



GS-53PC

Power-to-release High performance type PNP M12 connector type



*Please note that accessories depicted in the image are for illustrative purposes only and may not be included with the product.

Specifications

Model			GS-53PC
Lock type			Power-to-release type
Type			Advanced function type
Response time	Lock	Lock→Unlock	220 ms*1*2
		Unlock→Lock	220 ms*1*2*3
Lock	Locking force (Fzh)		Min. 2,000 N
	Alignment tolerance of lock		±2 mm ±0.08"
	Mechanical life-span		1 million cycles or more (with door operation speed of 1 m/s)
	Acceptable operation frequency		1 Hz*4
	Door radius		Min. 250 mm 9.84"
	Auxiliary release		Front, back *5
Cascading			Max. 25 units
Control output (OSSD output)	Output		Transistor outputs × 2
	Max. load current		Max. 150 mA
	Residual voltage (during ON)		Max 2.5 V (with a cable length of 5 m 16.40')
	OFF state voltage		Max 2.0 V (with a cable length of 5 m 16.40')
	Leakage current		Max. 0.5 mA
	Max. capacitive load		2.2 µF
	Load wiring resistance		Max. 2.5 Ω
AUX (Non-safety related output)	Output		Transistor output
	Number of outputs		2
	Max. load current		50 mA
	Residual voltage (during ON)		Max 2.5 V (with a cable length of 5 m 16.40')
External input (Short-circuit current)	Safety input		Approx.1.5 mA × 2
	Reset/EDM input		Approx. 10 mA × 1
	Lock control input		Approx. 2.5 mA × 2
	OSSD operation switching input		-
Applicable Standards (Safety)			EN 61508, IEC 61508(SIL2/SIL3) EN 62061, IEC62061(SIL CL2/SIL CL3) EN ISO13849-1: 2015(PLd, Category 2/PLe, Category 4) EN ISO14119(Type4) IEC 60947-5-3, EN 60947-5-3 UL 61010-1, CAN/CSA-C22.2 No.61010-1
Protection circuit			Reverse current protection, short-circuit protection and surge protection for each output
Power supply	Power voltage		24 V DC ±20 % (Ripple P-P 10 % or less, Class2)
	Power consumption		3.4 W*6

Environmental resistance	Enclosure rating		IP65/67(IEC60529), IP69K(ISO 20653) (TÜV SÜD certified), Enclosure Type 3/4X/12/13 (NEMA250)
	Operating ambient temperature		-20°C to +55C° -4°F to 131°F (No freezing)
	Operating relative humidity		5% to 95%RH
	Storage temperature		-25°C to +70°C -13°F to 158°F (No freezing)*7
	Storage relative humidity		5% to 95%RH
	Vibration resistance		10 to 55 Hz, Double amplitude 2.0 mm 0.08", 5 minutes in each of the X, Y, and Z directions (IEC 60947-5-3)
	Shock resistance		30 G in X, Y, Z directions 6 times each axis (IEC 60947-5-3)
Material	Sensor main unit	Case	SUS304, PPS, PBT, PAR, PA66, NBR
		Lock	Aluminum alloy, Zinc die cast (Nickel chrome plating)
		Cable	PVC
	Actuator	Case	PPS, PBT, NBR
		Lock	Aluminum alloy, SUS303
Weight			Approx. 380 g

*1 Risk time according to IEC60947-5-3 is 150 ms + 2 ms × (number of units cascaded -1).

*2 If the OSSD operation is open/close link mode, Detect→ Not detect: 20 ms + 2 ms × (number of units cascaded -1), Not detect → Detect: 30 ms + 25 ms × (number of units cascaded -1)

*3 430 ms when locked at the same time the actuator is detected.

*4 Acceptable door operation frequency is 3 Hz if the OSSD operation is open/close link mode. In that case, operation distance is Sao(OFF→ ON) = 3 mm 0.12", Sar(OFF→ ON) = 10.5 mm 0.41".

*5 Do not apply excessive torque (0.45N·m or higher).

*6 Power consumption temporarily increases (Max. 10.5 W, Approx. 0.2 s) when the lock control input(s) is(are) turned ON. After that, current consumption will be within the specification.

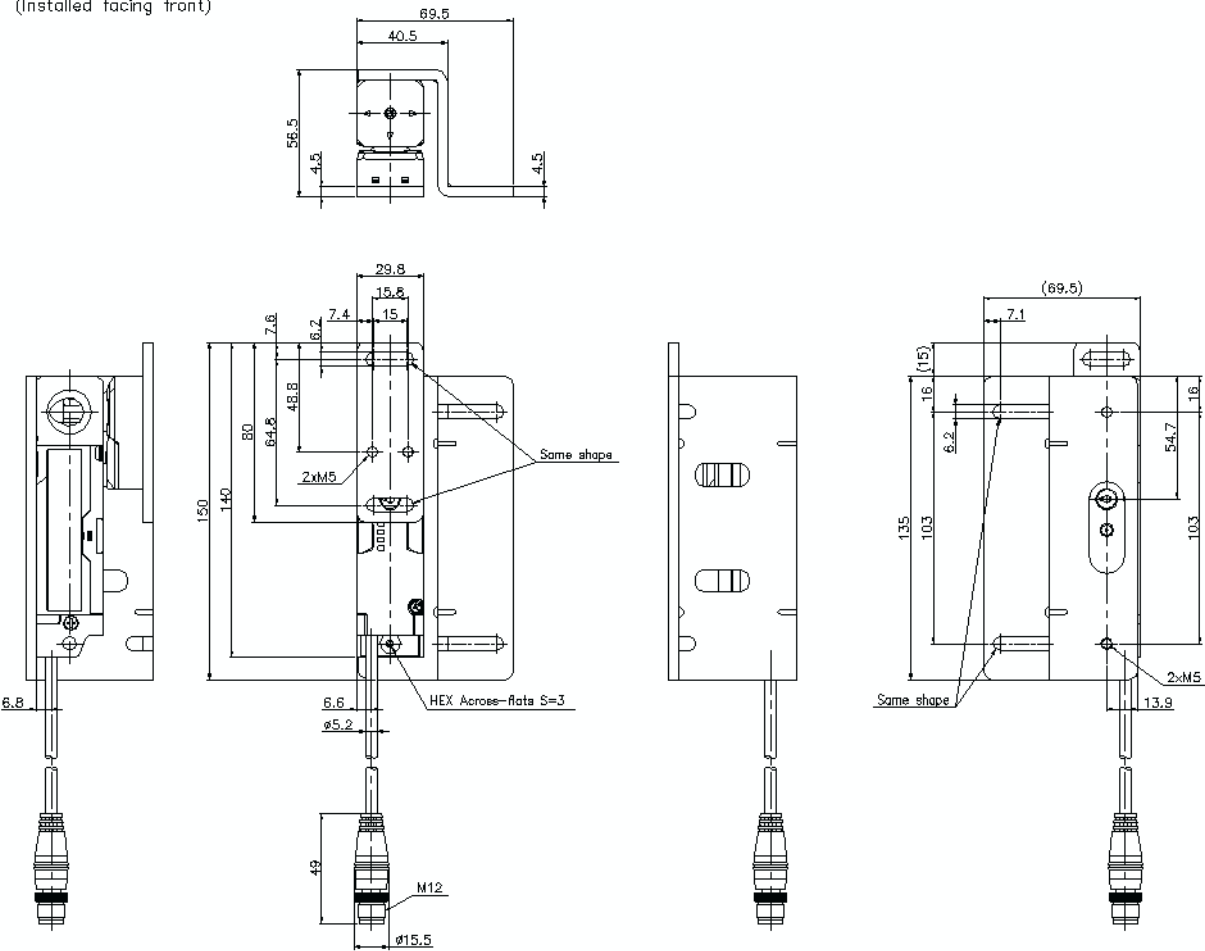
*7 When stored for a long period of time, please store it at a temperature of 55°C 131°F or lower.

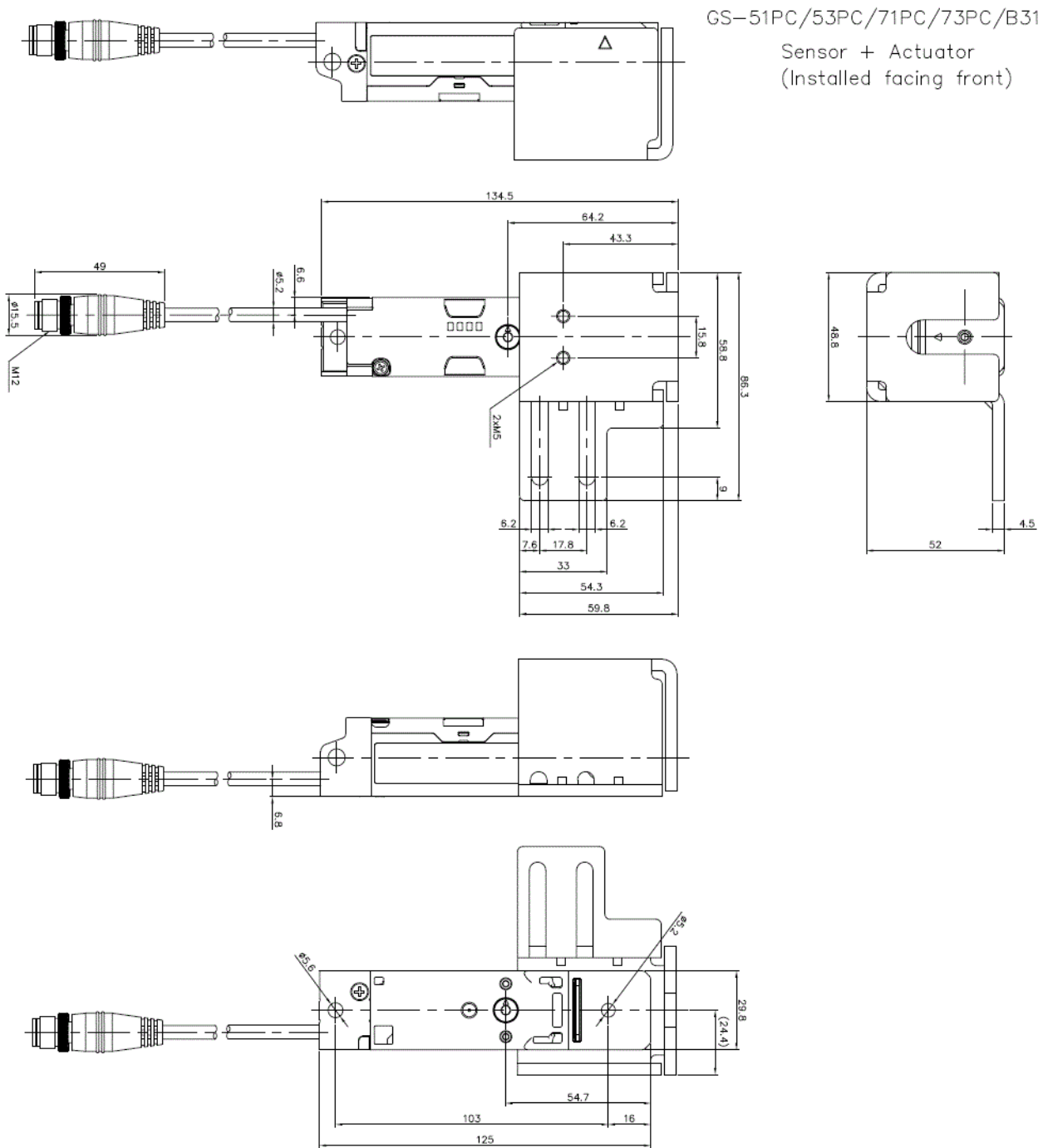
Dimensions

* Download CAD file or product manual for larger image/text and more detail.

Sensor + Actuator
(Installed facing front)

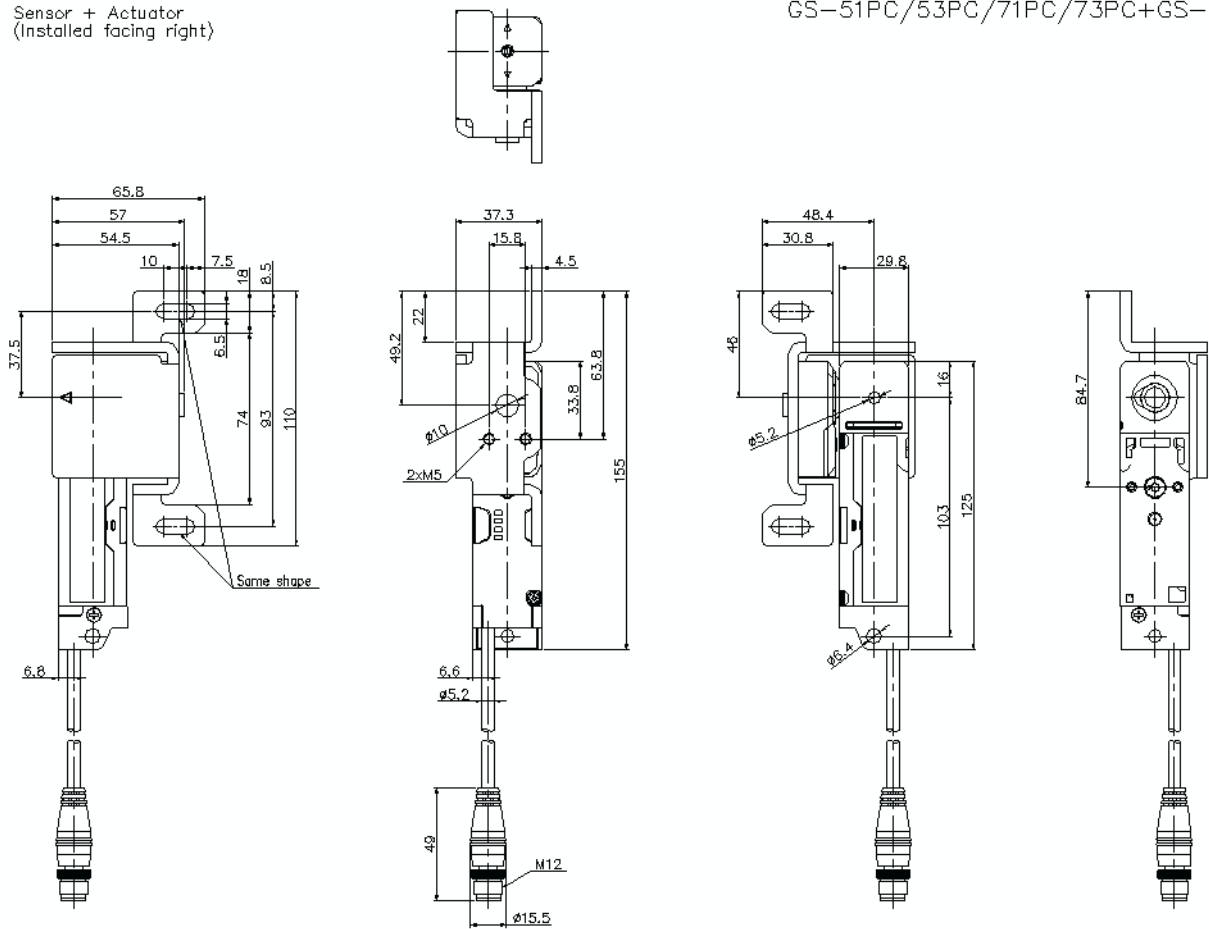
GS-51PC/53PC/71PC/73PC+GS-B21



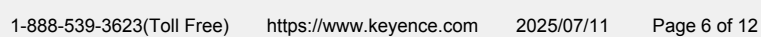


Sensor + Actuator
(Installed facing right)

GS-51PC/53PC/71PC/73PC+GS-B33

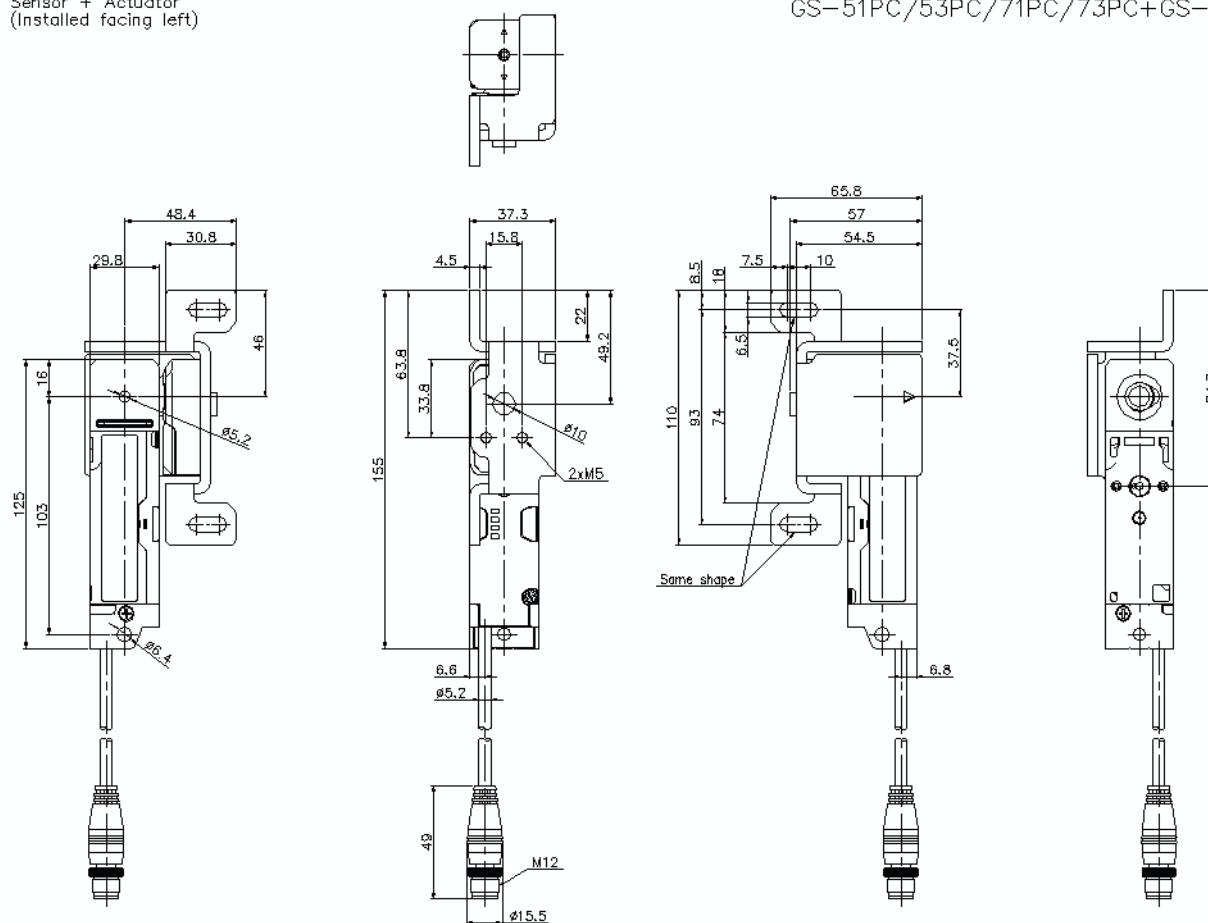


Sensor + Actuator
(Installed facing front)



Sensor + Actuator
(Installed facing left)

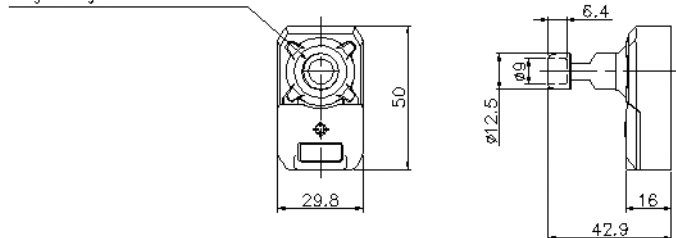
GS-51PC/53PC/71PC/73PC+GS-B43



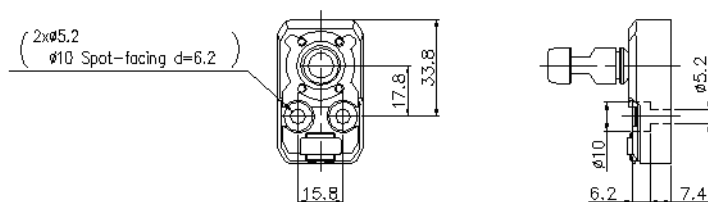
GS-51PC/53PC/71PC/73PC

Actuator

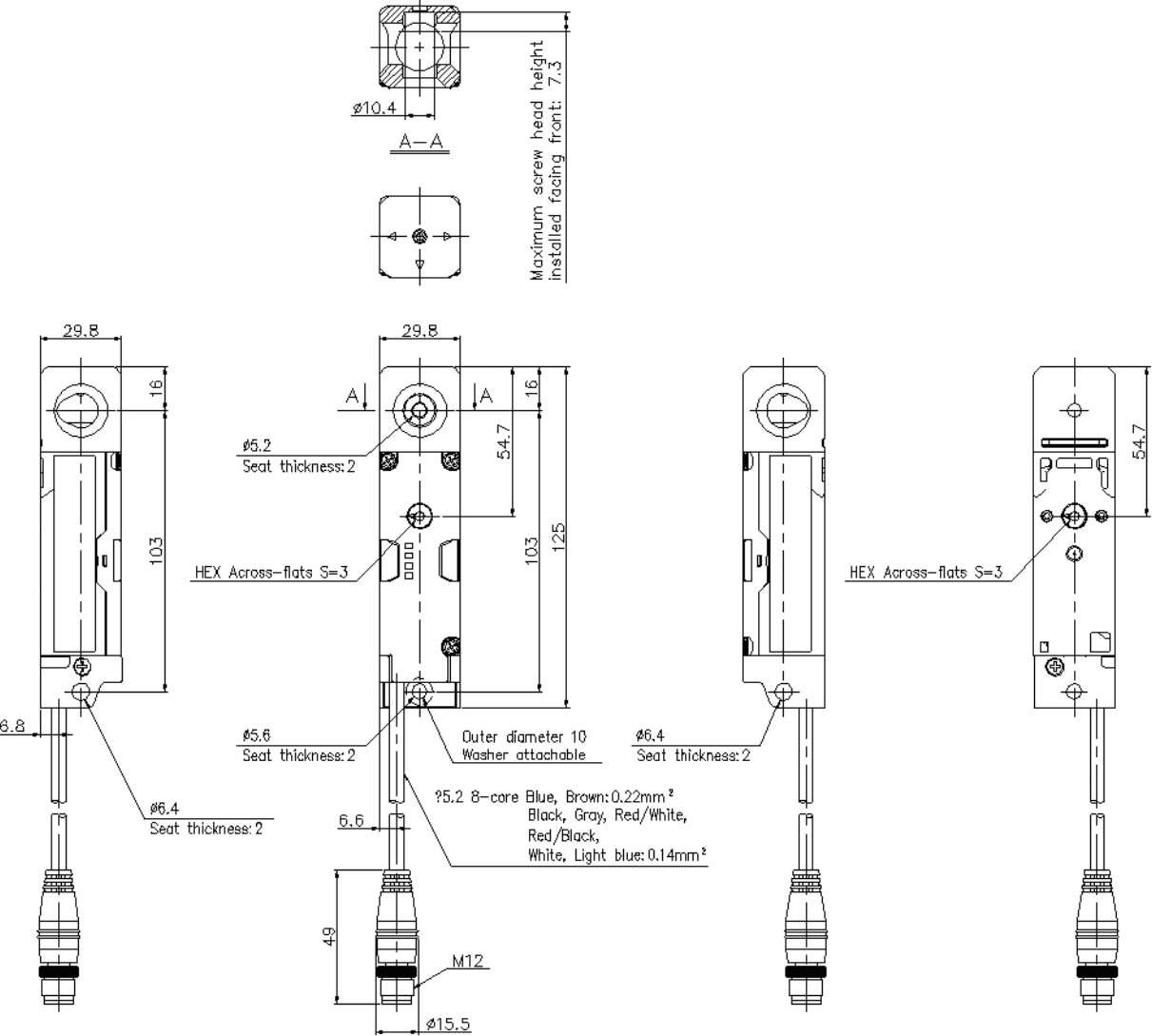
Upper, lower, left, and
right range of bolt motion: 2



Without the cover



Sensor
(Installed facing front)



Technical drawing of the M12 connector showing front, side, and detail views with dimensions and material specifications.

Top View (Front): Shows a square flange with a central screw. Dimensions include a flange width of 29.8 mm and a central hole diameter of $\phi 10.4$. A note specifies: "Maximum screw head height Installed facing right: 6.2". A section line A-A is indicated.

Bottom View (Back): Shows the rear of the connector with a central hole and four mounting holes. Dimensions include a flange width of 29.8 mm and a central hole diameter of $\phi 5.2$. A note specifies: "Seat thickness: 2".

Side View (Left): Shows the side profile of the connector. Dimensions include a total height of 125 mm, a flange thickness of 6.8 mm, and a central hole diameter of $\phi 5.2$. A note specifies: "Seat thickness: 2".

Side View (Right): Shows the side profile of the connector. Dimensions include a total height of 103 mm, a flange thickness of 6.6 mm, and a central hole diameter of $\phi 5.2$. A note specifies: "Seat thickness: 2".

Detail View (Bottom): Shows the bottom of the connector with a central hole and four mounting holes. Dimensions include a flange width of 29.8 mm, a central hole diameter of $\phi 5.2$, and a flange thickness of 6.6 mm. A note specifies: "Seat thickness: 2".

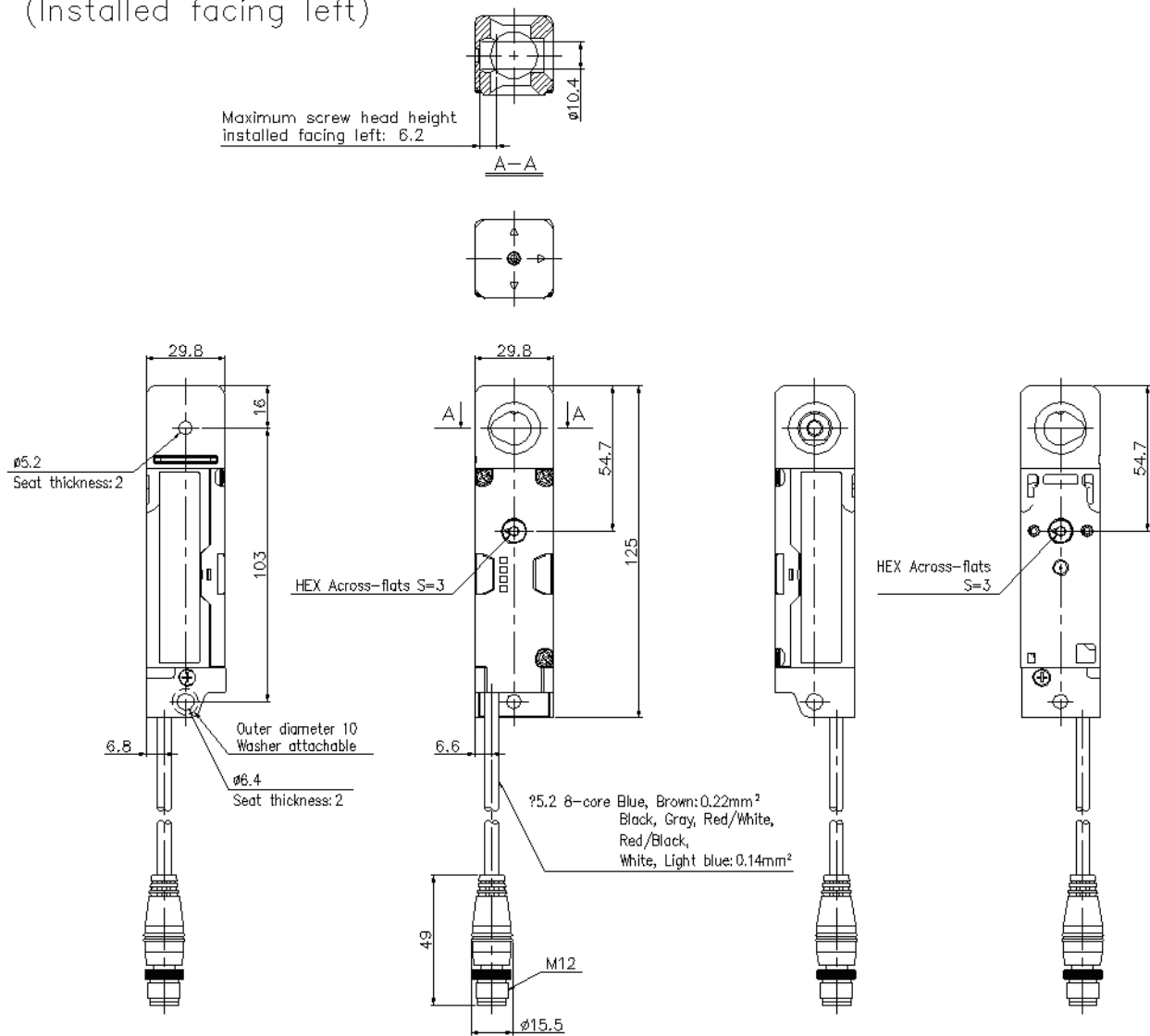
Material Specifications:

- Blue, Brown: 0.22mm²
- Black, Gray, Red/White, Red/Black, White, Light blue: 0.14mm²

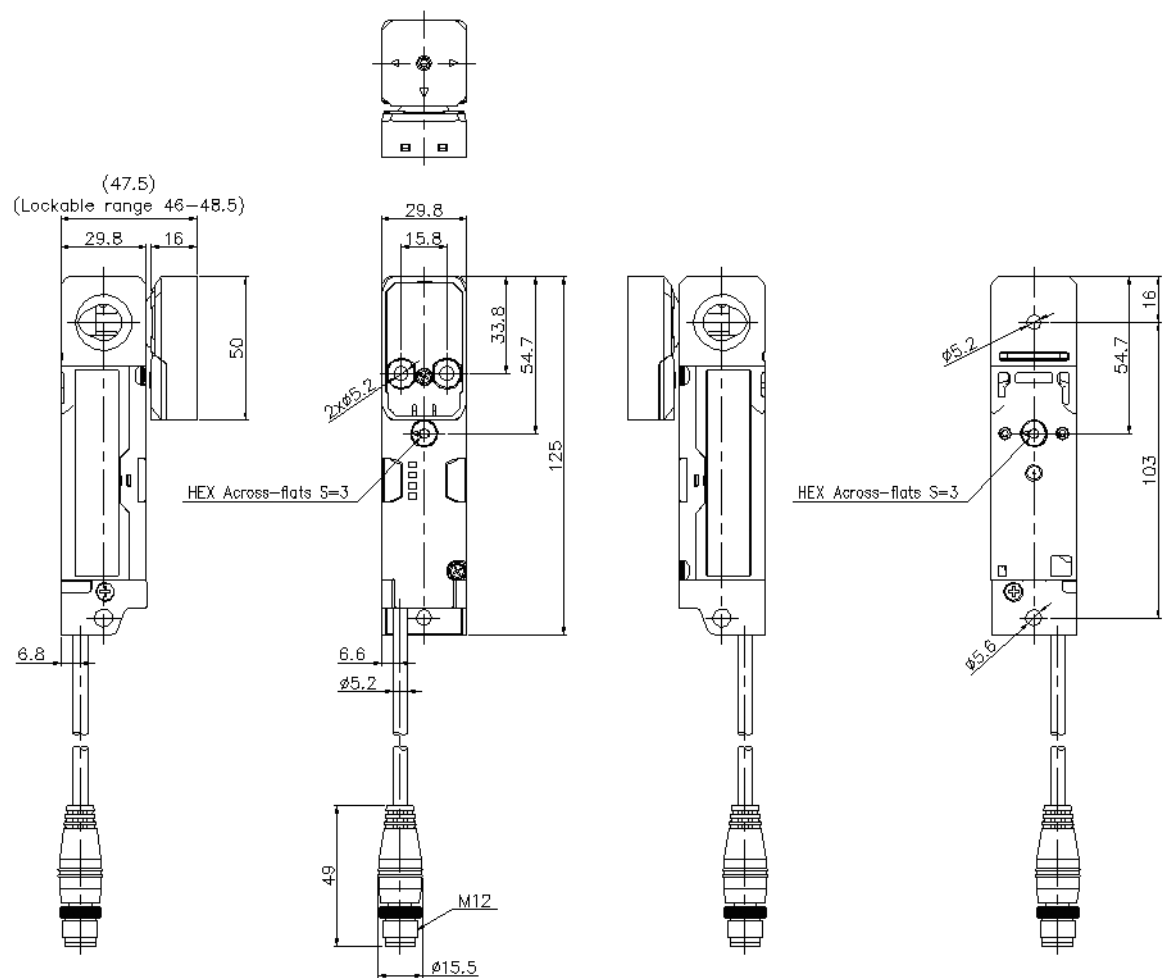
Other Dimensions and Notes:

- HEX Across-flats S=3
- Outer diameter 10 Washer attachable
- M12
- $\phi 15.5$
- 49
- 54.7
- 16
- 103
- 29.8
- 6.8
- 6.6
- 10.4
- 5.2
- 15.5

Sensor
(Installed facing left)



Sensor + Actuator
(Installed facing front)



Sensor + Actuator
(Installed facing right)

