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
To ensure stable high-speed operation

- Photoelectric Sensors
  - E3Z
  - E3FA
  - E3RA
  - E3ZM-B
- Inductive Proximity Sensors
  - E2B
  - E2E
- Capacitive Proximity Sensors
  - E2K-C
  - E2K-X
- Fiber Sensor
  - E3X-HD
  - E6B2-C
  - E6C2-C
- Encoders
- Inverters
  - 3G3JX
  - 3G3MX2

Film Feed Area
To improve efficiency through the stable detection of transparent films

- Photoelectric Sensors
  - E3Z
  - E3FA
  - E3RA
- Inductive Proximity Sensors
  - E2B
  - E2E
- Capacitive Proximity Sensors
  - E2K-C
  - E2K-X
- Fiber Sensor
  - E3X-HD
  - E3X-0AC-S
  - E32
- Encoders
- Inverters
  - 3G3JX
  - 3G3MX2

Also applicable to the following machines

Transportation area
Control area
Film feed area
Seal area
### Seal Area
To improve the packaging quality by precise sealing

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### Control Area
To improve user friendly operation

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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.

E3ZM-B
Excellent PET Bottle Detection
• Use of a special polarizing filter for the stable detection of transparent objects.

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

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

E3RA
All-Application Series
• Radial, 90 degree design for applications in tighter spaces.

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

E3Z
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

E3FA
All-Application Series
• Use of Omron’s unique technology for detecting objects with birefringent (double refraction) properties.

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)

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)

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Sensing Distance : Through beam 15M
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Control output : PNP/NPN

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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

E3RA
All-Application Series
• Radial, 90 degree design for applications in tighter spaces.

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

E3Z
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

E3FA
All-Application Series
• Use of Omron’s unique technology for detecting objects with birefringent (double refraction) properties.

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)

Stable Detection of Transparent Targets

Fiber Sensors
→ Adapted for Small Targets

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.

E3ZM-B
Excellent PET Bottle Detection
• Use of a special polarizing filter for the stable detection of transparent objects.

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

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Stainless Steel Housing Ideal for Food Industry
• IP69K for frequent machine wash down.

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

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

E3RA
All-Application Series
• Radial, 90 degree design for applications in tighter spaces.

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

E3Z
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

E3FA
All-Application Series
• Use of Omron’s unique technology for detecting objects with birefringent (double refraction) properties.

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)
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
- **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

### 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

### Converyor Speed Control

**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
**Film Feed Area**

**Detection of sheets and films**

**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 0.5M/4M
- Power supply voltage: DC12-24V
- Control output: PNP/NPN
- Connection: Pre-wire, Connector (M8 & M12)

**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

**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

**Fiber Sensors**

**Highly Accurate Detection**

**E32-C31**
(1)

**E39-F3R**
(2)

**E39-RP37**
(3)

**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

**Increased Ranges!**

**Fiber Sensors**

**E32-C31**
(1)

**E39-F3R**
(2)

**E39-RP37**
(3)

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

**Detection of the remainder of a sheet roll**

**Detection of sheet skewing**
Increased Ranges!

Fiber Sensors

**E32-C31** Transparent Object Detection Lens Unit

**E39-F3R** Reflective Unit

**E39-RP37**

Wide variety of fiber unit designs and applications to select from

**E3X-HD** Simple Fiber Amplifier

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

**E3X-DAC-S** Color Sensing Digital Fiber Sensor

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

**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

Detection of Sheet / Film Sag

**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
- **Power supply voltage**: DC12-24V
- **Control output**: DC3wire/DC2wire, PNP/NPN
- **Connection**: Pre-wire, Connector

Detection of Register Marks / Detection of Sheet Seam

**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

- **Threaded**
- **Flat**
- **Cylindrical**
- **Sleeved**

**E32**

Simple Fiber Amplifier

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

**Specifications**

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

**E32**

Simple, Compact Inverters

- Side-by-side mounting
- 24V control
- Built-in radio noise filter (Excluding single-phase/three-phase 200-V models)

**JX Series**

Simple, Compact Inverters

**MX2 Series**

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

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

Conveyor Speed Control

**Detection of Sheet / Film Sag**

**Inductive Proximity Sensors**

**Detection of Register Marks / Detection of Sheet Seam**

**Photoelectric Sensors**

**All-round Use**

**Fiber Sensors**

**Compact Amplifier**

**Color Mark Detection**

**E3ZM-V**

- 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

- **Threaded**
- **Flat**
- **Cylindrical**
- **Sleeved**

**E32**

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

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

Conveyor Speed Control

**Inverters**
Complete Tachometer Functionality

**H7CX**

- One-input measurement
- Measurement operation with one input.
  - Select the HI-LO, AREA, HI-HI, or LO-LO output mode.

**IN**

- Fan 1
- Fan 2

**OUT**

- Upper limit
- Lower limit

**IN**

- CP1
- CP1 - CP2
- CP2

**OUT**

**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)

**Temperature Sensor (General purpose Models)**

**E52**

- A Great Variety of High-precision Temperature Sensors.

**Specifications**

- Description: Sheathed platinum resistance thermometer, Sheathed thermocouple

**Solid State Relays**

**G3NE**

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

**G3NA**

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

**G3PE**

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

**Inductive Proximity Sensors**

**E2B**

Premium series for long distance detection
- Wide variety of extended range cylindrical proximity sensors.

**Specifications**
- **Size**: M8/M12/M16/M30
- **Sensing distance**: 4mm/6mm/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/M16/M30, others
- **Sensing distance**: DC2wire 2mm/3mm/7mm/10mm
- **Power supply voltage**: DC12-24V
- **Control output**: DC3wire/DC2wire, PNP/NPN
- **Connection**: Pre-wire, Connector

Control of Heat Seal Time

**Timers/Counters**

**H5CX**

- High Visibility, 12mm-high color display.

**Specifications**
- **Multifunction timer**
- **Timer and twin timer in one unit**
- **Time Range**: 0.001s to 9999H
- Short body with depth of only 59 mm
  (for 24-VAC / 12 to 24-VDC Models with Screw Terminals).
  The present value display characters can be switched between red, green, and orange.
- **15 output mode**

**H3CR**

- Time range and selectable output mode.

**Specifications**
- **Time range**: Multiple ranges between 0.05 s to 300 h
- **Power supply voltage**: 220VAC/110VAC/24VDC
  24-VAC / 12 to 24-VDC Models with Screw Terminals.
- **Other models**
  - Twin Timer: H3CR-R
  - Star-delta Timer: H3CR-S
  - Power OFF-Delay Timer: H3CR-I
  - Multi Function: H3CR-A

Counting in Fixed-size Cutting

**Counters**

**H7CX**

- High Visibility, 12mm-high color display.

**Specifications**
- **Preset counter, tachometer, and 4 other functions in one Unit.**
  - Counting speed: 30 Hz or 5 kHz
  - Increment, decrement, or increment/decrement operation
  - Multifunction Preset counter, tachometer and 4 other functions in one unit
  - Counting speed: 30Hz or 5 kHz
  - Increment, decrement, or increment/decrement operation
  - The present value display characters can be switched between red, green, and orange.

**H7CX**

Complete Tachometer Functionality

1) One-input measurement
   - Measurement operation with one input. Select the HI-LO, AREA, HI-HI, or LO-LO output mode.
2) Independent Measurement for Two Inputs.
   - Measurement operation with two independent inputs.
3) Differential Input for Two Inputs.
   - Measuring the difference between two inputs (CP1 - CP2).
4) Absolute Ratio for Two Inputs.
   - Measuring the ratio between two inputs (CP1/CP2).
**Software Suite**

**Sysmac Studio**
- True Integrated Development Environment and suite for the Sysmac NJ platform, including configuration and programming for logic, motion, vision, safety, robotics, enterprise, and HMI.

**CX-One**
- The CX-One software suite allows users to build, configure and program PLCs, HMIs, Temperature Controllers, Motion & Networks.

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**Part # :** SYSMAC-STUDIO-1USER
1-User License and DVD (other license levels available)

**OS :** Windows: XP, Vista, 7, 8

**Controllers :** Sysmac NJ Controller, and associated products

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**Part # :** CXONE-AL01D-V4
1-User License and DVD (other license levels available)

**OS :** Windows: XP, Vista, 7, 8

**Controllers :** CJ2 and CP1E/L/H PLCs and associated products

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**MAC Machine Automation Controller**

**NJ**
- Industry leading integrated controller with rack-free modular expansion.
- Logic, motion, vision, safety, robotics, and enterprise in one.
- Built-in EtherCAT and EtherCAT.
- Tag based architecture.

**CJ2**
- High performance, rack-free, modular PLC.
- Integrated EtherNet/IP available.
- Extensive motion, communication, and Analog expansion.

**CP1E/L/H**
- Fully featured Micro PLC family.
- Integrated Ethernet available.
- Integrated Analog available.
- I/O, Analog, and basic expansion.

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**Specifications**

| Power Supply | 24VDC, 100 to 240 VAC |
| Program Capacity | 5MB, 20MB |
| Built-in Communications Ports | USB, EtherCAT, EtherNet/IP |
| Maximum I/O | 2,560 |

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**Specifications**

| Power Supply | 24VDC, 100 to 240 VAC |
| Program Capacity | 5K to 60K Steps, 50K to 400K Steps |
| Built-in Communications Ports | USB, EtherNet/IP, RS-232C |
| Maximum I/O | 2,560 |

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**Specifications**

| Power Supply | 24 VDC, 100 to 240 VAC |
| Program capacity | 5K - 10K steps |
| Communications Port | 1 - 2 port options + integrated ports |
| Built-in digital I/O | 10, 16, 20, 30, 40, 60 point |
| High-speed counters | 2 inputs (100 kHz) |
| Pulse outputs | 2 outputs (100 kHz) |
| Analog I/O | 1-3 pt in if optional expansion |

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**Operator Interface Terminals**

**NB Series**
- Value displays from 3.5 to 10.1 inch.
- Feature-rich standard interface with class leading color, brightness, and longevity, as well as timesaving maintenance/troubleshooting options.

**NS Series**
- 5.7 to 15-inch bright and crisp displays.
- High function, high reliability operation, maintenance, and troubleshooting features with Class 1 Div 2 rating.

**NA Series**
- 7 to 15-inch widescreen high-resolution display.
- Programmed within Sysmac Studio Video, Document, and VB.Net customization capabilities.

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**Specifications**

| Power supply voltage | 24VDC |
| Communication ports | RS232, RS422, Ethernet, USB |
| Screen sizes | 3.5/5.6/7/10 1-inch |
| Internal memory | 32MB |
| Backlight life | 50,000 Hours @ 25°C |

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**Specifications**

| Power supply voltage | 24VCC |
| Communication ports | RS-232C, RS-422A/485, USB, Ethernet |
| Screen sizes | 5.7/8/10/12/15/15.4-inch |
| Internal memory | 60MB |
| Backlight life | 75,000 Hours @ 25°C |

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**Specifications**

| Power supply voltage | 24 VDC |
| Communication ports | RS-232C, Ethernet, USB |
| Screen sizes | 7/9/12/15.4-inch |
| Internal memory | 256MB |
| Backlight life | 50,000 Hours @ 25°C |

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**Pushbutton Switches / Indicators**

**A22R/M22R**
- Easy to Wire.
- Selector, Key-selector, and Indicator are available.

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**Specifications**

| Rated load | 3A, 240VAC |
**Self-powered Totalizer**

**H7E-N**
- Compact Economical Totalizer with High Visibility Available with Backlight LCD Display.

**Switch Mode Power Supplies**

**S8VK-G**
- Thinner control panel with industry’s top class of short body size.

**S8VS**
- Display for monitoring replacement time.
- Compact size of 40 wide x 95 mm high. (60W)

**General Purpose Relays**

**MY Series**
- Track Record of One Billion Relays Sold Worldwide.

**LY Series**
- Compact, General Purpose 15-A and 10-A Relays ideal for many applications.

**MK-S Series**
- Exceptionally reliable General Purpose Relay with lockable test button.

**Solid-state Timers**

**H3DK**
- Slim design (22.5mm Width) that mounts to DIN Track.
- Universal AC/DC power input.

**H3Y**
- Ultra-compact, space-saving design of 21.5 wide x 28 high.
- Easy time setting with a large knob.

**Monitoring of Speed and Revolution**

**K3MA-F**
- Highly Visible LCD Display with 2-color (Red and Green) LEDs.

**Specifications**

- **Display**
  - LCD
- **Size**
  - 1/32 DIN
- **Max. counting speed**
  - 30Hz/1kHz
- **Counting range**
  - 0 to 99999999
- **Contact form**
  - DPDT, 4PDT
- **Rated load (resistive)**
  - 2-pole 5A@250VAC, 5A@30VDC
  - 4-pole 10A, 4-pole 5A
- **Max. switching current**
  - 2-pole 10A, 4-pole 5A
- **Ambient operating temperature**
  - -55 to +70°C
- **Applicable Socket**
  - 2-pole PYF08A-E, PYF08S
  - 4-pole PYF14A-E, PYF14S

**Specifications**

- **Display range**
  - -19999 to 99999
- **Max. counting speed**
  - 30Hz/4kHz
- **Out type**
  - Upper Limit/ Lower Limit/ Upper and Lower Limit

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**Compact Timing Control**

**H3DK**
- Slim design (22.5mm Width) that mounts to DIN Track.
- Universal AC/DC power input.

**H3Y**
- Ultra-compact, space-saving design of 21.5 wide x 28 high.
- Easy time setting with a large knob.
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Notes: Specifications are subject to change.