

One Stop Solutions for Machines

Industry Selection Guide



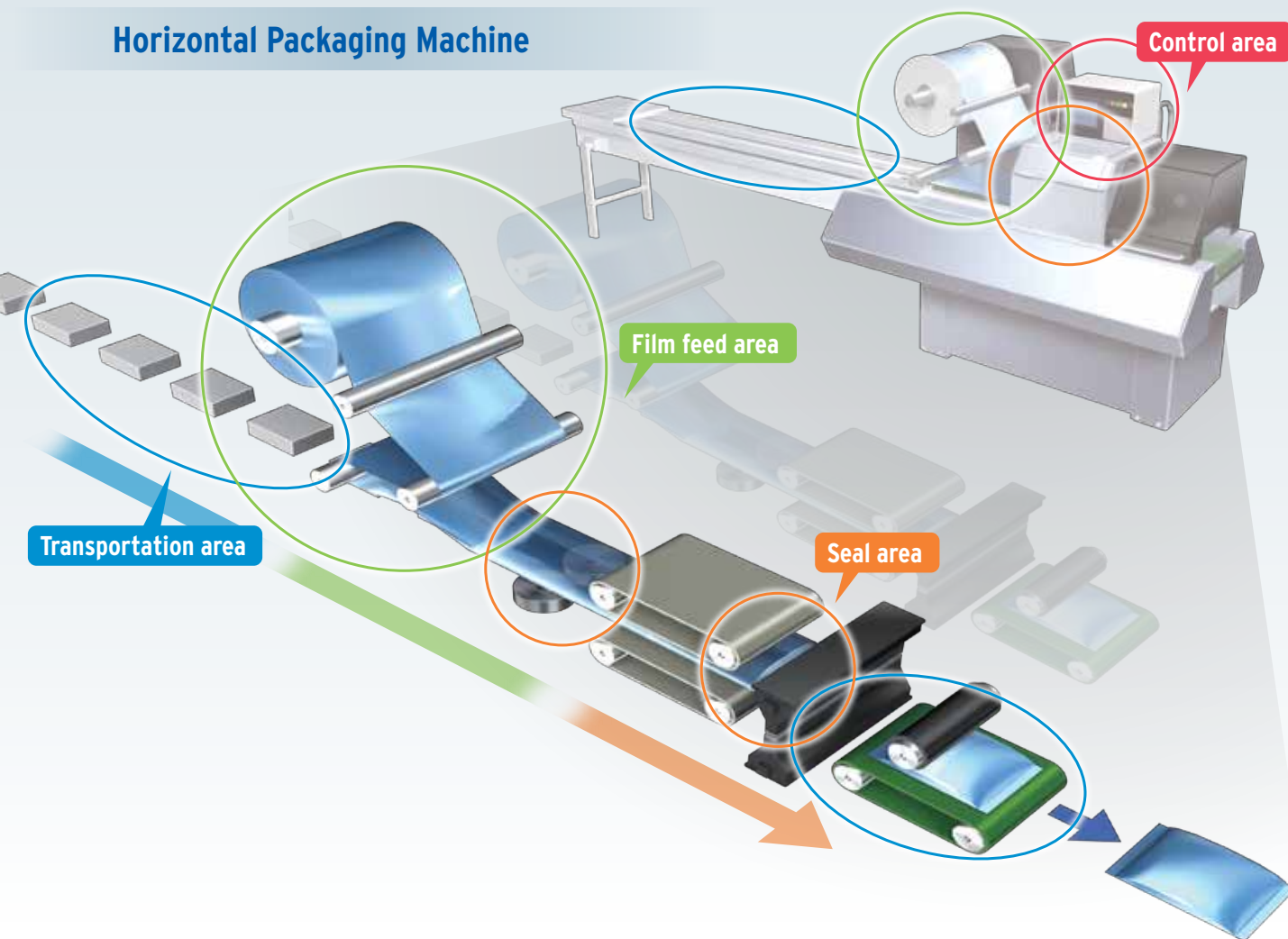
- » Innovative Technologies
- » Easy to Use, Install and Integrate
- » Powerful Solutions

Solutions for the Evolution of Machines

High Quality, Wide Product Line-up & Global Support

Omron's control devices promise better efficiency by improving the speed and precision of numerous machine applications.

Horizontal Packaging Machine



Transportation/Material Feed Area

>> p. 4-5

To ensure stable high-speed operation

Photoelectric Sensors



Inductive Proximity Sensors



Capacitive Proximity Sensors



Fiber Sensor



Encoders



Inverters



Film Feed Area

>> p. 6-7

To improve efficiency through the stable detection of transparent films

Photoelectric Sensors



Photoelectric Sensors



Proximity Sensors



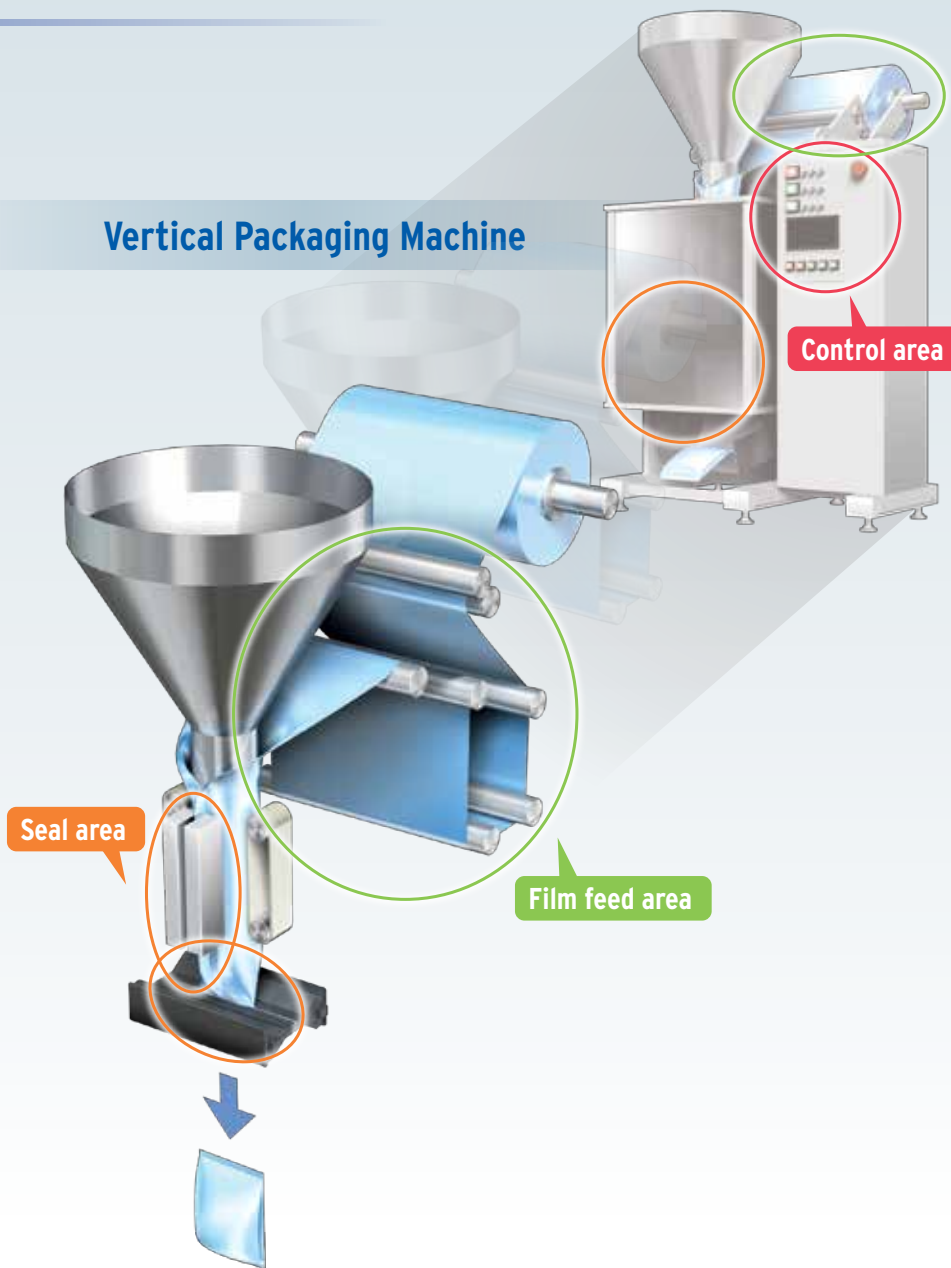
Fiber Sensors



Inverters



Vertical Packaging Machine



Also applicable to the following machines



Shrink wrapping



Blister packaging



Sealer

Seal Area

>> p. 8-9

To improve the packaging quality by precise sealing

Temperature Sensors



E52

Temperature Controllers



E5CC/E5EC

Solid State Relays



G3NE



G3NA



G3PE



E2B

E2E

Proximity Sensors

Timers/Counters



H5CX



H3CR



H7CX

Control Area

>> p. 10-11

To improve user friendly operation

Programmable Controllers



Sysmac NJ CP1E/L/H CJ2

Operator Interfaces



NB NS NA

Solid State Timers



H3DK

Timers/Counters



N7E_-N



H3Y

Digital Panel Indicator



K3MA-F

Pushbuttons



A22R/M22R

Relays



MY



LY



MK-S

Power Supplies

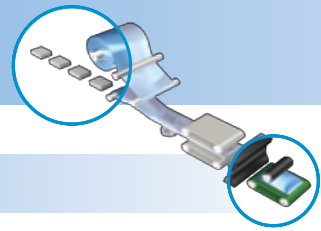


S8VK-G



S8VS

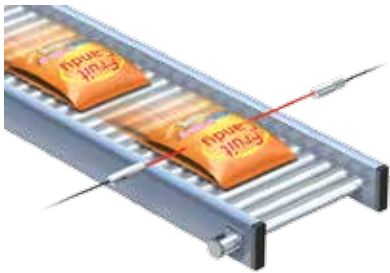
Transportation/Material Feed Area



Detection of Product Passage

Photoelectric Sensors

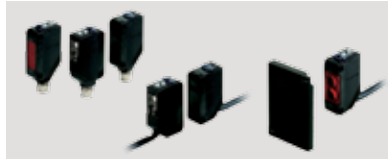
→ Target Presence



E3Z

Compact Sensor with Built-in Amplifier

- Global standard size.



Specifications

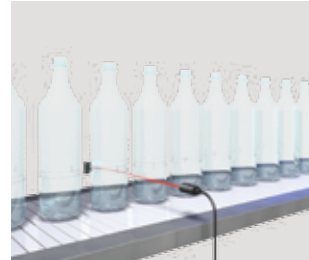
Size	: 31 * 20 * 10.8mm
Sensing distance	: Through beam 10M, 15M, 30M Retro reflective 4M Diffuse reflective 100mm, 1M, 90±30mm
Power supply voltage	: DC12-24V
Control output	: PNP/NPN
Connection	: Pre-wire, Connector (M8 & M12)



E3FA

Transparent Object Detection

The E3FA-B utilizes Omron's unique technology for detecting objects with birefringent (double refraction) properties.



E3FA

All-Application Series

- High power LED to compensate for dirt and misalignment.



Specifications

Size	: M18
Sensing distance	: Through beam 20M Retro reflective 0.5M/4M Diffuse reflective 100mm/300mm/1000mm
Power supply voltage	: DC10-30V
Control output	: PNP/NPN
Connection	: Pre-wire, Connector



E3RA

All-Application Series

- Radial, 90 degree design for applications in tighter spaces.



Specifications

Size	: M18
Sensing distance	: Through beam 15M Retro reflective 3M Diffuse reflective 100mm/300mm/700mm
Power supply voltage	: DC10-30V
Control output	: PNP/NPN
Connection	: Pre-wire, Connector



→ Stable Detection of Transparent Targets



E3ZM-B

Excellent PET Bottle Detection

- Use of a special polarizing filter for the stable detection of transparent objects.



Specifications

Size	: 31 * 20 * 10.8 mm
Sensing Distance	: 500mm (w/E39-RP1)
Power supply voltage	: DC10-30V
Control output	: PNP/NPN



E3ZM

Stainless Steel Housing Ideal for Food Industry

- IP69K for frequent machine wash down.



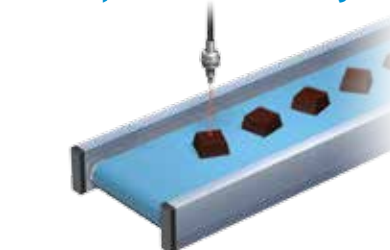
Specifications

Size	: 31 * 20 * 10.8 mm
Sensing Distance	: Through beam 15M
Power supply voltage	: DC 10-30V
Control output	: PNP/NPN



Fiber Sensors

→ Adapted for Small Targets



Fiber Sensors E3Z >>> P.7

E3X-HD

Easy-To-Use Fiber Amplifier

- High-speed and stable detection even in adverse, dusty environments.



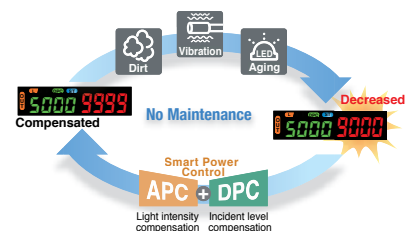
Specifications

Power supply voltage	: DC12-24V
Control output	: PNP/NPN
Response speed	: 50µs

Increased Ranges!



- Maintenance-free operation by compensating for harsh environments and LED degradation over time.



Detection of Positioning and Operation Timing



Inductive Proximity Sensors

E2B

Premium series for long distance detection

- Wide variety of extended range cylindrical proximity sensors.



Specifications

Size	: M8/M12/M18/M30
Sensing distance	: 4mm/8mm/16mm/30mm
Power supply voltage	: DC 12-24V
Control output	: DC3wire, PNP/NPN
Connection	: Pre-wire, Connector



E2E

Premium series for tough environments

- For harsh, oily environments.



Specifications

Size	: M8/M12/M18/M30, others
Sensing distance	: DC2wire 2mm/3mm/7mm/10mm DC3wire 1.5mm/2mm/5mm/10mm
Power supply voltage	: DC12-24V
Control output	: DC3Wire/DC2wire, PNP/NPN
Connection	: Pre-wire, Connector



Rotary Encoders

E6B2-C

Incremental 40-mm-dia.

- General purpose compact encoders.



Specifications

Size	: Ø 40 * 39 mm
Shaft	: Ø 6 mm
Power supply voltage	: DC5V, DC5-12V DC5-24V, DC12-24V
Resolution	: 10-2,000P/R



E6C2-C

Slim Incremental 50-mm-dia.

- Rugged and easy-to-use.



Specifications

Size	: Ø 50 * 40 mm
Shaft	: Ø 6 mm
Power supply voltage	: DC5V, DC5-12V DC5-24V, DC12-24V
Resolution	: 10-2,000P/R



Detection of Material

Capacitive Proximity Sensors



E2K-X

Low Cost type

- Non-adjustment type with fixed sensitivity.
Ability to detect water, oil, etc.



Specifications

Size	: Ø 12, 18, 30
Sensing distance	: 4, 8, 15mm
Power supply voltage	: DC 12-24V
Control output	: NPN
Connection	: Pre-wire



E2K-C

Long-distance type

- Adjustable Sensitivity.
Ability to detect water and oil.



Specifications

Size	: Ø 34
Sensing distance	: 25mm
Power supply voltage	: DC 12-24V
Control output	: PNP/NPN
Connection	: Pre-wire



Conveyor Speed Control

Inverters



JX Series

Simple, Compact Inverters



Specifications

- Side-by-side mounting
- V/f control
- Built-in radio noise filter
(Excluding single-phase/three-phase 200-V models)

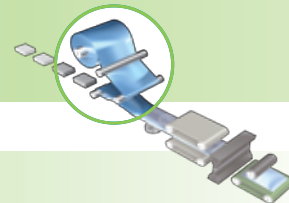
MX2 Series

Multi-function Compact Inverters with a wide range of capacity variation

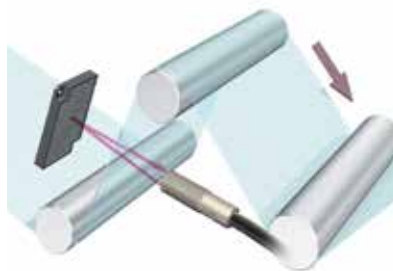


Specifications

- Control : Simple position control with pulse feed-back function (standard feature)
- High Starting torque : 200% at 0.5 Hz



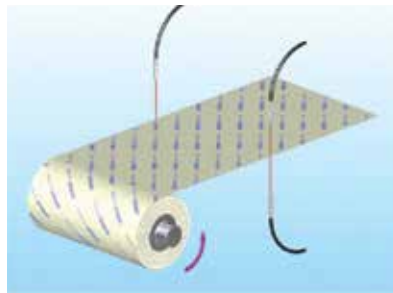
Detection of sheets and films



Detection of the remainder of a sheet roll



Detection of sheet skewing



Photoelectric Sensors

→ Target Presence

E3Z

Compact Sensor with Built-in Amplifier

- Global standard size.



Specifications

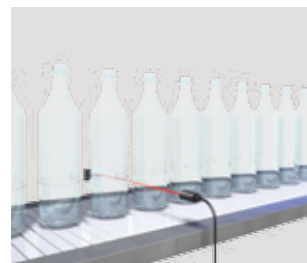
Size	: 31 * 20 * 10.8mm
Sensing distance	: Through beam 10M, 15M, 30M Retro reflective 4M Diffuse reflective 100mm, 1M, 90±30mm
Power supply voltage	: DC12-24V
Control output	: PNP/NPN
Connection	: Pre-wire, Connector (M8 & M12)



E3FA

Transparent Object Detection

The E3FA-B utilizes Omron's unique technology for detecting objects with birefringent (double refraction) properties.



E3FA

All-Application Series

- High power LED to compensate for dirt and misalignment.



Specifications

Size	: M18
Sensing distance	: Through beam 20M Retro reflective 0.5M/4M Diffuse reflective 100mm/300mm/1000mm
Power supply voltage	: DC10-30V
Control output	: PNP/NPN
Connection	: Pre-wire, Connector



E3RA

All-Application Series

- Radial, 90 degree design for applications in tighter spaces.



Specifications

Size	: M18
Sensing distance	: Through beam 15M Retro reflective 3M Diffuse reflective 100mm/300mm/700mm
Power supply voltage	: DC10-30V
Control output	: PNP/NPN
Connection	: Pre-wire, Connector



Fiber Sensors

→ Highly Accurate Detection

E3X-HD

Easy-To-Use Fiber Amplifier

- Use fibers with a special polarizing filter for the highly stable detection of transparent film!



Specifications

Power supply voltage	: DC12-24V
Control output	: PNP/NPN
Response speed	: 50µs

Increased Ranges!



Photoelectric Sensors

→ Detection of Transparent Sheets

E3ZM-B

Transparent Object Detection

- Use of a special polarizing filter for the stable detection of a transparent object.



Specifications

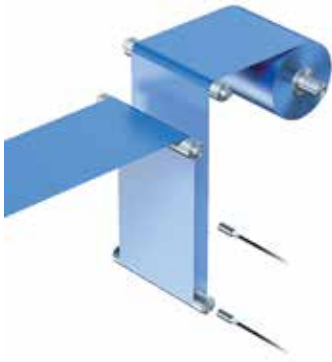
Size	: 31 * 20 * 10.8 mm
Sensing Distance	: 500mm (w/E39-RP1)
Power supply voltage	: DC10-30V
Control output	: PNP/NPN



- (1) Fiber Sensors
E32-C31
+
(2) Transparent Object Detection Lens Unit
E39-F3R
+
(3) Reflective Unit
E39-RP37

Detection of Sheet / Film Sag

Inductive Proximity Sensors



E2B

Premium series for long distance detection

- Wide variety of extended range cylindrical proximity sensors.



Specifications

Size	: M8/M12/M18/M30
Sensing distance	: 4mm/8mm/16mm/30mm
Power supply voltage	: DC12-24V
Control output	: DC3wire, PNP/NPN
Connection	: Pre-wire, Connector



E2E

Premium series for tough environments

- For harsh, oily environments.



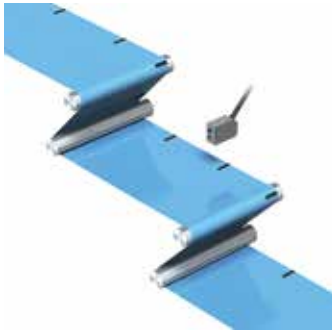
Specifications

Size	: M8/M12/M18/M30, others
Sensing distance	: DC2wire 2mm/3mm/7mm/10mm DC3wire 1.5mm/2mm/5mm/10mm
Power supply voltage	: DC12-24V
Control output	: DC3Wire/DC2wire, PNP/NPN
Connection	: Pre-wire, Connector



Detection of Register Marks / Detection of Sheet Seam

Photoelectric Sensors



→ All-round Use

E3ZM-V

Color Mark Detection

- White LED for the discernment of all colors.



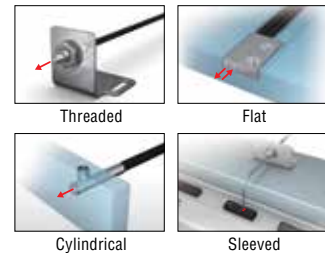
Specifications

Size	: 31 * 20 * 10.8 mm
Sensing Distance	: 12±2mm
Power supply voltage	: DC10-30V
Control output	: PNP/NPN



E32

Wide variety of fiber unit designs and applications to select from



Fiber Sensors



→ Compact Amplifier

E3X-HD

Simple Fiber Amplifier

- Quick-tuning to automatically adjust light level and set threshold value.



Specifications

Power supply voltage	: DC12-24V
Control output	: PNP/NPN

Increased Ranges!



→ Sheet Flapping

E3X-DAC-S

Color Sensing Digital Fiber Sensor

- High resistance to target vibration and white LED for stable detection of all colors.



Specifications

Power supply voltage	: DC12-24V
Control output	: PNP/NPN



Conveyor Speed Control

Inverters



JX Series

Simple, Compact Inverters



Specifications

- Side-by-side mounting
- V/f control
- Built-in radio noise filter (Excluding single-phase/three-phase 200-V models)



MX2 Series

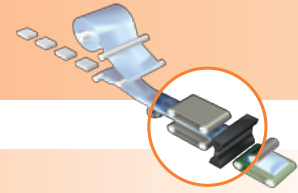
Multi-function Compact Inverters with a wide range of capacity variation



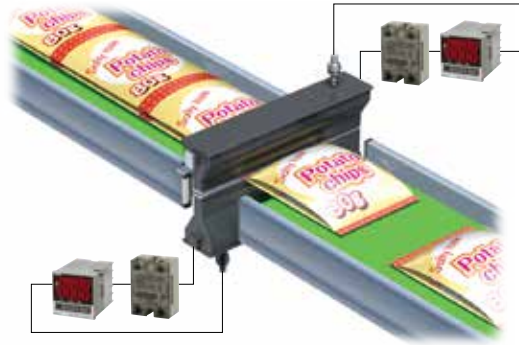
Specifications

- Control : Simple position control with pulse feed-back function (standard feature)
- High Starting torque : 200% at 0.5 Hz





Temperature Control in Seal Area



Temperature Sensor (General purpose Models)



E52 A Great Variety of High-precision Temperature Sensors.

Specifications

Description :
Sheathed platinum resistance thermometer,
Sheathed thermocouple

Temperature Controllers

E5CC/E5EC

Easy-to-Read Large White PV Display

• E5CC (48x48mm) / E5EC (48x96mm)



Specifications

Power supply voltage : 100 to 240 VAC
24 VAC / 24 VDC
Sensor Input : Thermocouple
Platinum resistance thermometer
Infrared temperature sensor
Analog input : Current input 4 to 20 mA or 0 to 20 mA
Voltage input 1 to 5 V, 0 to 5 V, or 0 to 10 V
Control output : Relay output / Voltage output
(for driving SSR)



- The white LCD display is easy to read in the subdued lighting conditions found in most control rooms.
- PV Display Height
 - E5CC 15.2 mm
 - E5EC 18 mm



Solid State Relays

G3NE

- Compact, Low-cost, SSR switching 5 to 20A.



Specifications

Rated input Voltage : 5, 12, 24 VDC
Rated load Voltage : 100 to 240 VAC
Load Current : with radiator 0.1 to 20A
without radiator 0.1 to 5A
Isolation method : Phototriac coupler
Zero-cross function : Yes



G3NA

- Wide variety of applicable loads from 5 to 90 A.



Specifications

Power Supply Voltage : 5 to 24VDC
100 to 240VAC
Rated load voltage : 24 to 240 VAC
200 to 480 VAC
400 to 600 VAC
(G3NA-D210B 5 to 200VDC)
Rated current : (With radiator)
~Max Value : ~5A/~10A/~20A/~40A
~50A/~75A/~90A
Isolation method : Phototriac coupler or photocoupler
Zero-cross function : Yes



G3PE

- SSR integrated with radiator in a compact, slim model for switching heaters.



Specifications

Power Supply Voltage : 12 to 24 VDC
Rated load voltage : 100 to 240 VAC/200 to 480 VAC
Rated current : ~Max Value : ~15A/~25A/~35A/~45A
Isolation method : Phototriac coupler
Zero-cross function : Yes/No



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