

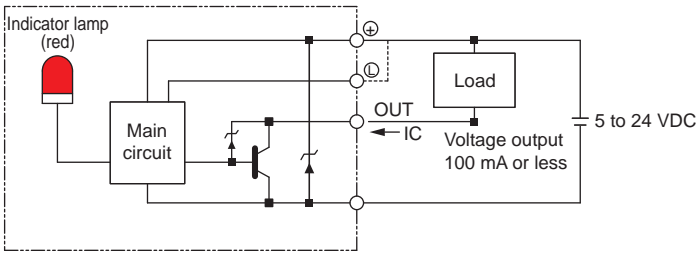
Origin sensor, limit sensor

	Manufacturer	Model
Outside mounted sensor	OMRON Corporation	EE-SX672
Inside mounted sensor	OMRON Corporation	EE-SX674

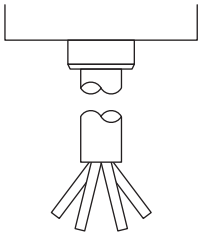
Performance

Item	Specifications
Hysteresis	0.025 mm or less
Light source (peak emission wavelength)	GaAs infrared LED (940 nm)
Indicator lamp	ON when receiving light (red)
Power supply voltage	5 to 24 VDC \pm 10% ripple (P-P) 10% or less
Current consumption	35 mA or less (NPN)
Control output	NPN: NPN open collector output 5 to 24 VDC 100 mA or less OFF state current 0.5 mA or less Residual voltage 0.8 V or less (at load current 100 mA) Residual voltage 0.4 V or less (at load current 40 mA)
Operating ambient illumination	Light-receiving surface luminance Fluorescent light: 1,000 lx or less
Ambient temperature range	When operating: -25 to +55°C When stored: -30 to +80°C (no condensation or freezing)
Ambient humidity range	When operating: 5 to 85% RH When stored: 5 to 95% RH (no condensation or freezing)
Degree of protection	IP50 IEC 60529 Standards
Cord length	2 m (Connector with cord [EE-1006 2M])

Output circuit



Wiring diagram



Terminal layout

Brown	5 to 24 VDC
Pink	L
Blue	0 V
Black	OUTPUT

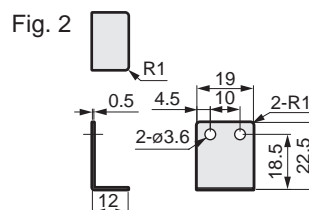
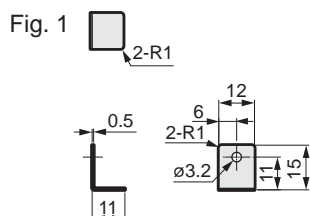
Sales of ECS-05 to ECS-12 will be terminated.

ECS Series

Technical data

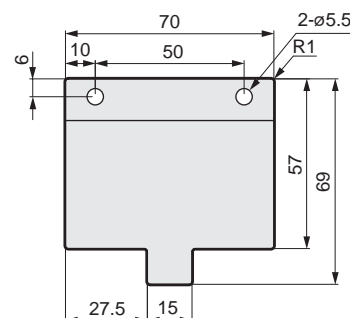
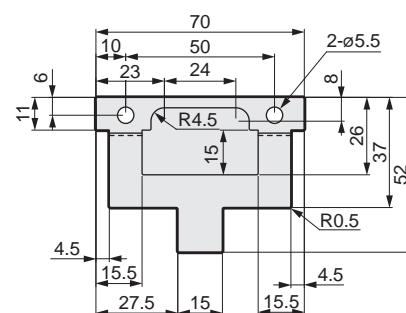
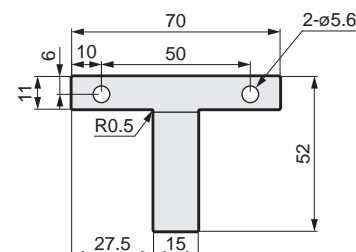
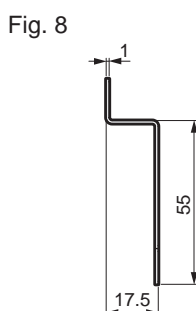
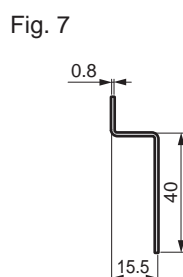
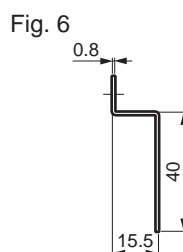
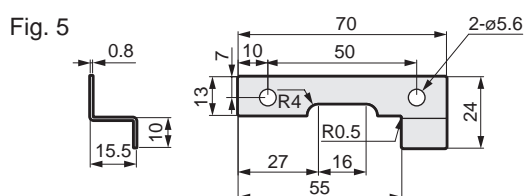
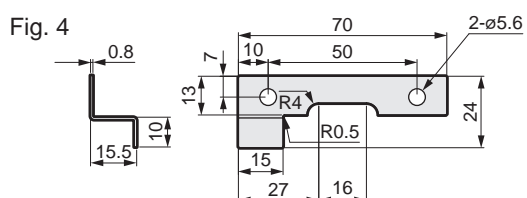
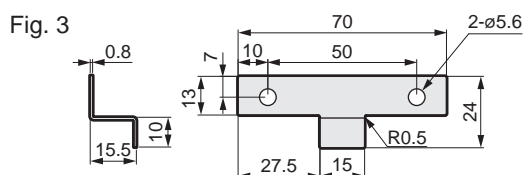
Sensor dog dimensions

	Motor mounting direction
Body size	E/D/R/L
ECS-05	Fig. 1
ECS-06	Fig. 2



	Motor mounting direction				
Body size	E/D/B	R		L	
		Grease nipple None	Grease nipple Yes	Grease nipple None	Grease nipple Yes
ECS-10	Fig. 3	Fig. 3		Fig. 3	
ECS-12	Fig. 3	Fig. 3	Fig. 4	Fig. 3	Fig. 5

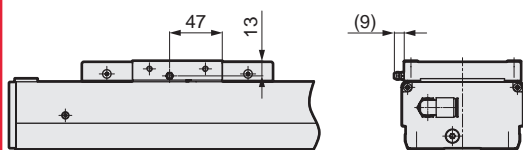
	Motor mounting direction				
Body size	E/D/B	R		L	
		Grease nipple None	Grease nipple Yes	Grease nipple None	Grease nipple Yes
ECS-14	Fig. 6	Fig. 6	Fig. 7	Fig. 6	Fig. 7
ECS-17	Fig. 6	Fig. 6	Fig. 7	Fig. 6	Fig. 7
ECS-22	Fig. 8	Fig. 8		Fig. 8	



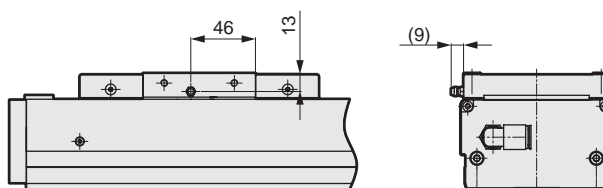
Grease nipple dimensions

*Horizontally symmetrical against the actuator.

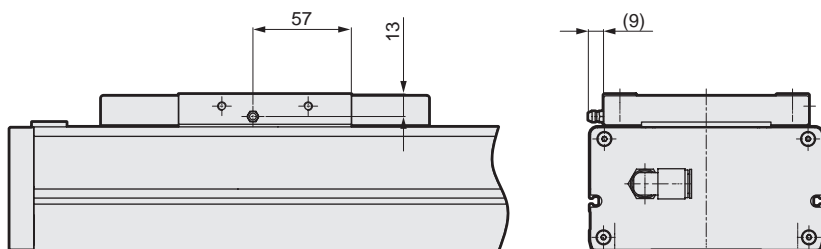
● ECS-10



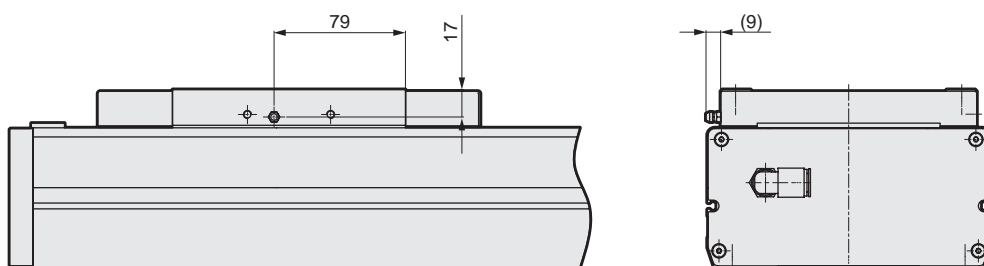
● ECS-12



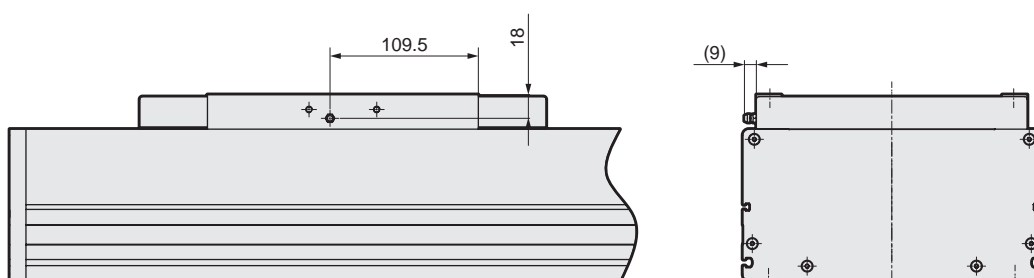
● ECS-14



● ECS-17



● ECS-22



Servo motor compatible

Stepper motor compatible

Safety precautions

MEMO

Servo motor compatible							Stepper motor compatible				Safety precautions
EBS	EBR	ETS	ETS Multi-Axis	ECS	ETV	ECV	EKS	EBS	EBR	ETS	ECS

List of attachments

Basic

Motor mounting bolt (common motor mounting direction)

Model No.	Mounted motor specification	Motor capacity	Size	Quantity
ECS-05	M	100 W	M4	2
ECS-06	Y		M4	2
ECS-10	P		M3	4
ECS-12	F		M4	2
ECS-14	M	200 W 400 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
ECS-17	M	400 W	M5	4
	Y		M5	4
	P		M4	4
	F		M5	4
	M	750 W	M6	4
	Y		M6	4
	P		M5	4
	F		M6	4
ECS-22	M	750 W	M6	4
	Y		M6	4
	P		M5	4
	F		M6	4

By motor mounting direction

Model No.	Attachment name	Included quantity
E (external direct mounting) B (built-in)	Coupling (Assembled at shipment)	1
R (right-side mounting) L (left-side mounting) D (bottom mounting)	Timing belt Pulley	1 1

When origin/limit sensor is selected *1

Sensor mounting direction	Shipping format	Quantity
Inside sensor	Fixed position assembled at shipment	3 *2
Outside sensor	Included at shipment *3	

*1 Shipping format varies according to whether origin sensor and limit sensor are assembled inside or outside.

*2 When "None" is selected for origin sensor or limit sensor, the other sensor is also "None".

*3 Sensor mounting screws are also included.

Suction port fitting






Model No.	Fitting model No.	Shipping format	Quantity
ECS-05/ECS-06	GWL6-M5	Assembled at shipment	2
ECS-10 to ECS-22	GWL10-8	Included at shipment	1

Discontinued some variations


Sales of ECS-05 to ECS-12 will be terminated. **ECS Series**
Maintenance parts

Maintenance parts

● Maintenance parts set

Model No.	Compatibility	Components				
		(1)	(2)	(3)	(4)	(5)
		Timing belt 	Pulley 	Sensor dog 	Photoelectric bracket 	Roller unit 
ETS-08JP002-0001	ECS-05	○ (1 pc)	○ (1 pc)	○ (1 pc)	-	-
ETS-08JP002-0002	ECS-06	○ (2 pcs)	○ (1 pc)	○ (1 pc)	-	-
ECS-08JP002-0009	ECS-10	○ (3 pcs)	○ (2 pcs)	○ (1 pc)	○ (4 pcs)	○ (4 pcs)
ECS-08JP002-0010	ECS-12	○ (2 pcs)	○ (2 pcs)	○ (1 pc)	○ (4 pcs)	○ (4 pcs)
ECS-08JP002-0011	ECS-14	○ (2 pcs)	○ (3 pcs)	○ (1 pc)	-	○ (4 pcs)
ECS-08JP002-0012	ECS-17	○ (4 pcs)	○ (2 pcs)	○ (1 pc)	-	○ (4 pcs)
ECS-08JP002-0013	ECS-22	○ (3 pcs)	○ (2 pcs)	○ (1 pc)	-	○ (6 pcs)

● Maintenance parts (coupling)

Model No. 	Compatibility	Motor capacity	Hole diameter
ETS-22007-000136	ECS-05, 06	100 W	ø8
ETS-22007-000014	ECS-10, 12	100 W	ø8
ETS-22007-000289	ECS-10,12,14 (Mounted motor specification: F)	200W	ø9
ETS-22007-000016	ECS-10, 12, 14 (Mounted motor specification: P)	200 W	ø11
ETS-22007-000017	ECS-10, 12, 14 (Mounted motor specification: M, Y)	200 W/400 W	ø14
ETS-22007-000022	ECS-17 (Mounted motor specification: P)	400 W	ø14
ETS-22007-000358	ECS-17 (Mounted motor specification: F)	750 W	ø14
ETS-22007-000397	ECS-22 (Mounted motor specification: F)	750 W	ø14
ETS-22007-000024	ECS-17 (Mounted motor specification: M, Y)	750 W	ø19
ETS-22007-000029	ECS-22 (Mounted motor specification: M, Y, P)	750 W	ø19

● Maintenance parts (outside mounted sensor)

Basic price model No. 	Compatibility	Part
ETS-22008-000001	All models	Body
ETS-22008-000006		Cable

EBS

EBR

ETS

ETS Multi-Axis

ECS

ETV

ECV

EKS

EBS

EBR

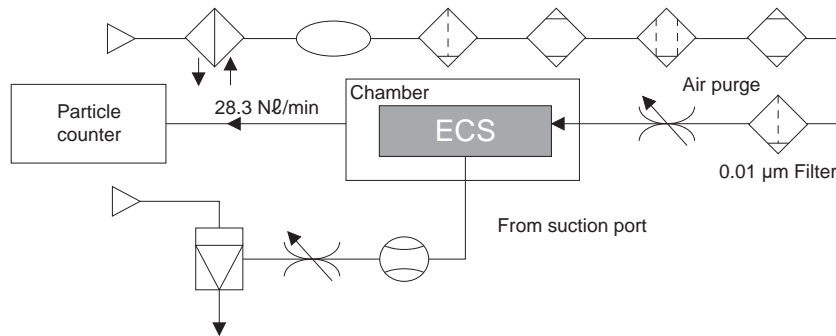
ETS

ECS

Safety
precautions

Dust generation characteristics Reference data

Test circuit



Measuring method

- (1) Set a test sample in the acrylic resin chamber.
- (2) Supply clean air at the same flow rate as the particle counter intake rate (28.3 Nℓ/min).
- (3) Place the chamber in an ISO class 4 (class 10) clean bench.
- (4) Activate the test sample, and measure changes in particle concentration over time during the specified measurement time.
- (5) Test sample operating speed

Measuring conditions

Item		Description
Test sample	Model No.	Operating speed 400 mm/sec for ECS-06-10040
		Operating speed 800 mm/sec for ECS-14-20040
		Operating speed 800 mm/sec for ECS-17-20040
	Acceleration/deceleration time	0.3 sec
	Air intake	40.0 Nℓ/min for ECS-06-10040
		60.0 Nℓ/min for ECS-14-20040
		60.0 Nℓ/min for ECS-17-20040
Chamber	Internal capacity	28.3 Nℓ
Particle counter	Name	Laser dust monitor
	Min. measurable particle diameter	0.1 μm
	Intake	28.3 Nℓ/min
Setting conditions	Sampling	10 min
	Interval	40 min
	Measurement time	50 h

Dust generation data

The values in the data are measured values under the above conditions, and are not guaranteed.

