

Round Water-resistant Connectors (M8)

XS3

Compact, Watertight, Round Connectors

- Water-resistive, compact connector meets IP67 requirements.
- Ideal for a wide variety of FA and OA applications.
- Using connectors for wiring ensures ease of equipment maintenance and reduces downtime required for equipment maintenance.



■ Ratings and Specifications

Rated current	3A
Rated voltage	125 VDC
Contact resistance	60 mΩ max. (20 mV max., 100 mA max.)
Insulation resistance	1,000 MΩ min. (at 500 VDC)
Dielectric strength	1,000 VAC for 1 min (leakage current: 1 mA max.)
Degree of protection	IP67 (IEC60529)
Insertion tolerance	200 times min.

■ Material

Contact / Surface	Copper Alloy / Nickel base, Au0.4 μm
Connector housing	PBT resin (UL94V-0)
Nut / Surface	Copper Alloy / Nickel plated
Cover	PBT resin (UL94V-0)

■ PVC Cable

Item	3 cores	4 cores
Color	Black	
Outer diameter	5 mm dia.	4.8 mm dia.
Conductor size	AWG22 0.34 mm ² (43 × 0.1)	0.25 mm ² (32 × 0.1)
Approvals	AWM	
Features	Flame retardant	
Temperature range	-25 to +70°C	

■ Socket Appearance

3 poles		4 poles	
Male	Female	Male	Female

■ PUR Cable

Item	3 cores	4 cores
Color	Black	
Outer diameter	4.3 mm dia.	4.7 mm dia.
Conductor size	AWG22 0.34 mm ² (43 × 0.1)	
Approvals	AWM	
Features	Flame retardant Halogen free Oil resistance	
Temperature range	Cable fixed: -50 to +80°C / Cable moved: -25 to +80°C	

Connectors with Cable Attached

■ XS3F - M8 Socket on One Cable End

XS3F-M8PVC□□□M PVC Cable

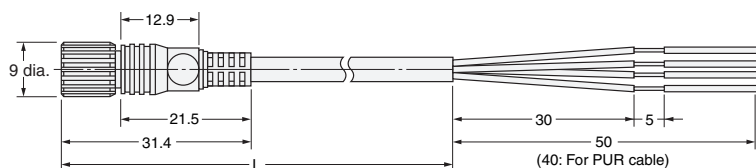
XS3F-M8PUR□□□M PUR Cable



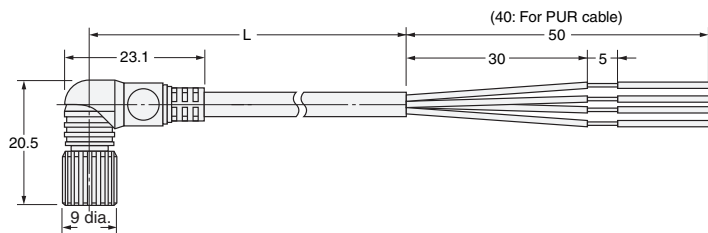
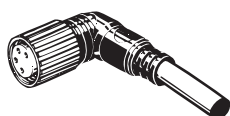
Dimensions

(Unit: mm)

Straight



Angled



Wiring Diagram

3 Poles	4 Poles
Contact No. Cable lead colors Brown Blue Black	Contact No. Cable lead colors Brown White Blue Black

Ordering Information

Connector	Size	Cable material	Poles	Type	Length (m)	Product description
Socket	M8	PVC	3	Angled	2	XS3F-M8PVC3A2M
					5	XS3F-M8PVC3A5M
					10	XS3F-M8PVC3A10M
				Straight	2	XS3F-M8PVC3S2M
					5	XS3F-M8PVC3S5M
					10	XS3F-M8PVC3S10M
			4	Angled	2	XS3F-M8PVC4A2M
					5	XS3F-M8PVC4A5M
					10	XS3F-M8PVC4A10M
				Straight	2	XS3F-M8PVC4S2M
					5	XS3F-M8PVC4S5M
					10	XS3F-M8PVC4S10M
		PUR	3	Angled	2	XS3F-M8PUR3A2M
					5	XS3F-M8PUR3A5M
					10	XS3F-M8PUR3A10M
				Straight	2	XS3F-M8PUR3S2M
					5	XS3F-M8PUR3S5M
					10	XS3F-M8PUR3S10M
			4	Angled	2	XS3F-M8PUR4A2M
					5	XS3F-M8PUR4A5M
					10	XS3F-M8PUR4A10M
				Straight	2	XS3F-M8PUR4S2M
					5	XS3F-M8PUR4S5M
					10	XS3F-M8PUR4S10M

Model Number Legend

Use this model number legend to identify products from their model number.
When ordering, use a model number from the table in *Ordering Information*.

XS3F - M8 **M**

1 2 3 4 5

1. Screw Type

M8: M8 size

2. Cable type

PVC: PVC cable

PUR: PUR cable

3. Number of Poles

3: 3 poles

4: 4 poles

4. Shape

A: Angled

S: Straight

5. Cable Length

2M: 2 m

5M: 5 m

10M: 10 m

■ XS3H - M8 Plugs on One Cable End

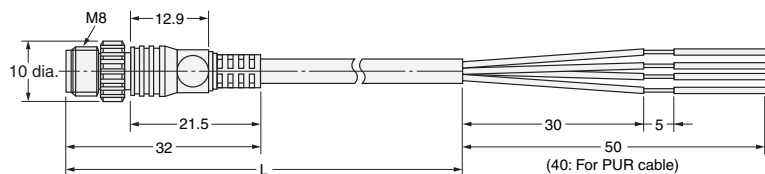
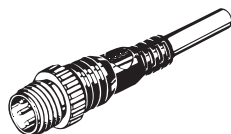
XS3H-M8PVC□□□□M PVC Cable
XS3H-M8PUR□□□□M PUR Cable

C[®] A[®] US
(PENDING)

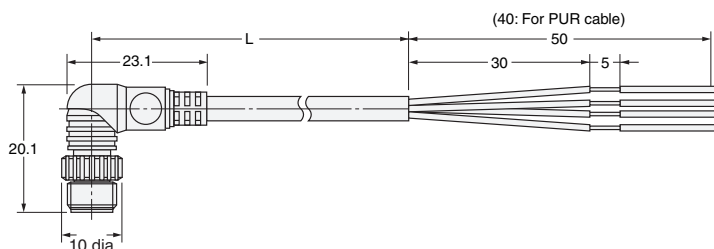
Dimensions

(Unit: mm)

Straight



Angled



Wiring Diagram

3 Poles	4 Poles
Contact No. Cable lead colors Brown Blue Black	Contact No. Cable lead colors Brown White Blue Black

Ordering Information

Connector	Size	Cable material	Poles	Type	Length (m)	Product description
plug	M8	PVC	3	Angled	0.3	XS3H-M8PVC3A03M
					1	XS3H-M8PVC3A1M
				Straight	0.3	XS3H-M8PVC3S03M
					1	XS3H-M8PVC3S1M
			4	Angled	0.3	XS3H-M8PVC4A03M
					1	XS3H-M8PVC4A1M
				Straight	0.3	XS3H-M8PVC4S03M
					1	XS3H-M8PVC4S1M
		PUR	3	Angled	0.3	XS3H-M8PUR3A03M
					1	XS3H-M8PUR3A1M
				Straight	0.3	XS3H-M8PUR3S03M
					1	XS3H-M8PUR3S1M
			4	Angled	0.3	XS3H-M8PUR4A03M
					1	XS3H-M8PUR4A1M
				Straight	0.3	XS3H-M8PUR4S03M
					1	XS3H-M8PUR4S1M

Model Number Legend

Use this model number legend to identify products from their model number.
When ordering, use a model number from the table in *Ordering Information*.

XS3H - M8 **M**

1 2 3 4 5

1. Screw Type

M8: M8 size

2. Cable type

PVC: PVC cable

PUR: PUR cable

3. Number of Poles

3: 3 poles

4: 4 poles

4. Shape

A: Angled

S: Straight

5. Cable Length

03M: 0.3 m

1M: 1 m

■ XS3W - M8 Sockets and M8 Plugs on Cable Ends

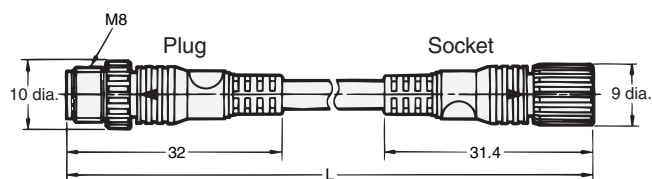
XS3W-M8PVC□□□□M PVC Cable
XS3W-M8PUR□□□□M PUR Cable



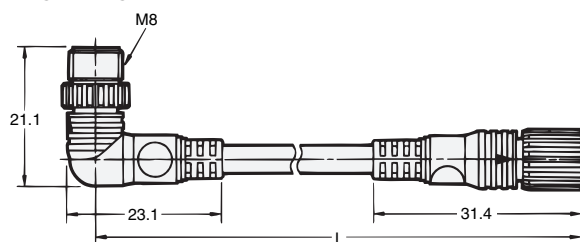
Dimensions

(Unit: mm)

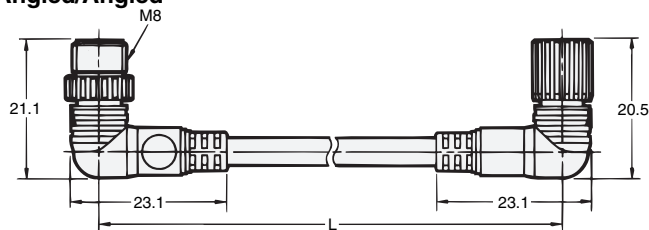
Straight/Straight



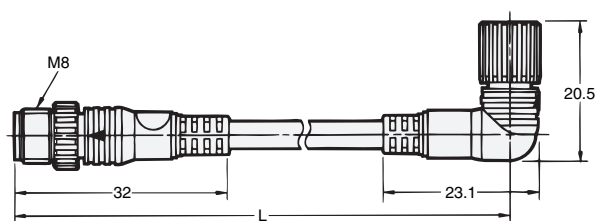
Straight/Angled



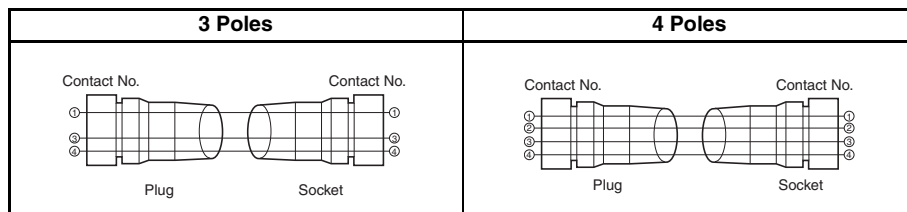
Angled/Angled



Angled/Straight



Wiring Diagram



Model Number Legend

Use this model number legend to identify products from their model number.
When ordering, use a model number from the table in *Ordering Information*.

XS3W - M8 □□□ □ □□ □M
1 2 3 4 5

1. Screw Type

M8: M8 size

2. Cable type

PVC: PVC cable

PUR: PUR cable

3. Number of Poles

3: 3 poles

4: 4 poles

4. Shape

SS: Straight / Straight

AA: Angled / Angled

SA: Straight / Angled

AS: Angled / Straight

5. Cable Length

2M: 2 m

5M: 5 m

1M: 10 m

Ordering Information

Connector	Size	Cable material	Poles	Shape		Length (m)	Product description
				Plug	Socket		
Both	M8	PVC	3	Angled	Angled	2	XS3W-M8PVC3AA2M
						5	XS3W-M8PVC3AA5M
						10	XS3W-M8PVC3AA10M
				Straight	Straight	2	XS3W-M8PVC3SS2M
						5	XS3W-M8PVC3SS5M
						10	XS3W-M8PVC3SS10M
				Angled	Straight	2	XS3W-M8PVC3AS2M
						5	XS3W-M8PVC3AS5M
						10	XS3W-M8PVC3AS10M
				Straight	Angled	2	XS3W-M8PVC3SA2M
						5	XS3W-M8PVC3SA5M
						10	XS3W-M8PVC3SA10M
			4	Angled	Angled	2	XS3W-M8PVC4AA2M
						5	XS3W-M8PVC4AA5M
						10	XS3W-M8PVC4AA10M
				Straight	Straight	2	XS3W-M8PVC4SS2M
						5	XS3W-M8PVC4SS5M
						10	XS3W-M8PVC4SS10M
				Angled	Straight	2	XS3W-M8PVC4AS2M
						5	XS3W-M8PVC4AS5M
						10	XS3W-M8PVC4AS10M
				Straight	Angled	2	XS3W-M8PVC4SA2M
						5	XS3W-M8PVC4SA5M
						10	XS3W-M8PVC4SA10M
		PUR	3	Angled	Angled	2	XS3W-M8PUR3AA2M
						5	XS3W-M8PUR3AA5M
						10	XS3W-M8PUR3AA10M
				Straight	Straight	2	XS3W-M8PUR3SS2M
						5	XS3W-M8PUR3SS5M
						10	XS3W-M8PUR3SS10M
				Angled	Straight	2	XS3W-M8PUR3AS2M
						5	XS3W-M8PUR3AS5M
						10	XS3W-M8PUR3AS10M
				Straight	Angled	2	XS3W-M8PUR3SA2M
						5	XS3W-M8PUR3SA5M
						10	XS3W-M8PUR3SA10M
			4	Angled	Angled	2	XS3W-M8PUR4AA2M
						5	XS3W-M8PUR4AA5M
						10	XS3W-M8PUR4AA10M
				Straight	Straight	2	XS3W-M8PUR4SS2M
						5	XS3W-M8PUR4SS5M
						10	XS3W-M8PUR4SS10M
				Angled	Straight	2	XS3W-M8PUR4AS2M
						5	XS3W-M8PUR4AS5M
						10	XS3W-M8PUR4AS10M
				Straight	Angled	2	XS3W-M8PUR4SA2M
						5	XS3W-M8PUR4SA5M
						10	XS3W-M8PUR4SA10M

Y-Joint M8 Plug / M8 Socket Connectors

■ XS3R

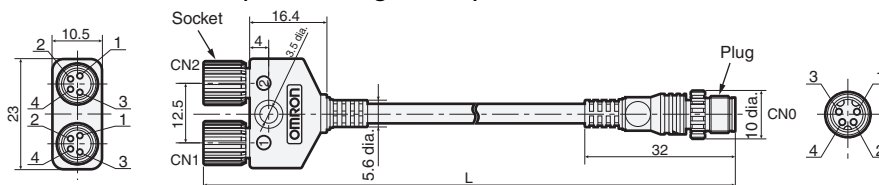
XS3R-M426-1□□□-A With Standard Cable
XS3R-M426-□ Without Cable

Dimensions

(Unit: mm)

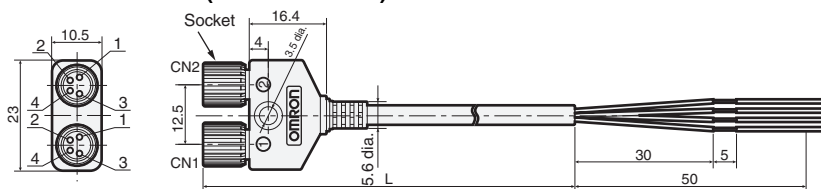
XS3R-M426-1□□1-A

Connectors on Both Cable Ends (Y-Joint Plug/Socket)



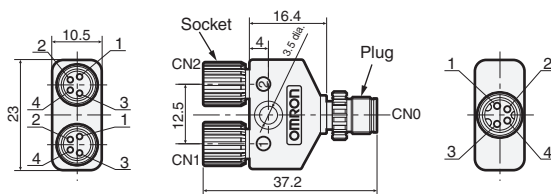
XS3R-M426-1□□0-A

Connector on One Cable End (Y-Joint/Socket)



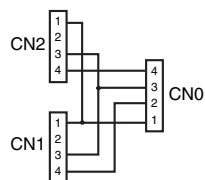
XS3R-M426-□

Connector on Both Ends (Y-Joint Plug/Socket) without Cable

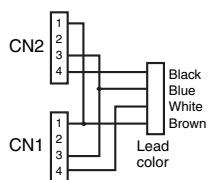


Wiring Diagram

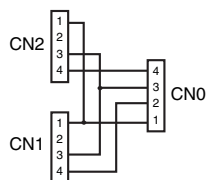
XS3R-M426-1□□1-A



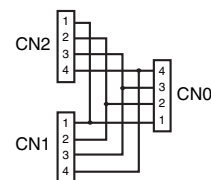
XS3R-M426-1□□0-A



XS3R-M426-1



XS3R-M426-5



Mating Connectors

Item	Model
XS3R(M8)	XS3F(M8)
	XS3H(M8)
	XS3W(M8)
	XS3P(M8)

Ordering Information

For M8 Connectors

Cable	Connector	Cable length L (m)	Model	Minimum order
With cable	Connectors on both cable ends	0.5	XS3R-M426-1C51-A	5
		1	XS3R-M426-1011-A	
		2	XS3R-M426-1021-A	
		3	XS3R-M426-1031-A	
	Connector on one cable end	2	XS3R-M426-1020-A	
		5	XS3R-M426-1050-A	
Without cable	Connectors on both cable ends	—	XS3R-M426-1	10
			XS3R-M426-5	

Panel-mount Connectors

■ XS3P - M8 Sockets

XS3P-M421-1 M8 Screw-mount sockets with Through-hole PCB Pins (front or rear lock)

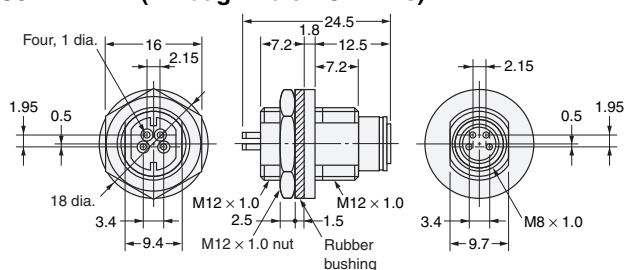
XS3P-M421-2 M8 Screw-mount sockets with Solder Cup Pins (front or rear lock)

XS3P-M422-2 M8 Screw-mount sockets with Solder Cup Pins (rear lock, slim model)

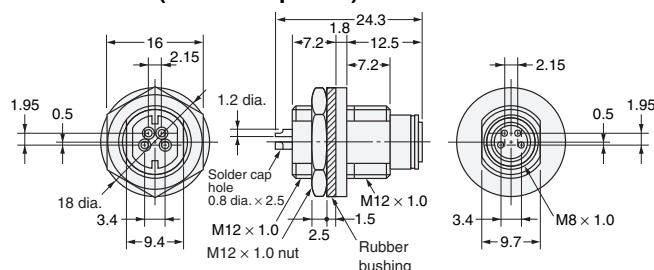
Dimensions

(Unit: mm)

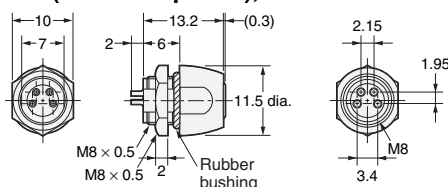
XS3P-M421-1 (Through-hole PCB Pins)



XS3P-M421-2 (Solder Cup Pins)



XS3P-M422-2 (Solder Cup Pins), Rear Lock Slim Models

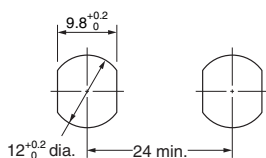
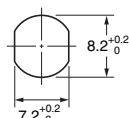


Mounting Dimensions for XS3P Screw-on Models and Snap-in Models

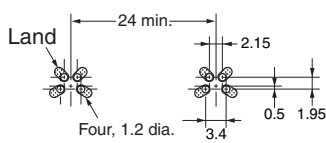
(Unit: mm)

Panel Cutouts

XS3P-□421

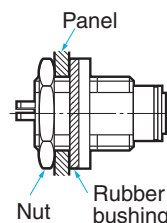
**XS3P-M422-2**

PCB-mounting Dimensions

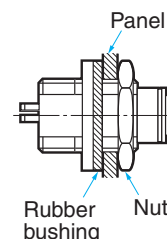


Panel-mounting Configuration

Rear Lock



Front Lock



Note: The panel thickness is 1 to 3 mm.

Note: The panel thickness is 2.4 mm maximum.

Ordering Information

Connection method	Panel mounting	Pin shape	Model	Minimum order
M8 screw-mounting	Front lock or rear lock	Through-hole PCB pins	XS3P-M421-1	50
		Solder cup pins	XS3P-M421-2	
	Rear lock	Solder cup pins	XS3P-M422-2	

Note: Orders are accepted in multiples of the minimum order.

Safety Precautions

In addition to the following information, also refer to the 'Precautions' section at the end of this datasheet

■ Correct Use - Panel Mounting

- When mounting XS3P Panel-mount Connectors to panels, refer to *Panel-mounting Configuration* and provide rubber bushings and nuts for the Connectors. Apply a tightening torque of between 0.4 and 0.6 N·m to mount the Connectors.

Connectors for Embedding in Sensors

■ XS3M - Plugs

XS3M-K421-1 Embedded Plugs with Screw Threads and Through-hole PCB Pins

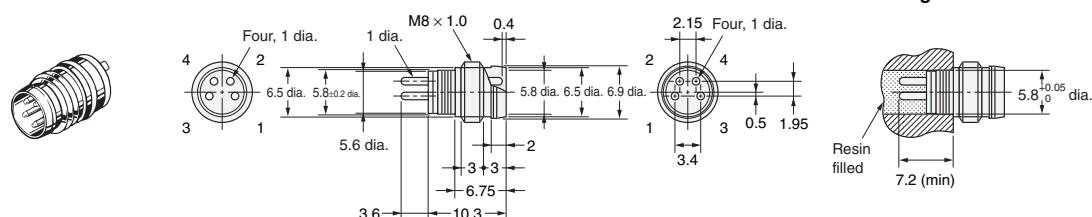
XS3M-K421-2 Embedded plugs with Screw Threads and Solder Cup Pins

Dimensions

(Unit: mm)

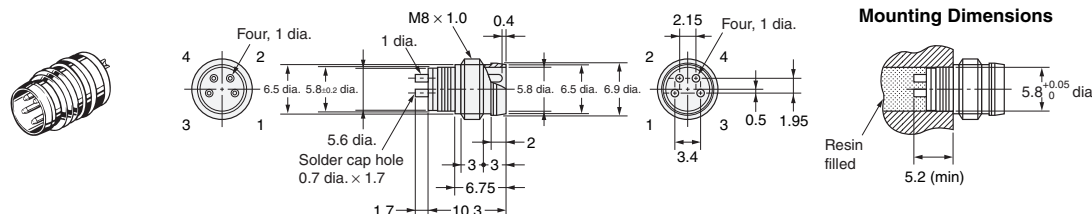
XS3M-K421-1

Embedded Model with Through-hole PCB Pins



XS3M-K421-2

Embedded Model with Solder Cup Pins



Mating Connectors

Item	Model
XS3M	XS3F, XS3W

Ordering Information

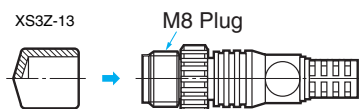
Connection method	Pin shape	Model	Minimum order
Embedded model	Through-hole PCB pins	XS3M-K421-1	200
	Solder cup pins	XS3M-K421-2	

Note: Orders are accepted in multiples of the minimum order.

Accessories

Dust Covers

XS3Z-13



XS3Z-15



Model	Material	Suitable connector	
		Model	Mounting portion
XS3Z-13	Acrylic resin/transparent	XS3H/XS3M	M8 plug
XS3Z-15		XS3F	M8 socket

Note: The Dust Covers are for dust prevention and do not ensure IP67 sealability. When mounting a Dust Cover to a Connector, be sure to press the Dust Cover onto the Connector until the Connector is fully inserted into the Dust Cover.

Precautions

■ Correct Use

Do not use the product in atmospheres or environments that exceed product ratings.

Connections

- The XS3 and XS2 Sensor I/O Connectors cannot be connected to each other.
- When using Sensors with Connectors or Limit Switches, use the Sensor I/O Connectors specified in the catalog.

Connector Connection and Disconnection

- Before connecting or disconnecting Connectors, make sure that no power is being supplied to the Connectors.
- When connecting or disconnecting Connectors, be sure to hold the Connectors by hand. Do not disconnect the Connectors by pulling the cable.
- Do not touch the engagement side of any Connector with wet hands. If there is any water on the Connector or near the Connector, be sure to wipe off the water before connecting or disconnecting the Connector, otherwise the Connector may short-circuit internally or not ensure good insulation.
- Make sure that engagement side of any Connector is free of metal dust or power.
- Do not use pliers to tighten mounting the thread bracket, otherwise the thread bracket may be damaged. Be sure to tighten each thread bracket by hand within a torque of 0.2 N·m. If the thread bracket is not tightened securely, the Connector may not maintain its proper degree of protection or the thread bracket may fall off due to vibration.

Cable Wire Color

- The M8 Sensor I/O Connectors use the following lead wire colors.

Model		Pin No.			
		1	2	3	4
For DC	8-mm-dia. DC4	Brown	White	Blue	Black

Degree of Protection

- Do not impose external force continuously on the joints of pin blocks and covers, otherwise the Connectors may not keep its proper degree of protection (i.e., IP67).
- Connectors are not fully watertight. Do not use them underwater.
- The Connectors are not oil-resistant. Do not use them where they would be subject to oil.
- If Connectors are used in places with vibration or shock, secure the engaged side of each Connector, otherwise the Connectors may be disconnected or fail to maintain their proper degree of protection.
- Connectors are of resin mold construction. Do not impose excessive force on them.

Storage

Do not store Connectors for long periods of time in the following locations

- Locations subject to dust or high humidity
- Locations subject to ammonia gas or sulfide gas

Installation

- Do not make any cable bends near the base of the Unit.
- Any bends made must have a minimum radius of 36 mm.

MEMO

Omron Electronic Components, LLC

Terms and Conditions of Sales

I. GENERAL

- Definitions:** The words used herein are defined as follows.
 - Terms:** These terms and conditions
 - Seller:** Omron Electronic Components LLC and its subsidiaries
 - Buyer:** The buyer of Products, including any end user in section III through VI
 - Products:** Products and/or services of Seller
 - Including:** Including without limitation
- Offer/Acceptance:** These Terms are deemed part of all quotations, acknowledgments, invoices, purchase orders and other documents, whether electronic or in writing, relating to the sale of Products by Seller. Seller hereby objects to any Terms proposed in Buyer's purchase order or other documents which are inconsistent with, or in addition to, these Terms.
- Distributor:** Any distributor shall inform its customer of the contents after and including section III of these Terms.

II. SALES

- Prices; Payment:** All prices stated are current, subject to change without notice by Seller. Buyer agrees to pay the price in effect at the time the purchase order is accepted by Seller. Payments for Products received are due net 30 days unless otherwise stated in the invoice. Buyer shall have no right to set off any amounts against the amount owing in respect of this invoice.
- Discounts:** Cash discounts, if any, will apply only on the net amount of invoices sent to Buyer after deducting transportation charges, taxes and duties, and will be allowed only if (a) the invoice is paid according to Seller's payment terms and (b) Buyer has no past due amounts owing to Seller.
- Interest:** Seller, at its option, may charge Buyer 1.5% interest per month or the maximum legal rate, whichever is less, on any balance not paid within the stated terms.
- Orders:** Seller will accept no order less than 200 U.S. dollars net billing.
- Currencies:** If the prices quoted herein are in a currency other than U.S. dollars, Buyer shall make remittance to Seller at the then current exchange rate most favorable to Seller; provided that if remittance is not made when due, Buyer will convert the amount to U.S. dollars at the then current exchange rate most favorable to Seller available during the period between the due date and the date remittance is actually made.
- Governmental Approvals:** Buyer shall be responsible for all costs involved in obtaining any government approvals regarding the importation or sale of the Products.
- Taxes:** All taxes, duties and other governmental charges (other than general real property and income taxes), including any interest or penalties thereon, imposed directly or indirectly on Seller or required to be collected directly or indirectly by Seller for the manufacture, production, sale, delivery, importation, consumption or use of the Products sold hereunder (including customs duties and sales, excise, use, turnover and license taxes) shall be charged to and remitted by Buyer to Seller.
- Financial:** If the financial position of Buyer at any time becomes unsatisfactory to Seller, Seller reserves the right to stop shipments or require satisfactory security or payment in advance. If Buyer fails to make payment or otherwise comply with these Terms or any related agreement, Seller may (without liability and in addition to other remedies) cancel any unshipped portion of Products sold hereunder and stop any Products in transit until Buyer pays all amounts, including amounts payable hereunder, whether or not then due, which are owing to it by Buyer. Buyer shall in any event remain liable for all unpaid accounts.
- Cancellation; Etc:** Orders are not subject to rescheduling or cancellation unless Buyer indemnifies Seller fully against all costs or expenses arising in connection therewith.
- Force Majeure:** Seller shall not be liable for any delay or failure in delivery resulting from causes beyond its control, including earthquakes, fires, floods, strikes or other labor disputes, shortage of labor or materials, accidents to machinery, acts of sabotage, riots, delay in or lack of transportation or the requirements of any government authority.
- Shipping; Delivery:** Unless otherwise expressly agreed in writing by Seller:
 - All sales and shipments of Products shall be FOB shipping point (unless otherwise stated in writing by Seller), at which point title to and all risk of loss of the Products shall pass from Seller to Buyer, provided that Seller shall retain a security interest in the Products until the full purchase price is paid by Buyer;
 - Delivery and shipping dates are estimates only; and
 - Seller will package Products as it deems proper for protection against normal handling and extra charges apply to special conditions.
- Claims:** Any claim by Buyer against Seller for shortage or damage to the Products occurring before delivery to the carrier or any claim related to pricing or other charges must be presented in detail in writing to Seller within 30 days of receipt of shipment.

III. PRECAUTIONS

- Suitability:** IT IS THE BUYER'S SOLE RESPONSIBILITY TO ENSURE THAT ANY OMRON PRODUCT IS FIT AND SUFFICIENT FOR USE IN A MOTORIZED VEHICLE APPLICATION. BUYER SHALL BE SOLELY RESPONSIBLE FOR DETERMINING APPROPRIATENESS OF THE PARTICULAR PRODUCT WITH RESPECT TO THE BUYER'S APPLICATION INCLUDING (A) ELECTRICAL OR ELECTRONIC COMPONENTS, (B) CIRCUITS, (C) SYSTEM ASSEMBLIES, (D) END PRODUCT, (E) SYSTEM, (F) MATERIALS OR SUBSTANCES OR (G) OPERATING ENVIRONMENT. Buyer acknowledges that it alone has determined that the Products will meet their requirements of the intended use in all cases. Buyer must know and observe all prohibitions of use applicable to the Product/s.
- Use with Attention:** The followings are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible use of any Product, nor to imply that any use listed may be suitable for any Product:
 - Outdoor use, use involving potential chemical contamination or electrical interference.

- Use in consumer Products or any use in significant quantities.
 - Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
 - Systems, machines, and equipment that could present a risk to life or property.
- Prohibited Use:** NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.
 - Motorized Vehicle Application:** USE OF ANY PRODUCT/S FOR A MOTORIZED VEHICLE APPLICATION MUST BE EXPRESSLY STATED IN THE SPECIFICATION BY SELLER.
 - Programmable Products:** Seller shall not be responsible for the Buyer's programming of a programmable Product.

IV. WARRANTY AND LIMITATION

- Warranty:** Seller's exclusive warranty is that the Products will be free from defects in materials and workmanship for a period of twelve months from the date of sale by Seller (or such other period expressed in writing by Seller). SELLER MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, ABOUT ALL OTHER WARRANTIES, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OF THE PRODUCTS.
- Buyer Remedy:** Seller's sole obligation hereunder shall be to replace (in the form originally shipped with Buyer responsible for labor charges for removal or replacement thereof) the non-complying Product or, at Seller's election, to repay or credit Buyer an amount equal to the purchase price of the Product; provided that there shall be no liability for Seller or its affiliates unless Seller's analysis confirms that the Products were correctly handled, stored, installed and maintained and not subject to contamination, abuse, misuse or inappropriate modification. Return of any Products by Buyer must be approved in writing by Seller before shipment.
- Limitation on Liability:** SELLER AND ITS AFFILIATES SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR PRODUCTION OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED IN CONTRACT, WARRANTY, NEGLIGENCE OR STRICT LIABILITY. FURTHER, IN NO EVENT SHALL LIABILITY OF SELLER OR ITS AFFILIATES EXCEED THE INDIVIDUAL PRICE OF THE PRODUCT ON WHICH LIABILITY IS ASSERTED.
- Indemnities:** Buyer shall indemnify and hold harmless Seller, its affiliates and its employees from and against all liabilities, losses, claims, costs and expenses (including attorney's fees and expenses) related to any claim, investigation, litigation or proceeding (whether or not Seller is a party) which arises or is alleged to arise from Buyer's acts or omissions under these Terms or in any way with respect to the Products.

V. INFORMATION; ETC.

- Intellectual Property:** The intellectual property embodied in the Products is the exclusive property of Seller and its affiliates and Buyer shall not attempt to duplicate it in any way without the written permission of Seller. Buyer (at its own expense) shall indemnify and hold harmless Seller and defend or settle any action brought against Seller to the extent that it is based on a claim that any Product made to Buyer specifications infringed intellectual property rights of another party.
- Property; Confidentiality:** Notwithstanding any charges to Buyer for engineering or tooling, all engineering and tooling shall remain the exclusive property of Seller. All information and materials supplied by Seller to Buyer relating to the Products are confidential and proprietary, and Buyer shall limit distribution thereof to its trusted employees and strictly prevent disclosure to any third party.
- Performance Data:** Performance data is provided as a guide in determining suitability and does not constitute a warranty. It may represent the result of Seller's test conditions, and the users must correlate it to actual application requirements.
- Change In Specifications:** Product specifications and descriptions may be changed at any time based on improvements or other reasons. It is Seller's practice to change part numbers when published ratings or features are changed, or when significant engineering changes are made. However, some specifications of the Product may be changed without any notice.
- Errors And Omissions:** The information on Seller's website or in other documentation has been carefully checked and is believed to be accurate; however, no responsibility is assumed for clerical, typographical or proofreading errors or omissions.
- Export Controls:** Buyer shall comply with all applicable laws, regulations and licenses regarding (a) export of the Products or information provided by Seller; (b) sale of Products to forbidden or other proscribed persons or organizations; (c) disclosure to non-citizens of regulated technology or information.

VI. MISCELLANEOUS

- Waiver:** No failure or delay by Seller in exercising any right and no course of dealing between Buyer and Seller shall operate as a waiver of rights by Seller.
- Assignment:** Buyer may not assign its rights hereunder without Seller's written consent.
- Law:** These Terms are governed by Illinois law (without regard to conflict of laws). Federal and state courts in Cook County, Illinois have exclusive jurisdiction for any dispute hereunder.
- Amendment:** These Terms constitute the entire agreement between Buyer and Seller relating to the Products, and no provision may be changed or waived unless in writing signed by the parties.
- Severability:** If any provision hereof is rendered ineffective or invalid, such provision shall not invalidate any other provision.

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1. **Suitability for Use.** Seller shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in Buyer's application or use of the Product. At Buyer's request, Seller will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases but the following is a non-exhaustive list of applications for which particular attention must be given:
 - (i) Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this document.
 - (ii) Energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
 - (iii) Use in consumer products or any use in significant quantities.
 - (iv) Systems, machines and equipment that could present a risk to life or property. Please know and observe all prohibitions of use applicable to this product.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.
2. **Programmable Products.** Seller shall not be responsible for the user's programming of a programmable product, or any consequence thereof.
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