

## IoT Compatible components Series

Improving plant productivity using IoT

**Ethernet**

**EtherNet/IP<sup>®</sup>**

**DeviceNet<sup>™</sup>**

**EtherCAT<sup>®</sup>**

**CC-Link IETSN**

**CC-Link IE Field**

**CC-Link IE Field Basic**

**CC-Link**

**PROFI  
NET**

**PROFI  
BUS**

**IO-Link**

**IO-Link Wireless**

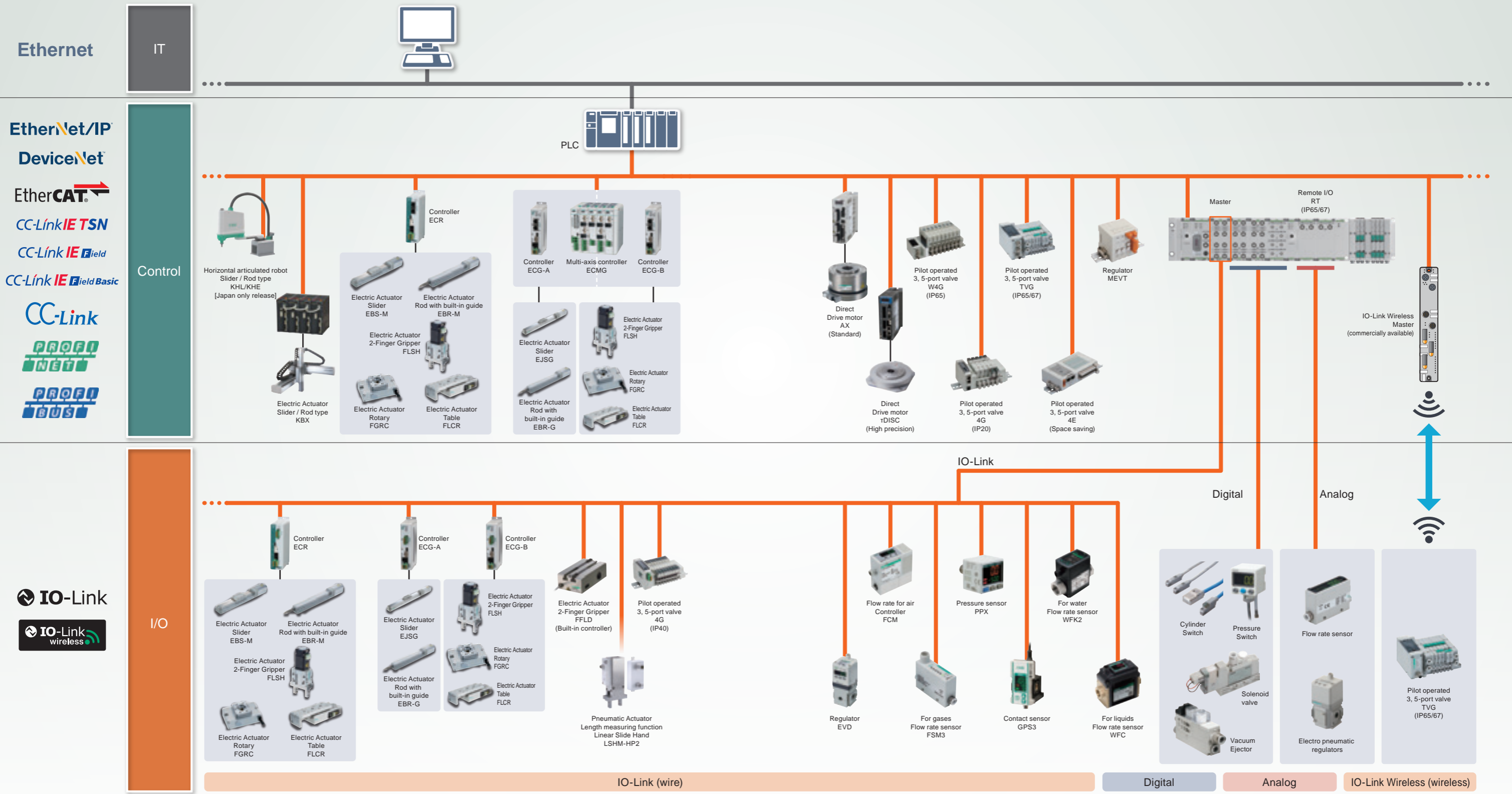
CKD Corporation

# An extensive lineup of CKD network components

With the globalization of production and the decrease in the working population, components are also required to support various networks. CKD offers a lineup of products compatible with various industrial networks at production sites and supports high customer productivity through components which allow effective collaboration between people and machines.

## System configuration

<b>AIR HAND</b> Pneumatic pressure Actuator	<b>ELECTRIC MOTOR</b> Electric motion components	<b>DIRECTIONAL CONTROL VALVES</b> Directional control valve	<b>SENSOR CONTROLLER</b> Sensor/ Controller	<b>RJ45</b> Supported communication port RJ45	<b>M12</b> Supported communication port M12
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# List of supported communications by product

Product Category	Product	Product	Compatible controllers				EtherNet/IP	DeviceNet	EtherCAT	CC-Link IE TSN	CC-Link IE Field	CC-Link IE Field Basic	CC-LINK	PROFINET	PROFI-BUS DP	Ethernet	IO-Link	IO-Link Wireless	
			ECG-A	ECG-B	ECR	ECMG													
Electric motion components	SCARA Robot	<b>KHL / KHE</b>					●	●	●				●	●	●	●			
	Electric actuator Slider/Rod	<b>KBX</b>						●					●						
	Direct drive motor General purpose	<b>AXD, AX1R, AX2R, AX4R</b>					●		●				●						
	Direct drive motor High precision	<b>tDISC</b>							●				●						
	Controller	<b>ECG-A</b>					●		●				●				●		
	Controller	<b>ECG-B</b>					●		●				●				●		
	Controller	<b>ECR</b>							●				●				●		
	Multi-axis controller	<b>ECMG</b>					●		●				●						
	Electric actuator Slider	<b>EJSG</b>	●			●	●		●				●					●	
	Electric actuator Slider	<b>EBS-G</b>	●			●	●		●				●					●	
	Electric actuator Slider	<b>EBS-M</b>			●				●				●					●	
	Electric actuator Rod with built-in guide	<b>EBR-G</b>	●			●	●		●				●					●	
	Electric actuator Rod with built-in guide	<b>EBR-M</b>			●				●				●					●	
	Electric Actuator 2-Finger Gripper	<b>FLSH</b>		●	●	●	●		●				●					●	
	Electric actuator Table	<b>FLCR</b>		●	●	●	●		●				●					●	
	Electric actuator Rotary	<b>FGRC</b>		●	●	●	●		●				●					●	
	Electric Actuator 2-Finger Gripper	<b>FFLD</b>																●	
	Electric actuator Rod type	<b>GSSD2</b>	●			●	●		●				●					●	
	Electric actuator Stopper	<b>GSTK</b>	●			●	●		●				●					●	
	Electric actuator Guided	<b>GSTG</b>	●			●	●		●				●					●	
Electric actuator Guided	<b>GSTS</b>	●			●	●		●				●					●		
Electric actuator Guided	<b>GSTL</b>	●			●	●		●				●					●		
Electric actuator Guided	<b>GCKW</b>	●			●	●		●				●					●		
Pneumatic Actuator	Linear Slide Hand with Length Measuring Function	<b>LSHM-HP2</b>																●	
Directional control valve	Pilot operated 3, 5-port valve	<b>TVG</b>					●	●	●	●	●	●	●	●				●	●
	Pilot operated 3, 5-port valve	<b>4G</b>					●	●	●	●	●	●	●	●	●			●	
	3, 5-port pilot operated valve, plug-in block manifold	<b>W4G</b>					●	●	●	●	●	●	●	●				●	
	3, 5-port pilot operated valve, PLC-compatible block manifold	<b>MN3E / MN4E</b>					●	●	●				●					●	
Sensors / Controllers	Remote I/O	<b>RT</b>					●		●				●					●	
	Compact flow rate controller RAPIFLOW®	<b>FCM</b>																●	
	Electro-pneumatic regulator	<b>EVD</b>																●	
	Thin electro-pneumatic regulator	<b>MEVT</b>						●					●					●	
	Compact flow rate sensor RAPIFLOW®	<b>FSM3</b>																●	
	Digital pressure sensor	<b>PPX</b>																●	
	Digital gap switch	<b>GPS3</b>																●	
	Karman vortex flow rate sensor for water FLUEREX	<b>WFK2</b>																●	
	Capacitance electromagnetic flow sensor	<b>WFC</b>																●	

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 PROFINET, PROFIBUS and IO-Link are registered trademarks of PROFIBUS User Organization.

**ELECTRIC MOTOR** **Electric motion components Multi-axis controller**  
**ECMG** **RJ45**

**Specifications**

- Supported actuator: EJSG, EBS/EBR-G, FLSH/FLCR/FGRC-G, GSSD2, GSTK, GSTG, GSTS, GSTL, GCKW
- Max. operating axes: 16
- Power supply voltage: 24 VDC ±10%

**Features**

- Up to 16 axes of actuators can be connected. 40% less space required for installation than conventional models.
- Significantly improved basic performance of the actuator, up to 5 times higher payload per speed and up to 2 times higher maximum speed compared to conventional models
- Compatible with all 3 types of power supply methods
- The dedicated S-Tools software can be downloaded free of charge from our website



**ELECTRIC MOTOR** **Electric motion components Controller**  
**ECG-A** **RJ45**

**Specifications**

- Supported actuators: EBS/EBR-G, GSSD2, GSTK, GSTG, GSTS, GSTL (Applicable motor size: □35 to □56)
- Supported network: CC-Link, IO-Link, EtherCAT, EtherNet/IP
- Power supply voltage: 24 VDC ±10%
- Current consumption: 0.4 A or less (Control power supply) Max. 2.8 A or less (Motor power supply)
- Degree of protection: IP20

**Features**

- Contributes to inventory reduction by connecting to all sizes of all 7 models
- Automatic recognition function eliminates initial settings when connecting actuators and controllers
- Compact and capable of adjacent installation, only 38% of the installation space of conventional models. Greater space saving
- The dedicated S-Tools software can be downloaded free of charge from our website



**ELECTRIC MOTOR** **Electric motion components Controller**  
**ECG-B** **RJ45**

**Specifications**

- Compatible actuators: FLSH/FLCR/FGRC-G, GCKW (Applicable motor size: □20 to □35)
- Supported network: CC-Link, IO-Link, EtherCAT, EtherNet/IP
- Power supply voltage: 24 VDC ±10%
- Current consumption: 0.4 A or less (Control power supply) Max. 2.8 A or less (Motor power supply)
- Degree of protection: IP20

**Features**

- Contributes to inventory reduction by connecting to all sizes of all 4 models
- Compact and capable of adjacent installation, only 41% of the installation space of conventional models. Greater space savings.
- The dedicated S-Tools software can be downloaded free of charge from our website



**ELECTRIC MOTOR** **SCARA Robot**  
**KHL / KHE**

**Specifications**

- Arm length: 300 to 700 mm
- Max. payload: 10 kg

**Features**

- Flexible movement to match workpieces, compatible with multiple-model production
- High speed operation, shortened tact time and space saving
- The dedicated software enables operation simulation in advance.
- Can be connected to various image processing systems



**ELECTRIC MOTOR** **Direct drive motor General purpose**  
**AX1R / AX2R / AX4R / AXD** **ABSODEX** **RJ45**

**Specifications**

- Max. torque: 6 to 1000 N·m
- Indexing accuracy: ±15 to 30 sec
- Repeat rate: ±5 sec
- Max. rotation speed: 30 to 300 rpm

**Features**

- Index table is available without the need for a deceleration mechanism and bearing parts
- Batteryless absolute position detector eliminates the need for "Origin return"
- Flexible support for equipment and line specification changes due to the ability to change operations
- AX Tools, a configuration tool (free download) that anyone can use right away.



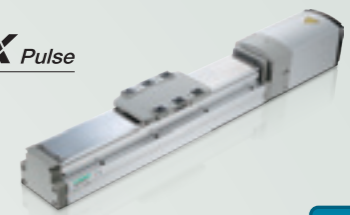
**ELECTRIC MOTOR** **Electric actuator Slider**  
**EJSG** **ROBODEX Pulse** **RJ45**

**Specifications**

- Max. payload (horizontal): 80 kg
- Max. payload (vertical): 43.3 kg
- Repeatability: ±0.01 mm
- Degree of protection: IP50 (dust-proof specs.)

**Features**

- Lineup includes dust, low dust specifications, rechargeable battery manufacturing, and food manufacturing processes
- Batteryless absolute encoder reduces equipment downtime
- Realizes a compact and rigid body with built-in outer rail guide
- Easy maintenance with grease supply port as standard equipment



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

**ELECTRIC MOTOR** **Electric actuator Slider**  
**EBS-G** **ROBODEX Pulse** **RJ45**

**Specifications**

- Max. payload (horizontal): 80 kg
- Max. speed: 1100 mm/s
- Repeatability: ±0.01 mm

**Features**

- Batteryless absolute encoder reduces equipment downtime
- Realizes a compact and rigid body with built-in outer rail guide
- Easy maintenance with grease supply port as standard



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

**ELECTRIC MOTOR** **Electric actuator Rod with built-in guide**  
**EBR-G** **ROBODEX Pulse** **RJ45**

**Specifications**

- Max. payload (horizontal): 80 kg
- Max. speed: 900 mm/s
- Repeatability: ±0.01 mm

**Features**

- Batteryless absolute encoder reduces equipment downtime
- Built-in guides reduce the need for additional guides
- Mounting holes are provided on the top and bottom surfaces of the product to enable installation without disassembly



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

**ELECTRIC MOTOR** **Electric Actuator 2-Finger Gripper**  
**FLSH** **ROBODEX Pulse** **RJ45**

**Specifications**

- Max. gripping force: 65 N (one side)
- Max. stroke: 14 mm (one side 7 mm)
- Max. gripping speed: 15 mm/s (one side)

**Features**

- Equivalent capacity and dimensions as pneumatic components
- Includes self-lock mechanism and manual operation
- Compatible with Air Hand LSH



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

**ELECTRIC MOTOR** **Electric actuator Table**  
**FLCR** **ROBODEX Pulse** **RJ45**

**Specifications**

- Max. payload (horizontal): 11 kg
- Max. speed: 300 mm/s
- Maximum pressing force: 210 N

**Features**

- Equivalent capacity and dimensions as pneumatic components
- High rigidity with linear guide
- Dimensional compatibility with the Air Cylinder LCR



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

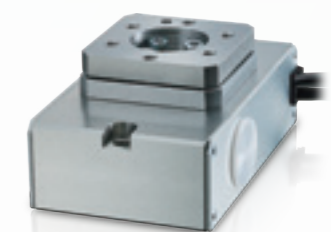
**ELECTRIC MOTOR** **Electric actuator Rotary**  
**FGRC** **ROBODEX Pulse** **RJ45**

**Specifications**

- Max. torque: 4.66 N·m
- Allowable moment of inertia: 0.0297 kg·m<sup>2</sup>
- Max. angular speed: 200 deg/s

**Features**

- Equivalent capacity and dimensions as pneumatic components
- Includes self-lock mechanism and manual operation
- Center of rotation and center of actuator body are coaxial



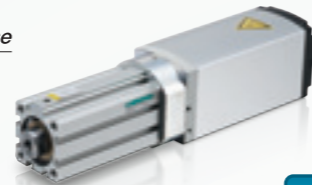
- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

**ELECTRIC MOTOR** **Electric actuator Rod type**  
**GSSD2**

**ROBODEX Pulse**

- Specifications**
- Max. payload (horizontal): 14.8 kg
  - Max. speed: 500 mm/s
  - Maximum pressing force: 590 N

- Features**
- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
  - By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

**RJ45**

**ELECTRIC MOTOR** **Electric actuator Stopper**  
**GSTK**

**ROBODEX Pulse**

- Specifications**
- Max. thrust: 192 N
  - Max. speed: 500 mm/s
  - Maximum pressing force: 590 N

- Features**
- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
  - By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

**RJ45**

**ELECTRIC MOTOR** **Electric actuator Guided**  
**GSTG**

**ROBODEX Pulse**

- Specifications**
- Max. payload (horizontal): 14.8 kg
  - Max. speed: 500 mm/s
  - Maximum pressing force: 590 N
  - Stroke: 20 to 100 mm

- Features**
- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
  - By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

**RJ45**

**ELECTRIC MOTOR** **Electric actuator Guided**  
**GSTS**

**ROBODEX Pulse**

- Specifications**
- Max. payload (horizontal): 14.8 kg
  - Max. speed: 500 mm/s
  - Maximum pressing force: 590 N
  - Stroke: 25 to 50 mm

- Features**
- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
  - By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

**RJ45**

**ELECTRIC MOTOR** **Electric actuator Guided**  
**GSTL**

**ROBODEX Pulse**

- Specifications**
- Max. payload (horizontal): 14.8 kg
  - Max. speed: 500 mm/s
  - Maximum pressing force: 590 N
  - Stroke: 50 to 200 mm

- Features**
- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
  - By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

**RJ45**

**ELECTRIC MOTOR** **Electric actuator Guided**  
**GCKW**

**ROBODEX Pulse**

- Specifications**
- Max. gripping force (one side): 29 N
  - Max. stroke: 6 mm (one side 3 mm)
  - Max. gripping speed: 15 mm/s (one side)

- Features**
- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
  - By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

**RJ45**

**SENSOR CONTROLLER** **Remote I/O**  
**RT**

**M12**



- Specifications**
- Network: EtherNet/IP, EtherCAT, IO-Link (as IO-Link master)
  - Unit type: Digital input/Digital output Analog input, analog output IO-Link master
  - Power supply voltage: 24 VDC ±10%
  - Degree of protection: IP65/67

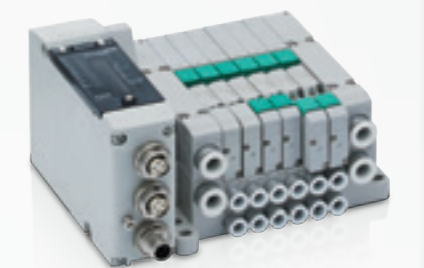
- Features**
- Since it is IP65/67, it can be installed as is without a control panel. Ideal for distributed I/O installation away from the PLC
  - Device unit input/output points 512bytes (4096 points) Can be connected to a max. of 18 units \*Remote I/O that can be created by combining required units
  - Max. 0.5 A output per port. Power supply units can be added at any position, supporting an increase in the number of connected sensors
  - IO-Link master: 8 ports/unit. Contributes to equipment space saving

**DIRECTIONAL CONTROL VALVES** **Pilot operated 3, 5-port valve**  
**TVG**

**M12**

- Specifications**
- Applicable cylinder bore size: up to ø80
  - Working pressure range: 0.2 MPa to 0.7 MPa
  - Degree of protection: IP65/67

- Features**
- Durability count of 120 million cycles, the longest in the soft spool industry
  - Contributes to carbon neutrality by reducing air leakage
  - Easy-to-reassemble plug-in structure
  - Valve equipped with ON count function

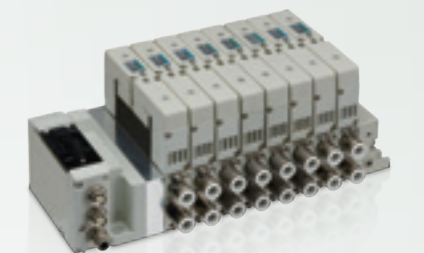


**DIRECTIONAL CONTROL VALVES** **3, 5-port pilot operated valve, plug-in block manifold**  
**W4G**

**M12**

- Specifications**
- Applicable cylinder bore size: ø20 to ø125
  - Working pressure range: 0.2 MPa to 0.7 MPa
  - Degree of protection: IP65

- Features**
- The adopted plug-in method enables easy replacement of valves
  - Service life is extended by improvements in structure of sliding section, packing, etc.
  - Durability count: 60 million cycles (at 0.5 MPa with clean air)

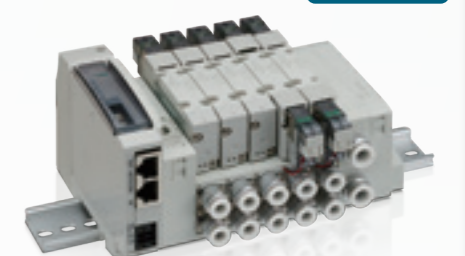


**DIRECTIONAL CONTROL VALVES** **Pilot operated 3, 5-port valve**  
**4G**

**RJ45**

- Specifications**
- Applicable cylinder bore size: ø20 to ø100
  - Working pressure range: 0.2 MPa to 0.7 MPa
  - Degree of protection: IP20

- Features**
- The superb sliding mechanism of the main valve realizes low friction and long service life<sup>\*1</sup>
  - Response time: 12 ms±2 ms (4G1 type)
  - Durability count 100 million cycles (single solenoid)<sup>\*1</sup>
- \*1. 4GA/BR, M4GA/BR, MN4GA/BR only



**DIRECTIONAL CONTROL VALVES** **3, 5-port pilot operated valve, PLC-compatible block manifold**  
**MN3E / MN4E**

**RJ45**

- Specifications**
- Applicable cylinder bore size: ø.5 to ø40
  - Working pressure range: 0.2 MPa to 0.7 MPa

- Features**
- Space saving design with valve width of 7 mm and 10 mm
  - Response 12 ms (two 3-port valves integrated) Ideal for air operated valve operation
  - Supports various fittings (ø8, ø3, ø4) to contribute to equipment space saving
  - Equipped with valve ON count function.



**DIRECTIONAL CONTROL VALVES**  
**Pilot operated 3, 5-port valve**  
**TVG**

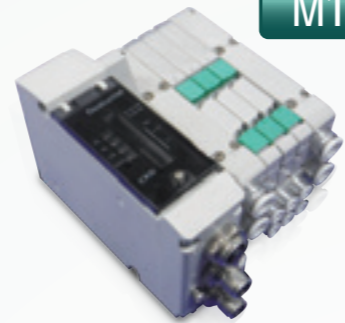
M12

**Specifications**

- Applicable cylinder bore size: up to ø80
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65/67

**Features**

- Durability count of 120 million cycles, the longest in the soft spool industry
- Contributes to carbon neutrality by reducing air leakage
- Easy-to-reassemble plug-in structure



**DIRECTIONAL CONTROL VALVES**  
**3, 5-port pilot operated valve, plug-in block manifold**  
**W4G**

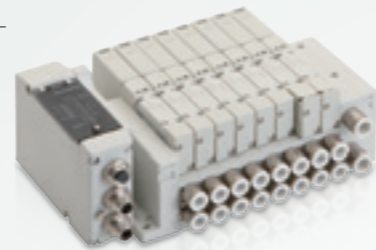
M12

**Specifications**

- Applicable cylinder bore size: ø0 to ø125
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65

**Features**

- The adopted plug-in method enables easy replacement of valves
- Service life is extended by improvements in structure of sliding section, packing, etc.
- Durability count: 60 million cycles (at 0.5 MPa with clean air)



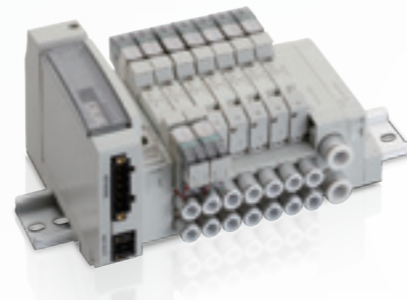
**DIRECTIONAL CONTROL VALVES**  
**Pilot operated 3, 5-port valve**  
**4G**

**Specifications**

- Applicable cylinder bore size: ø20 to ø100
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP20

**Features**

- The superb sliding mechanism of the main valve realizes low friction and long service life<sup>\*1</sup>
- Response time: 12 ms ± 2 ms (4G1 type)
- Durability count 100 million cycles (single solenoid)<sup>\*1</sup>



<sup>\*1</sup> 4GA/BR, M4GA/BR, MN4GA/BR only

**DIRECTIONAL CONTROL VALVES**  
**3, 5-port pilot operated valve, PLC-compatible block manifold**  
**MN3E / MN4E**

**Specifications**

- Applicable cylinder bore size: ø.5 to ø40
- Working pressure range: 0.2 MPa to 0.7 MPa

**Features**

- Space saving design with valve width of 7 mm and 10 mm
- Response 12 ms (two 3-port valves integrated) Ideal for air operated valve operation
- Supports various fittings (ø1.8, ø3, ø4) to contribute to equipment space saving



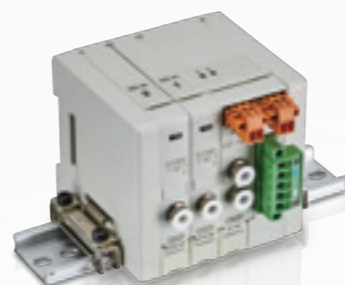
**SENSOR CONTROLLER**  
**Thin electro-pneumatic regulator**  
**MEVT**

**Specifications**

- Max. flow rate: MEVT100 2 L/min, MEVT500 6 L/min
- Pressure control range: MEVT100 0 to 100 kPa, MEVT500: 0 to 0.5 MPa
- Linearity: ±0.5% F.S. or less

**Features**

- Thin electro-pneumatic regulator, manifold. Width per station: 14 mm, 80 g
- High repeatability of 0.3%F.S., high response time of 0.1 sec (without load)
- DIN rail mountable. Select from bottom mounting and back mounting



**ELECTRIC MOTOR**  
**SCARA Robot**  
**KHL / KHE**

**Specifications**

- Arm length: 300 to 700 mm
- Max. payload: 10 kg

**Features**

- Flexible movement to match workpieces, compatible with multiple-model production
- High speed operation, shortened tact time and space saving
- The dedicated software enables operation simulation in advance.
- Can be connected to various image processing systems



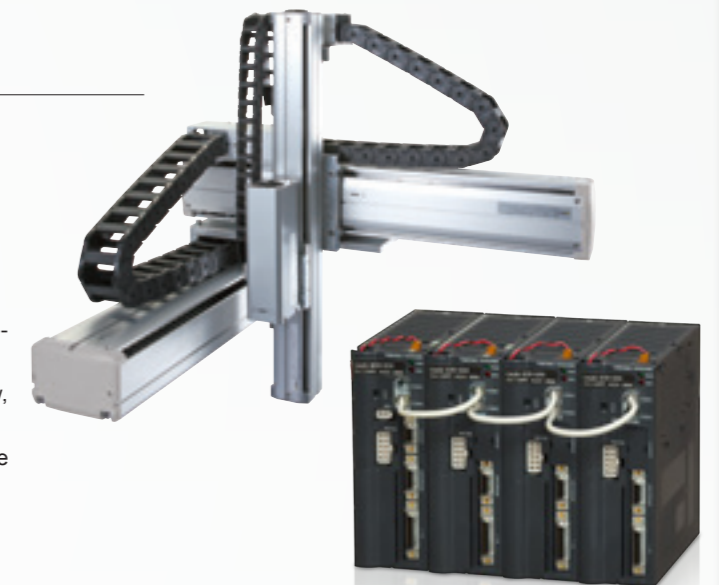
**ELECTRIC MOTOR**  
**Electric actuator Slider/Rod**  
**KBX**

**Specifications**

- Max. payload (horizontal): 250 kg
- Max. stroke: 4450 mm
- Max. operating axes: 4 axes

**Features**

- Equipped with 50 to 750 W servo motors, enabling multi-axis configuration from single axis to a maximum of 4 axes
- Wide range of variations including slider type (ball screw, belt), rod type, and R-axis type
- Can be used as a multi-axis controller by connecting the single-axis controller with the link cable.



**ELECTRIC MOTOR** **Electric motion components Multi-axis controller** **RJ45**

## ECMG

**Specifications**

- Supported actuator: EJSG, EBS/EBR-G, FLSH/FLCR/FGRC-G, GSSD2, GSTK, GSTG, GSTS, GSTL, GCKW
- Max. operating axes: 16 axes
- Power supply voltage: 24 VDC ±10%

**Features**

- Up to 16 axes of actuator can be connected. 40% installation space compared with conventional models
- Basic actuator performance is greatly improved. Up to 5 times higher payload per speed and up to 2 times higher maximum speed than conventional models
- Compatible with all 3 types of power supply methods
- The dedicated S-Tools software can be downloaded free of charge from our website



**ELECTRIC MOTOR** **Electric motion components Controller** **RJ45**

## ECG-A

**Specifications**

- Supported actuator: EBS/EBR-G, GSSD2, GSTK, GSTG, GSTS, GSTL (Applicable motor size: □35 to □56)
- Supported network: CC-Link, IO-Link, EtherCAT, EtherNet/IP
- Power supply voltage: 24 VDC ±10%
- Current consumption: 0.4 A or less (Control power supply) Max. 2.8 A or less (power supply)
- Degree of protection: IP20

**Features**

- Contributes to inventory reduction by connecting to all sizes of all 7 models
- With the automatic recognition function, there is no need for initial settings when connecting the actuator and controller
- Compact and capable of adjacent installation, only 38% of the installation space of conventional models. Greater space savings.
- The dedicated S-Tools software can be downloaded free of charge from our website



**ELECTRIC MOTOR** **Electric motion components Controller** **RJ45**

## ECG-B

**Specifications**

- Compatible actuator: FLSH/FLCR/FGRC-G, GCKW (Applicable motor size: □20 to □35)
- Supported network: CC-Link, IO-Link, EtherCAT, EtherNet/IP
- Power supply voltage: 24 VDC ±10%
- Current consumption: 0.4 A or less (Control power supply) Max. 2.8 A or less (power supply)
- Degree of protection: IP20

**Features**

- Contributes to stock reduction by connecting to all sizes of all 4 models
- Compact and capable of adjacent installation, only 41% of the installation space of conventional models. Greater space savings.
- The dedicated S-Tools software can be downloaded free of charge from our website



**ELECTRIC MOTOR** **Electric motion components Controller** **RJ45**

## ECR

**Specifications**

- Compatible actuator: EBS/EBR-M, FLSH, FLCR, FGRC (Applicable motor size: □20 to □56)
- Supported network: CC-Link, EtherCAT, IO-Link
- Power supply voltage: 24 VDC ±10% or 48 VDC ±10%
- Current consumption: 0.6 A or less (Control power supply) Max. 6.1 A or less (power supply)
- Degree of protection: IP20

**Features**

- Contributes to inventory reduction by connecting to all sizes of all 5 models
- With the automatic recognition function, there is no need for initial settings when connecting the actuator and controller
- Compact and capable of adjacent installation, only 44% of the installation space of conventional models. Realizes space savings.
- The dedicated S-Tools software can be downloaded free of charge from our website



**ELECTRIC MOTOR** **Direct drive motor General purpose** **RJ45**

## AX1R / AX2R / AX4R / AXD

**ABSODEX**

**Specifications**

- Max. torque: 6 to 1000 N·m
- Indexing accuracy: ±15 to 30 sec
- Repeat rate: ±5 sec
- Max. rotation speed: 30 to 300 rpm

**Features**

- Index table is available without the need for deceleration mechanism and bearing parts
- Origin return is not required thanks to the battery-less absolute position detector
- Operation can be changed flexibly to change specifications of facilities and lines
- Anyone can use it right away with the AX Tools configuration tool



**ELECTRIC MOTOR** **Direct drive motor High precision** **RJ45**

## tDISC

**NIKKI DENSO**

**Specifications**

- Max. torque: 7.5 to 3700 N·m
- Absolute positioning accuracy: ±10 to 15 arcsec (With correction option)
- Rated rotation speed: 1 to 15 rps

**Features**

- Compact design with high torque density per motor volume
- Stable operation even with large inertias
- Achieves high-speed and high-precision positioning
- Ideal for converting AC servo motor + deceleration mechanism into direct drive



**ELECTRIC MOTOR** **Electric actuator Slider** **RJ45**

## EJSG

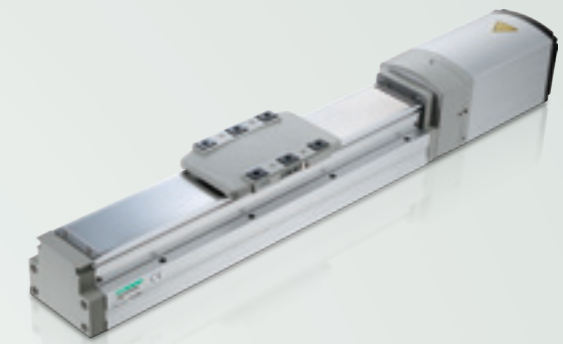
**ROBODEX Pulse**

**Specifications**

- Max. payload (horizontal): 80 kg
- Max. payload (vertical): 43.3 kg
- Repeatability: ±0.01 mm
- Degree of protection: IP50 (dust-proof specifications)

**Features**

- Lineup includes dust, low dust specifications, rechargeable battery manufacturing, and food manufacturing processes
- Batteryless absolute encoder reduces equipment downtime
- Compact and highly rigid body integrating an outer rail guide
- Easy maintenance with the standard equipment of grease lubrication port



**Compatible Controller**

- ECMG
- ECG-A
- ECG-B
- ECR

**ELECTRIC MOTOR** **Electric actuator Slider** **RJ45**

## EBS-M / EBS-G

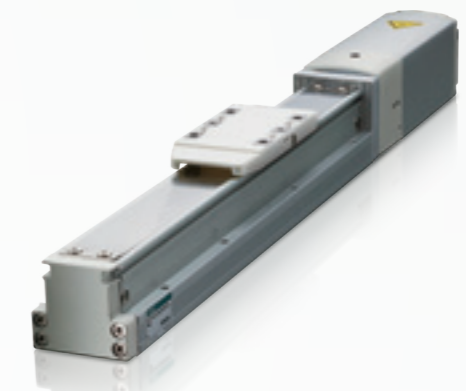
**ROBODEX Pulse**

**Specifications**

- Max. payload (horizontal): 80 kg
- Max. speed: 1100 mm/s
- Repeatability: ±0.01 mm

**Features**

- Batteryless absolute encoder reduces equipment downtime
- Compact and highly rigid body is realized by adopting an outer rail guide
- Easy maintenance with the standard equipment of grease lubrication port



**Compatible Controller**

- ECMG
- ECG-A
- ECG-B
- ECR

**ELECTRIC MOTOR** **Electric actuator Rod with built-in guide** **RJ45**

## EBR-M / EBR-G

**ROBODEX Pulse**

**Specifications**

- Max. payload (horizontal): 80 kg
- Max. speed: 900 mm/s
- Repeatability: ±0.01 mm

**Features**

- Batteryless absolute encoder reduces equipment downtime
- Built-in guides reduce the need for additional guides
- Mounting holes are provided on the top and bottom surfaces of the product to enable installation without disassembly



**Compatible Controller**

- ECMG
- ECG-A
- ECG-B
- ECR



## Electric Actuator 2-Finger Gripper

### FLSH

**ROBODEX** Pulse

Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

#### Specifications

- Max. gripping force: 65 N (one side)
- Max. stroke: 14 mm (one side 7 mm)
- Max. gripping speed: 15 mm/s (one side)

#### Features

- Equivalent capacity and dimensions as pneumatic components
- Includes self-lock mechanism and manual operation
- Compatible with Air Hand LSH



RJ45



## Electric actuator Table

### FLCR

**ROBODEX** Pulse

Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

#### Specifications

- Max. payload (horizontal): 11 kg
- Max. speed: 300 mm/s
- Maximum pressing force: 210 N

#### Features

- Equivalent capacity and dimensions as pneumatic components
- High rigidity with linear guide
- Dimensional compatibility with the Air Cylinder LCR



RJ45



## Electric actuator Rotary

### FGRC

**ROBODEX** Pulse

Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

#### Specifications

- Max. torque: 4.66 N·m
- Allowable moment of inertia: 0.0297 kg·m<sup>2</sup>
- Max. angular speed: 200 deg/s

#### Features

- Equivalent capacity and dimensions as pneumatic components
- Includes self-lock mechanism and manual operation
- Center of rotation and center of actuator body are coaxial



RJ45



## SCARA Robot

### KHL / KHE

#### Specifications

- Arm length: 300 to 700 mm
- Max. payload: 10 kg

#### Features

- Flexible movement to match workpieces, compatible with multiple-model production
- High speed operation, shortened tact time and space saving
- The dedicated software enables operation simulation in advance.
- Can be connected to various image processing systems



## Electric actuator Rod type

### GSSD2

**ROBODEX** Pulse

Compatible Controller

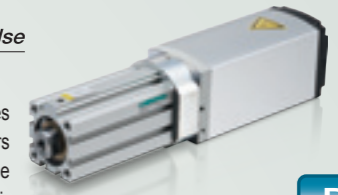
- ECMG
- ECG-A
- ECG-B
- ECR

#### Specifications

- Max. payload (horizontal): 14.8 kg
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N

#### Features

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



RJ45



## Electric actuator Stopper

### GSTK

**ROBODEX** Pulse

Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

#### Specifications

- Max. thrust: 192 N
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N

#### Features

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



RJ45



## Electric actuator Guided

### GSTG

**ROBODEX** Pulse

Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

#### Specifications

- Max. payload (horizontal): 14.8 kg
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N
- Stroke: 20 to 100 mm

#### Features

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



RJ45



## Electric actuator Guided

### GSTS

**ROBODEX** Pulse

Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

#### Specifications

- Max. payload (horizontal): 14.8 kg
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N
- Stroke: 25 to 50 mm

#### Features

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



RJ45



## Electric actuator Guided

### GSTL

**ROBODEX** Pulse

Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

#### Specifications

- Max. payload (horizontal): 14.8 kg
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N
- Stroke: 50 to 200 mm

#### Features

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



RJ45



## Electric actuator Guided

### GCKW

**ROBODEX** Pulse

Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

#### Specifications

- Max. gripping force (one side): 29 N
- Max. stroke: 6 mm (one side 3 mm)
- Max. gripping speed: 15 mm/s (one side)

#### Features

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.

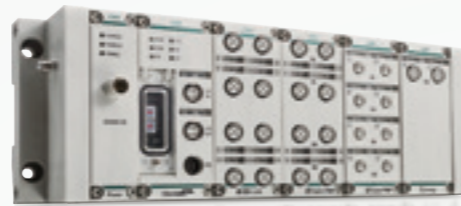


RJ45



**SENSOR CONTROLLER**  
**Remote I/O RT**

M12



**Specifications**

- Network: EtherNet/IP, EtherCAT, IO-Link (as IO-Link master)
- Unit type: Digital input/Digital output Analog input/Analog output IO-Link master
- Power supply voltage: 24 VDC ±10%
- Degree of protection: IP65/67

**Features**

- Since it is IP65/67, it can be installed as without a control panel. Ideal for distributed I/O installation away from the PLC
- Device unit input/output points 512bytes (4096 points) Can be connected to a max. of 18 units  
\*Remote I/O that can be created by combining required units
- Max. 0.5 A output per port. Power supply units can be added at any position, supporting an increase in the number of connected sensors
- IO-Link master: 8ports/unit. Contributes to equipment space saving

**DIRECTIONAL CONTROL VALVES**  
**Pilot operated 3, 5-port valve TVG**

M12



**Specifications**

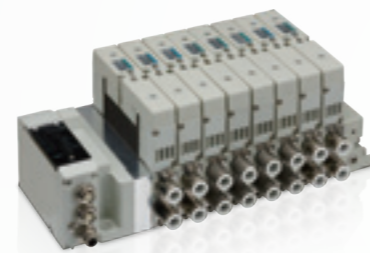
- Cylinder bore size: up to ø80
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65/67

**Features**

- Durability count 120 million cycles  
The longest in the soft spool industry
- Contributes to carbon neutrality by reducing air leakage
- Easy-to-reassemble plug-in structure
- Valve equipped with ON count function

**DIRECTIONAL CONTROL VALVES**  
**3, 5-port pilot operated valve, plug-in block manifold W4G**

M12



**Specifications**

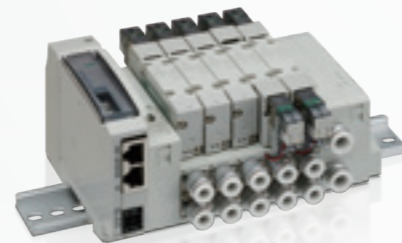
- Applicable cylinder bore size: ø20 to ø125
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65

**Features**

- The adopted plug-in method enables easy replacement of valves
- Service life is extended by improvements in structure of sliding section, packing, etc.
- Durability count: 60 million cycles (at 0.5 MPa with clean air)

**DIRECTIONAL CONTROL VALVES**  
**Pilot operated 3, 5-port valve 4G**

RJ45



**Specifications**

- Applicable cylinder bore size: ø20 to ø100
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP20

**Features**

- The superb sliding mechanism of the main valve realizes low friction and long service life<sup>\*1</sup>
- Response time: 12 ms± 2 ms (4G1 type)
- Durability count 100 million cycles (single solenoid)<sup>\*1</sup>

\*1. 4GA/BR, M4GA/BR, MN4GA/BR only

**DIRECTIONAL CONTROL VALVES**  
**3, 5-port pilot operated valve, PLC-compatible block manifold MN3E / MN4E**

RJ45



**Specifications**

- Cylinder bore size: ø2.5 to ø40
- Working pressure range: 0.2 MPa to 0.7 MPa

**Features**

- Space saving design with valve width of 7 mm and 10 mm
- Response 12 ms (two 3-port valves integrated) Ideal for air operated valve operation
- Supports various fittings (ø1.8, ø3, ø4) to contribute to equipment space saving

**DIRECTIONAL CONTROL VALVES**  
**Pilot operated 3, 5-port valve TVG**

M12



**Specifications**

- Cylinder bore size: up to ø80
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65/67
- CC-Link IE TSN communication specifications  
Certification Class: ClassB  
Communication speed: 1 Gbps / 100 Mbps

**Features**

- Main durability of 120 million cycles, the longest in the soft spool industry
- Contributes to carbon neutrality by reducing air leakage
- Easy-to-reassemble plug-in structure
- Valve equipped with ON count function

**DIRECTIONAL CONTROL VALVES**  
**3, 5-port pilot operated valve, plug-in block manifold W4G**

M12



**Specifications**

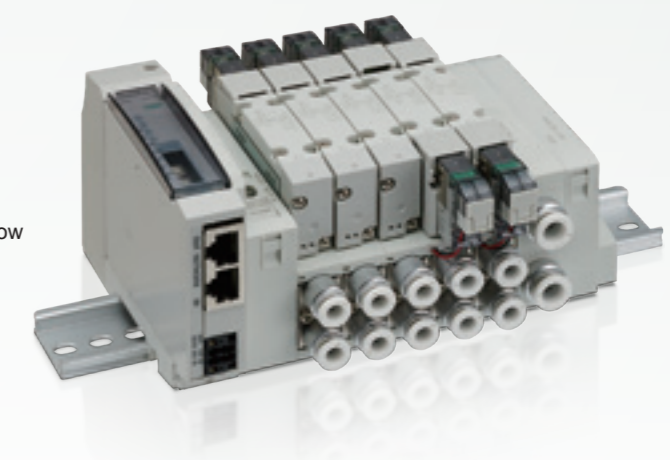
- Applicable cylinder bore size: ø20 to ø125
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65

**Features**

- The adopted plug-in method enables easy replacement of valves
- Service life is extended by improvements in structure of sliding section, packing, etc.
- Durability count: 60 million cycles (at 0.5 MPa with clean air)
- Valve equipped with ON count function

**DIRECTIONAL CONTROL VALVES**  
**Pilot operated 3, 5-port valve 4G**

RJ45



**Specifications**

- Applicable cylinder bore size: ø20 to ø100
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP20

**Features**

- The superb sliding mechanism of the main valve realizes low friction and long service life<sup>\*1</sup>
- Response time: 12 ms± 2 ms (4G1 type)
- Durability count 100 million cycles (single solenoid)<sup>\*1</sup>
- Valve equipped with ON count function

\*1. 4GA/BR, M4GA/BR, MN4GA/BR only



## Pilot operated 3, 5-port valve TVG

M12

### Specifications

- Cylinder bore size: up to  $\varnothing 80$
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65/67

### Features

- Durability count 120 million cycles, the longest in the soft spool industry
- Contributes to carbon neutrality by reducing air leakage
- Easy-to-reassemble plug-in structure
- Valve equipped with ON count function



## 3, 5-port pilot operated valve, plug-in block manifold W4G

M12

### Specifications

- Applicable cylinder bore size:  $\varnothing 20$  to  $\varnothing 125$
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65

### Features

- The adopted plug-in method enables easy replacement of valves
- Service life is extended by improvements in structure of sliding section, packing, etc.
- Durability count: 60 million cycles (at 0.5 MPa with clean air)
- Valve equipped with ON count function



## Pilot operated 3, 5-port valve 4G

RJ45

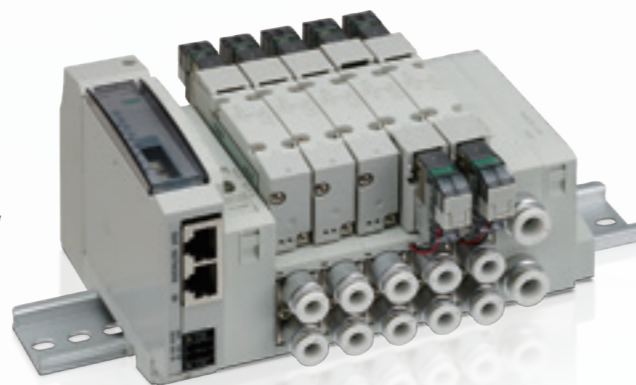
### Specifications

- Applicable cylinder bore size:  $\varnothing 20$  to  $\varnothing 100$
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP20

### Features

- The superb sliding mechanism of the main valve realizes low friction and long service life<sup>\*1</sup>
- Response time: 12 ms $\pm$ 2 ms (4G1 type)
- Durability count 100 million cycles (single solenoid)<sup>\*1</sup>
- Valve equipped with ON count function

\*1. 4GA/BR, M4GA/BR, MN4GA/BR only



## Pilot operated 3, 5-port valve TVG

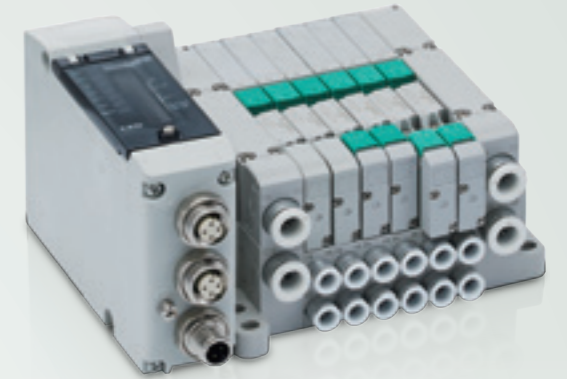
M12

### Specifications

- Cylinder bore size: up to  $\varnothing 80$
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65/67

### Features

- Durability count 120 million cycles, the longest in the soft spool industry
- Contributes to carbon neutrality by reducing air leakage
- Easy-to-reassemble plug-in structure
- Valve equipped with ON count function



## 3, 5-port pilot operated valve, plug-in block manifold W4G

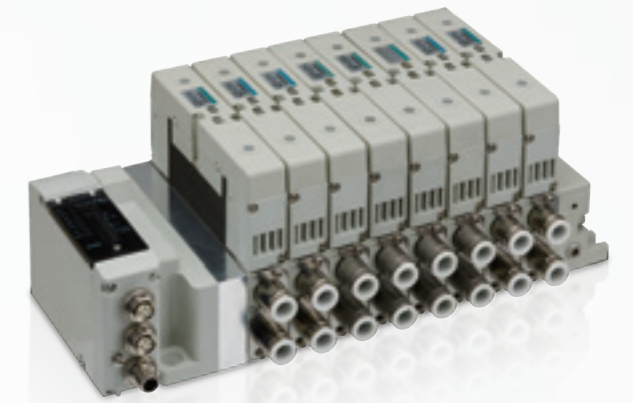
M12

### Specifications

- Applicable cylinder bore size:  $\varnothing 0$  to  $\varnothing 125$
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65

### Features

- The adopted plug-in method enables easy replacement of valves
- Service life is extended by improvements in structure of sliding section, packing, etc.
- Durability count: 60 million cycles (at 0.5 MPa with clean air)
- Valve equipped with ON count function



## Pilot operated 3, 5-port valve 4G

RJ45

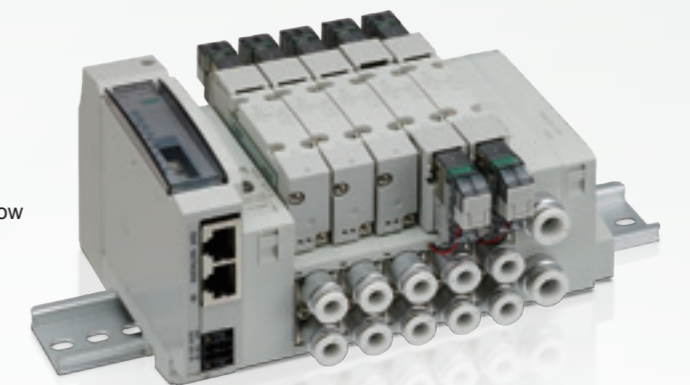
### Specifications

- Applicable cylinder bore size:  $\varnothing 20$  to  $\varnothing 100$
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP20

### Features

- The superb sliding mechanism of the main valve realizes low friction and long service life<sup>\*1</sup>
- Response time: 12 ms $\pm$ 2 ms (4G1 type)
- Durability count 100 million cycles (single solenoid)<sup>\*1</sup>
- Valve equipped with ON count function

\*1. 4GA/BR, M4GA/BR, MN4GA/BR only



**ELECTRIC MOTOR** **Electric motion components Multi-axis controller**  
**ECMG**

**Specifications**

- Supported actuators: EJSG, EBS/EBR-G, FLSH/FLCR/FGRC-G, GSSD2, GSTK, GSTG, GSTS, GSTL, GCKW
- Max. operating axes: 16 axes
- Power supply voltage 24 VDC ±10%

**Features**

- Up to 16 axes of actuator can be connected. 40% installation space compared with conventional models
- Basic actuator performance is greatly improved. Up to 5 times higher payload per speed and up to 2 times higher maximum speed than conventional models
- Compatible with all 3 types of power supply methods
- The dedicated S-Tools software can be downloaded free of charge from our website



RJ45

**ELECTRIC MOTOR** **Electric motion components Controller**  
**ECG-A**

**Specifications**

- Supported actuators: EBS/EBR-G, GSSD2, GSTK, GSTG, GSTS, GSTL (Applicable motor size: □35 to □56)
- Supported network: CC-Link, IO-Link, EtherCAT, EtherNet/IP
- Power supply voltage 24 VDC ±10%
- Current consumption □0.4 A or less (Control power supply) Max. 2.8 A or less (power supply)
- Degree of protection □IP20

**Features**

- Contributes to inventory reduction by connecting to all sizes of all 7 models
- With the automatic recognition function, there is no need for initial settings when connecting the actuator and controller
- Compact and capable of adjacent installation, only 38% of the installation space of conventional models. Greater space savings.
- The dedicated S-Tools software can be downloaded free of charge from our website



**ELECTRIC MOTOR** **Electric motion components Controller**  
**ECG-B**

**Specifications**

- Compatible actuators □FLSH/FLCR/FGRC-G, GCKW (Applicable motor size: □20 to □35)
- Supported network □CC-Link, IO-Link, EtherCAT, EtherNet/IP
- Power supply voltage □24 VDC ±10%
- Current consumption □0.4 A or less (Control power supply) Max. 2.8 A or less (power supply)
- Degree of protection IP20

**Features**

- Contributes to stock reduction by connecting to all sizes of all 4 models
- Compact and capable of adjacent installation, only 41% of the installation space of conventional models. Greater space savings.
- The dedicated S-Tools software can be downloaded free of charge from our website



RJ45

**ELECTRIC MOTOR** **Electric motion components Controller**  
**ECR**

**Specifications**

- Compatible actuator: EBS/EBR-M, FLSH, FLCR, FGRC (Applicable motor size: □20 to □56)
- Supported network: CC-Link, EtherCAT, IO-Link
- Power supply voltage: 24 VDC ±10% or 48 VDC ±10%
- Current consumption: 0.6A or less (Control power supply) Max. 6.1A or less (power supply)
- Degree of protection IP20

**Features**

- Contributes to inventory reduction by connecting to all sizes of all 5 models
- With the automatic recognition function, there is no need for initial settings when connecting the actuator and controller
- Compact and capable of adjacent installation, only 44% of the installation space of conventional models. Realizes space savings.
- The dedicated S-Tools software can be downloaded free of charge from our website



RJ45

**ELECTRIC MOTOR** **Direct drive motor General purpose**  
**AX1R / AX2R / AX4R / AXD**

**Specifications**

- Max. torque: 6 to 1000 N·m
- Indexing accuracy: ±15 to 30 sec
- Repeatability: ±5 sec
- Max. rotation speed: 30 to 300 rpm

**Features**

- Index table is available without the need for a deceleration mechanism and bearing parts
- Origin return is not required thanks to the battery-less absolute position detector
- Operation can be changed flexibly to change specifications of facilities and lines
- Anyone can use it right away with the AX Tools configuration tool



RJ45

**ELECTRIC MOTOR** **Direct drive motor High precision**  
**tDISC**

**Specifications**

- Max. torque: 7.5 to 3700 N·m
- Absolute positioning accuracy: ±10 to 15 arcsec (With correction option)
- Rated rotation speed: 1 to 15 rpm

**Features**

- Compact design with high torque density per motor volume
- Stable operation even with large inertia
- Achieves high-speed and high-precision positioning
- Ideal for converting AC servo motor + deceleration mechanism into direct drive



RJ45

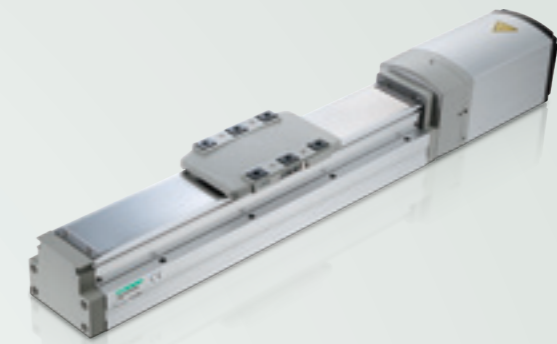
**ELECTRIC MOTOR** **Electric actuator Slider**  
**EJSG**

**Specifications**

- Max. payload (horizontal): 80 kg
- Max. payload (vertical): 43.3 kg
- Repeatability: ±0.01 mm
- Degree of protection: IP50 (dust-proof specifications)

**Features**

- Lineup includes dust, low dust specifications, rechargeable battery manufacturing, and food manufacturing processes
- Batteryless absolute encoder reduces equipment downtime
- Compact and highly rigid body integrating an outer rail guide
- Easy maintenance with the standard equipment of grease lubrication port



RJ45

Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

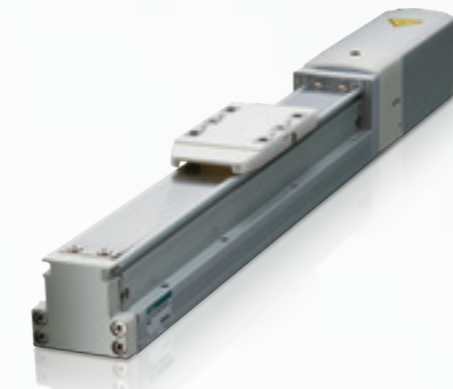
**ELECTRIC MOTOR** **Electric actuator Slider**  
**EBS-M / EBS-G**

**Specifications**

- Max. payload (horizontal): 80 kg
- Max. speed: 1100 mm/s
- Repeatability: ±0.01 mm

**Features**

- Batteryless absolute encoder reduces equipment downtime
- Compact and highly rigid body is realized by adopting an outer rail guide
- Easy maintenance with the standard equipment of grease lubrication port



RJ45

Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

**ELECTRIC MOTOR** **Electric actuator Rod with built-in guide**  
**EBR-M / EBR-G**

**Specifications**

- Max. payload (horizontal): 80 kg
- Max. speed: 900 mm/s
- Repeatability: ±0.01 mm

**Features**

- Batteryless absolute encoder reduces equipment downtime
- Built-in guides reduce the need for additional guides
- Mounting holes are provided on the top and bottom surfaces of the product to enable installation without disassembly



RJ45

Compatible Controller

- ECMG
- ECG-A
- ECG-B
- ECR

**ELECTRIC MOTOR** **SCARA Robot**  
**KHL / KHE**

**Specifications**

- Arm length: 300 to 700 mm
- Max. payload: 10 kg

**Features**

- Flexible movement to match workpieces, compatible with multiple-model production
- High speed operation, shortened tact time and space saving
- The dedicated software enables operation simulation in advance.
- Can be connected to various image processing systems



**ELECTRIC MOTOR** **Electric actuator Slider/Rod**  
**KBX**

**Specifications**

- Max. payload (horizontal): 250 kg
- Max. stroke: 4450 mm
- Max. operating axes: 4 axes

**Features**

- Equipped with 50 to 750 W servo motors, enabling multi-axis configuration from single axis to a maximum of 4 axes
- Wide range of variations including slider type (ball screw, belt), rod type, and R-axis type
- Use as a multi-axis controller by connecting the single-axis controller with the link cable



**ELECTRIC MOTOR** **Electric Actuator 2-Finger Gripper**  
**FLSH**

**Specifications**

- Max. gripping force: 65 N (one side)
- Max. stroke: 14 mm (one side 7 mm)
- Max. gripping speed: 15 mm/s (one side)

**Features**

- Equivalent capacity and dimensions as pneumatic components
- Includes self-lock mechanism and manual operation
- Compatible with Air Hand LSH



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

RJ45

**ELECTRIC MOTOR** **Electric actuator Table**  
**FLCR**

**Specifications**

- Max. payload (horizontal): 11 kg
- Max. speed: 300 mm/s
- Maximum pressing force: 210 N

**Features**

- Equivalent capacity and dimensions as pneumatic components
- High rigidity with linear guide
- Dimensional compatibility with the Air Cylinder LCR



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

RJ45

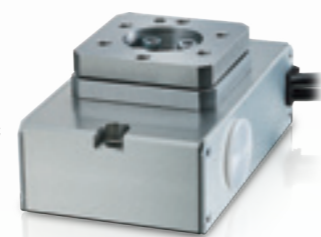
**ELECTRIC MOTOR** **Electric actuator Rotary**  
**FGRC**

**Specifications**

- Max. torque: 4.66 N·m
- Allowable moment of inertia: 0.0297 kg·m<sup>2</sup>
- Max. angular speed: 200 deg/s

**Features**

- Equivalent capacity and dimensions as pneumatic components
- Includes self-lock mechanism and manual operation
- Center of rotation and center of actuator body are coaxial



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

RJ45

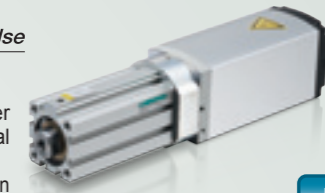
**ELECTRIC MOTOR** **Electric actuator Rod type**  
**GSSD2**

**Specifications**

- Max. payload (horizontal): 14.8 kg
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N

**Features**

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

RJ45

**ELECTRIC MOTOR** **Electric actuator Stopper**  
**GSTK**

**Specifications**

- Max. thrust: 192 N
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N

**Features**

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

RJ45

**ELECTRIC MOTOR** **Electric actuator Guided**  
**GSTG**

**Specifications**

- Max. payload (horizontal): 14.8 kg
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N
- Stroke: 20 to 100 mm

**Features**

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

RJ45

**ELECTRIC MOTOR** **Electric actuator Guided**  
**GSTS**

**Specifications**

- Max. payload (horizontal): 14.8 kg
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N
- Stroke: 25 to 50 mm

**Features**

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

RJ45

**ELECTRIC MOTOR** **Electric actuator Guided**  
**GSTL**

**Specifications**

- Max. payload (horizontal): 14.8 kg
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N
- Stroke: 50 to 200 mm

**Features**

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

RJ45

**ELECTRIC MOTOR** **Electric actuator Guided**  
**GCKW**

**Specifications**

- Max. gripping force (one side): 29 N
- Max. stroke: 6 mm (one side 3 mm)
- Max. gripping speed: 15 mm/s (one side)

**Features**

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B
  - ECR

RJ45

**DIRECTIONAL CONTROL VALVES**  
**Pilot operated 3, 5-port valve**  
**TVG**

M12

**Specifications**

- Cylinder bore size: up to  $\varnothing 80$
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65/67

**Features**

- Durability count 120 million cycles, the longest in the soft spool industry
- Contributes to carbon neutrality by reducing air leakage
- Easy-to-reassemble plug-in structure



**DIRECTIONAL CONTROL VALVES**  
**3, 5-port pilot operated valve, plug-in block manifold**  
**W4G**

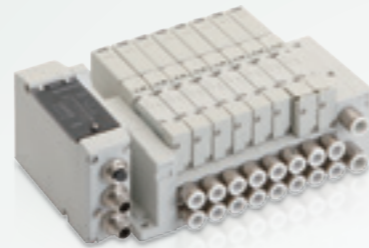
M12

**Specifications**

- Applicable cylinder bore size:  $\varnothing 0$  to  $\varnothing 25$
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65

**Features**

- The adopted plug-in method enables easy replacement of valves
- Service life is extended by improvements in structure of sliding section, packing, etc.
- Durability count: 60 million cycles (at 0.5 MPa with clean air)



**DIRECTIONAL CONTROL VALVES**  
**Pilot operated 3, 5-port valve**  
**4G**

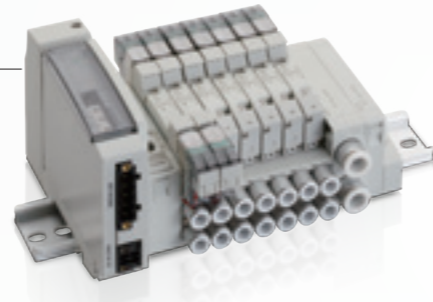
**Specifications**

- Applicable cylinder bore size:  $\varnothing 0$  to  $\varnothing 140$
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP20

**Features**

- The superb sliding mechanism of the main valve realizes low friction and long service life<sup>\*1</sup>
- Response time: 12 ms $\pm$ 2 ms (4G1 type)
- Durability count 100 million cycles (single solenoid)<sup>\*1</sup>

\*1. 4GA/BR, M4GA/BR, MN4GA/BR only



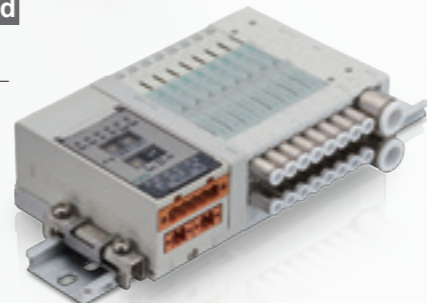
**DIRECTIONAL CONTROL VALVES**  
**3, 5-port pilot operated valve, PLC-compatible block manifold**  
**MN3E / MN4E**

**Specifications**

- Cylinder bore size:  $\varnothing 2.5$  to  $\varnothing 40$
- Working pressure range: 0.2 MPa to 0.7 MPa

**Features**

- Space saving design with valve width of 7 mm and 10 mm
- Response 12 ms (two 3-port valves integrated) Ideal for air operated valve operation
- Supports various fittings ( $\varnothing 1.8$ ,  $\varnothing 3$ ,  $\varnothing 4$ ) to contribute to equipment space saving



**SENSOR CONTROLLER**  
**Thin electro-pneumatic regulator**  
**MEVT**

**Specifications**

- Max. flow rate: MEVT100 2 L/min, MEVT500 6 L/min
- Pressure control range: MEVT100: 0 to 100 kPa, MEVT500: 0 to 0.5 MPa
- Linearity:  $\pm 0.5\%$  F.S. or less

**Features**

- Thin electro pneumatic regulator, manifold Width per station: 14 mm, 80 g
- High repeatability of 0.3%F.S., high response time of 0.1 sec (without load)
- DIN rail mountable. Select from bottom mounting and back mounting



**SENSOR CONTROLLER**  
**Remote I/O**  
**RT**

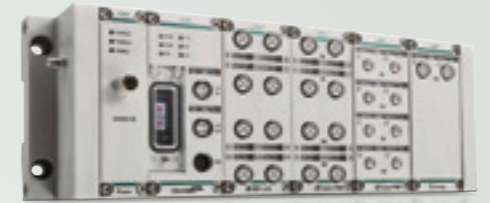
M12

**Specifications**

- Network: EtherNet/IP, EtherCAT, IO-Link (as IO-Link master)
- Unit type: Digital input/digital output Analog input/Analog output IO-Link master
- Power supply voltage: 24 VDC  $\pm 10\%$
- Degree of protection: IP65/67

**Features**

- Since it is IP65/67, it can be installed as is without a control panel. Ideal for distributed I/O installation away from the PLC
- Device unit input/output points 512bytes (4096 points) Can be connected to a max. of 18 units \*Remote I/O that can be created by combining required units
- Max. 0.5A output per port. Power supply units can be added at any position, supporting an increase in the number of connected sensors
- IO-Link master: 8 ports/unit. Contributes to equipment space saving



**DIRECTIONAL CONTROL VALVES**  
**Pilot operated 3, 5-port valve**  
**TVG**

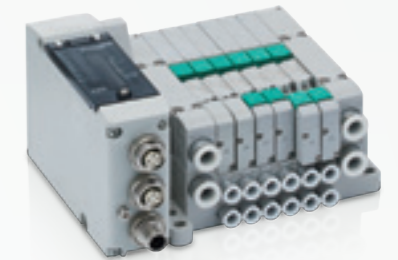
M12

**Specifications**

- Cylinder bore size: up to  $\varnothing 80$
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65/67

**Features**

- Durability count: 120 million cycles The longest in the soft spool industry
- Contributes to carbon neutrality by reducing air leakage
- Easy-to-reassemble plug-in structure
- Valve equipped with ON count function



**DIRECTIONAL CONTROL VALVES**  
**3, 5-port pilot operated valve, plug-in block manifold**  
**W4G**

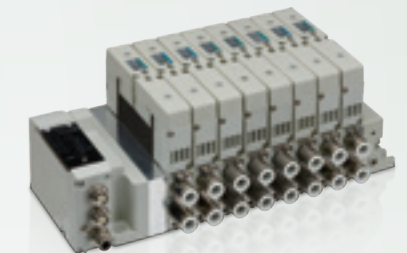
M12

**Specifications**

- Applicable cylinder bore size:  $\varnothing 20$  to  $\varnothing 125$
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65

**Features**

- The adopted plug-in method enables easy replacement of valves
- Service life is extended by improving structure of sliding section, packing, etc.
- Durability count: 60 million cycles (at 0.5 MPa with clean air)
- Valve equipped with ON count function



**DIRECTIONAL CONTROL VALVES**  
**Pilot operated 3, 5-port valve**  
**4G**

RJ45

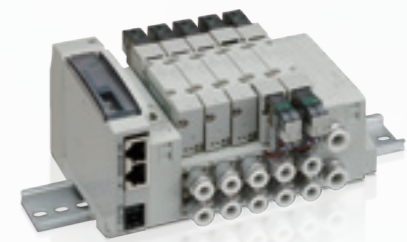
**Specifications**

- Applicable cylinder bore size:  $\varnothing 20$  to  $\varnothing 100$
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP20

**Features**

- The superb sliding mechanism of the main valve realizes low friction and long service life<sup>\*1</sup>
- Response time: 12 ms $\pm$ 2 ms (4G1 type)
- Durability count 100 million cycles (single solenoid)<sup>\*1</sup>
- Valve equipped with ON count function

\*1. 4GA/BR, M4GA/BR, MN4GA/BR only



**ELECTRIC MOTOR**  
**SCARA Robot**  
**KHL / KHE**

**Specifications**

- Arm length: 300 to 700 mm
- Max. payload: 10 kg

**Features**

- Flexible movement to match workpieces, compatible with multiple-model production
- High speed operation, shortened tact time and space saving
- The dedicated software enables operation simulation in advance.
- Can be connected to various image processing systems



**DIRECTIONAL CONTROL VALVES** Pilot operated 3, 5-port valve  
**4G**

**Specifications**

- Applicable cylinder bore size:  $\varnothing 20$  to  $\varnothing 100$
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP20

**Features**

- The superb sliding mechanism of the main valve realizes low friction and long service life \*\*
- Response time: 12 ms $\pm$  2ms (4G1 type)
- Durability count 100 million cycles (single solenoid) \*\*

\*1. 4GA/BR, M4GA/BR, MN4GA/BR only



**ELECTRIC MOTOR** SCARA Robot  
**KHL / KHE**

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**ELECTRIC MOTOR** SCARA Robot  
**KHL / KHE**

**Specifications**

- Arm length: 300 to 700 mm
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**Features**

- Flexible movement to match workpieces, compatible with multiple-model production
- High speed operation, shortened tact time and space saving
- The dedicated software enables operation simulation in advance.
- Can be connected to various image processing systems



**ELECTRIC MOTOR** Electric motion components Controller  
**ECG-A**

**Specifications**

- Supported actuator: EBS/EBR-G, GSSD2, GSTK, GSTG, GSTS, GSTL (Applicable motor size: □35 to □56)
- Supported network: CC-Link, IO-Link, EtherCAT, EtherNet/IP
- Power supply voltage: 24 VDC ±10%
- Current consumption: 0.4 A or less (Control power supply) Max. 2.8 A or less (power supply)
- Degree of protection: IP20

**Features**

- Contributes to inventory reduction by connecting to all sizes of all 7 models
- With the automatic recognition function, there is no need for initial settings when connecting the actuator and controller
- Compact and capable of adjacent installation, only 38% of the installation space of conventional models. Greater space savings.
- The dedicated S-Tools software can be downloaded free of charge from our website



**ELECTRIC MOTOR** Electric motion components Controller  
**ECG-B**

**Specifications**

- Compatible actuator: FLSH/FLCR/FGRC-G, GCKW (Applicable motor size: □20 to □35)
- Supported network: CC-Link, IO-Link, EtherCAT, EtherNet/IP
- Power supply voltage: 24 VDC ±10%
- Current consumption: 0.4 A or less (Control power supply) Max. 2.8 A or less (power supply)
- Degree of protection : IP20

**Features**

- Contributes to stock reduction by connecting to all sizes of all 4 models
- Compact and capable of adjacent installation, only 41% of the installation space of conventional models. Greater space savings.
- The dedicated S-Tools software can be downloaded free of charge from our website



**ELECTRIC MOTOR** Electric motion components Controller  
**ECR**

**Specifications**

- Supported actuator: EBS/EBR-M, FLSH, FLCR, FGRC (Applicable motor size: □20 to □56)
- Supported network: CC-Link, EtherCAT, IO-Link
- Power supply voltage: 24 VDC ±10% or 48 VDC ±10%
- Current consumption: 0.6 A or less (Control power supply) Max. 6.1 A or less (power supply)
- Degree of protection: IP20

**Features**

- Contributes to inventory reduction by connecting to all sizes of all 5 models
- With the automatic recognition function, there is no need for initial settings when connecting the actuator and controller
- Compact and capable of adjacent installation, only 44% of the installation space of conventional models. Realizes space savings.
- The dedicated S-Tools software can be downloaded free of charge from our website



**ELECTRIC MOTOR** Electric actuator Slider  
**EJSG**

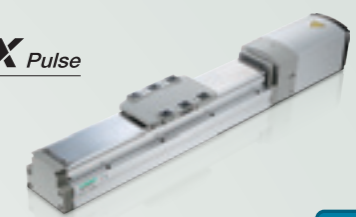
**Specifications**

- Max. payload (horizontal): 80 kg
- Max. payload (vertical): 43.3 kg
- Repeatability: ±0.01 mm
- Degree of protection: IP50 (dust-proof specifications)

**Features**

- Lineup includes dust, low dust specifications, rechargeable battery manufacturing, and food manufacturing processes
- Batteryless absolute encoder reduces equipment downtime
- Compact and highly rigid body integrating an outer rail guide
- Easy maintenance with the standard equipment of grease lubrication port

**ROBODEX Pulse**



- Compatible Controller
- ECMG
  - ECG-A**
  - ECG-B
  - ECR

**RJ45**

**ELECTRIC MOTOR** Electric actuator Slider  
**EBS-M / EBS-G**

**Specifications**

- Max. payload (horizontal): 80 kg
- Max. speed: 1100 mm/s
- Repeatability: ±0.01 mm

**Features**

- Batteryless absolute encoder reduces equipment downtime
- Compact and highly rigid body is realized by adopting an outer rail guide
- Easy maintenance with the standard equipment of grease lubrication port

**ROBODEX Pulse**



- Compatible Controller
- ECMG
  - ECG-A**
  - ECG-B
  - ECR

**RJ45**

**ELECTRIC MOTOR** Electric actuator Rod with built-in guide  
**EBR-M / EBR-G**

**Specifications**

- Max. payload (horizontal): 80 kg
- Max. speed: 900 mm/s
- Repeatability: ±0.01 mm

**Features**

- Batteryless absolute encoder reduces equipment downtime
- Built-in guides reduce the need for additional guides
- Mounting holes are provided on the top and bottom surfaces of the product to enable installation without disassembly

**ROBODEX Pulse**



- Compatible Controller
- ECMG
  - ECG-A**
  - ECG-B
  - ECR

**RJ45**

**ELECTRIC MOTOR** Electric Actuator 2-Finger Gripper  
**FLSH**

**Specifications**

- Max. gripping force: 65 N (one side)
- Max. stroke: 14 mm (one side 7 mm)
- Max. gripping speed: 15 mm/s (one side)

**Features**

- Equivalent capacity and dimensions as pneumatic components
- Includes self-lock mechanism and manual operation
- Compatible with Air Hand LSH

**ROBODEX Pulse**



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B**
  - ECR

**RJ45**

**ELECTRIC MOTOR** Electric actuator Table  
**FLCR**

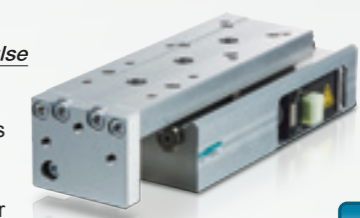
**Specifications**

- Max. payload (horizontal): 11 kg
- Max. speed: 300 mm/s
- Maximum pressing force: 210 N

**Features**

- Equivalent capacity and dimensions as pneumatic components
- High rigidity with linear guide
- Dimensional compatibility with the Air Cylinder LCR

**ROBODEX Pulse**



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B**
  - ECR

**RJ45**

**ELECTRIC MOTOR** Electric actuator Rotary  
**FGRC**

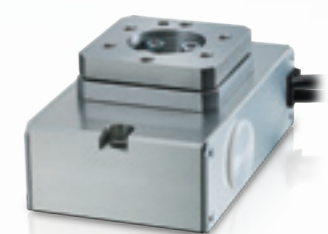
**Specifications**

- Max. torque: 4.66 N·m
- Allowable moment of inertia: 0.0297 kg·m<sup>2</sup>
- Max. angular speed: 200 deg/s

**Features**

- Equivalent capacity and dimensions as pneumatic components
- Includes self-lock mechanism and manual operation
- Center of rotation and center of actuator body are coaxial

**ROBODEX Pulse**



- Compatible Controller
- ECMG
  - ECG-A
  - ECG-B**
  - ECR

**RJ45**

**ELECTRIC MOTOR** **Electric actuator Rod type**  
**GSSD2** **ROBODEX Pulse**

**Specifications**

- Max. payload (horizontal): 14.8 kg
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N

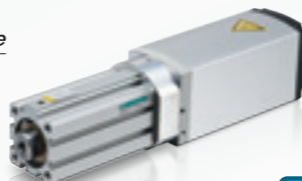
**Features**

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.

**Compatible Controller**

- ECMG
- ECG-A
- ECG-B
- ECR

**RJ45**



**ELECTRIC MOTOR** **Electric actuator Stopper**  
**GSTK** **ROBODEX Pulse**

**Specifications**

- Max. thrust: 192 N
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N


**Features**

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.

**Compatible Controller**

- ECMG
- ECG-A
- ECG-B
- ECR

**RJ45**



**ELECTRIC MOTOR** **Electric actuator Guided**  
**GSTG** **ROBODEX Pulse**

**Specifications**

- Max. payload (horizontal): 14.8 kg
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N
- Stroke: 20 to 100 mm


**Features**

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.

**Compatible Controller**

- ECMG
- ECG-A
- ECG-B
- ECR

**RJ45**



**ELECTRIC MOTOR** **Electric actuator Guided**  
**GSTS** **ROBODEX Pulse**

**Specifications**

- Max. payload (horizontal): 14.8 kg
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N
- Stroke: 25 to 50 mm


**Features**

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.

**Compatible Controller**

- ECMG
- ECG-A
- ECG-B
- ECR

**RJ45**



**ELECTRIC MOTOR** **Electric actuator Guided**  
**GSTL** **ROBODEX Pulse**

**Specifications**

- Max. payload (horizontal): 14.8 kg
- Max. speed: 500 mm/s
- Maximum pressing force: 590 N
- Stroke: 50 to 200 mm


**Features**

- The use of the same body as the air cylinder provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.

**Compatible Controller**

- ECMG
- ECG-A
- ECG-B
- ECR

**RJ45**



**ELECTRIC MOTOR** **Electric actuator Guided**  
**GCKW** **ROBODEX Pulse**

**Specifications**

- Max. gripping force (one side): 29 N
- Max. stroke: 6 mm (one side 3 mm)
- Max. gripping speed: 15 mm/s (one side)


**Features**

- The use of the same body as the air components provides high rigidity unheard of in conventional electric actuators
- By connecting to the controller ECG/ECMG, it can be connected to various interfaces as well as 64 multi-point positioning and pressing operations.

**Compatible Controller**

- ECMG
- ECG-A
- ECG-B
- ECR

**RJ45**



**ELECTRIC MOTOR** **Electric Actuator 2-Finger Gripper**  
**FFLD** **ROBODEX Pulse**

**Specs**


- Size expansion: 3 sizes (□20, □25L)
- Encoder: Incremental encoder
- Drive method: rack and pinion, worm gear
- Stroke range: 100 (one side 50 mm) to 160 mm (one side 80 mm)
- Max. gripping force: 80 N to 500 N (one side)
- Repeatability: ±0.02 mm
- Power supply voltage: 24 VDC ±10%
- Reduced current: 0.2 A or less (Control power supply), max. 2.8 A or less (power supply)
- Degree of protection: IP20

**Features**

- Long stroke does not require a tool change and supports a wide variety of workpieces. To reduce tool costs.
- Thin body reduces the axial load and moment of inertia. For downsizing robots
- Built-in controller saves space on the control panel
- A single power and control cable contributes to reduced wiring and disconnection

**Built-in controller**

**M12**



**SENSOR CONTROLLER** **Remote I/O**  
**RT**


**Specs**

- Network: EtherNet/IP, EtherCAT, IO-Link (as IO-Link master)
- Unit type: Digital input, digital output, analog input, analog output, IO-Link master
- Power supply voltage: 24 VDC ±10%
- Degree of protection: IP65/67

**Features**

- Since it is IP65/67, it can be installed as is without a control panel. Ideal for distributed I/O installation far from the PLC
- Device unit input/output points 512bytes (4096 points) Can be connected to a max. of 18 units
- \*Remote I/O that can be created by combining required units
- Max. 0.5 A output per port. Power supply units can be added at any position, supporting an increase in the number of connected sensors
- IO-Link master: 8 ports/unit. Contributes to equipment space saving

**M12**



**AIR HAND** **Linear Slide Hand with Length Measuring Function**  
**LSHM-HP2**


**Specifications**

- Bore size: ø10, 16, 20, 25
- Working pressure range: 0.2 MPa to 0.7 MPa
- Operating stroke: 4 to 14 mm (according to bore size)
- Repeatability: ±0.02 mm
- IO-Link communication specifications
- Transmission speed: COM3 (230.4 kbps)
- Min. cycle time: 1 ms

**Features**

- Length measurement function enables predictive maintenance such as wear detection of gripping fingers and workpiece model judgment
- The industry's first integrated sensor structure enables high-precision length measurement
- Option lineup with rubber cover for environment-resistant environments
- Operation stroke and switch output 4 points are input using process data

**M12**



**DIRECTIONAL CONTROL VALVES** **Pilot operated 3, 5-port valve**  
**TVG**

**Specifications**

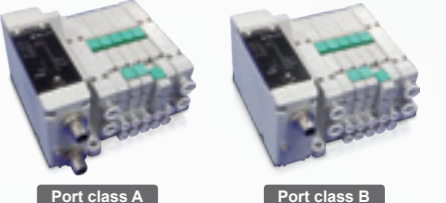
- Cylinder bore size: up to ø80
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65/67
- IO-Link communication specifications
- Port class: A, B compatible (model No. selection)
- Minimum cycle time: 1.0 ms (COM3), 3.4 ms (COM2)

**Features**

- Durability count 120 million cycles The longest in the soft spool industry
- Contributes to carbon neutrality by reducing air leakage
- Easy-to-reassemble plug-in structure

**RJ45**

Port class A      Port class B



**DIRECTIONAL CONTROL VALVES** **3, 5-port pilot operated valve, plug-in block manifold**  
**W4G**

**Specifications**


- Applicable cylinder bore size: ø20 to ø125
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65
- IO-Link communication specifications
- Port class: A, B supported (model No. selection)
- Min. cycle time: 1.0 ms (COM3), 3.4 ms (COM2)

**Features**

- The adopted plug-in method enables easy replacement of valves
- Service life is extended by improvements in structure of sliding section, packing, etc.
- Durability count: 60 million cycles (at 0.5 MPa with clean air)

**M12**

Port class B



**DIRECTIONAL CONTROL VALVES** **Pilot operated 3, 5-port valve**  
**4G**

**Specifications**

- Applicable cylinder bore size: ø20 to ø100
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP40
- IO-Link communication specifications
- Transmission speed: COM2 (38.4 kbps), COM3 (230.4 kbps)
- Minimum cycle time: 2.3 ms (COM2), 1.0ms (COM3)

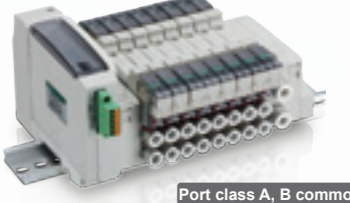
**Features**

- The superb sliding mechanism of the main valve realizes low friction and long service life<sup>\*1</sup>
- Response time: 12 ms± 2 ms (4G1 type)
- Durability count 100 million cycles (single solenoid)<sup>\*1</sup>
- Valve equipped with ON count function

**Specifications**

- \*1. 4GA/BR, M4GA/BR, MN4GA/BR only

**Port class A, B common**






**SENSOR CONTROLLER** **Compact flow rate controller RAPIFLOW®** **FCM** **M12**

**Specifications**

- Flow rate control range: 0.015 to 100 L/min (air, nitrogen,)(applicable fluid): 0.015 to 50 L/min (argon), 0.015 to 10 L/min(oxygen, city gas, propane), 0.06 to 20 L/min (Helium)
- Accuracy: ±3% F.S. Repeatability: ±1% F.S.
- IO-Link communication specifications: transmission speed: COM3 (230.4 kbps) Minimum cycle time: 2 ms

**Features**

- Equipped digital display makes control status visible at a glance. Can be operated using the buttons on the unit or IO-Link
- Outputs instantaneous flow rate and accumulated flow as process data




**SENSOR CONTROLLER** **Electro-pneumatic regulator** **EVD** **M12**

**Specifications**

- Flow rate range: 60 L/min to 1500 L/min
- IO-Link communication specifications: transmission speed: COM3 (230.4 kbps) Minimum cycle time: 2 ms

**Features**

- Indicator allows the pressure value under control to be checked
- Equipped with a pressure control stop function Stops control when control is not required



**SENSOR CONTROLLER** **Compact flow rate sensor/RAPIFLOW®** **FSM3** **M12**


**Specifications**

- Flow rate range: 0.5 L/min to 1000 L/min
- Applicable fluid: Clean air, compressed air, nitrogen gas, argon, oxygen, carbon dioxide, gas mixture (argon + carbon dioxide)
- IO-Link communication specifications: transmission speed: COM2 (38.4 kbps) Minimum cycle time: 5 ms

**Features**

- Five types of gases can be measured with just one unit thanks to the gas type switching function
- Body material: Resin, stainless steel (can be used selectively depending on the environment)
- Uni-directional and bi-directional fluid measurement
- High precision / High responsiveness Repeatability: Display accuracy within ±1%F.S.: within ±3%F.S.

\*For stainless steel body only




**SENSOR CONTROLLER** **Digital pressure sensor** **PPX** **M12**

**Specifications**

- Set pressure: For low pressure: -101.0 to +101.0 kPa For high pressure: -0.101 to +1.010 MPa
- IO-Link communication specifications: transmission speed: COM3 (230.4 kbps) Minimum cycle time: 1.0 ms

**Features**

- 30 × 25.5 compact size
- Set value can be changed while viewing the present value
- Oil-prohibited wetted section (option)




**SENSOR CONTROLLER** **Digital gap switch** **GPS3** **M12**

**Specifications**

- Working pressure: 50 to 200 kPa
- Detection range scale Short range: 0.02 to 0.15 mm Wide range: 0.03 to 0.4 mm
- IO-Link communication specifications: transmission speed: COM2 (38.4 kbps) Minimum cycle time: 5 ms

**Features**

- Digital display enables contact confirmation at a glance
- High precision 2-point output
- Detection air flow clog notification function




**DIRECTIONAL CONTROL VALVES** **Karman vortex flow rate sensor for water FLUEREX** **WFK2** **M12**

**Specifications**

- Flow rate range: 0.4 to 250 L/min
- Applicable fluids: pure water, industrial water
- IO-Link communication specifications: transmission speed: COM2 (38.4 kbps) Minimum cycle time: 5 ms

**Features**

- All models equipped as standard with water temperature measuring function
- Manual valve for easy flow rate adjustment (option)
- Indicator screen rotation




**DIRECTIONAL CONTROL VALVES** **Capacitance electromagnetic flow sensor** **WFC** **M12**

**Specifications**

- Flow rate range: 0.5 to 60 L/min
- Applicable fluids: Fluids (conductive fluids) that do not corrode water/wetted part materials
- IO-Link communication specifications: transmission speed: COM2 (38.4 kbps) Minimum cycle time: 5 ms

**Features**

- The Flo-Thru structure allows use even with water of poor quality
- Max. working pressure: 2.0 MPa
- Fluid temperature measuring function (option)



**DIRECTIONAL CONTROL VALVES**  
**TVG**  
**Pilot operated 3, 5-port valve**

**M12**

\*No communication port Power port: M12

### Specifications

- Cylinder bore size: up to ø80
- Working pressure range: 0.2 MPa to 0.7 MPa
- Degree of protection: IP65/67
- Radio Law Acquisition Region: Japan, US, EU

### Features

- Durability count 120 million cycles  
The longest in the soft spool industry
- Contributes to carbon neutrality by reducing air leakage
- Easy-to-reassemble plug-in structure
- Valve equipped with ON count function



### Industry's first

## Open network IO-Link Wireless compatible solenoid valve \*1

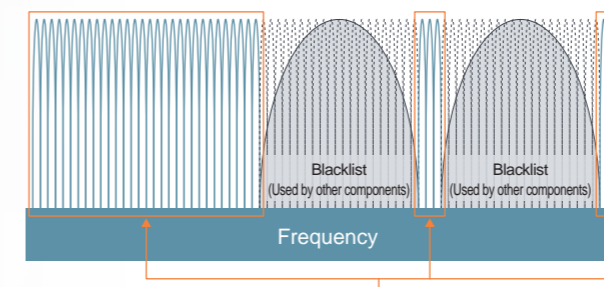
Uninterrupted radio for control. Error rate 1/1 billion. \*2

Wireless connection of PLC and solenoid valve of various communications is possible via the IO-Link Wireless master.

Item	Wireless local area network	Bluetooth	ZigBee	IO-Link Wireless
Standards	IEEE802.11b	IEEE802.15.1	IEEE802.15.4	<b>IEEE802.15.1</b>
Frequency	2.4GHz	2.4GHz	2.4GHz	<b>2.4GHz</b>
Communication distance	up to 100m	up to 10m	up to 100m	<b>up to 10m</b>
Transmission bit rate	11Mbps	1Mbps	250kbps	<b>21kbps</b>
Number of connection nodes	32	7	128	<b>40</b>
Delay time	50 ms	10 to 30 ms	5-conductor cable 0.5 mm <sup>2</sup>	<b>5 ms</b>
Reliability	Low	Low	Medium	<b>High</b>
Error rate	0.1%	0.1%	0.01%	<b>1/1 billion</b>

### Blacklist function

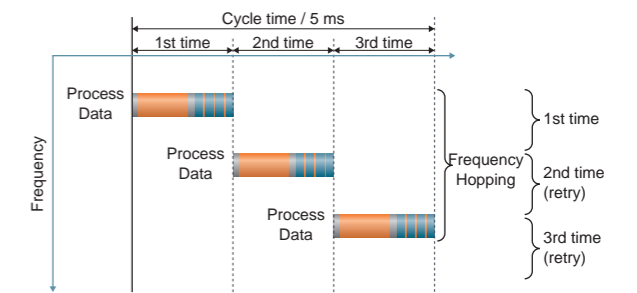
Avoids frequencies used in other wireless components.  
Coexistence with other wireless components is made possible.



Communicate at frequencies other than those blacklisted

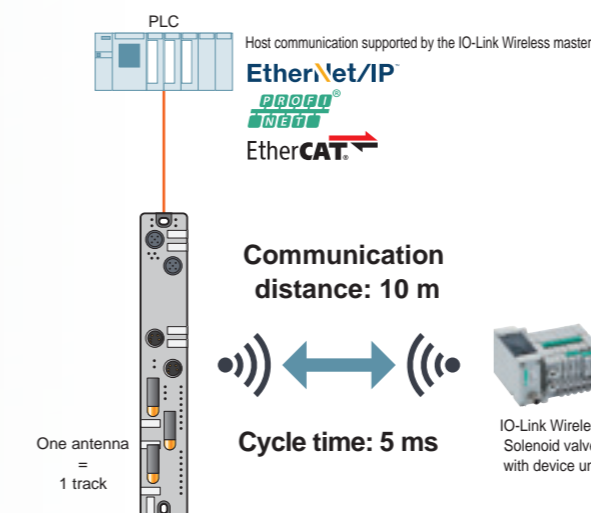
### Frequency hopping function

Three tries are executed in one cycle of communication.  
The retry is executed by switching the frequency band.



Uninterrupted, low latency

### IO-Link Wireless system configuration example



IO-Link Wireless master

\*1. June 2023, CKD research. CKD IO-Link Wireless components compatible Region: Japan, EU, USA.

\*2. The blacklist function and frequency hopping function realize wire-like reliability. Radio quality for control.

### Solenoid valve with IO-Link Wireless device unit available

Solenoid valve appearance	IO-Link master (1 track) No. of connections per track	Cycle Time
	1 to 6 units	5 ms
	32 points output 7 to 8 units	10 ms

# Product introduction RT Series

## It's fast! It connects! It's built to last!

### Update cycle as fast as 0.5 ms

High-speed internal communication enables high-speed device control and status monitoring. Contributes to faster production tact time.

### Max. connections 18 units

Supports a total of 512 bytes (4096 points) of I/O. The type and number of units can be selected according to the equipment specifications.

## Remote I/O for the site

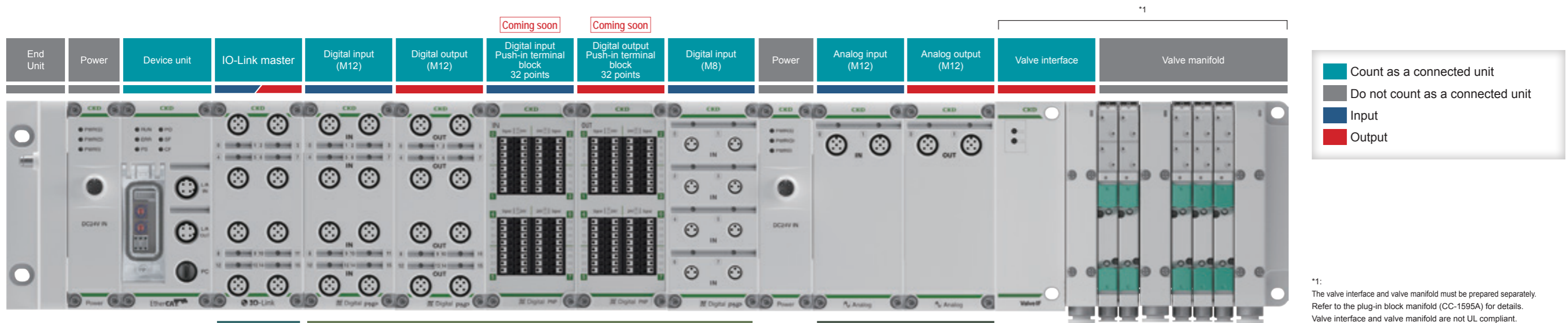
### IP65 / IP67 Designed for tough use

IP65 / IP67 (dust-proof/jet-proof) design. Ready to be installed near the actuator. Control panel is not required, increasing layout flexibility.



Remote I/O

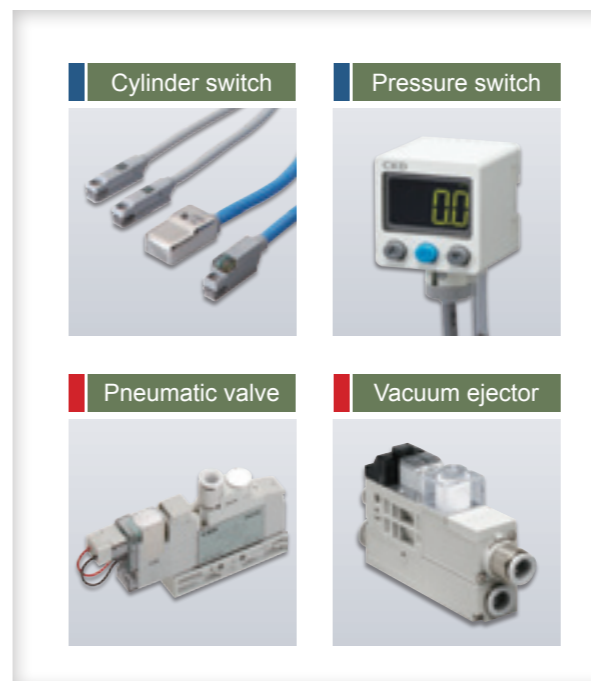
IP65 IP67



## IO-Link



## Digital input/output



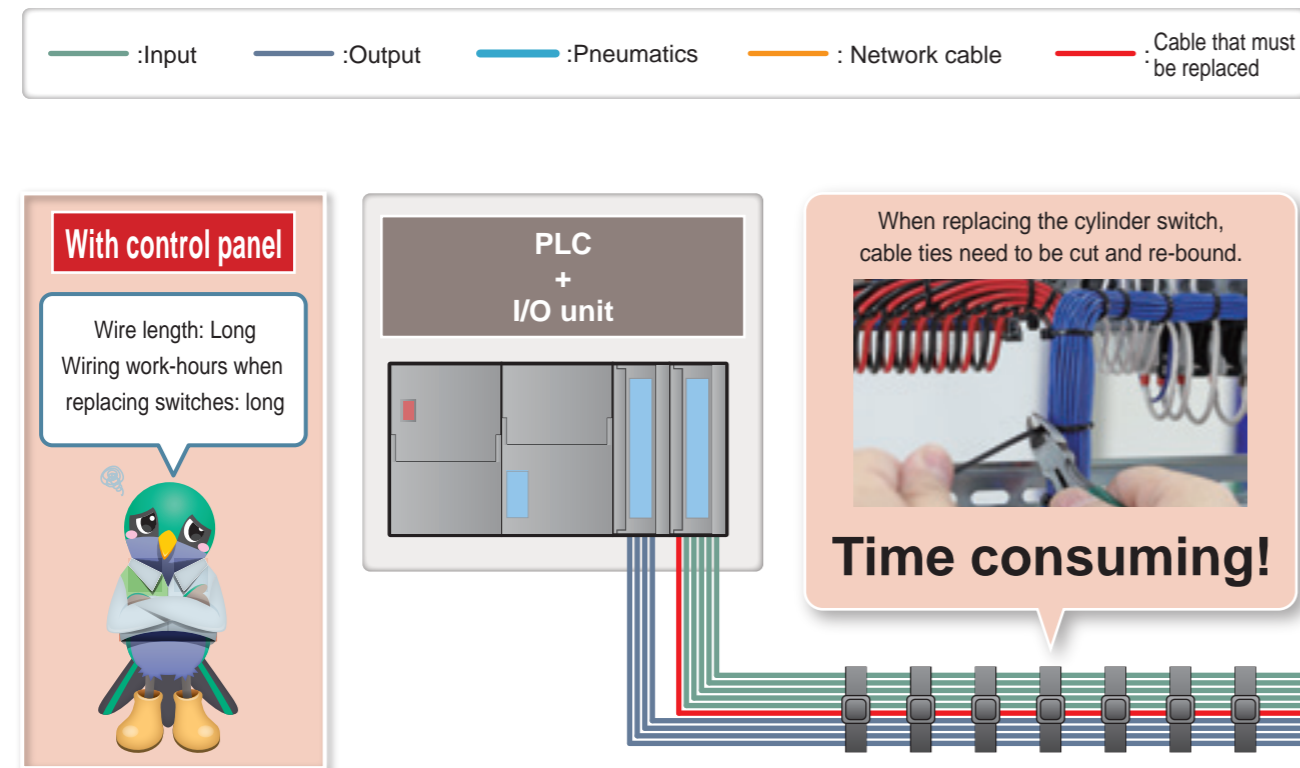
## Analog input/output



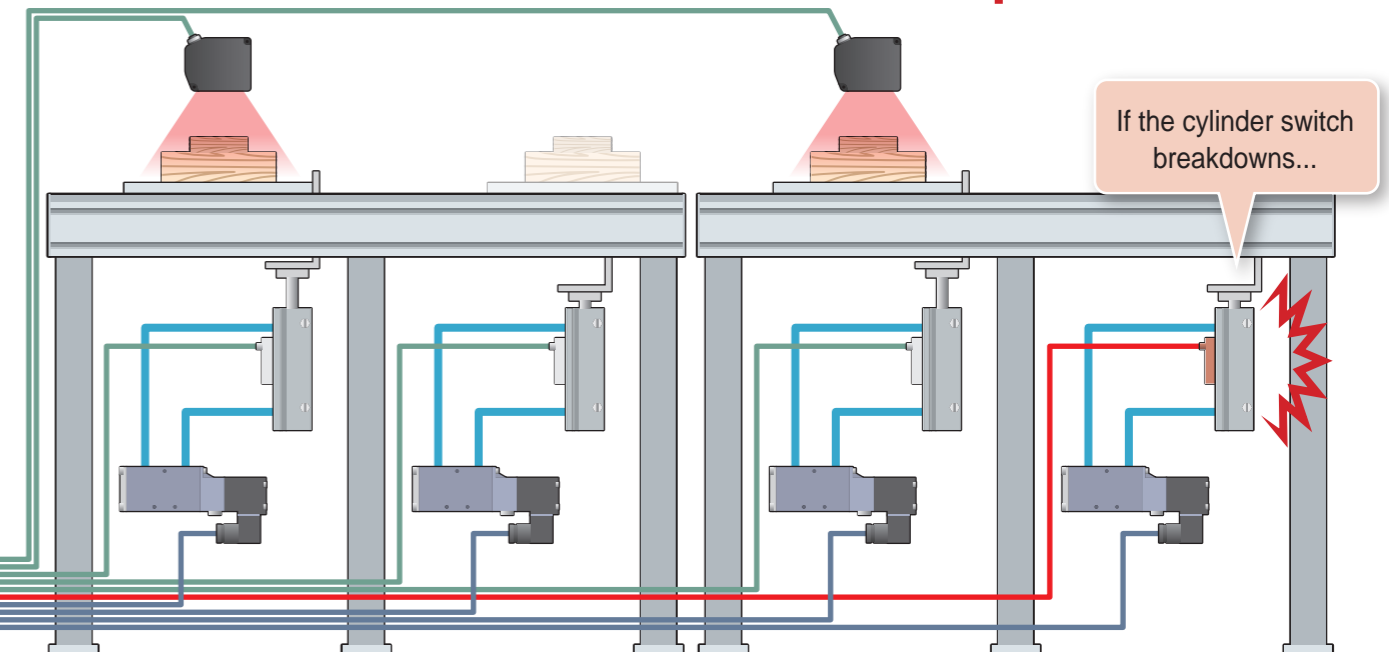
# Remote I/O that can be installed outside

# the control panel just like solenoid valves

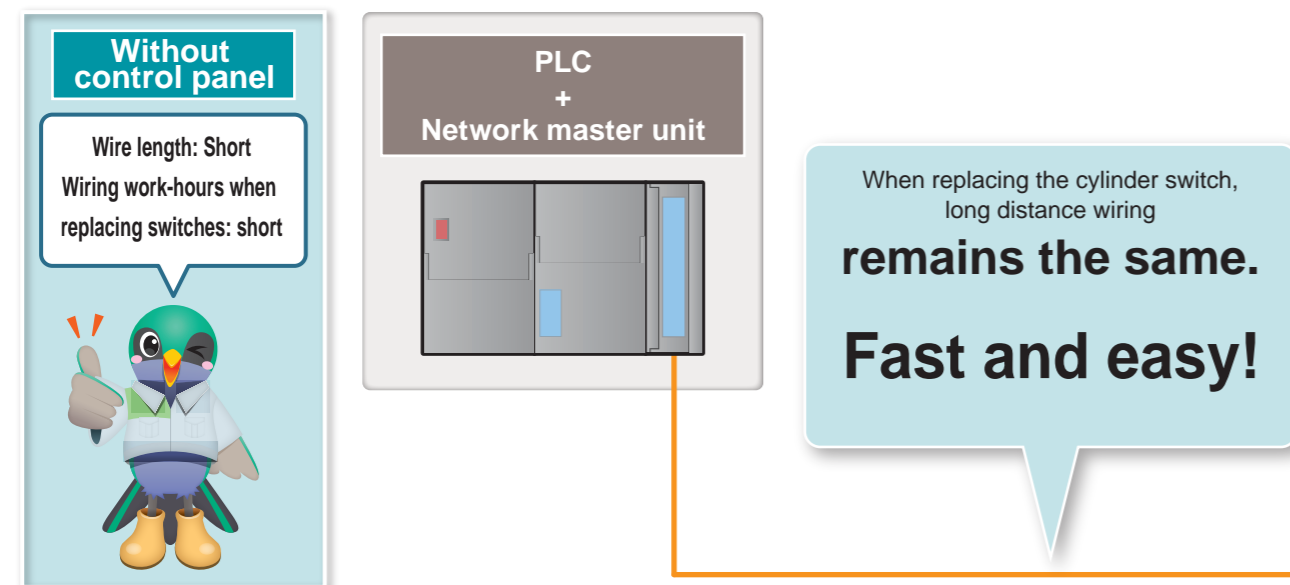
## Before (Non-protected I/O unit + Control panel)



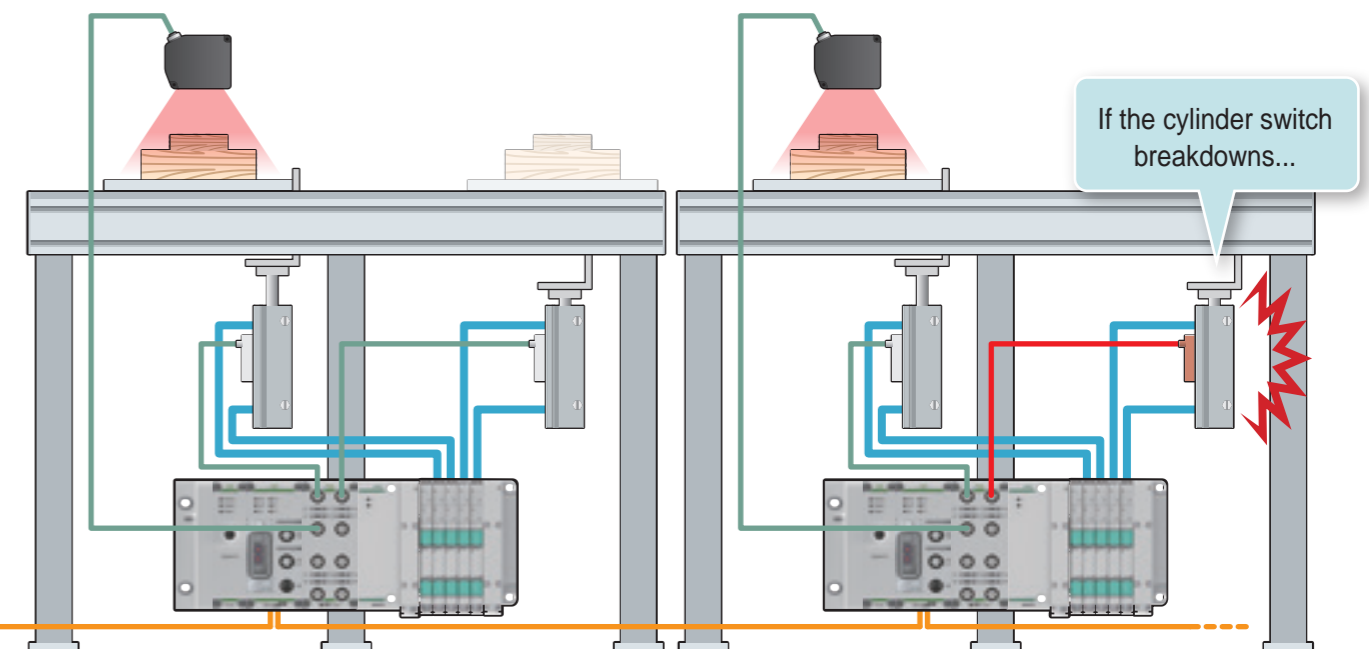
● Long sensor cable: **HIGH** risk of disconnection and noise  
**Maintenance: The long sensor cable up to the PLC must be replaced**

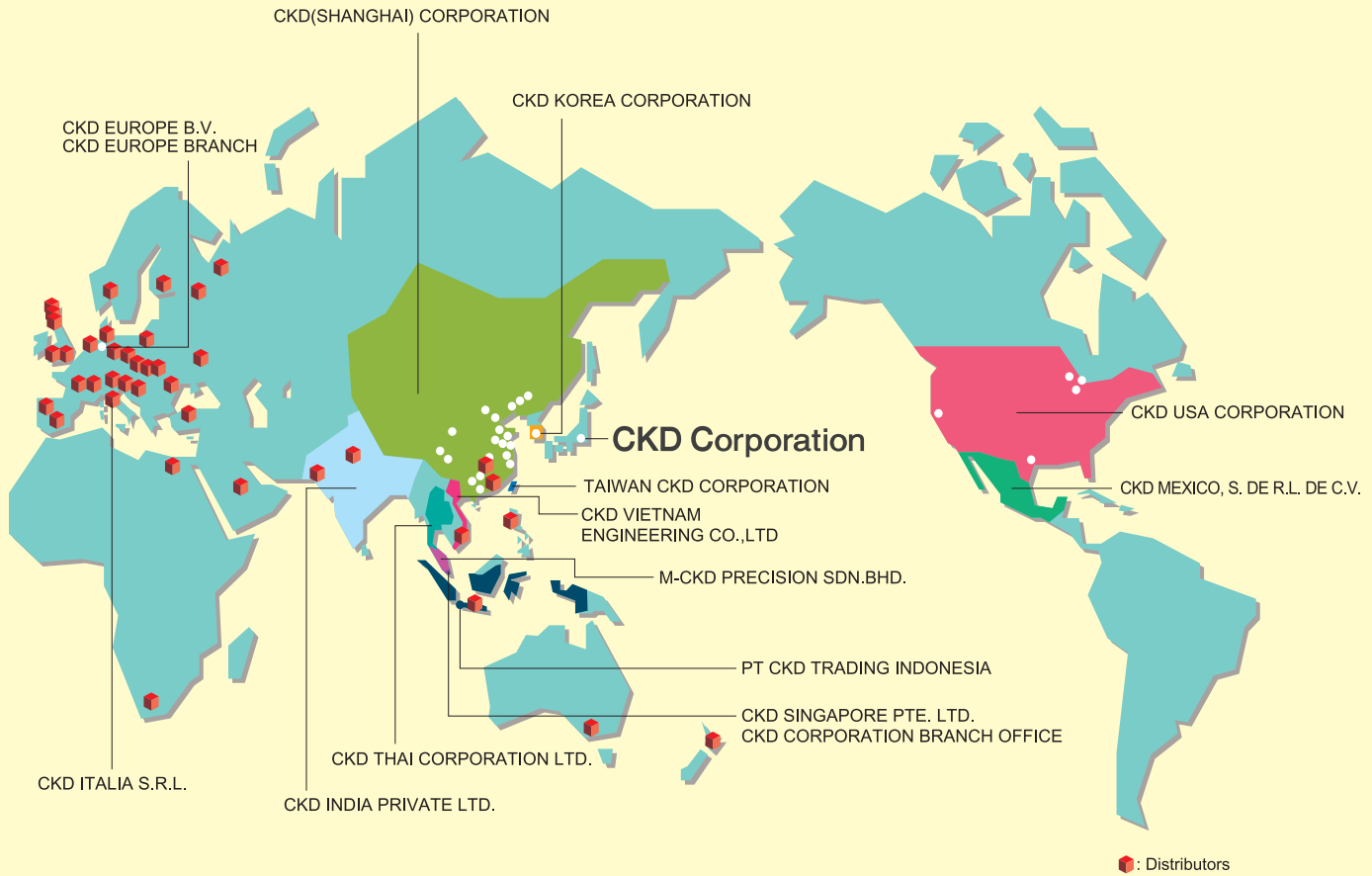


## After (Water- / Dust-proof Remote I/O, no control panel)



● Short sensor cable: **LOW** risk of disconnection and noise  
**Maintenance: Easy to replace the short sensor cable up to the remote I/O!**





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