAC/DC | 5/ 12/24 VDC | 1.0Amp |

NEW ILLUMINATED POWER CONNECTORS



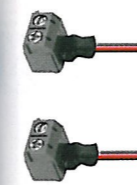
CA-1510-3FLQ



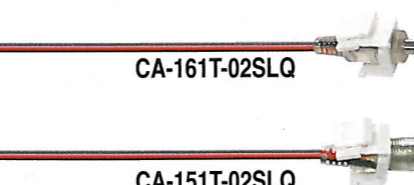
CA-1610-3FLQ



CA-1615-06LQ



CA-1611-02SLQ



CA-1511-02SLQ

AC/DC Illuminated Power Connectors make trouble-shooting CCTV or other 12VDC or 24VAC equipment easy testing

| Code | Description |
|---------------|--|
| CA-1610-3FLQ | DC Female Plug with LED and 75mm wire length |
| CA-1510-3FLQ | DC Male Jack with LED and 75mm wire length |
| CA-1615-06LQ | DC Male Jack to DC Female Plug with LED and 150mm wire length |
| CA-1611-02SLQ | DC Female Plug to terminal block, snap-in, LED, 63mm wire length |
| CA-1511-02SLQ | DC Male Jack to terminal block, snap-in, LED, 63mm wire length |

Features

Checks for low voltage AC/DC before connecting to a device.

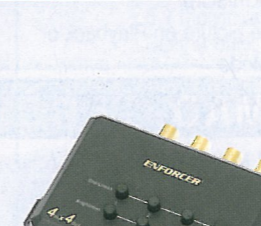


No Power Correct DC Polarity Incorrect DC Polarity AC Voltage

NEW VIDEO AMPLIFIER



VA-2101B-WQ



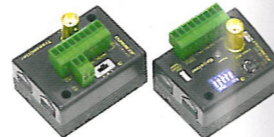
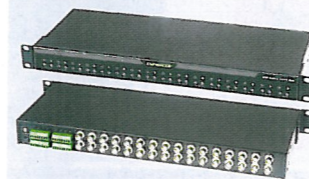
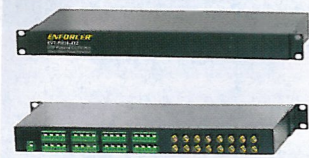
VA-2404B-WQ

- Video Amplifier compensates for video loss
- Connects to video camera, multiplexer, VCR, DVR, etc.
- Transmits up to 1km

| Code | VA-2101B-WQ | VA-2404B-WQ |
|----------------------|----------------------|----------------------|
| Video Input Channel | 1 | 4 |
| Video Output Channel | 1 | 4 |
| Video Input level | 0.8~1.2Vpp, 75 chins | 0.8~1.2Vpp, 75 chins |
| Gain adjustment | + 60dB @ 5MHz | + 60dB @ 5MHz |
| Operating Voltage | 12VDC | 12VDC |
| Power consumption | 100mA | 200mA |



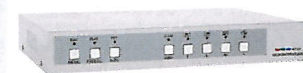
VIDEO AMPLIFIER



| Code | EVT-PH16-4T2Q | EVT-PB1-31RGQ | EVT-AH16-4T2Q | EVT-AB1Q |
|-------------------|--|---|---|--|
| Transmit Distance | 610m | 610m | 2400m | 900m |
| Video Input | 16 x 1 | 1 | 16 x 2 | 1 |
| Video Output | 16 (BNC) | 1 | 32 (BNC) | 1 |
| Power | 500mA | 300mA | 500mA | 300mA |
| Compact enclosure | 1U (1 3/4") | 48 x 35 x 23mm | 1U (1 3/4") | 59 x 43 x 41mm |
| Port | Passive | Passive | Active | Active |
| Features | <ul style="list-style-type: none"> Connects up to 16 CCTV cameras using low-cost CAT5e/6 UTP cable to a central location Built-in RS-485 port to P.C. Mounts in 19" rack Complete passive operation, no power required | <ul style="list-style-type: none"> Video, power and Data (VDP) over CAT5e/6 UTP cable Built-in ground loop isolator. Gold-plated BNC connector Dual-colour LED indication | <ul style="list-style-type: none"> Works with full motion CCTV cameras up to 2.4km via active video baluns Mounts in 19" rack Built-in impedance coupled device and noise filter Works in conjunction with passive or active video baluns | <ul style="list-style-type: none"> Transmitter amplifies the video signal for excellent picture quality at long distances Ind BNC connector and removable terminal blocks Gold-plated BNC connector Surge, ground and transient protection |

VIDEO PROCESSORS & SWITCHERS

Video Processors



4 Channel



4 Channel



16 Channel



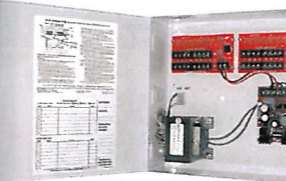
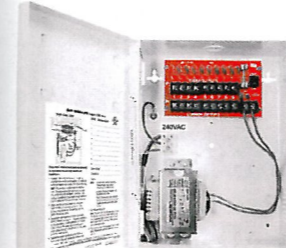
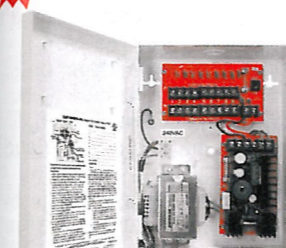
6 Channel

Switchers

| Colour Code | QA2004 (4CH) | LEE-406CVQ | KH-103 (16CH) | JMY-X6 |
|----------------|---|---|--|---|
| B&W Code | QA2005 (5CH) | LEE-403BVQ | - | JMY-X6 |
| Features: | <ul style="list-style-type: none"> Real Time Colour Quad display 4 Channel Camera Input Time/Date Generator Auto Sequence Switching Programmable Dwell Time Various Display Modes | <ul style="list-style-type: none"> Easy to operate Built-in RTC Freezing Function Menu Display Playback Function Motion detection for LEE-406CVQ only Display Mode: Full/Quad/PIP/Zoom/Auto Switch Picture update rate 25/sec | <ul style="list-style-type: none"> 16 Channel Camera Input Duplex Operation (Recording & Monitoring) Auto Sequence Switching Various Display Mode (4Ch/6Ch/8Ch/9Ch) Freeze picture on Playback or Live Mode Alarm I/O and Video Loss Detection Digital Motion Detection | <ul style="list-style-type: none"> Transmission Rate: 315mHz Remote Controller Transmission Distance: 20m-50m Supply Voltage: 230V |
| Specification: | Video Signal – Television System & Digital Memory: PAL 720x576 | Video Input: 4 Channels (Camera) 1 Channel (VCR) Video Output: 1 Channel (Camera) 1 Channel (VCR) | Video Input: 9/16 Camera / 1 VCR Video Output: 9/16 Looping / 2 Monitor / 1 VCR | QA28008 (8CH) <ul style="list-style-type: none"> Supply Voltage: 230V Input signal: 1Vp-p/75 Ohm, 1-8pcs BNC Output signal: 1Vp-p/75 Ohm 1pcs BNC 1-45 sec auto sequence switch, time is adjustable Bypass & locking function |



CCTV POWER SUPPLIES 240VAC



ACDC Power Supplies is the cost effective way to power multiple cameras. The power supplies provide a 24VAC or adjustable 12VDC output for 4, 9 or 18 fused outputs.

AC Models

| Code | No. of Outputs 24VAC | Output Amps | Max. Amps/Channel |
|-------------|----------------------|-------------|-------------------|
| 24VAC2.5A4P | 4 | 2.5A | 1.1 |
| 24VAC5A8P | 8 | 5A | 1.1 |
| 24VAC10A18P | 18 | 10A | 1.1 |

DC Models

| Code | No. of Outputs 12VDC | Output Amps | Max. Amps/Channel |
|-------------|----------------------|-------------|-------------------|
| 12VDC5A4P | 4 | 5A | 1.1 |
| 12VDC10A9P | 9 | 10A | 1.1 |
| 12VDC10A18P | 18 | 10A | 1.1 |

DC/AC Models

| Code | No. of Outputs 12VDC | No. of Outputs 24VAC | Max. Amps/Channel |
|---------------|----------------------|----------------------|-------------------|
| EVP-124M6P16Q | 8 (3A) | 8 (3A) | 1.1 |

NB: "Output Amps" is a maximum total output amperage for entire power supply

Features

- Supply volts: 90~240VAC
- AC or DC output models available
- Individually protected PTC-type 11A fuse outputs
- Status LED indicator
- Main Power Switch with surge protector
- Includes IP55 Steel enclosure and transformer
- DC models adjustable from 12.6~15.15VDC
- Dimensions: 196W x 254H x 89Dmm



RACK-MOUNTED CCTV POWER SUPPLIES

AC/DC Slim-line design. Rack mounted CCTV Power Supplies



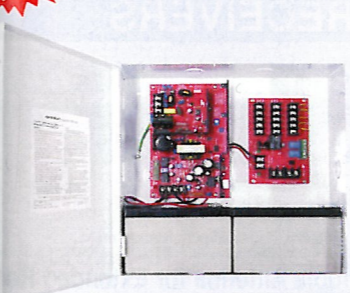
| Code | No. of Outputs | Output Volts | Output Amps | Max. Amps/Channel |
|--------------|----------------|--------------|-------------|-------------------|
| 24VAC10A16PR | 16 | 24VAC | 10A | 1.1 |
| DC Model | | | | |
| 12VDC13A16PR | 16 | 12VDC | 13A | 1.1 |

Features

- Supply volts: 176~264VAC
- Status LED indicator
- Includes IP55 enclosure
- Dimensions: 482W x 170H x 44Dmm



ACCESS CONTROL POWER SUPPLIES



DC Models

| Code | No. of Selectable Outputs | Description |
|----------|---------------------------|----------------------------|
| EAP-5D5Q | 5 | 5A @ 12VDC and 4.5A @24VDC |

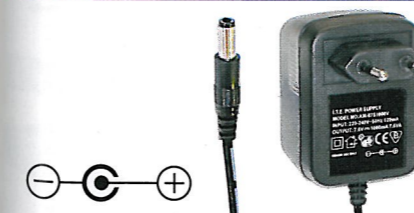
Features

- Supply Volts: 90~240VAC
- Field-selectable 12VDC or 24VDC outputs
- Each output operates both in fail-safe and fail-secure modes
- 5 x Individually fused power outlets
- Built-in back up battery charger
- Automatically switches to back-up battery if AC power fails
- Adjustable voltage range to compensate for voltage drop
- AC power failure supervision relay
- Auxiliary relay output

CAMERA ACCESSORIES

Power Supplies. Plug into 2 Pin Euro Socket

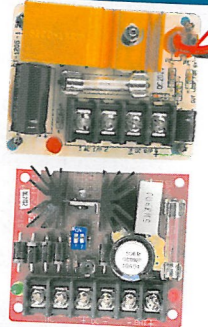
| Code | Volts | Amps |
|----------|------------|-------|
| EU1215* | 230V/12VDC | 150mA |
| EU1230* | 230V/12VDC | 300mA |
| EU1250* | 230V/12VDC | 500mA |
| EU12100* | 230V/12VDC | 1A |



*Barrel plug inside
Ø size to be specified:
1.4, 2.1, 2.5.

For more power supplies, see pages 68-69.

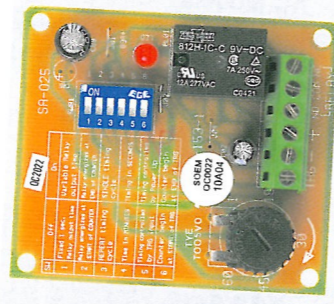
SERIES POWER SUPPLY/CHARGERS



- Regulated and filtered output voltage
- Short circuit protection
- Built-in backup battery charger
- Switches to backup battery automatically in the event of power loss
- Fused protection for battery charger
- Input AC Voltage required for 6VDC (12VAC), 12VDC (16VAC), 24VDC (24-28VAC)
- Transformer selection $P = V \times I$ (for 2A @ 16VAC = 2x16 = 32VA) use 40VA standard VA
- Transformer excluded (see page 65)

| Code | DC Voltage | Current (continuous) | Current (peak) |
|------------|------------|----------------------|----------------|
| ST-2406-2A | 6, 12, 24 | 1.5A | 2.0A |
| ST-2406-3A | 6, 12, 24 | 2.5A | 3.0A |
| ST-2406-5A | 6, 12, 24 | 4.0A | 5.0A |
| ST-2406-7A | 6, 12, 24 | 7.0A | 7.5A |

MULTI-FUNCTION TIMER MODULE



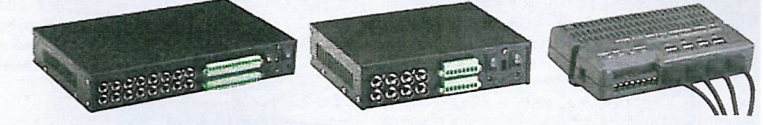
- Timer can be set from 1 second to 60 minutes
- Positive or negative trigger on power-up
- Relay can be programmed to activate at the start or at the end of the timing cycle
- Relay can also be set to activate for one second at the end of the timing cycle
- Programmable for pulse (flash) or steady on
- Reset function for manual reset of timing cycle
- LED indicates relay is energised

| Code | Description |
|--------|---|
| SA-025 | Relay Contact Ratings: 8A @ 120VAC/24VDC Supply Voltage: 12/24VDC (auto sensing) |

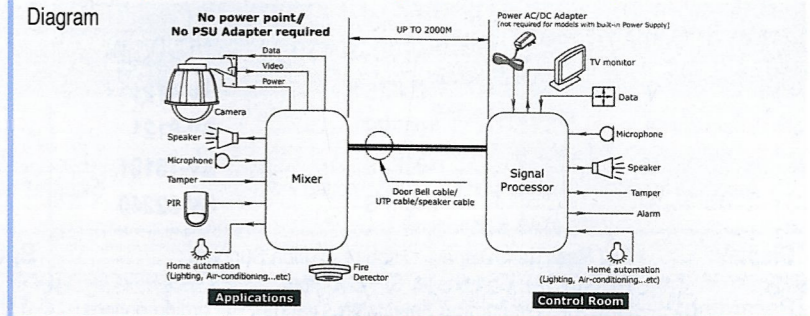
CCTV 2Y-LINK CABLE INSTALLATION

Using only one pair of cable to transmit power, video, control data, two-way audio & other signals. "Simultaneously"

Signal Processor - Supply volts 230VAC



| Code | CI-16-ASP-485 | CI-08-ASP-485 | CI-04-ASP-485 |
|-----------|---------------|---------------|---------------|
| Channel | 16 | 8 | 4 |
| Terminals | 16 | 8 | 4 |

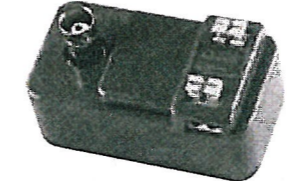


Up to 2000M ONE PAIR best cable for Video & Power No separate power wire



Push-Fit Mixer

Pig-Tail Mixer



| Code | Description | Code | Description |
|----------|---|----------|---|
| PF068A12 | Universal Mixer (0-500m, 12V to camera) | PT068A12 | Universal Mixer (0-500m, 12V to camera) |
| PF068A12 | Universal Mixer (500-1000m, 12V to camera) | PT068B12 | Universal Mixer (500-1000m, 12V to camera) |
| PF068B12 | Universal Mixer (1000-1500m, 12V to camera) | PT068C12 | Universal Mixer (1000-1500m, 12V to camera) |
| PF068A24 | Universal Mixer (0-500m, 24V to camera) | | |
| PF068B24 | Universal Mixer (500-1000m, 24V to camera) | | |

Accessories for easy installation

Rack mount Bracket

Rack mount Bracket

| RM-04 | RM-16 |
|--|--|
| For mounting one or two units of CI-04-ASP-485 signal processor in 19" rack. | For mounting CI-16-ASP-485 signal processor in 19" rack. |

Distribution board

Distribution board

| DB-4RJ | DB-4PF |
|---|--|
| Enables a single Cat5e/6 cable to split into TWO, THREE or FOUR individual pairs of UTP | Enables a single Cat5e/6 cable to split into TWO, THREE or FOUR individual pairs of Bell speakers wires. |

NEW

RF TRANSMITTERS



| Code | Description | Code | Description |
|--------------|---|--------------|---|
| SK-919TP1H-B | 1-Button Transmitter fixed code | SK-919TP2D-P | 2-Button Desktop RF Transmitter (2 Channel) |
| SK-919TP2H-N | 2-Button Transmitter fixed code | SK-919TP2D-F | 2-Button Foot RF Transmitter (2 Channel) |
| SK-919TP4H-N | 4-Button Transmitter fixed code | | |
| SK-94BC | Belt clip holster or wall mount bracket | | |
| AC513 | Spare battery (CR2016) | | |

- Features**
- Operates up to 160m (500ft)
 - Over 68 billion codes possible
 - Includes visor and belt clip
 - Includes 2 x 3VDC lithium batteries
 - Frequency 433.92MHz



- Features**
- RF remote controlled activation of locks, cameras or other devices from the convenience of a desk or other location.
 - Operates up to 160m (500ft)
 - Attractive heavy-duty aluminium case
 - LED indication for transmission, low battery and charging
 - Frequency 433.92Mz
 - Works with receivers below type SK910R2-4
 - Rechargeable 9V battery and power supply included

WIRED & WIRELESS RF TRANSMITTERS & RECEIVERS

- Powered by internal or external battery
- Operates up to 170M
- Over 68 billion possible codes
- LED transmission indicator
- Includes 12VDC alkaline battery
- Wiring:
 - 2 wires (200mm) for N.O. switch input
 - 2 wires (200mm) for 12VDC power input
- Frequency: 433.92MHz

Wired Transmitter



SK-939TDWS-B

1 & 2 Channel Transmitter



SK-939TS1S 1 Ch
SK-939TS2S 2 Ch

Typical Applications:

Make push-button wireless

Convert Sensors into entry alarm system

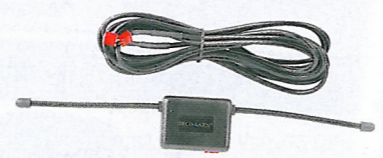
Wireless equipment/perimeter security

Receiver



| Code | Description |
|-----------|-------------|
| SK910R-4 | 1 Channel |
| SK910R2-4 | 2 Channel |
| SK910R4 | 4 Channel |

Dipole Antenna for Extended Range



| Code | Description |
|-----------|--|
| SK-93ERSD | Extended range up to 200m for SK910R/R2/R4 Frequency: 433.92MHz Plugs into Board Connector on Receiver |

DIGITAL SECURITY CCTV SYSTEM

NEW



| Code | D7704HT-KIT | D7708HT-KIT |
|----------|---|---|
| Features | With 4 x CCD cameras and 4 x 18.3m cables | With 8 x CCD cameras and 8 x 18.3m cables |

- Night vision up to 50ft (15m)
- H.264 Compression & Virus free Linux O/S
- Support mobile phone live view & email alarm
- Real hexaplex operation - simultaneous record, playback, mobile phone live view, backup, control & remote access
- 4 channels real time playback at the same time (for D7704HT)
- User-friendly interface: 16 bit true colour, semi-transparent graphical user interface
- Support D1, HD1, CIF for recording quality (for D7704HT)
- Support CIF for recording quality (for D7708HT)
- Fluent internet transmission
- Support USB DVD backup
- Power to 4 cameras is from DVR (for D7704HT)
- Suitable for fields such as supermarkets, chain stores, community security or villa
- Hi-speed backup/upgrade/record via USB2.0

PC DVR SYSTEM



| No. of Camera Input | Display/Recording Speed | Code PC Type | Code PC Board only | Code Relay Board |
|---------------------|-------------------------|--------------|--------------------|------------------|
| 4 | 100FPS | SV-4121 | SVM-4120 | SVM-4DIDO |
| 8 | 100FPS | SV-8121 | SVM-8120 | SVM-8DIDO |
| 16 | 100FPS | SV-16121 | SVM-16120 | - |
| 32 | 240FPS | SV-32240 | - | - |

- Display:** Full Real Time Display • High resolution Support • RGB (VGA), Composite, SVHS Output.
- Recording:** Real Time Recording Selectable • Various Recording options: (continuous, schedule, motion detection, event/ alarm) • Recording Frame & Resolution adjustable to each Channel • Pre & Post event/alarm recording • Max 4CH Audio input & recording • Provides Mpeg4 and Mjpeg compression Algorithm.
- Search and Data Backup:** Multi Channel Search at the same time in Server and Remote • Instant searching by recording time bar, date and camera. • Recorded Image Zooming and Panning by mouse • Data back-up to DVD, CD-RW, FDD Network Drive • File save in AVI, BMP or JPEG.
- Remote Function:** Dynamic IP support • Monitoring and full control for server from remote PC • Multi-channel searching from remote PC • Remote connection by PSTN, TCP/IP, Internet by Ethernet card • Multi access and servers controlled by management S/W program

Specifications

| | |
|-------------------|---------------------------------------|
| Video Resolution | 640 x 480, 320 x 240, 240 x 180 |
| Screen Switching | 1-10 seconds |
| Output Resolution | Over 400 TV lines (1 Screen) |
| Network | LAN, ADSL/PSTN |
| Motion Detection | 5 Types of Sensors |
| Data Backup | DVD, CD-RW, FDD |
| HDD | Standard 120GB/Max. 1250GB Expandable |

Note: System Requirement for PC Board

| | |
|------------------|---------------------------|
| CPU | Pentium IV 2.0GHz minimum |
| RAM | 256MB |
| Operating System | Windows 2000 / XP |

DIGITAL VIDEO RECORDERS (DVR) & CAMERAS



H.264 compression supports mobile remote surveillance



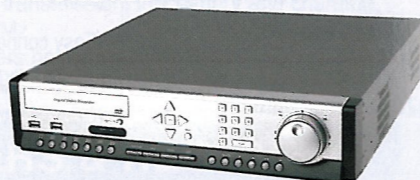
| Code | BES-8004VT | BES-8008VT |
|---------------------|---|---|
| Operating System | Embedded Linux | Embedded Linux |
| Front Type | Front Key/ 7" TFT Monitor | Front Key/ 7" TFT Monitor |
| System Control | Front Button/ Mouse/ Remote controller/ External Keyboard | Front Button/ Mouse/ Remote controller/ External Keyboard |
| HDD | Support 1TB SATA HDD | Support 1TB SATA HDD |
| Video Input/ Output | 4ch BNC/ 2ch BNC | 8ch BNC/ 2ch BNC |
| Audio Input/ Output | 4ch BNC/ 1ch BNC | 8ch BNC/1ch BNC |
| Alarm Input/ Output | 4ch / 1 ch | 8ch/1ch |
| Port - USB | 2.0 | 2.0 |
| Image Quality | CIF/HD1/D1 selectable | CIF |
| Internet | IE/PPPoE/DDNS | IE/PPPoE/DDNS |
| Mobile Surveillance | Support Symbian s60 v3.0, Mobile Pocket PC operation system | Support Symbian s60 v3.0, Mobile Pocket PC operation system |
| Power Adaptor | 19V/3.42A DC | 19V/3.42A DC |
| Dimensions (mm) | 330 x 230 x 60mm | 330 X 360 X 60mm |

H.264 STAND-ALONE DVR SERIES



D1 (4CIF) Real-Time - Complete with 1.5 TB.HDD

Complete with 640G HDD



| Code | SD-1004BV | SD-1008DV | SD-1016BV | EZSD-0824H | EZSD-1648H |
|------------------------|--|-----------|-----------|---|------------|
| Operating System | Embedded Linux | | | Embedded Linux | |
| Front Type | Front Key | | | Front Key/ DVD-RW/ Jog Shuttle | |
| System Control | Front Button/ Mouse/ Remote controller/ External Keyboard | | | Front Button/ Mouse/ Remote controller/ External Keyboard | |
| HDDs Bay | Sata HDDs (1.5TB) incl. | | | 3 Sata HDDs/ 1 DVD-RW/ 640G HDD incl. | |
| Video Input BNC | 4ch | 8ch | 16ch | 8ch | 16ch |
| Audio Input RCA | 4ch | 8ch | 16ch | 8ch | 16ch |
| Alarm Output | 4ch | 8ch | 16ch | 1ch (live or playback) | |
| Port - USB | 1 | 2 | 2 | 4 | 4 |
| Display - Speed | Real-Live (30 frame per each channel) | | | Real-Live (30 frame per each channel) | |
| - PIP/ POP | PIP | PIP & POP | PIP & POP | PIP & POP | |
| Recording - Video Code | Hardware H.264 | | | Hardware H.264 | |
| Max - HDD | 2TB | 4TB | 4TB | 4TB | |
| Network - Type | Static/ Dynamic/ DHCP/ PPPoE/ DDNS | | | Static/ Dynamic/ DHCP/ PPPoE/ DDNS | |
| - CMS | Live/ Playback/ Audio/ PTZ/ Snapshot/ Recording/ Setup/ Remote Firmware Upgrade/ Remote DVR Reboot | | | | |
| Power Adaptor | DC 12V/ 5A | | | DC 12V/ 6.7A | |
| Dimensions (mm) | 325 x 245 x 45mm | | | 430 x 90 x 430mm | |

DIGITAL SECURITY CCTV SYSTEM

4 Cameras + 10.4" LCD/DVR



4 Cameras + 7" LCD/DVR



Instant Viewing using Windows Mobile™ 6.0 and above touch screen smart phones.

Wireless 1CH 2000 Images

Recording on 2G SD Card



| Code | D2164JA-KIT | D2284HM-KIT | D2001JW-KIT |
|------|--|--|---|
| | <ul style="list-style-type: none"> 10.4" LCD with 4 channels video input With 4x CMOS cameras and 4x 18.3m cables Duplex operation: Simultaneous playback & record Built-in removable HD rack and USB1.1 port for backup Simple user interface via mouse function Motion detection and video loss alarm function Power recovery auto-record function Recording mode: continuous, motion detection, time schedule Hard disk storage: Over 1TByte Recording frame rate: PAL: 50fps/NTSC: 60fps Support audio: RCA 4-CH input/ 1-CH output | <ul style="list-style-type: none"> With 4 x CCD cameras and 4 x 18.3m cables Night vision up to 50ft (15m) H.264 Compression, Support D1/ HD1/ CIF/ 100/120fps (CIF) USB mouse control PTZ and network function Built-in 7" retractable LCD monitor Support mobile remote surveillance Support network center management system For Business and Home use | <ul style="list-style-type: none"> Colour CMOS wireless camera 11 x IR LED, night vision up to 15m Motion detection function Record single camera at a time Record AVI video files or JPG photo images A 128MB card (not included) can store over 2000 images or 2500seconds AVI videos Support up to 2GB SD card With PIP function, support 1 wired and 1 wireless camera simultaneously on TV Conveniently connect wireless or wired cameras |

LCD/DVR & CAMERA COMBO KITS

NEW

Instant Viewing
using Windows Mobile™ 6.0
and above touch screen
smart phones.



Instant Viewing
using Windows Mobile™ 6.0
and above touch screen
smart phones.



| Code | L1507D4-KIT (4 cameras) | L1701D4-KIT (4 cameras) | D1901D8-KIT (8 cameras) |
|------|------------------------------|------------------------------|------------------------------|
| Code | L1507D4-DVR (DVR + LCD only) | L1701D4-DVR (DVR + LCD only) | D1901D8-DVR (DVR + LCD only) |

- With 4 x CCD cameras and 4 x 18.3m cables
- 15" TFT-LCD monitor with built-in DVR
- H.264 compression
- Triple operation - simultaneous record, playback, network
- Clear and smooth network live monitor
- Mouse/ USB backup/ PTZ/ Mobile
- HDD up to 1TByte capacity
- Remote view with Mobile phone
- Real time remote view via IE browser
- Support network protocol: TCP/IP, DHCP, DDNS, PPPoE and email

- With 4 x CCD cameras and 4 x 18.3m cables
- 17" TFT-LCD monitor with built-in DVR
- H.264 compression
- Triplex operation - simultaneous record, playback, network
- Clear and smooth network live monitor
- Mouse/ USB backup/ PTZ/ Mobile
- HDD up to 1TByte capacity
- Remote view with Mobile phone
- Real time remote view via IE browser
- Support network protocol: TCP/IP, DHCP, DDNS, PPPoE and email

- With 8 x CCD cameras and 8 x 18.3m cables
- 19" TFT-LCD monitor with built-in DVR
- H.264 compression
- Triplex operation - simultaneous record, playback, network
- Clear and smooth network live monitor
- Mouse/ USB backup/ PTZ/ Mobile
- HDD up to 1TByte capacity
- Remote view with Mobile phone
- Real time remote view via IE browser
- Support network protocol: TCP/IP, DHCP, DDNS, PPPoE and email

NEW

B&W AND COLOUR MONITORS

3D Combo filter



| Code | SC-03001HM | ML-1900TM1 | TP-226LCD-3D |
|------------------|-----------------------------------|--|---|
| Screen Size | 8" TFT Colour LCD | 19" Active Matrix Colour LCD | 22" Active Matrix Colour LCD |
| Resolution | 800 x 480 | 1280 x 1024 XGA | 1280 x 1050 WSXGA |
| Display Mode | NTSC/ PAL Auto | Video/ S-Video/ VGA/ HDMI | Video/ S-Video/ VGA/ HDMI |
| Composite Input | 2 CH Video (BNC)/ 2CH Audio (RCA) | VGA x 1, RCA x 2, BNC x 2 PC Audio x 1 | VGA x 1, RCA x 2, BNC x 2 PC Audio x 1, S-Video x 1 |
| Composite Output | Built-in speaker | BNC x 2, Ear Phone x 1 | BNC x 2, Ear Phone x 1 |
| Power | 6W (DC 12V), 2000mA | 35W (110V/ 230VAC) | 35W (110V/ 230VAC) |
| Dimensions | 189 x 131 x 38mm | 517 x 318 x 50mm | 420 x 360 x 30mm |



14" B&W Quad Monitor

Code LEE-1233BQ

- High Resolution: 800 TV Lines
- Auto Video Loss Alarm Detect
- Freezing with Playback Function
- 4 Video Input



10" B&W Monitor

Code LEE-101M

- 1 Channel Video/Audio Input
- High Resolution: 800 TV Lines
- Size: 235W x 305D x 323Hmm



14" Colour Quad Monitor

Code LEE-131Q (Colour 14")

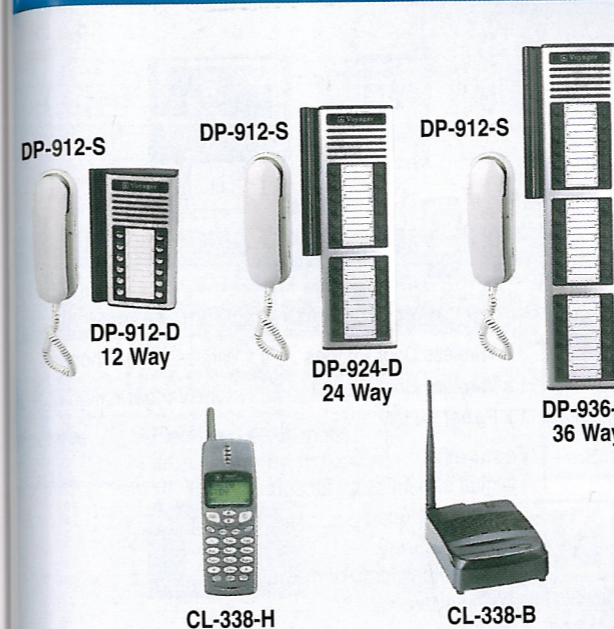
- Built-In Real Time Quad Processor & 4 Cameras capability
- Horizontal Resolution: 430TVL
- Manual/Automatic switching between multiple cameras (1 to 60 seconds adjustable)
- Built-In Condenser Microphone & Speaker for 2 Way Audio
- Freeze & Zoom function for close-up study of events
- A/V Input/Output for VCR Recording & Playback
- Size: 350W x 369D x 325Hmm

14" Colour Monitor only

Code TM-144

Real Time Built-In Observation Monitor

AUDIO ENTRY KITS FOR 1 TO 12 APARTMENTS



Wireless Door Station Button Type - 500m to 5km IP65

| Code | DP-912-D | DP-924-D | DP-936-D |
|--|----------|----------|----------|
| No. of Way (Apartments) | 12 Way | 24 Way | 36 Way |
| • Complete with Power Supply • Wireless phones to be ordered separately, see below | | | |

Wireless Phone Wallmount

Code DP-912-S

Wireless Phone Cordless

Code Phone CL-338-H

Code Base Unit CL-338-B only required if connecting to Telkom landline

Special and Unique Features

- Long communication range (500m to 5km for outdoor)
- Working in 900MHz/800MHz/2.4GHz/200-400MHz
- Multi-Frequency group pre-settable
- Multi-Frequency channel (40/80 selectable) auto-scan, auto-select clear channel
- One million set security code (system changeable)
- Talking time control (auto off)
- Press key to talk with preset subscriber
- Press key to open door
- Door ajar displayed on subscriber unit
- Voice Scrambler

NEW

PORTABLE WIRELESS DOORPHONE SYSTEMS

Portable Wireless Doorphones



| Code | PPG-1122B |
|------|-------------------------------------|
| Code | PPG-1122IN (Spare indoor unit only) |

- No wiring required for operation
- 2.4GHz operating frequency
- Rechargeable function
- 100-150m operating distance
- Operated by rechargeable batteries with external adapter 230VAC (included)
- Battery life: Up to 120hrs stand-by Up to 5hrs talk time
- Can connect up to 3 sub-indoor units
- Incoming-call forwarding function
- Extra indoor unit can be added
- Product size: 160.3 x 117.3 x 43.5mm

PPG-1122B-2IN

- 2.4GHz operating frequency
- Operated by DC6V or external adaptor 230VAC (included)
- 100-150m operating distance
- Transparent name position on the front panel
- Surface wall-mounted type
- Connection for door lock
- Weatherproof
- Product size: 126 x 97 x 33mm

Portable Colour Wireless Video Doorphone

IP54



RL-0825AB

- 2.4" Colour Video Doorphone
- 2.4GHz operating frequency
- Operated by lithium battery and external adaptor 230VAC (included)
- Distance: 50-70m
- Dual-way intercommunication
- Camera: CMOS
- Size: outdoor: 126 x 93 x 34mm indoor: 102 x 66 x 17mm

NEW

WIRELESS VIDEO INTERCOM

2.4GHZ Digital 3.5" Wireless Video Doorphone - with rain-proof outdoor camera IP54

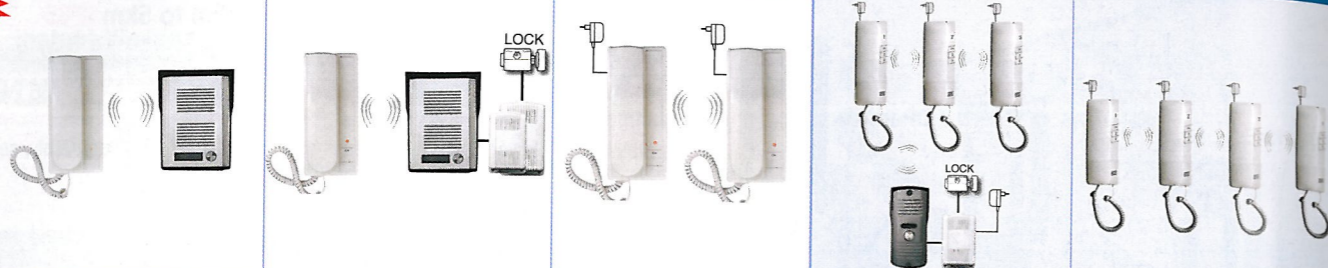
| Code | VDP-616-KIT |
|--------------|---|
| Kit includes | <ul style="list-style-type: none"> • 1 x CMOS Camera with 2.4GHz Wireless transmitter • 2 x 100-240V Power adapter for indoor monitor • 2 x 3.5" Screen Monitor with 2.4GHz Wireless receiver • 1 x 100-240V Power adapter for outdoor camera • 2 x Wall mounting bracket for indoor monitor • 1 x English version operation manual |

Specifications

- Easy to install, no wiring required for monitor, place it anywhere
- Rain-proof camera
- Camera & Monitor have built-in rechargeable lithium-ion battery
- Unlock the door remotely using electronic lock
- Take picture manually
- Automatically capture visitor's picture
- Camera with 6-LED for night vision
- Completely hands-free talking just after push of a button
- Press monitor button anytime to view surveillance camera
- Built-in selectable 24pcs doorbell chime
- Sleek-shape monitor with built-in antenna
- Distance range - Open-air: 300m. In-home: 50-70m
- Camera can be linked to more than 1 monitor
- Code for Spare monitor: VDP-616

WIRELESS DIGITAL DOORPHONE KITS

NEW



| Code | RL-0510A | RL-0510 | RL-0510B | RL-0510C-03 | RL-0510B4 |
|-------------|--|--|--------------------------|---|--------------------------|
| Description | 1 x Wireless Door Phone 1 x Wireless Door Station | 1 x Wireless Door Phone 1 x Wireless Door Station 1 x Power Supply | 2 x Wireless Door Phones | 3 x Wireless Door Phones 1 x Wireless Door Station 1 x Power Supply | 4 x Wireless Door Phones |

AC Power Adaptor:
220-240V 50Hz AC
9V (included)

- Features:**
- 2.4GHz digital transmission
 - Clear talking voice
 - Dual-way inter-communication
 - Maximum working distance is 200m

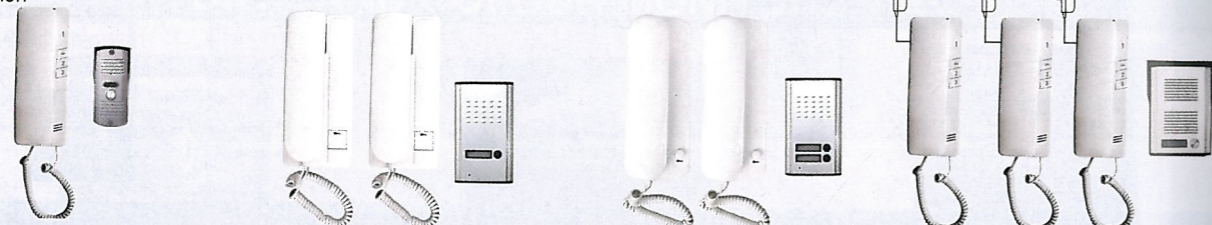
- Features:**
- Digital transmission for sound signal
 - Adaptor included
 - Wireless 2-way
 - Adjustable volume of melodies
 - Anti-interference
 - Inter-communication between indoor & outdoor unit

Code RL-0510ACDC
Description Spare power supply system for intercom

WIRED INTERCOM DOORPHONE KITS

- Features:**
- 2-Wire connections
 - Inter-communication
 - With unlocking function
 - Working Distance: 100m
 - DIY Assembly
 - Anti-oxidation, wearable aluminium outdoor unit
 - High quality sharp clear voice

AC Power Adaptor:
220-240V 50Hz
AC 9V



| Code | RL-3203C | RL-3208DD | RL-3207AA | RL-3203AAA |
|-------------|--------------------------------------|--|--|---|
| Description | 1 x Door Station 1 x Indoor Phone | 1 x Door Station 2 x Indoor Phones | 1 x Door Station (2 Button) 2 x Indoor Phones | 1 x Door Station 3 x Indoor Phones |
| Code | RL-3200ACDC | Two-way intercommunication is available between only two indoor phones | | Works as doorphone or 3-way intercom system |
| Description | Spare power supply | | | |

WIRED VIDEO DOOR ENTRY

Colour Video Door Phone



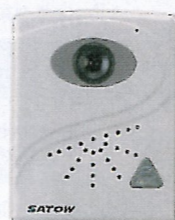
Code LEE-560CDP

Accessories

| Description | Code |
|---|-------------|
| Complete Set (monitor & camera) | LEE-560/086 |
| Spare Monitor | LEE-560CDP |
| Spare Camera | LEE-086DAN |
| Switcher for 2 monitors & 1 door camera | LEE-897 |
| Spare 18.3 metre cable | LEE-18CAB |

Features

- CASIO 5.6" high resolution colour TFT-LCD screen
- Hand-free intercom
- Ring or music indicating visitors
- Alarming function
- Un-lock voltage output function
- Supply: DC 13.5V 1A

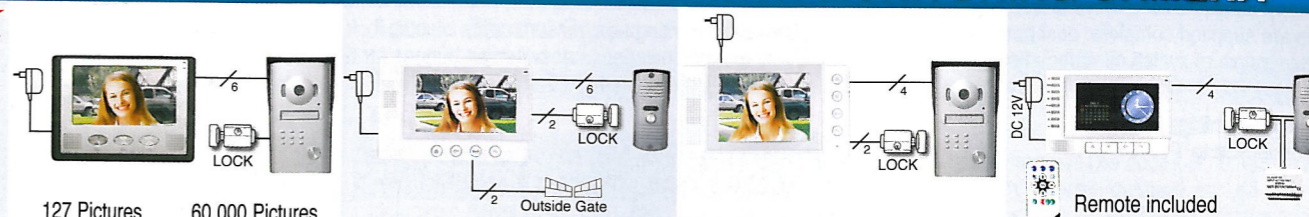


Code LEE-086DAN

1/3" colour CMOS camera
Resolution: NTSC 510(H)x492(V)
PAL 628(H)x582(V)
Supplied with: Mains adaptor, 18.3 metre cable.

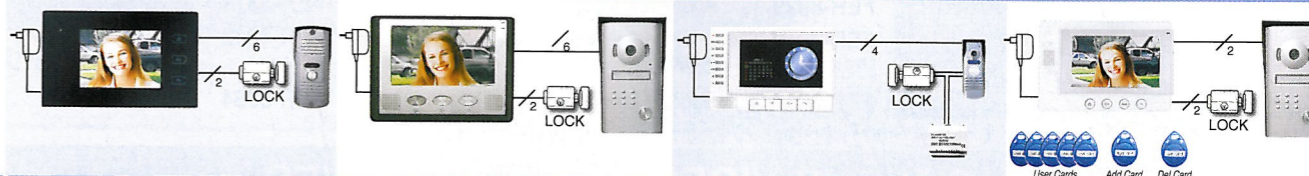
WIRED COLOUR DOORPHONE KITS WITH MONITORING CAMERA

NEW

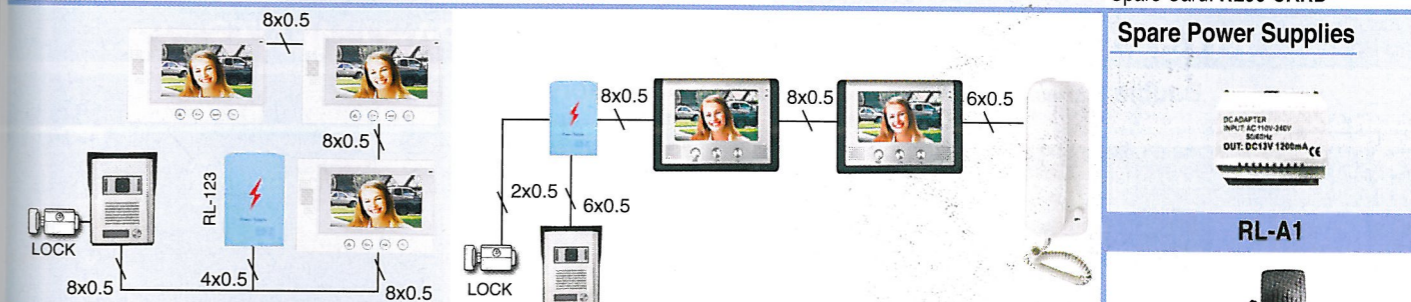


| Code | RL-037MP | RL-028MG | RL-06C | RL-08M | RL-SD7F |
|-------------|---|--|--|---|--|
| Description | 127 Pictures • 1 x 7" Video Monitor • 1 x Door Station • 2-Wire Connection • Picture taken when call button pressed • Night Vision | 60 000 Pictures • 1 x 8" Video Monitor • 2GB SD Card (incl.) • 1 x Door Station • 1 x Indoor Phone | • 1 x 7" Video Monitor • 1 x Door Station • 1 x Indoor Phone | • 1 x 8" Video Monitor • 1 x Monitoring Camera • 1 x Door Station | • 1 x 7" Video Monitor • 1 x Monitoring Camera • Motion recording with SD card to save memory • Clock and calendar function |

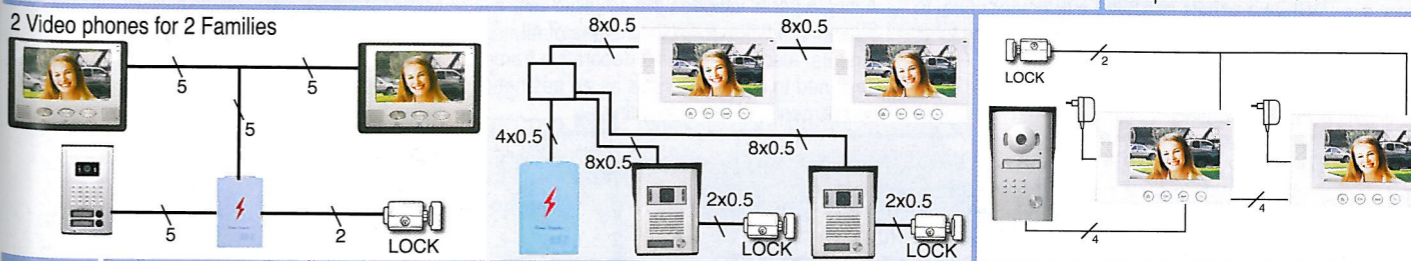
- Features**
- Electronic unlock mode
 - 8-Chord melody ring options
 - Brightness, contrast & volume adjustment
 - 15m cable & power adaption
 - Waterproof and damageproof cameras



| Code | RL-SD036C | RL-037M | RL-SD7F | RL-06MID |
|-------------|---|---|--|---|
| Description | • Video recording for moving objects • Video is saved on 16GB SD card as an AVI file, 640 x 480 pixels • 8-Chord melody ring options • Video doorphone mode will be automatically turned back for a call when reviewing recorded video • Night vision | • IP44 waterproof • 7" TFT Colour Screen • Night vision • Enclosed a switch power supply and 15m cable for DIY installation • 1 x Power supply (230V) | • Works as video doorphone, invisible recorder, digital clock & perpetual calendar • Auto-recording onto SD card for outside moving objects only • Brightness, chroma and volume adjustable • 8-Chord melody ring options • Night vision | • 17mm ultra-thin indoor unit • ID unlocking and electric-controlled unlocking • 7" TFT Colour Screen • Up to 100 user cards can be added to this system • 1 x Power Supply (230V) • Supplied 5 x user cards, 1 Delete & Add card Spare Card: RL06-CARD |



| Code | RL-3TV06A | RL-3TVP2-1 | RL-A1 | RL-A3 |
|-----------------|--|---|--------------------|--|
| Description | • 3 x 7" Video Monitors • 1 x Door Station • Power Supply (230V) | • 2 x 7" Video Monitors • 1 x Door Station • Power Supply (230V) | • 1 x Indoor Phone | |
| Features | • Hands-Free Communication • 8-Chord Melody Rings • Brightness, Contrast & Volume Adjustable | • 15m Cable & Power Adaptor • Night vision • Inter-communication between indoor units | | • Input Voltage: AC 100-240V • Output Voltage: DC 12V • Output Current: 2000mA |

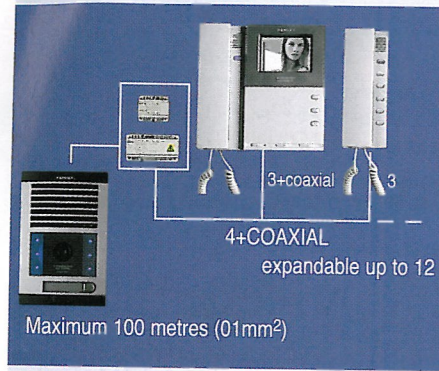


| Code | RL-2A037 | RL-2D06P2 | RL-2TV06A |
|-------------|---|--|---|
| Description | • 2 x 7" Video Monitors • 1 x Door Station • 1 x Power Supply (230V) • High definition CCD Camera • Electric-controlled unlocking • Waterproof | • 2 x 7" Video Monitor • 2 x Door Station • 1 x Power Supply (230V) • High definition CCD Camera • Waterproof • Electric-controlled unlocking | • 2 x 7" Video Monitors • 1 x Door Station • 8-Chord melody ring options • Hands-free • Waterproof, inter-communication, anti-oxidation • Night vision |

BLACK & WHITE VIDEO KITS FOR HOME

Kits are supplied complete: pushbutton outdoor panel with camera, mounting box, power supply, electric lock release and Loft monitor with connector plate. Video monitors switch off automatically after 60 seconds. Every monitor includes: autoswitch/on buttons for two access function buttons to switch on the courtesy light or open a second door (garage, etc.) from the monitor. A relay Code **FER-2013** is required for this function.

- Flush Mounting
- Connection to TV



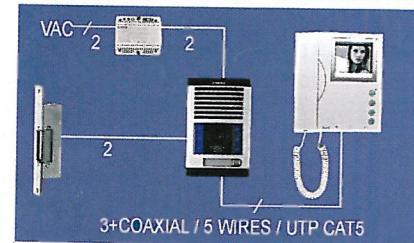
| No. of Way | Kit Code Econo Type | No. of Wires | Extendable Units with same PSU | Kit Code Digital | No. of Wires | Extendable Units with same PSU |
|------------|---------------------|--------------|--------------------------------|------------------|--------------|--------------------------------|
| 1 Way | *FER-6002 | 8 + Coax | 3 phones/1 monitor | FER-3340 | 3 + Coax | 2 phones/1 monitor |
| 2 Way | FER-6006 | 8 + Coax | 2 phones/1 monitor | FER-3332 | 3 + Coax | 2 phones/1 monitor |
| 3 Way | - | - | - | FER-3334 | 3 + Coax | 2 phones/1 monitor |

*With Internal Intercom

Accessories

| Code | Description | Code | Description |
|----------|-----------------------------------|----------|-----------------------------------|
| FER-8044 | Additional Phone | FER-2451 | Additional Phone |
| FER-8029 | Additional Monitor | FER-3319 | Additional Monitor |
| FER-4812 | Additional Power Supply 230/18VDC | FER-4812 | Additional Power Supply 230/18VDC |
| FER-8954 | Surface Box | FER-8954 | Surface Box |

COLOUR VIDEO KITS FOR HOMES

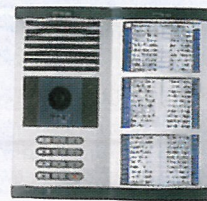


Deluxe. Colour image. Wiring: 3 + Coax. Allows 1 monitor code **FER-3320** (or code **FER-3319** B&W) or 2 telephones code **FER-2451** without additional power supply. Allows secondary access and remote camera.

| No. of Way | Kit Code Econo Type | Extensions with same Power Supply | | |
|------------|---------------------|-----------------------------------|----------------|----------|
| | | B/W Monitor | Colour Monitor | 2xPhones |
| 1 Way | FER-3330 | FER-3319 | FER-3320 | FER-2451 |
| 2 Way | FER-3333 | FER-3319 | FER-3320 | FER-2451 |

KITS FOR APARTMENTS (UP TO 199 APARTMENTS)

Double Panel



Code FER-6092

Panel Size Series 5: 130(W)x246(H)mm
Box Size Series 5: 115(W)x233(H)x45(D)mm

With two panels including a directory panel to write down the names of all tenants and their door numbers

- Flush Mounting

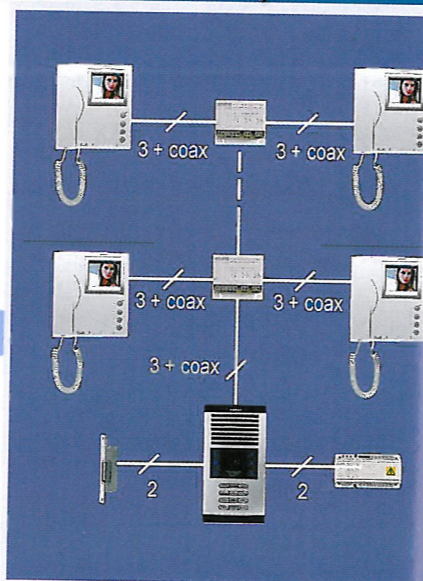
Electronic Directory



Code FER-6134

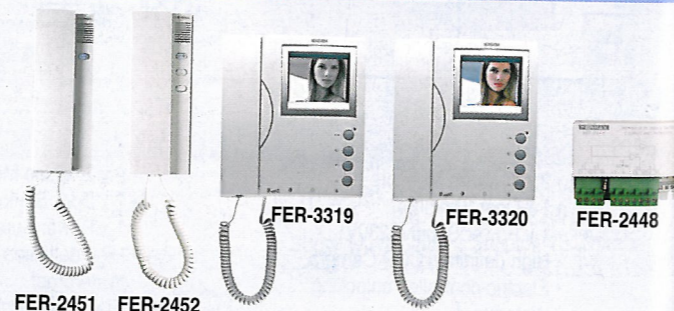
Panel Size Series 7: 130(W)x341(H)mm
Box Size Series 7: 115(W)x328(H)x45(D)mm
Frame Size Series 7: 225(W)x450(H)mm

A single panel includes the amplifier and a directory to write down the names of all tenants. Also included is a decorative frame designed to cover any gaps as an aesthetic compliment. • Flush Mounting



Accessories

| Description | Code |
|--|----------|
| ADS Phone – Basic Phone per apartment (max. 3 per apartment) | FER-2451 |
| ADS Phone – Basic Phone with 2 additional function buttons | FER-2452 |
| B&W ADS Basic Monitor per apartment (max 3 per apartment) | FER-3319 |
| Colour Basic Monitor per apartment (max 3 per apartment) | FER-3320 |
| 2 Way Video distributor | FER-2448 |

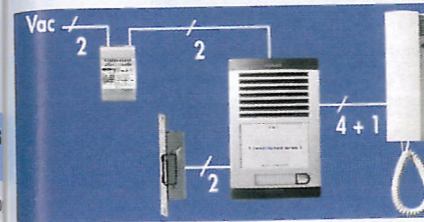


ACCESS CONTROL SYSTEM

Access Control System (Flush Mount)

| Kit Code | Additional Phone Code | Access Card Code |
|----------|-----------------------|------------------|
|----------|-----------------------|------------------|

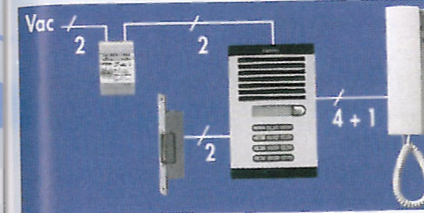
FER-2261 **FER-8044** **FER-2363**
Wiring: 5 Wires. The outdoor panel includes a proximity access control reader. The door lock is released by presenting a card to the reader. For applications in apartments, offices, banks, garages, etc. Kit includes 6 cards Code **FER-2363** (up to 400). Allows extension telephones Code **FER-8044** and secondary access.



Access Control System up to 100 Codes (Flush Mount)

| Kit Code | Additional Phone Code |
|----------|-----------------------|
|----------|-----------------------|

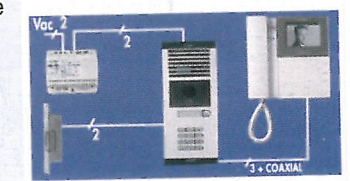
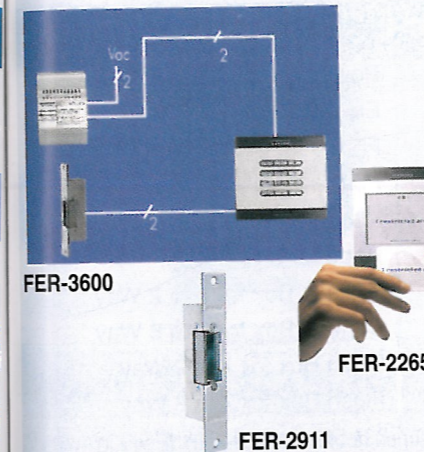
FER-3602 **FER-8044**
With Memo key. Wiring: 5 Wires. The panel includes a keypad to release electric lock when entering a 4, 5 or 6 digit code. It allows up to 100 different codes for the users, with facility of alarm control, 2nd door opening, etc. Includes flush box phone **FER-8044** PSU **FER-8981** and electric lock release **FER-2911**.



Access Control without Phone (Flush Mount)

| Code Kit with 100 Codes | Code Kit with Access Card | Code Kit with B&W Video |
|-------------------------|---------------------------|-------------------------|
|-------------------------|---------------------------|-------------------------|

FER-3600 **FER-2260** **FER-3606**
Keypad access control system. The electric lock is released by entering a 4, 5 or 6 digit code. Allows up to 100 different codes for personnel, one to release another device (like an alarm), a secondary entrance, etc. Includes panel with keypad, flush box, power supply and electric lock release Code **FER-2911**
Proximity access control system. Every user has a personal card that the reader can identify, allowing or denying access to the area. The system allows 400 different cards. Kit includes: panel with proximity reader, flush box, power supply, electric lock release Code **FER-2911** and 6 cards Code **FER-2363** (up to 400). Programmed manually or via Win Prox software
Video Entry Kit for a single apartment with MEMOKEY access control function



INTERCOM SYSTEM KITS – FLUSH MOUNT

Multiway City Kits (Audio + Intercom)

Door entry kits for single family houses, offices, companies, etc. with internal communication. The outdoor panel calls, tones generated in all the telephones, it is possible to answer and open the door from any handset. The internal call sounds different from the outdoor panel call, to distinguish the origin. Kit includes: Pushbutton kit panel with flush box Code **FER-8300**, power supply (DIN 10 modules) Code **FER-8815**, multiway switcher (DIN 6 modules) and intercommunication telephones compatible with the audio entry system Code **FER-8084** with decorative frames. Electric lock release not included.

| Code | Description | |
|----------|--|----|
| FER-9022 | No of Way | 2 |
| | Maximum number of additional Phones allowed (FER-8084) | 12 |

• Kit includes 2 Phones per Way.

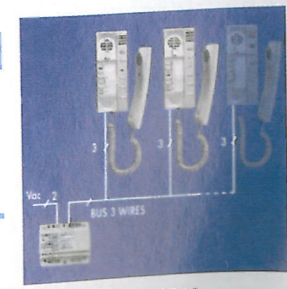
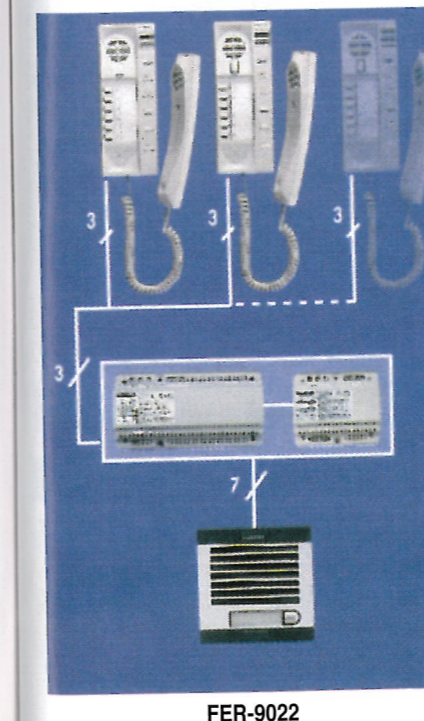
Intercom Kits: (without door unit)

| Code | Description |
|----------|---|
| FER-9042 | Intercom Kits for single family houses, offices, warehouses, etc. Kit includes: Power supply (DIN 6 elements) Code FER-88039 and intercom telephones Code FER-8084 with decorative frames |

Maximum number of additional Phones allowed (FER-8084) 12

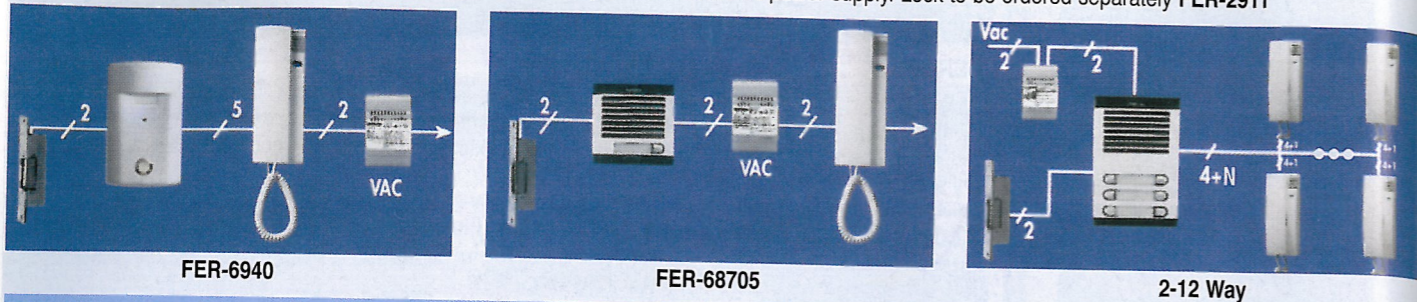
Accessories

| | | |
|----------|---------------------------|----------|
| FER-8084 | Palace Intercom Bus Phone | FER-2911 |
| FER-2911 | Electric Lock 8-12V | FER-9042 |



AUDIO ENTRY KITS FOR 1 TO 12 APARTMENTS

• Surface Mount for FER-6940 and FER-68705, all others Flush Mount.
 • Kit includes: Outdoor pushbutton panel, box, telephones for apartments and DIN power supply. Lock to be ordered separately FER-2911



| No of Way | No of Wire | Kit Code | Additional Phones Max Extension | Code | No of Way | No of Wire | Kit Code | Additional Phones Max Extension | Code |
|-----------|------------|-----------|---------------------------------|----------|-----------|------------|-----------|---------------------------------|----------|
| 1 Way | 5 | FER-6940 | 3 | FER-8091 | 6 Way | 4+6 | FER-6343 | 3 | FER-8044 |
| 1 Way | 2 | FER-68705 | 1 | FER-8044 | 8 Way | 4+8 | FER-63456 | 3 | FER-8044 |
| 2 Way | 4+2 | FER-63256 | 3 | FER-8044 | 10 Way | 4+10 | FER-63506 | 3 | FER-8044 |
| 3 Way | 4+3 | FER-63306 | 3 | FER-8044 | 12 Way | 4+12 | FER-63556 | 3 | FER-8044 |
| 4 Way | 4+4 | FER-63356 | 3 | FER-8044 | | | | | |

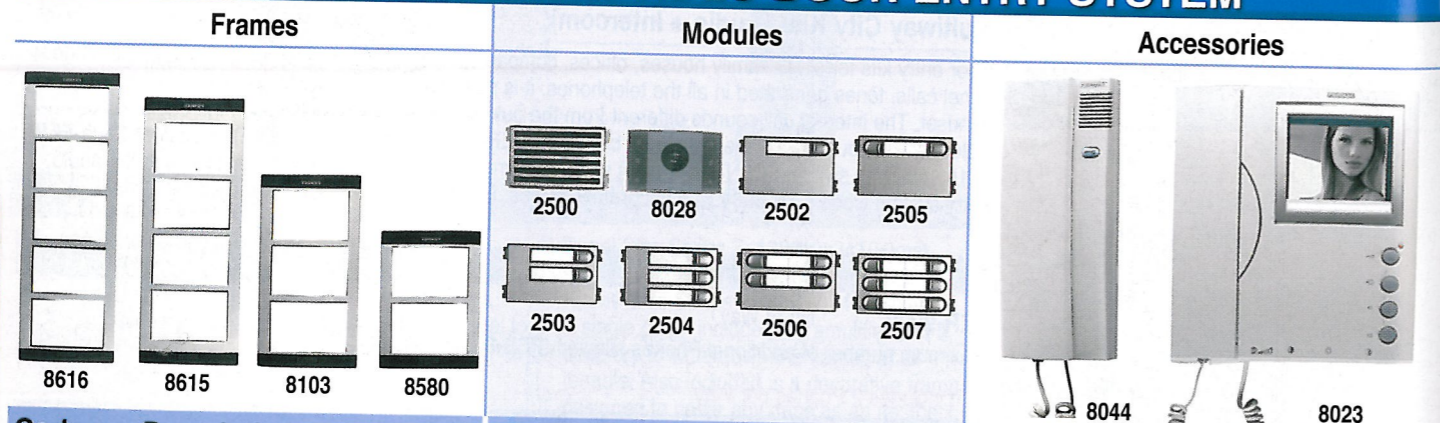


Accessories

| Code | Description |
|----------|-----------------------------|
| FER-4812 | Power Supply 230/18VDC 1.5A |
| FER-2911 | Electrical Lock 8-12V |
| FER-8251 | Frame for 1 to 2 Way |
| FER-8254 | Frame for 3 to 8 Way |
| FER-8400 | Hood for 1 to 2 Way |
| FER-8403 | Hood for 3 to 8 Way |
| FER-8951 | Surface Box for 1 to 2 Way |
| FER-8954 | Surface Box for 3 to 8 Way |
| FER-8948 | Flush Box for 1 to 2 Way |
| FER-8949 | Flush Box for 3 to 8 Way |

Above Accessories not for Kit FER-8901 (Eco Kit)

CITYMAX AUDIO & VIDEO DOOR ENTRY SYSTEM



| Code | Description | Code | Description | Code | Description |
|----------|---|----------|------------------------|-----------|-------------------------------------|
| FER-8580 | 2-module frame | FER-2501 | Blank module | FER-8044 | Basic telephone |
| FER-8853 | Flush box (for 2-module panels) | FER-2500 | Audio amplifier module | FER-3310 | B/W monitor w/o connecting plate |
| FER-8103 | 3-module frame | FER-8028 | B/W camera module | FER-3312 | Colour monitor w/o connecting plate |
| FER-8855 | Flush box (for 3-module panels) | FER-2490 | Colour camera module | FER-3032 | Connecting plate for monitor |
| FER-8615 | 4-module frame | FER-2502 | 1 pushbutton module | FER-8788 | Power supply for audio module |
| FER-8857 | Flush box (for 4-module panels) | FER-2503 | 2 pushbutton module | FER-88301 | Power supply for video module |
| FER-8616 | 5-module frame | FER-2504 | 3 pushbutton module | FER-2448 | 2 way video distributor |
| FER-8858 | Flush box (for 5-module panels) | FER-2505 | 2 pushbutton module | FER-2449 | 4 way video distributor |
| FER-8829 | Joining bolts (for more than one panel) | FER-2506 | 4 pushbutton module | FER-4812 | Power Supply 230/18VDC 1.5A |
| FER-2515 | Connecting cable for 2 panels | FER-2507 | 6 pushbutton module | | |

HOME SECURITY

| Code | Description | Code | Description | Code | Description | Code | Description | Code | Description |
|-------|--------------------------------------|-------|-----------------------------|------------|--------------------------------|-------|------------------|---------|------------------------------------|
| S080N | Magnetic Sensor Entry Alarm | S080K | Magnetic Sensor Entry Alarm | S086K | Glass Vibration Breakage Alarm | S063 | Door Wedge Guard | MD-288 | Keyring and Alarm (Personal Alarm) |
| S062 | Sliding Door and Window Alarm | S002M | Home Guard | S003M | Home Guard | S008B | Home Guard Plus | S082X | Entry Protection plus Entry Chime |
| S001K | Wireless Motion Activated Door Chime | ST-10 | Sensor with Remote | MINI FLASH | Personal Safety Light | S100G | Siren | SW-3003 | Detector |

S080N
 Features: No tools installation, a built-in 80-85 dB alarm siren and is excellent for windows, sliding doors & cabinet protection. Operates on two button cell batteries (included).

S080K
 Features: No tools installation, a built-in 90-105 dB alarm siren and is excellent for windows, sliding doors & cabinet protection. Operates on two button cell batteries (included).

S086K
 Features: Can be used on any glass window or door and features no tools installation. Built-in 80-85 dB alarm siren. Operates with two button cell batteries (included).

S063
 Features: Uses a contact plate or vibration for alarm activation and has a high output 110-112 dB alarm siren. Great for travelling. Operates with a 9 volt battery (included).

MD-288
 Features: Mini keyring with personal alarm, Pull cord to trigger alarm, Panic switch, Damaging 120dB level battery (included).

S062
 Features: Has a high output 110-120 dB alarm, a screw locking mechanism for sliding window security and is activated by vibration. It operates with a 12 volt battery (included) and needs no tools to be installed.

S002M
 Features: Digital keypad arm/disarm with a detection range of up to 1500 sq. ft., operates with 9V battery (not included) and has a built-in alarm siren. AC Power Option (not included).

S003M
 Features: Built-in alarm or chime modes and a detection. Cover of 70m². Operates with 4 x AA batteries (not included). AC Power Option (not included).

S008B
 Features: Has a programmable keypad with alarm or chime modes and panic button alarm activation. This unit is expandable and operates with a 9 volt battery (not included). AC power option (not included).

S082X
 Features: Digital keypad on/of control, a built-in alarm siren and alarm or chime modes, it operates with 3 x AAA batteries (not included). Instant or delay alarm options with detached magnetic sensors.

S001K
 Features: 50m range. 256 codes to prevent interference. Power sources: Sensor 12VDC power or 1 x 6V battery (included). Chime unit 4 x AA Batteries (not included). 3 Chime options: 2 note chime, Bell tone, Westminster. Adjustable volume.

ST-10
 Features: PIR Sensor with remote control on/off. Door chime and 120dB alarm. Time delay for exit & entry. Operates with 3 x AA batteries (not included). AC Power option (not included). ST-10B as ST-10, with magnet sensor.

MINI FLASH
 Features: Compact & modern design. Attracts attention from over 1km at night. Ideal for safety signalling during jogging, cycling, hiking, camping, etc. Size: 26(L)x10(W)x55(H)mm

S100G
 Features: Provides a long range external siren of 110 to 120 dB and can be located up to 20m from the main control unit S008B. Supply Volts: 12VDC

SW-3003
 Features: Hand held Metal Detector (Body scanner). Battery operated 9V rechargeable 130mAh or 150mAh (not included). Battery charger: 9V 500mA (included)

TECHNICAL INFORMATION

Pressure Equivalent Table

| P.S.I. | bar | kPa |
|--------|-------|--------|
| 1 | 0,06 | 6,89 |
| 5 | 0,34 | 34,48 |
| 10 | 0,68 | 68,96 |
| 20 | 1,37 | 137,93 |
| 30 | 2,06 | 206,89 |
| 50 | 3,44 | 344,82 |
| 75 | 5,17 | 517,24 |
| 100 | 6,89 | 689,65 |
| 125 | 8,62 | 862 |
| 150 | 10,34 | 1034 |
| 175 | 12,06 | 1206 |
| 200 | 13,79 | 1379 |
| 250 | 17,24 | 1724 |
| 300 | 20,68 | 2068 |

1kPa = 0,01 bar
 1MPa = 10,00 bar
 1kg/cm² = 1,00 atm
 1 P.S.I. = 6,895 kPa
 1 kPa = 0,145 P.S.I.
 1kg/cm² = 14, 223 P.S.I.

Temperature Equivalent Table

| °F | | °C | | °F | | °C | | °F | | °C | |
|-----|-------|-----|-----|-----|-----|-----|-----|----|--|----|--|
| 0 | -17.8 | 180 | 82 | 460 | 238 | 740 | 393 | | | | |
| 10 | -12.2 | 200 | 93 | 480 | 249 | 760 | 404 | | | | |
| 20 | -6.7 | 212 | 100 | 500 | 260 | 780 | 416 | | | | |
| 32 | 0 | 240 | 116 | 520 | 271 | 800 | 427 | | | | |
| 40 | 4.4 | 260 | 127 | 540 | 282 | | | | | | |
| 50 | 10 | 280 | 138 | 560 | 293 | | | | | | |
| 60 | 15.6 | 300 | 149 | 580 | 304 | | | | | | |
| 70 | 21.1 | 320 | 160 | 600 | 316 | | | | | | |
| 80 | 26.7 | 340 | 171 | 620 | 327 | | | | | | |
| 90 | 32.2 | 360 | 182 | 640 | 338 | | | | | | |
| 100 | 38 | 380 | 193 | 660 | 349 | | | | | | |
| 120 | 49 | 400 | 204 | 680 | 360 | | | | | | |
| 140 | 60 | 420 | 216 | 700 | 371 | | | | | | |
| 160 | 71 | 440 | 227 | 720 | 382 | | | | | | |

Formula:
 $^{\circ}\text{C} = \frac{^{\circ}\text{F} - 32}{1.8}$
 $^{\circ}\text{F} = (^{\circ}\text{C} \times 1.8) + 32$

Utilization Categories IEC 947-4-1

| Category | A.C. Contactors/Relays | Category | A.C. Switches/Isolators |
|----------|---|----------|---|
| AC-1 | Non-inductive or slightly inductive loads, resistance furnaces | AC-20 | Connecting and disconnecting under no-load conditions |
| AC-2 | Slip-ring motors: Starting, plugging | AC-21 | Switching of resistive loads including moderate overloads |
| AC-3 | Squirrel-cage motors: Starting, switching off motors during running | AC-22 | Switching of mixed resistive and inductive loads including moderate overloads |
| AC-4 | Squirrel-cage motors: Starting, plugging, inching | AC-23 | Switching of motor loads or other highly inductive loads |
| AC-11 | Electromagnets for contactors, valves, solenoid actuators | | |

IP Rating for Enclosures - IEC 529

| Meaning | FIRST CHARACTERISTIC NUMERAL: Protection against ingress of solid foreign objects and against access to dangerous parts | | | | | | |
|--|---|----------------------------------|------------------------------------|-----------------------------------|---------------------------------|----------------------------|-------------------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| Protection against ingress of: | No Protection | Solid objects larger than ø 50mm | Solid objects larger than ø 12,5mm | Solid objects larger than ø 2,5mm | Solid objects larger than ø 1mm | Dust in a harmful quantity | Dust (total protection) |
| Personal protection against access with: | No Protection | Back of hand | Finger | Tool | | Wire | |

| Meaning | SECOND CHARACTERISTIC NUMERAL: Protection against water | | | | | | | | |
|-------------------------------|---|----------------------------------|--|------|-----------------|-----------|--------------------|---------------------|----------------------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Protection against effect of: | No Protection | Virtually falling drops of water | Virtually falling drops of water with maximum inclination of 15° | Rain | Splashing water | Water jet | Powerful water jet | Temporary immersion | Continuous immersion |

Example

Protection against ingress of dust in a harmful quantity

Protected against effects of splashing water

IP 54

TECHNICAL INFORMATION

Standard F.L.C. data for 4 Pole motors

| Rated Power | | Standard 3-Phase 4 pole motors Line Connected | | | | Phase Connected (Star-Delta)* | | Single Phase Motors |
|-------------|------|---|--------|--------|---------|-------------------------------|--------|---------------------|
| kW | Hp | 380V A | 400V A | 550V A | 1000V A | 380V A | 400V A | 230V A |
| 0.37 | 0.5 | 1 | 1 | 0.72 | 0.4 | - | - | 3.4 |
| 0.55 | 0.75 | 1.6 | 1.5 | 1.16 | 0.64 | - | - | 4.6 |
| 0.75 | 1 | 2 | 1.9 | 1.4 | 0.75 | - | - | 5.8 |
| 1.1 | 1.5 | 2.6 | 2.5 | 1.9 | 1 | - | - | 8.4 |
| 1.5 | 2 | 3.5 | 3.3 | 2.5 | 1.3 | - | - | 11.2 |
| 2.2 | 3 | 5 | 4.7 | 3.6 | 1.9 | - | - | 16.4 |
| 3 | 4 | 6.6 | 6.3 | 4.8 | 2.5 | - | - | 21 |
| 4 | 5.5 | 8.5 | 8.1 | 6.2 | 3.3 | 4.9 | 4.7 | 28 |
| 5.5 | 7.5 | 11.5 | 10.9 | 8.6 | 4.5 | 6.7 | 6.3 | 37 |
| 7.5 | 10 | 15.5 | 14.7 | 11.5 | 6 | 9 | 8.5 | - |
| 10 | 13.5 | 20 | 19 | 14.3 | 7.5 | 11.6 | 11 | - |
| 11 | 15 | 22 | 21 | 16 | 8.7 | 12.8 | 12 | - |
| 15 | 20 | 30 | 28.5 | 22 | 12 | 17.4 | 16.6 | - |
| 18.5 | 25 | 37 | 35 | 27 | 14.3 | 21 | 20 | - |
| 22 | 30 | 44 | 42 | 32 | 17 | 25 | 24 | - |
| 30 | 40 | 60 | 57 | 43 | 23 | 35 | 33 | - |
| 37 | 50 | 72.5 | 69 | 53 | 28 | 42 | 40 | - |
| 45 | 60 | 85 | 81 | 62 | 33 | 49 | 47 | - |
| 55 | 75 | 105 | 100 | 76 | 40 | 64 | 61 | - |
| 75 | 100 | 138 | 131 | 100 | 53 | 79 | 75 | - |
| 90 | 125 | 170 | 161 | 123 | 65 | 99 | 94 | - |
| 110 | 150 | 205 | 195 | 152 | 78 | 119 | 113 | - |
| 132 | 175 | 245 | 233 | 179 | 91 | 142 | 135 | - |
| 160 | 220 | 300 | 285 | 218 | 117 | 174 | 165 | - |
| 200 | 270 | 370 | 351 | 268 | 149 | 215 | 204 | - |
| 220 | 300 | 408 | 388 | 296 | 161 | 237 | 225 | - |
| 250 | 350 | 475 | 451 | 344 | 200 | 275 | 262 | - |
| 315 | 430 | 584 | 555 | 422 | 240 | 339 | 322 | - |
| 355 | 480 | 636 | 604 | 477 | 265 | 369 | 350 | - |
| 375 | 500 | 670 | 636 | 503 | 278 | 389 | 369 | - |
| 425 | 580 | 760 | 722 | 548 | 303 | 441 | 419 | - |

* These are the values of F.L.C. as seen by the overload and main/delta contactors when phase connected within a Star-Delta starter.
 Note: Always check the rating plate of the motor when commissioning before switching on.

Cable ratings

3 & 4 Core copper PVC/SWA/PVC 600/1000V cables - SABS 1507/1990

| Cable size (mm ²) | Electrical properties | | | | Gland Size Type ACG | | |
|-------------------------------|-----------------------|-----|-----------|----------|---------------------|--------|--------|
| | Current ratings | | Volt drop | (mV/A/m) | 3 Core | 4 Core | 5 Core |
| 1.5 | 23 | 18 | 18 | | 25.080 | 0 | 0 |
| 2.5 | 30 | 24 | 24 | 15.363 | 0 | 0/1 | 2 |
| 4 | 38 | 31 | 32 | 9.561 | 1 | 1 | 2 |
| 6 | 48 | 39 | 40 | 6.391 | 1 | 2 | 3 |
| 10 | 64 | 52 | 54 | 3.793 | 2 | 2 | |
| 16 | 82 | 67 | 72 | 2.390 | 2 | 2/3 | |
| 25 | 126 | 101 | 113 | 1.515 | 3 | 3 | |
| 35 | 147 | 120 | 136 | 1.097 | 3 | 3/4 | |
| 50 | 176 | 144 | 167 | 0.817 | 4 | 4 | |
| 70 | 215 | 175 | 207 | 0.576 | 4 | 4/5 | |
| 95 | 257 | 210 | 253 | 0.427 | 4/5 | 5 | |
| 120 | 292 | 239 | 293 | 0.348 | 5 | 5/6 | |
| 150 | 328 | 369 | 336 | 0.294 | 5 | 6 | |
| 185 | 369 | 303 | 384 | 0.250 | 6 | 6 | |
| 240 | 422 | 348 | 447 | 0.211 | 6 | 7 | |
| 300 | 472 | 397 | 509 | 0.189 | 6/7 | 7 | |

Borehole pump motor F.L.C. data

100mm submersible motors

| kW | F.L.C. | |
|------|-----------|-----------|
| | 230V Amps | 400V Amps |
| 0.25 | 3.1 | - |
| 0.37 | 3.9 | 1.3 |
| 0.56 | 5.0 | 1.6 |
| 0.75 | 6.0 | 2.2 |
| 1.12 | 8.8 | 3.0 |
| 1.50 | 11.8 | 3.9 |
| 2.20 | 17.0 | 5.9 |
| 3 | - | 7.2 |
| 4 | - | 9.3 |
| 5.5 | - | 13.2 |

Note: Always check the rating plate of the motor when commissioning before switching on. Borehole pumps and motors require specialised protection. For a wide range of protection devices as well as special borehole control panels, see pages 40 and 41.

400V STAR-DELTA STARTERS - COMPONENT SELECTION GUIDE

| Motor | F.L.C. 4 Pole | Main/Delta Contactors | Star Contactor | Overload Relay FLC x √3 | Ammeter | CT | Back Up BS Fuse DIN Fuse | Isolator | DIN MCB (D Curve) | MCCB Std kA |
|--------|---------------|-----------------------|----------------|-------------------------|---------------------------|----------|--------------------------|------------|-------------------|-------------------------|
| 7.5kW | 14.7A | TC1-D09 | TC1-D09 | TR2-D09314 8.5A | SQ72-20AD | (Direct) | TIA25 24700-25A | CSSD25D3 | GW92467 (6kA) | E160-SF 25A (16kA) |
| 11kW | 21A | TC1-D12 | TC1-D09 | TR2-D12316 12A | SQ72-25AD | (Direct) | TIA32 24700-32A | CSSD40D3 | GW92469 (6kA) | E160-SF 32A (16kA) |
| 15kW | 28.5A | TC1-D18 | TC1-D12 | TR2-D18321 16.5A | SQ72-30AD | (Direct) | TIS40 24700-40A | CSSD63D3 | GW92470 (6kA) | E160-SF 40A (16kA) |
| 18.5kW | 35A | TC1-D25 | TC1-D25 | TR2-D25322 20A | SQ72-40AD | (Direct) | TIS50 24700-50A | CSSD63D3 | GW92471 (6kA) | E160-SF 50A (15kA) |
| 22kW | 42A | TC1-D32 | TC1-D25 | TR2-D32353 24A | SQ72-50AD | (Direct) | TIS63 24700-63A | CSSD63D3 | GW93386 (16kA) | E160-SF 63A (16kA) |
| 30kW | 57A | TC1-D38 | TC1-D32 | TR2-D32355 33A | SQ72-5 + SQ72SP 60/5A | DS-605 | TIS63M80 24700-80A | CSSD125D3 | GW93386 (16kA) | E160-SF 80A (16kA) |
| 37kW | 69A | TC1-D40 | TC1-D40 | TR2-D65357 40A | SQ72-5 + SQ72SP 75/5A | DS-755 | TIS80 24700-80A | CSSD125D3 | GW93387 (16kA) | E160-SF 100A (16kA) |
| 45kW | 81A | TC1-D50 | TC1-D40 | TR2-D65357 47A | SQ72-5 + SQ72SP 100/5A | DS-1005 | TCP100 24585-100A | CSSD125DM3 | GW93388 (16kA) | E160-SF 125A (16kA) |
| 55kW | 100A | TC1-D65 | TC1-D50 | TR2-D65359 58A | SQ72-5 + SQ72SP 125/5A | DS-1255 | TCP125 24585-125A | CSSD160DM3 | - | E160-SF 160A (16kA) |
| 75kW | 131A | TC1-D80 | TC1-D80 | TR2-D80363 76A | SQ72-5 + SQ72SP 150/5A | DS-1505 | TCP160 24585-160A | CSSD160DM3 | - | E250-SCF 175A (16kA) |
| 90kW | 161A | TC1-D95 | TC1-D80 | TR2-D95365 93A | SQ72-5 + SQ72SP 200/5A | DS1-2005 | TF200 24720-200A | CSSD200DM3 | - | E250-SCF 200A (16kA) |
| 110kW | 195A | LC1-FDP115A | LC1-FDP115A | LR1-F160 113A | SQ72-5 + SQ72SP 250/5A | DS1-2505 | TKF250 24720-250A | CSSD250DM3 | - | E250-SCF 250A (16kA) |
| 132kW | 233A | LC1-FDP150A | LC1-FDP115A | LR1-F160 135A | SQ72-5 + SQ72SP 250/5A | DS1-2505 | TKF250 24720-250A | CSSD250DM3 | - | E400-NS 400A (25kA) |
| 160kW | 285A | LC1-FDP185A | LC1-FDP185A | LR1-F200 165A | SQ72-5 + SQ72SP 300/5A | DS1-3005 | TKF315 24582-315A | CSSD315DM3 | - | E400-NS 400A (25kA) |
| 200kW | 351A | LC1-FDP225A | LC1-FDP185A | LR1-F250 203A | SQ72-5 + SQ72SP 400/5A | DS2-4005 | TM400 24582-400A | CSSD400D3 | - | E630-NE 630A (36kA) |
| 250kW | 451A | LC1-FDP265A | LC1-FDP265A | LR1-F315 260A | SQ72-5 + SQ72SP 500/5A | DS2-5005 | TTM500 24588-500A | CSSD630K3 | - | E630-NE 630A (36kA) |
| 315kW | 555A | LC1-FDP330A | LC1-FDP330A | LR1-F400 320A | SQ72-5 + SQ72SP 600/5A | DS2-6005 | TTM630 24588-630A | CSSD630K3 | - | - |
| 375kW | 636A | LC1-FDP400A | LC1-FDP400A | LR1-F400 367A | SQ72-5 + SQ72SP 750/5A | DS2-7505 | - | CSSD800K3 | - | - |

Notes: 1) The above guide excludes material such as enclosure, mechanical interlock, electrical interlocks and timer. 2) The F range contactors have been selected for use with horizontal mechanical interlocks. If vertical mechanical interlocks are used, the star point contactor can be reduced in size. 3) The above guide is not applicable to Star-Delta reversing starters. 4) Fuse & circuit breaker selection assumes that starting time does not exceed 20 secs.

PRODUCT & DISCOUNT GROUPS

| Page | Group | Product Range | Discount % |
|-----------------------|-------|---|--------------------------|
| 62 | BOB | Transformer components | <input type="checkbox"/> |
| 255-263 | FLP | Flameproof products & telephones | <input type="checkbox"/> |
| 67-81 | BC1 | Battery chargers, power supplies & UPS's | <input type="checkbox"/> |
| 60-61 | P1 | PCB transformers | <input type="checkbox"/> |
| 342-345, 350-351 | SM1 | Perano steel enclosures and fittings | <input type="checkbox"/> |
| 346-349, 352-364 | SM2 | Other enclosures | <input type="checkbox"/> |
| 82-85 | SOL | Solar & wind generators | <input type="checkbox"/> |
| 63-66 | T1 | Power transformers | <input type="checkbox"/> |
| 154-162 | U | Lightning & surge protection, temperature switches & line filters | <input type="checkbox"/> |
| 151-153, 534 | WIR | Solid & flexible busbar, earth braids, wire | <input type="checkbox"/> |
| 236-254 | ALL | Alarms | <input type="checkbox"/> |
| 12-16, 19-23, 168-185 | DPM | Digital instruments, kWh meters, PLCs, timers & counters | <input type="checkbox"/> |
| 30-31, 86-88, 106-107 | EES | Soft starters, SSRs, VSDs & electronic motor protection | <input type="checkbox"/> |
| 336-341 | ELC | Electronic components | <input type="checkbox"/> |
| 42-59 | ESP | Pumps & irrigation accessories | <input type="checkbox"/> |
| 406-420 | FAN | Fans, heaters, airconditioners, water coolers & hygiene products | <input type="checkbox"/> |
| 2-11, 41 | M1 | Electronic timers and relays | <input type="checkbox"/> |
| 264-301 | MET | Test instruments, tools, storage bins & racks, gensets & welders | <input type="checkbox"/> |
| 32-40 | PRO | Probes, float switches, level sensors, radio & telemetry | <input type="checkbox"/> |
| 534-573 | SEC | Alarms, surveillance, intercom systems, TV accessories & door chimes | <input type="checkbox"/> |
| 190-197 | TC | Temperature controls | <input type="checkbox"/> |
| 23, 26-27, 196, 223 | RHE | Slimline, A-line, 48x48 timer, Protechtor, Counterline, Sensors, Thermoline (Full Rhomberg range in separate catalogue) | <input type="checkbox"/> |
| 216-226, 230-235 | DAT | Datasensor | <input type="checkbox"/> |
| 204-207 | HIG | Foot, limit, micro & safety switches | <input type="checkbox"/> |
| 334-335 | LEG | Cable accessories & firemans switches | <input type="checkbox"/> |
| 17-18 | OR1 | Digital & analogue time switches | <input type="checkbox"/> |
| 139-150 | R | Terminals & busbar supports | <input type="checkbox"/> |
| 19-29 | RE1 | Relays, bases and relay boards | <input type="checkbox"/> |
| 208-215, 227-229 | SCA | Proximity switches | <input type="checkbox"/> |
| 109-111 | CB1 | DIN MCBs | <input type="checkbox"/> |
| 108, 201-203 | CON | Manual motor starters, pressure switches, valves & air filters | <input type="checkbox"/> |
| 134-138 | L | Fuses and holders | <input type="checkbox"/> |
| 198-200 | Q | Crane & DC vehicle controls | <input type="checkbox"/> |
| 186-189 | T | Power factor equipment and capacitors | <input type="checkbox"/> |
| 98-105 | TEC | Isolators & fuse switches | <input type="checkbox"/> |
| 117-123 | TS | DIN MCBs, and MCCBs | <input type="checkbox"/> |
| 89-97, 102, 124-125 | CO1 | Motor control gear & pushbuttons & busduct systems | <input type="checkbox"/> |
| 126-127 | COM | Comepi pushbuttons, pilot lights & selector switches | <input type="checkbox"/> |
| 128-133 | ELT | Pushbuttons, pilot lights & selector switches | <input type="checkbox"/> |
| 163-167 | H | Analogue instruments, CTs & shunts | <input type="checkbox"/> |
| 421-533 | LIT | Lighting products | <input type="checkbox"/> |
| 28, 365-387, 397-405 | GEW | Gewiss | <input type="checkbox"/> |
| 112-116 | GEWCB | Gewiss DIN MCBS | <input type="checkbox"/> |
| 388-396 | GEWCH | Gewiss Chorus range | <input type="checkbox"/> |
| 304-333 | P3 | Cable & wiring accessories, adhesives & technical sprays | <input type="checkbox"/> |
| 302-303 | P4 | Installation switches & accessories | <input type="checkbox"/> |