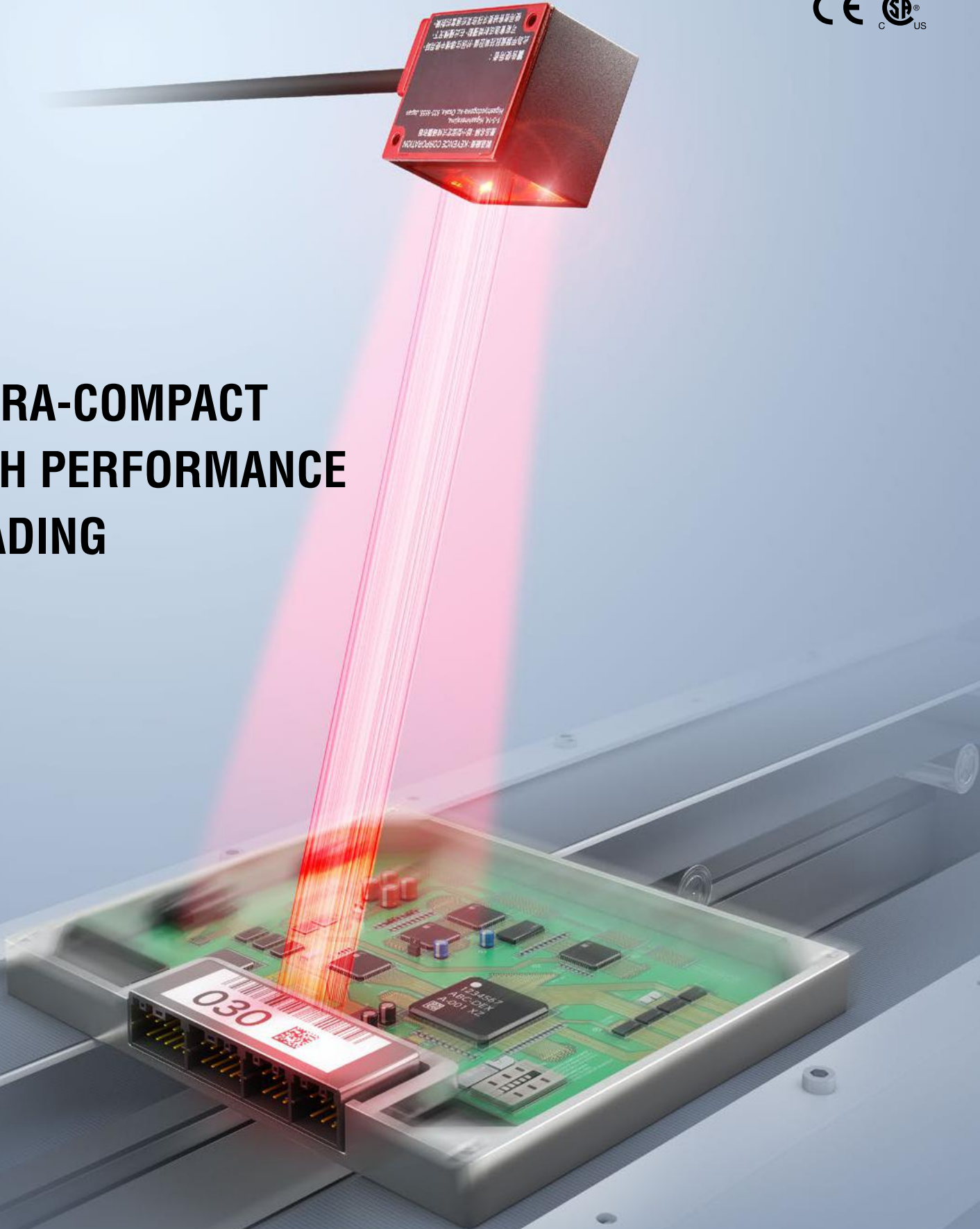


KEYENCE

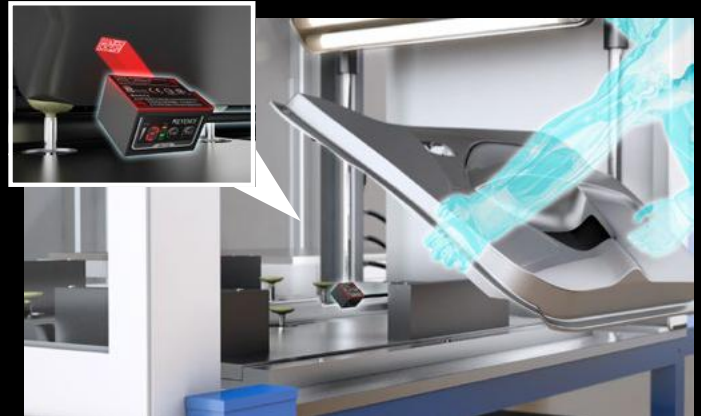
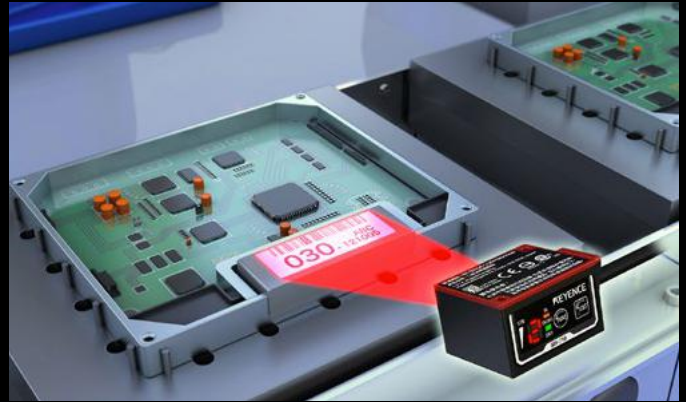
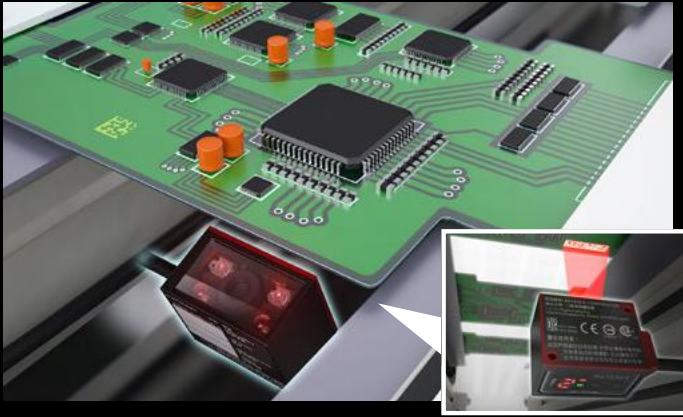
NEW Ultra-compact 1D and 2D Code Reader
SR-700 Series



**ULTRA-COMPACT
HIGH PERFORMANCE
READING**



SR-700 Series



C O M P A C T B O D Y

ADVANCED PROCESSING FOR STABLE, HIGH-QUALITY READING

EXCELLENT READING CAPABILITY THROUGHOUT THE FIELD OF VIEW

A built-in lens minimizes aberration to ensure stable reading even at the edges of the field of view.



READING UNAFFECTED BY MOUNTING ANGLE

Geometric correction enables reliable code reading even when the code appears distorted.



EASILY READ DAMAGED OR IRREGULARLY PRINTED CODES

New algorithms provide best-in-class reading capability even when the code is hard to read.



POWERFUL HIGH SPEED READING

BURST READ FUNCTION:

Acquires up to 10 consecutive images. The decoding process is performed after imaging for high speed code detection.

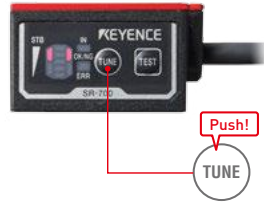
HIGH-SPEED IMAGE CAPTURE:

The built-in ultra-high-intensity LED and high-speed digital signal processor (DSP) capture moving objects effectively, even with a short exposure time. (Reference: Max. 170 m/min with a KEYENCE test label)

EASY TUNING

Easily optimize reading settings

The optimal brightness and filter settings are automatically selected using the buttons on the main unit.



Tuning is also available through the setting software.
SR-H6W

CODE VERIFICATION FUNCTION

Verification based on code quality standards

OUTPUT DATA **AD-ERMT-55841:8**
TOTAL GRADE JUDGMENT
Judgment can also be performed for each grading criteria

*This function is designed for 2D codes (QR, DataMatrix, GS1 Composite, PDF417).



SUPPORTED STANDARDS

- ISO/IEC 15415
- ISO/IEC TR 29158(AIM DPM-1-2006)
- ISO/IEC 16022
- SAE AS9132
- SEMI T10-0701

BUILT-IN TEST MODE

Visual indication of reading success

Pressing the TEST button starts the reading rate measurement mode.



MATCHING LEVEL JUDGMENT FUNCTION

Compare the print quality of scanned codes

Higher contrast and print quality are indicated by a larger matching level, as shown below:

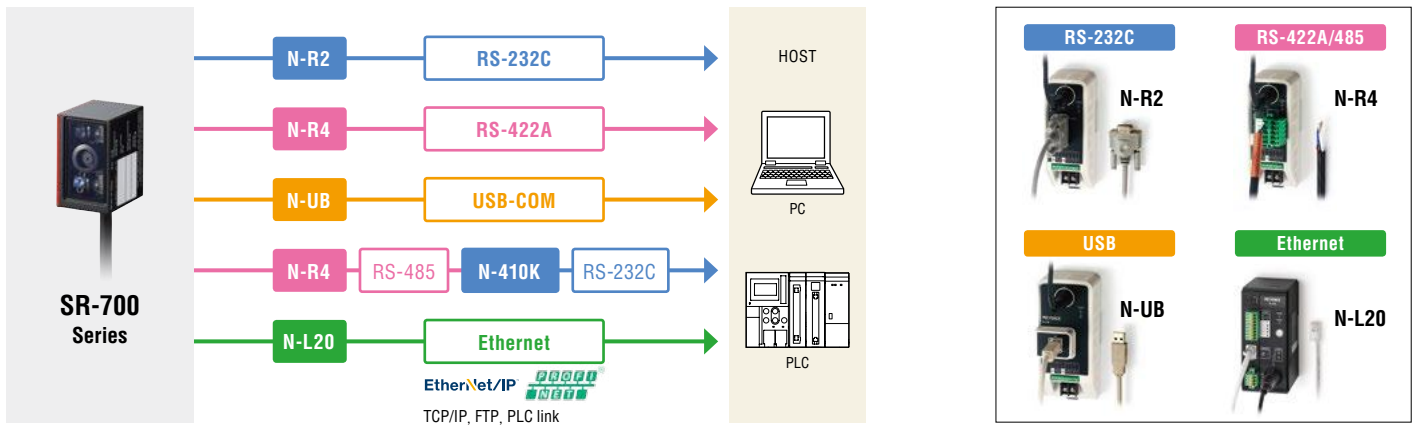
Reading rate **100%**
Matching level **75**



Reading rate **100%**
Matching level **43**

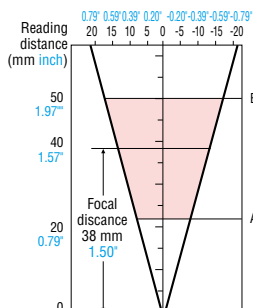


SYSTEM CONFIGURATION DIAGRAM

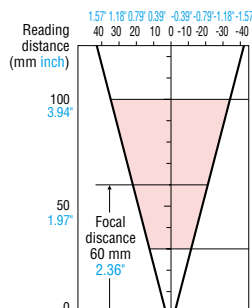


READING RANGE CHARACTERISTICS [TYPICAL]

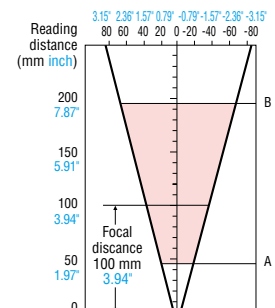
| SR-700HA: HIGH-RESOLUTION TYPE | | | |
|--------------------------------|--------------|----------|----------|
| Code type | Cell size | A | B |
| 2D | 0.08 0.003" | 31 1.22" | 39 1.54" |
| | 0.127 0.005" | 27 1.06" | 42 1.66" |
| | 0.25 0.010" | 22 0.87" | 50 1.97" |



| SR-700: CLOSE-RANGE TYPE | | | |
|--------------------------|-------------------------------|----------|-----------|
| Code type | Cell size Narrow bar width | A | B |
| 2D | 0.127 0.005" | 50 1.97" | 70 2.76" |
| | 0.25 0.010" | 40 1.57" | 80 3.15" |
| Barcode | 0.127 0.005" | 46 1.81" | 74 2.91" |
| | 0.33 0.013" | 30 1.18" | 100 3.94" |



| SR-710: MIDDLE-RANGE TYPE | | | |
|---------------------------|-------------------------------|----------|-----------|
| Code type | Cell size Narrow bar width | A | B |
| 2D | 0.25 0.010" | 65 2.56" | 130 5.12" |
| | 0.5 0.020" | 45 1.77" | 165 6.50" |
| Barcode | 0.127 0.005" | 75 2.95" | 110 4.33" |
| | 0.5 0.020" | 45 1.77" | 195 7.68" |



SPECIFICATIONS

Main unit



| Model | | SR-700HA | SR-700 | SR-710 | |
|---------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| Type | | High-resolution type | Close-range type | Middle-range type | |
| Laser pointer | Light source | Visible semiconductor laser (Wavelength: 660 nm) | | | |
| | Output | 60 μW | | | |
| | Pulse duration | 200 μs | | | |
| | Laser class | Class 1 Laser Product (IEC60825-1, FDA (CDRH) Part 1040.10 ⁻¹) | | | |
| Lighting | Light source: High intensity red LED | | | | |
| Reading | Supported code | Barcode | *2 | CODE39, ITF, 2of5 (Industrial 2of5), COOP 2of5, NW-7 (Codabar), CODE128, GS1-128, GS1 DataBar, CODE93, JAN/EAN/UPC, Trioptic CODE39, CODE39 Full ASCII, Pharmacode | |
| | | 2D code | QR, MicroQR, DataMatrix (ECC200), GS1 DataMatrix, PDF417, MicroPDF417, GS1 Composite (CC-A, CC-B, CC-C) | | |
| | Minimum resolution | Barcode | - | 0.127 mm 0.005" | 0.127 mm 0.005" |
| | | 2D code | 0.082 mm 0.003" | 0.127 mm 0.005" | 0.19 mm 0.008" |
| | Reading distance (typical examples) | Barcode | - | 30 to 100 mm 1.18" to 3.94" (Narrow bar width = 0.33 mm 0.01") | 45 to 195 mm 1.77" to 7.68" (Narrow bar width = 0.5 mm 0.02") |
| | | 2D code | 22 to 50 mm 0.87" to 1.97" (Cell size = 0.25 mm 0.01") | 40 to 80 mm 1.57" to 3.15" (Cell size = 0.25 mm 0.01") | 45 to 165 mm 1.77" to 6.50" (Cell size = 0.5 mm 0.02") |
| Focal distance | 38 mm 1.50" | | 60 mm 2.36" | 100 mm 3.94" | |
| Field of view (Typical example at focal distance) | 26 mm × 17 mm 1.02" × 0.67" | | 42 mm × 27 mm 1.65" × 1.06" | 70 mm × 45 mm 2.76" × 1.77" | |
| I/O | Control input | 2 inputs (IN1 and IN2), non-voltage input (contact, solid-state) | | | |
| | Control output | 4 NPN open collector outputs (OUT1 to 4) 30 mA or less (24 V or less) Residual voltage 0.8 V or less, leakage current 0.1 mA or less | | | |
| | RS-232C | Transmission speed | 9600, 19200, 38400, 57600, 115200 bps | | |
| | | Supported protocol | No-protocol, MC protocol, SYSWAY, KV STUDIO | | |
| USB | USB 2.0 Full Speed compliant | | | | |
| Environmental resistance | Enclosure rating | IP65 | | | |
| | Ambient temperature | 0 to +45°C 32 to 113 °F | | | |
| | Ambient storage temperature | -10 to +50°C 14 to 122 °F (No freezing) | | | |
| | Relative humidity | 35 to 95% RH (No condensation) | | | |
| | Ambient luminance | Sunlight: 10000 lux, Incandescent lamp: 6000 lux, Fluorescent lamp: 2000 lux | | | |
| | Operating environment | No dust or corrosive gas present | | | |
| Vibration | 10 to 55 Hz Double amplitude 1.5 mm 0.06", 3 hours each in X, Y and Z directions | | | | |
| Rating | Power voltage | 5 VDC ±5%, -10% | | | |
| | Current consumption | 630 mA or less | | | |
| Weight | Approx. 160 g (including cable) | | | | |

*1 The laser classification for FDA (CDRH) is implemented based on IEC60825-1 in accordance with the requirements of Laser Notice No.50.

*2 Barcodes which fit into the visual field can be read.

Communication unit



| Model | N-R2 | N-R4 | N-UB | N-L20 |
|--------------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------------|
| Interface | RS-232C | RS-422A/485 | USB-COM | Ethernet* |
| Code reader power supply | 5 VDC ±5%, (650 mA) | | | |
| Terminal block | Input | 2 inputs (IN1 and IN2)/Input type: Bidirectional voltage input/Maximum input voltage rating: 26.4 VDC/ Minimum ON voltage: 15 VDC/Maximum OFF current: 1 mA | | |
| | Output | 4 outputs (OUT1 to 4)/Output type: Photo MOS relay output/Output rated load: 30 VDC, 100 mA/ Leakage current when OFF: 0.1 mA or less/Residual voltage when ON: 1 V or less | | |
| Environmental resistance | Ambient temperature/Relative humidity | 0 to +50°C/35 to 85% RH (No condensation) | | |
| | Ambient storage temperature | -20 to +60°C -4 to 140 °F | | |
| | Operating environment | No dust or corrosive gas present | | |
| Vibration | 10 to 55 Hz Double amplitude 1.5 mm 0.06" (N-L20: 0.3 mm 0.01"), 2 hours each in X, Y and Z directions | | | |
| Rating | Power voltage: 24 VDC (+10%, -20%)/Current consumption: 380 mA max. | | | |
| Weight | Approx. 135 g | Approx. 135 g (excluding connector) | Approx. 155 g | Approx. 150 g |

*Supported protocol: TCP, UDP, FTP, BOOTP, EtherNet/IP™, PROFINET, KV STUDIO, MC protocol, OMRON PLC link.



CALL TOLL FREE TO CONTACT YOUR LOCAL OFFICE
1-888-KEYENCE
1-888-539-3623

www.keyence.com

SAFETY INFORMATION
Please read the instruction manual carefully in order to safely operate any KEYENCE product.

CONTACT YOUR NEAREST OFFICE FOR RELEASE STATUS

KEYENCE CORPORATION OF AMERICA

Head Office 500 Park Boulevard, Suite 200, Itasca, IL 60143, U.S.A. PHONE: +1-201-930-0100 FAX: +1-855-539-0123 E-mail: keyence@keyence.com

- | | | | | | | | | | |
|------------------|----------------|------------|-----------------|-----------------|-----------------|---------------|-----------------|--------------|--------------|
| AL Birmingham | CA San Jose | CO Denver | IL Chicago | MI Detroit | MO St. Louis | NC Raleigh | PA Philadelphia | TN Nashville | WI Milwaukee |
| AR Little Rock | CA Cupertino | FL Tampa | IN Indianapolis | MI Grand Rapids | NJ Elmwood Park | OH Cincinnati | PA Pittsburgh | TX Austin | |
| AZ Phoenix | CA Los Angeles | GA Atlanta | KY Louisville | MN Minneapolis | NY Rochester | OH Cleveland | SC Greenville | TX Dallas | |
| CA San Francisco | CA Irvine | IA Iowa | MA Boston | MO Kansas City | NC Charlotte | OR Portland | TN Knoxville | WA Seattle | |

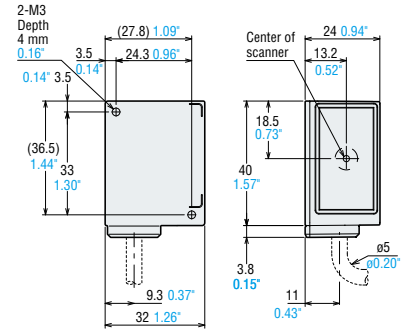
KEYENCE CANADA INC.

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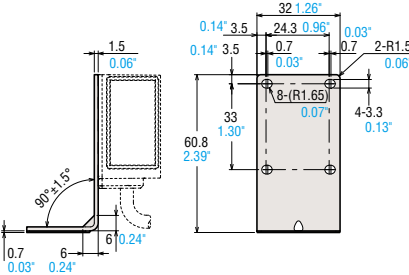
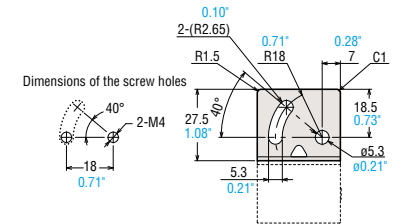
DIMENSIONS

Unit: mm inch

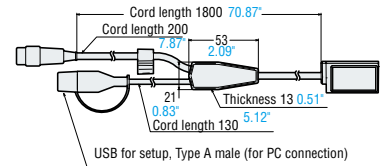
MAIN UNIT
SR-700/710/700HA



MOUNTING BRACKET



HEAD CABLE



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The specifications are expressed in metric units. The English units have been converted from the original metric units.

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SR700-KA-C4-US 1067-1 611F28