



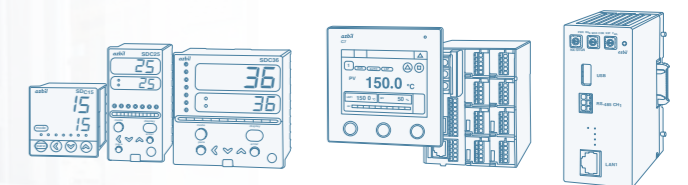
Products for the Automobile Industry

Selection Guide

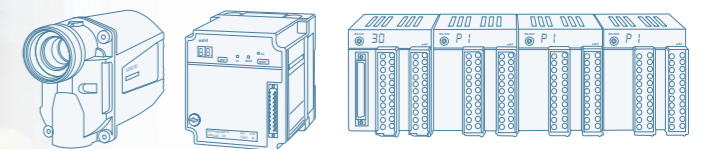
Switches and Sensors



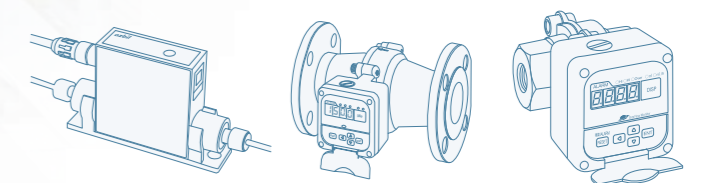
Control Products for Instrumentation



Combustion Safety and Control Systems



Flowmeters



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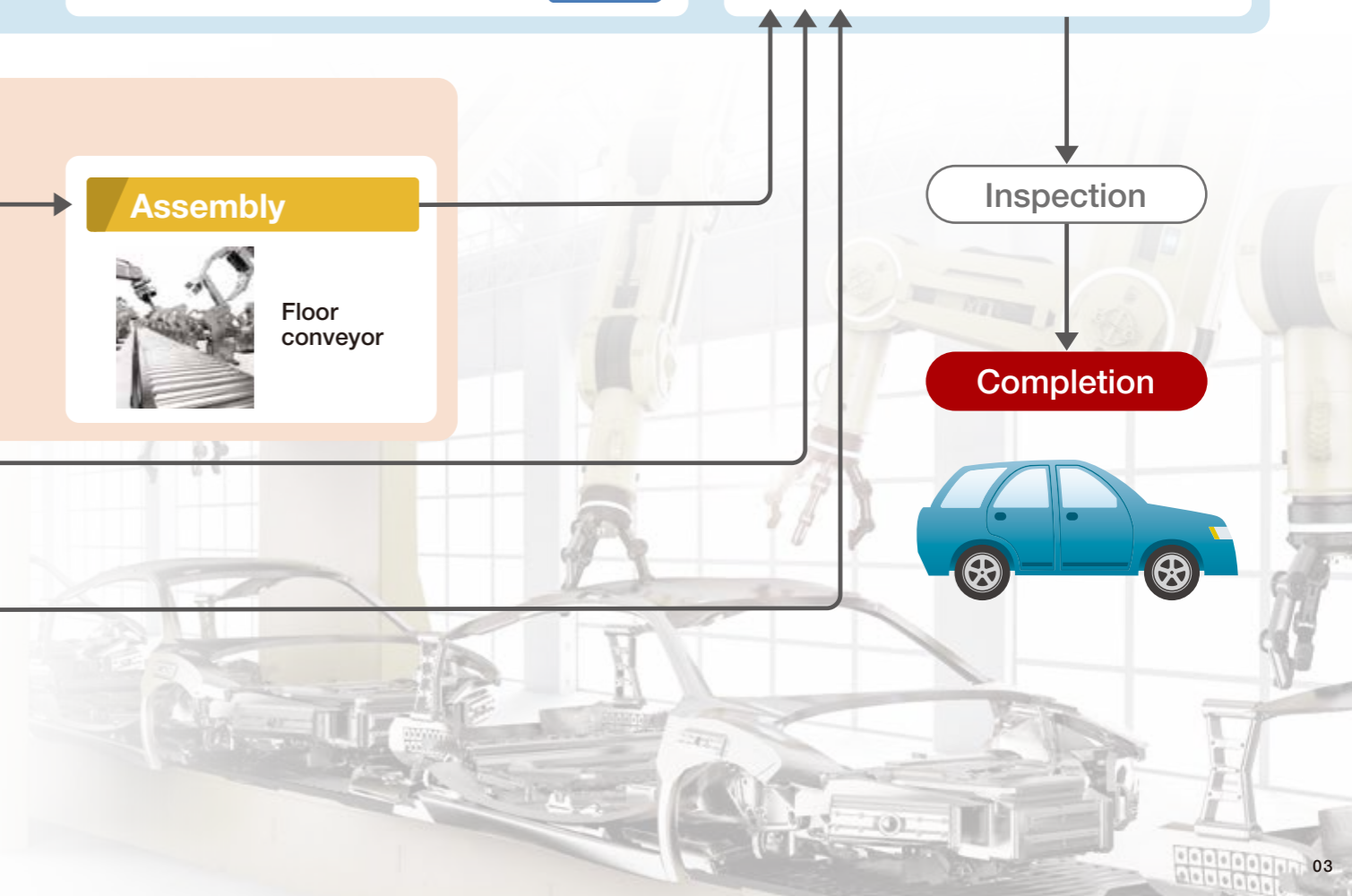
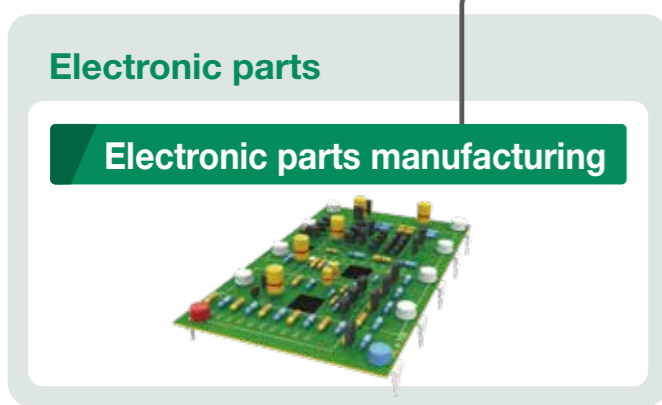
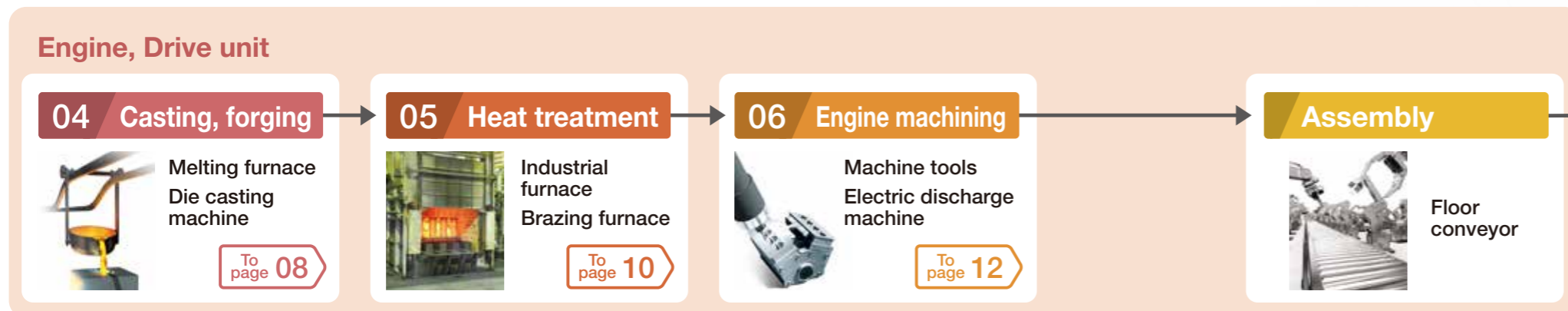
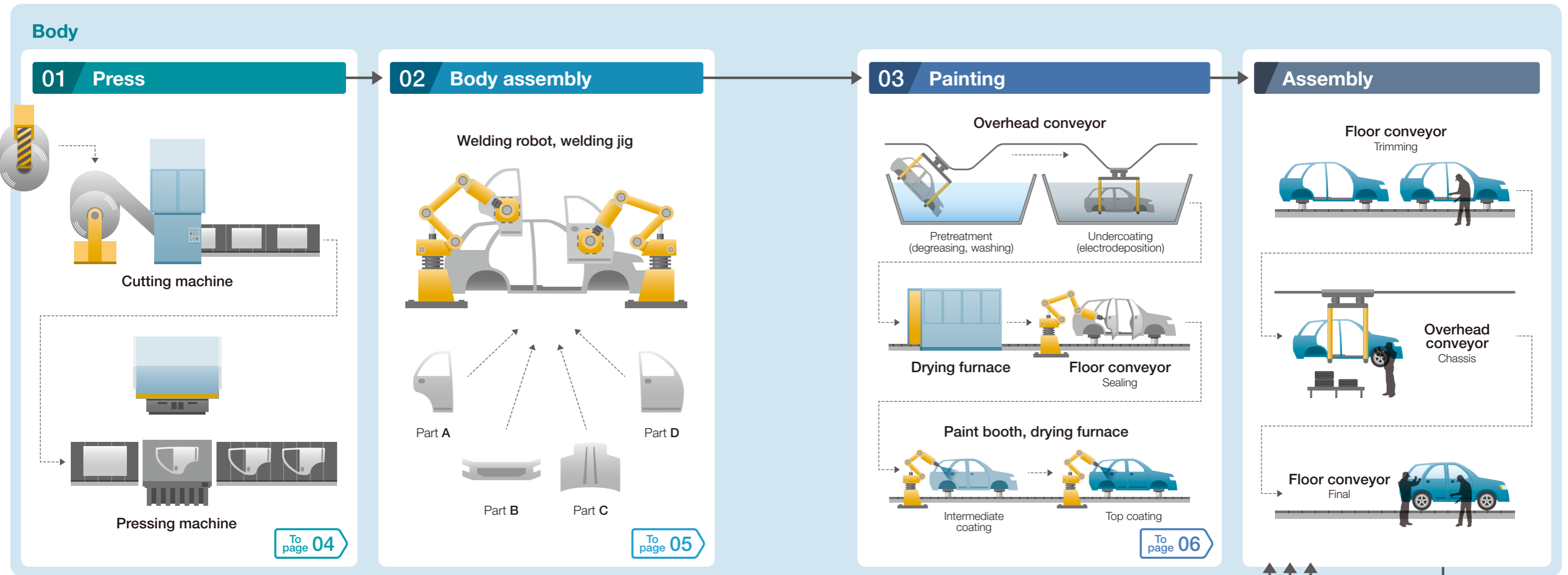
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Azbil Corporation
Advanced Automation Company

1-12-2 Kawana, Fujisawa
Kanagawa 251-8522 Japan
URL: <https://www.azbil.com>

1st Edition : Mar. 2021-SO

Overview of the Automobile Manufacturing Process



01

Press process

Cutting machine Pressing machine [Environment] Vibration

Switches

Customer's request

Limit switches that resist deterioration and breakage by vibration.

[Application] Mold presence & position detection, Vertical strokes detection



Ultra long life / Die-cast housing
Model 1LS-J7_

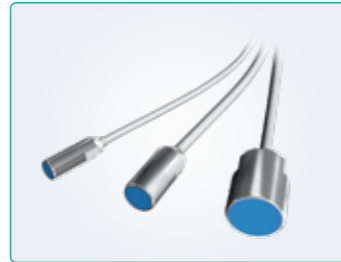


Compact Horizontal (rugged) / Die-cast housing
Model SL1_

Customer's request

Proximity switches with a long-range detection to prevent collision with workpieces.

[Application] Mold presence & position detection, Vertical strokes detection



Long-distance proximity switches
Model FL7M-_W/Y

Customer's request

Detect fine changes (punching blade chipping, etc.) at a reasonable cost

[Application] Punching blade chipping detection



Photoelectric Switches
Model HP7- T_



Slit for thru-scan model
Model HP-S_



02

Body assembly process (welding)

Welding robot Welding jig [Environment] Spatter, magnetic field noise from welding current

Switches

Customer's request

Spatter-guarded limit switches

[Application] Transport pass-by detection



Spatter-Guarded Limit Switches
Model 1LS71-JW_



Spatter-Guarded Limit Switches
Model 5LS7-JW_

Customer's request

Proximity switches that resist malfunction due to spatter

[Application] Parts presence detection, Discrimination of parts



Spatter-Guarded Cylindrical Proximity Switches
Model FL7M-___W



Spatter-guarded connector cover
Model FL-PA_ W

Customer's request

Countermeasures against breakage due to collision with workpiece and against wear from removing spatter

[Application] Parts presence detection, Discrimination of parts



Stainless Steel Sensing Face Proximity Switches
Model FL7S-___



Spatter-guarded protective cover
Model FL-PA_ W

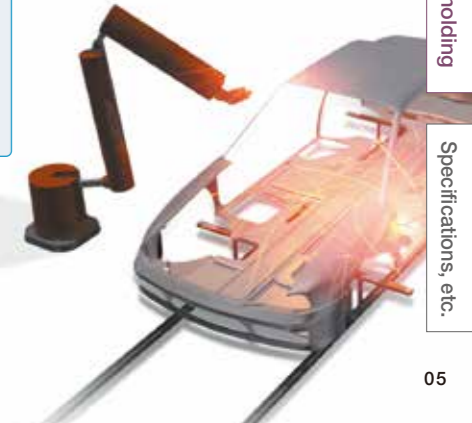
Customer's request

Countermeasures against malfunction due to magnetic field noise from welding

[Application] Parts presence detection, Discrimination of parts



Stainless Steel Sensing Face Proximity Switches
Model FL7S-___



01 Press

02 Body assembly

03 Painting

04 Casting, forging

05 Heat treatment

06 Engine machining

07 Parts molding

Specifications, etc.

Switches

Customer's request

Reliable pass-by detection (for conveyor)

[Application] Conveyor, Pass-by detection



High overtravel /
High sensitivity Limit Switches
Model 1LS-J55_

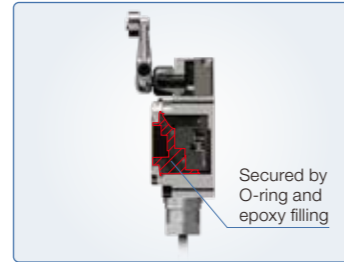


High overtravel /
Ultra long life Limit Switches
Model 1LS-J73_

Customer's request

Products against harsh environment

[Application] Pretreatment (conveyor), Pass-by detection (chemical environment)



High overtravel /
Resin filling Limit Switches
Model 1LS-J550_-MD03



High overtravel /
High-resistance Limit Switches
Model 1LS-J550H

[Application] Electrodeposition (conveyor, drying furnace), Pass-by detection (high-heat environment)



2-Point Detection
Explosion-Proof Switches
Model VCX-7_0_



Vertical
Explosion-Proof Switches
Model _LX700_

[Application] Intermediate/top coating process (conveyor, paint booth, drying furnace), Pass-by detection (explosion-proof environment)

Temperature & humidity control

Customer's request

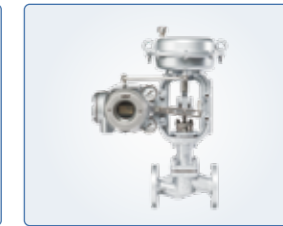
Keep constant temperature & humidity to avoid uneven painting



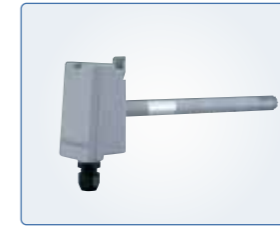
Single Loop Controller
Model C__



Temperature Sensors
Model YY___



Various control valves



Insertion Dewpoint
Temperature Sensor
Model HTY79



Control Motor
Model ECM3000

Combustion safety and control system

Customer's request

Safe operation with combustion safety control that meets the latest standards



Burner interlock module and
burner control module
Model RX___



Advanced Ultraviolet
Flame Detector
Model AUD300C



Ignition Transformer
Model ATN110A-1



High-Performance Gas
Solenoid Valve
for Industrial Applications
Model GV-A___



GAS Flow Monitors
Model CMG___



Gas Pressure Switch
Model C6097A

IoT devices

Customer's request

Collection & visualization of data from devices without programming



Network Instrumentation Module
Smart Device Gateway*
Model NX-SVG

* A communication gateway that allows the interchange of information between various kinds of control device without programming, enabling smarter development work.



Casting, forging

Melting furnace Die casting machine [Environment] High heat, dust

Switches

Customer's request

Limit switches that resist deterioration & breakage by heat

[Application] Sand mold presence detection

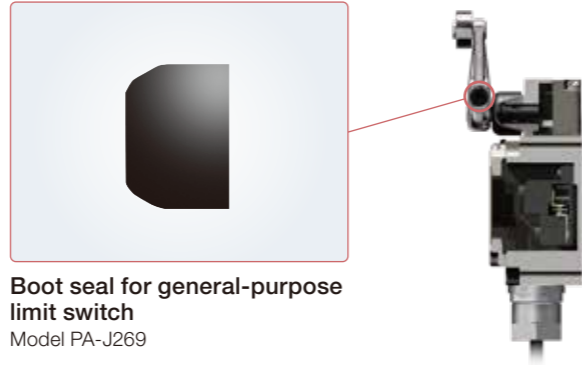


High-resistance Limit Switches
Model 1LS_-J_H

Customer's request

Countermeasures against switch malfunctions caused by dust

[Application] Sand mold presence detection



Boot seal for general-purpose limit switch
Model PA-J269

Minute liquid measurement

Customer's request

Control of casting conditions



Micro Flow Rate Liquid Flow Meter
Model F7M



Temperature control

Customer's request

Keep melting temperature constant



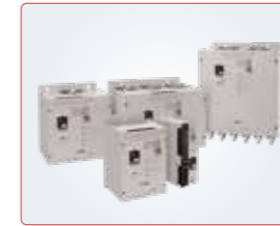
Single Loop Controllers
Model C_ _



Temperature Sensors
Model YY_ _ _



Control Motor
Model ECM3000



Three-phase Power Controller
Model PU2_



Multi-loop Controller with Multifunction Display (with advance warning of problems)
Model C7G

Combustion safety and control system

Customer's request

Safe operation with combustion safety control that meets the latest standards



Dynamic Self-Checking Burner controllers
Model AUR455



Advanced Ultraviolet Flame Detector
Model AUD300C



Ignition Transformer
Model ATN110A-1



High-Performance Gas Solenoid Valve for Industrial Applications
Model GV-A_ _ _



GAS Flow Monitors
Model CMG_ _ _



Gas Pressure Switch
Model C6097A

IoT devices

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Collection & visualization of data from devices without programming



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Heat treatment process

Industrial furnace Brazing furnace [Environment] High heat

Switches

Customer's request

Limit switches that resist deterioration & breakage by heat

[Application] Heat treatment furnace, Inlet/outlet pass-by detection



High-resistance Limit Switches
Model 1LS_-J_H

Customer's request

Object detection from a remote location, without effects by heat or smoke

[Application] Heat treatment furnace, Inlet/outlet pass-by detection



Long-distance Photoelectric Switches
Model HP7-T4_



Temperature control

Customer's request

Keep heat treatment quality at a specific level



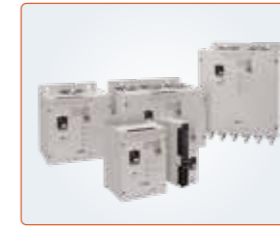
Multi-loop Controller with Multifunction Display
Model C7G



Temperature Sensors
Model YY_ _ _ _



Control Motor
Model ECM3000



Three-phase Power Controller
Model PU2_

Combustion safety and control system

Customer's request

Safe operation with combustion safety control that meets the latest standards



Dynamic Self-Checking Burner controllers
Model AUR455



Advanced Ultraviolet Flame Detector
Model AUD300C



Ignition Transformer
Model ATN110A-1



High-Performance Gas Solenoid Valve for Industrial Applications
Model GV-A_ _ _ _



GAS Flow Monitors
Model CMG_ _ _ _



Gas Pressure Switch
Model C6097A

IoT devices

Customer's request

Collection & visualization of data from devices without programming



Network Instrumentation Module Smart Device Gateway*
Model NX-SVG

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Pressure Transmitters

Customer's request

Monitor the pressure inside the furnace.



Differential Pressure Transmitters / Pressure Transmitters
Model GTX_ _ D

Switches

Customer's request

Avoid **switch breakage** by coolant

[Application] Transport of objects inside machine tools, pass-by detection



Resin filling Limit Switches
Model 1LS-J5_0SEC-MD03, 5LS_-JSEC-MD03, 1LS-J7_0SEC-MD03,



DC2-Wire Environment-Resistant Cylindrical Proximity Switches
Model FL7M-___-C



Compact Horizontal Limit Switches (Rugged)
Model SL1-_C



Distance-Adjustable Photoelectric Switch
Model H2B-___

[Application] Inside machine tools, ATC presence detection, ATC shutter opening/closing detection, Pallet seating detection, Origin/end point detection

Customer's request

Avoid **proximity switch malfunction** due to aluminum shavings

[Application] Engine block machining machine, Object presence detection



DC2-Wire Aluminum-Chip Resistant Cylindrical Proximity Switches
Model FL7M-___A



DC2-Wire Environment-Resistant Cylindrical Proximity Switches / Aluminum-Chip Resistant type
Model FL7M-___A-C

Switches

Customer's request

Reduce time spent adjusting switch installation position, eliminate **installation variation** between workers.

[Application] Machining center, Main spindle position & state detection, Lathe Chuck cylinders position & state detection



Adjustable Proximity Sensor
Model H3C-H_

IoT devices

Customer's request

Collection & visualization of data from NC and peripheral coolant equipment

[Application] Transport & pass-by detection



Network Instrumentation Module Smart Device Gateway*
Model NX-SVG

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Switches

Customer's request

Photoelectric switches with easy optical axis adjustment

[Application] Transport line, Large molded parts detection



Photoelectric switch with front light incidence indicator
Model HP7-T4

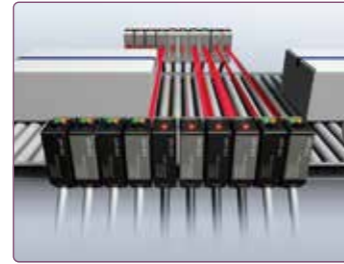


Retroreflective switches feature polarizing filters
Model HP7-P_ _

Customer's request

Photoelectric switches without mutual interference

[Application] Transport line, Discrimination of molded parts



Thru-scan model Different Frequency type Photoelectric Switches
Model HP7- T1_



Mutual interference protection filter
Model HP-U02

Customer's request

Eliminate misdetection for black tires, black parts

[Application] Injection molding machine, Black molded parts detection
Vulcanizer, Tire detection



Photoelectric Switches
Model HP7- G



Temperature control

Customer's request

Keep a constant mold temperature to improve quality

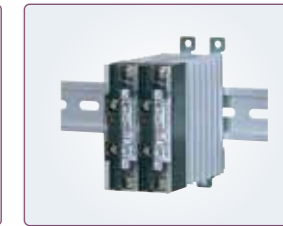
[Application] Injection molding



Network Instrumentation Modules
Model NX- _ _ _



Temperature Sensors
Model YY _ _ _



Solid-State Relay
Model PGM10 _

Temperature & pressure control

Customer's request

Keep a constant vulcanization temperature & pressure to improve quality

[Application] Vulcanization process



Multi-loop Controller with Multifunction Display
Model C7G



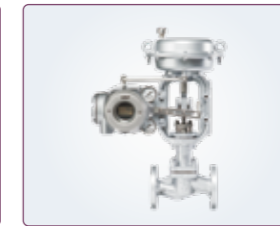
Temperature Sensors
Model YY _ _ _



Digital Pressure Detectors Intelligent Pressure Sensor and Switch
Model SPS300A



Smart Pressure Transmitters
Model PTG71_ /72_



Various control valves

IoT devices

Customer's request

Collection & visualization of data from devices without programming



Network Instrumentation Module Smart Device Gateway*
Model NX-SVG

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Limit Switches

Type	Actuator		Operating characteristics			Basic catalog listing	Model No.						
	Name	Shape	Max. O.F. (operating force)	Max. P.T. (pretravel)	Min. T.T. (total travel)		With LED lamp, 12 to 125 Vac/dc EC	With neon lamp, 100/200 Vac E	Double seal S	Double seal + LED SEC	Heat-resistant type	DC preloaded connector, 30 cm + LED+double seal+Resin filled	DC preloaded connector, 30 cm + LED+double seal+LED+Resin filled
General purpose	Roller lever		8.9N	High sensitivity 10°	High overtravel 80°	1LS-J550	1LS-J550EC	1LS-J550E	1LS-J550S	1LS-J550SEC	1LS-J550H	1LS-J550S-MD03	1LS-J550SEC-MD03
Spatter-guarded	Roller lever		8.9N	High sensitivity 10°	High overtravel 80°	1LS71-JW2	1LS71-JWC	1LS-JW	1LS71-JSW2	1LS71-JSWC	-	-	-
	Boot seal roller plunger		15.7N	1.7mm	7.3mm	-	5LS7-JWC	5LS7-JW	-	5LS7-JSWC	-	-	-
Ultra long life	Roller lever		13.4N	Standard model 20°	Standard travel 50°	1LS-J700	1LS-J700EC	-	-	1LS-J700SEC	-	1LS-J700S-MD03	1LS-J700SEC-MD03
				High sensitivity 5°	Standard travel 50°	1LS-J710	1LS-J710EC	-	-	1LS-J710SEC	-	1LS-J710S-MD03	1LS-J710SEC-MD03
			8.9N	Standard model 20°	High overtravel 80°	1LS-J720	1LS-J720EC	-	-	1LS-J720SEC	-	1LS-J720S-MD03	1LS-J720SEC-MD03
				High sensitivity 10°	High overtravel 80°	1LS-J730	1LS-J730EC	-	-	1LS-J730SEC	-	1LS-J730S-MD03	1LS-J730SEC-MD03



Limit Switches

Type	Actuator		Basic catalog listing	Low current load
	Name	Shape		
Compact Horizontal	Roller plunger		SL1-A	SL1-AK
	Boot seal roller plunger		SL1-B	SL1-BK
	Cross roller plunger		SL1-D	SL1-DK
	Long roller plunger		SL1-E	SL1-EK
	Plunger		SL1-H	SL1-HK
	Short roller lever		SL1-P	SL1-PK
Compact Horizontal (rugged)	Roller plunger		SL1-AC	SL1-AKC
	Boot roller plunger		SL1-BC	SL1-BKC
	Cross roller plunger		SL1-DC	SL1-DKC
	Long roller plunger		SL1-EC	SL1-EKC
	Plunger		SL1-HC	SL1-HKC
	Short roller lever		SL1-PC	SL1-PKC

Proximity Switches

Shape	Cylindrical				
	DC 2-wire proximity switches (long-distance)	DC 2-wire proximity switches (spatter-guarded)	Proximity switches (all-stainless steel housing)	DC 2-wire proximity switches (environment-resistant)	Adjustable Proximity Sensor Model H3C-H_
Model description and appearance					
Sensor head size and sensing distance	M12 4mm M18 8mm M30 15mm	M12 3mm M18 7mm M30 10mm	M8 1.5mm M12 2mm M18 5mm M30 8mm	M8 2mm M12 3mm M18 7mm M30 10mm	M8 2mm M12 3mm
Model No. coding examples (for preloaded models excluding FL7S)	<p>Base model No. FL7M-</p> <p>4: M12 8: M18 15: M30 W: N.O. Y: N.C.</p> <p>All models are without polarity.</p>	<p>Base model No. FL7M-</p> <p>■ With polarity</p> <ul style="list-style-type: none"> M8 / M12 / M18 N.O. M30 N.O. N.C. <p>■ Without polarity</p> <ul style="list-style-type: none"> M12 M18 M30 	<p>Base model No. FL7S-</p> <p>● 2-wire</p> <ul style="list-style-type: none"> General use Aluminum shavings-resistant <p>● 3-wire (M8 only)</p> <ul style="list-style-type: none"> NPN PNP <p>All FL7S switches are N.O. Connection of 3-wire models (M8 only) is by 80 cm preloaded connector.</p>	<p>Base model No. FL7M-</p> <p>● General use</p> <ul style="list-style-type: none"> M8 / M12 / M18 N.O. M30 N.O. N.C. <p>■ Aluminum shavings-resistant</p> <ul style="list-style-type: none"> N.O. N.C. 	<ul style="list-style-type: none"> M8 H3C-HB02M-CP31 M12 H3C-HC03M-CP31

Photoelectric Switches

Name and model	Photoelectric Switches Model HP7-___	Distance-Adjustable Photoelectric Switch Mode HP7-G__	Distance-Adjustable Photoelectric Switch Mode H2B-___
Model description and appearance	Our industry-standard product line now offers new functions. A wide variety of products can meet various detection needs.	Balances ultralong distance with compact size. Detection distance is about 3x that of same-size products.	An environment-resistant photoelectric switch that withstands harsh environments. Provides robust, oil-resistant service.
Detection method, detection distance	Thru-scan models: 4, 15, 30 m Reflector models: 3, 5 m Diffuse reflection models: 50 cm, 1 m Wide-beam diffuse reflection models: 50, 100 mm Transparent object detection reflector models: 50 cm, 1 m, 2 m	Triangulation reflection type: 750 mm	Thru-scan model: 23 m Reflector model: 4.5 m Diffuse reflection model: 0.8 m

01 Press

02 Body assembly

03 Painting

04 Casting, forging






05 Heat treatment

06 Engine machining











07 Parts molding

Specifications, etc.









Digital Indicating Controllers

Name and model	Single Loop Controller Model C15	Single Loop Controller Model C25	Single Loop Controller Model C26
Appearance	   	   	   
Control channels	1	1	1
Sampling cycle	500 ms	300 ms	300 ms
Rated power supply voltage	100 to 240 V AC 50/60 Hz 24 V AC 50/60 Hz, 24 to 48 V DC Note: Varies depending on the model.	100 to 240 V AC 50/60 Hz 24 V AC 50/60 Hz, 24 V DC Note: Varies depending on the model.	100 to 240 V AC 50/60 Hz 24 V AC 50/60 Hz, 24 V DC Note: Varies depending on the model.
External dimensions (mm)	H48 × W48 × D62	H96 × W48 × D70	H96 × W96 × D70
Panel cutout size (mm)	45 ^{+0.5} × 45 ^{+0.5}	44 ^{+0.5} × 92 ^{+0.5}	92 ^{+0.5} × 92 ^{+0.5}

















Digital Indicating Controllers

Name and model	Single Loop Controller Model C35	Single Loop Controller Model C36	Multi Loop Controller Model C45A
Appearance	   	   	   
Control channels	1	1	1 or 2
Sampling cycle	100 ms	100 ms	25 ms, 50 ms, 100 ms, 300 ms
Rated power supply voltage	100 to 240 V AC 50/60 Hz 24 V AC 50/60 Hz, 24 V DC Note: Varies depending on the model.	100 to 240 V AC 50/60 Hz 24 V AC 50/60 Hz, 24 V DC Note: Varies depending on the model.	100 to 240 V AC 50/60 Hz 24 V DC Note: Varies depending on the model.
External dimensions (mm)	H96 × W48 × D70	H96 × W96 × D70	H96 × W48 × D130
Panel cutout size (mm)	44 ^{+0.5} × 92 ^{+0.5}	92 ^{+0.5} × 92 ^{+0.5}	44 ^{+0.5} × 92 ^{+0.5}









Digital Indicating Controllers

Name and model	Multi-Loop Controller with Multifunction Display	
	Multi Loop Controller Model C46A	Multi-Loop Controller with Multifunction Display Model C7G
Appearance	   	   
Control channels	1 or 2	1, 2, 3, 4
Sampling cycle	25 ms, 50 ms, 100 ms, 300 ms	10 ms, 50 ms, 100 ms
Rated power supply voltage	100 to 240 V AC 50/60 Hz 24 V DC Note: Varies depending on the model.	100 to 240 V AC 50/60 Hz 24 V DC Note: Varies depending on the model.
External dimensions (mm)	H96 × W96 × D130	H92 × W92 × D138.7 (integrated mounting)
Panel cutout size (mm)	92 ^{+0.5} × 92 ^{+0.5}	92 ^{+0.5} × 92 ^{+0.5}






Network Instrumentation Modules

Name and model	Controller Module Model NX-D15	Controller Module Model NX-D25	Controller Module Model NX-D35	Supervisor Module Model NX-S11/12/21/01
Appearance	   	   	   	   
Control loops	4	4	2, 4	32 (8 units)
Sampling cycle	500 ms	200 ms	100 ms	-
Rated power supply voltage	24 V DC	24 V DC	24 V DC	24 V DC
External dimensions (mm)	H100 × W30 × D104	H100 × W30 × D104	H100 × W30 × D104	H100 × W30 × D85




Network Instrumentation Modules

Name and model	Digital Input Module Model NX-DX_	Digital Input Module Model NX-DY_
Appearance	   	   
Inputs	16	16 (sink/source)
Outputs	-	16
Rated power supply voltage	24 V DC	24 V DC
External dimensions (mm)	H100 × W30 × D104	H100 × W30 × D104






Network Instrumentation Modules

Name and model	Communication Box Model NX-CB2/CB1	Communication Adapter Model NX-CL1/CR1
Appearance	    (model NX-CB1 only)	
Individual specifications	100 Mbps Ethernet RJ45 (4 ports) With an optical port: 100 Mbps Ethernet RJ45 (3 ports) + LC (1 port)	RJ45 (1 port)
Mounting method	DIN rail	DIN rail
Rated power supply voltage	24 V DC	-
External dimensions (mm)	H100 × W30 × D85	H100 × W20 × D26.4

Network Instrumentation Module Smart Device Gateway*

Name and model	Network Instrumentation Module Smart Device Gateway* Model NX-SVG
Appearance	  
Event bus	-
Mounting method	DIN rail
Communication port	Ethernet: 2, RS-485: 2
Rated power supply voltage	24 V DC
External dimensions (mm)	H100.5 × W45.8 × D84.3

* A communication gateway that allows the interchange of information between various kinds of control device without programming, enabling smarter development work.

 Product has CE Marking, allowing export to Europe.  Product meets safety standards in the U.S. and Canada.  These products are compliant with Korean safety standards.  S-marked product compliant with Korea Occupational Safety and Health Agency (KOSHA) requirements.  Product meets ship classification society requirements.

01 Press

02 Body assembly

03 Painting

04 Casting, forging




05 Heat treatment

06 Engine machining




07 Parts molding

Specifications, etc.


Temperature Sensors (Thermocouples)

Name and model	Temperature Sensor (General-Purpose Sheathed Thermocouple) Model YYF__	Temperature Sensor (General-Purpose Sheathed Thermocouple) Model YYE__	Temperature Sensor (General-Purpose Thermocouple) Model YYC__
Appearance			
Element type	Single/Double	Single/Double	Single/Double
Type	K, E, J, T	K, E, J, T	K, E, J, T
Measurement range	-40 to +900 °C	-40 to +900 °C	0 to 900 °C
Material	ASTM316L (equivalent to SUS316L)	ASTM316L (equivalent to SUS316L)	SUS316
Protective tube outside diameter(mm)	3.2/4.8/6.4/8.0	1.0/1.6/3.2/4.8/6.4/8.0 (only straight type single element available for 1.0/1.6)	10/12/15/22 (21.7)


Temperature Sensors (Thermocouples)

Name and model	Temperature Sensors (Resistance Temperature Detectors)		
	Temperature Sensor (Simple Thermocouple) Model YYU1_/2_/3_	Temperature Sensor (Simple Thermocouple) Model YYU4_	Temperature Sensor (General-Purpose Resistance Temperature Detector) Model YYK__
Appearance			
Element type	Single	Single	Single/Double
Type	K, J	K, J	Pt100Ω 3-wire type JPt100Ω 3-wire type
Measurement range	0 to 250 °C	0 to 150 °C, 0 to 250 °C	0 to 250 °C, 0 to 500 °C
Material	SUS316	-	SUS316
Protective tube outside diameter(mm)	3.2	-	3.2/4.8/6.4/8.0



Temperature Sensors
(Resistance Temperature Detectors)

Name and model	Temperature Sensor (General-Purpose Resistance Temperature Detector) Model YYP__
Appearance	
Element type	Single/Double
Type	Pt100Ω 3-wire type JPt100Ω 3-wire type
Measurement range	-200 to +100 °C, -40 to +250 °C, 0 to 500 °C
Material	SUS316
Protective tube outside diameter(mm)	10/12/15/22 (21.7)



Dewpoint Temperature Sensor

Name and model	Insertion Dewpoint Temperature Sensor Mode HTY79
Appearance	
Detection element	Temperature: Pt100: Platinum thin-film resistance thermometer sensor (JIS C 1604 Class A) Humidity: Polymer thin film
Measurement range	Temperature: -20 to +60 °C Dewpoint temperature: -40 to +60 °C DP
Output signal	Temperature: 100 Ω/0 °C Dewpoint temperature: 1-5 V DC (linear for -40 to +60 °C DP) 4-20 mA DC (linear for -40 to +60 °C DP)



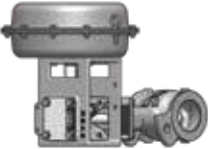
Power Controllers

Name and model	Solid-State Relay Model PGM10N	Solid-State Relay Model PGM10F
Appearance		
Type	No heat sink type	Built-in heat sink type
Input signal	3.5 to 30 V DC(Voltage pulse)	4.5 to 30 V DC(Voltage pulse)
Mounting method	DIN rail	-
	Wall mountable	●

Power Controllers

Name and model	Single-phase Power Controller Model PU21_	Three-phase Power Controller Model PU23_
Appearance		
Control system	Phase control	Basic, Constant-voltage, Constant-current, Constant-power
	Zero-cross control	●
Rated power supply voltage	100 to 440 V AC	200 to 440 V AC
Rated current	10 to 500 A	

Control Valves (General-Purpose Valves)

Name and model	Control Valves (Valves for Large Diameter/ Large Flow Pipes)		
	Single Seated Control Valve Model ACT__	Top Guided Single Seated Control Valve Model AGVB___/AGVM___	Eccentric Rotary Control Valve Model VFR__
Appearance			
Nominal size	15 A to 75 A	15 A to 100 A	25 A to 300 A
Pressure rating	JIS10K	AGVB___: ANSI/JPI 150, JIS10K AGVM___: ANSI/JPI 300, JIS16K to 30K	ANSI/JPI 150, 300, 600* JIS10K, 20K, 30K*, 40K* * Size 2 in. or less
Connection type	Flanged: RF	Flanged: RF, FF Welded: SW, BW	Wafer Flanged: RF
Body material	Carbon steel Stainless steel	Carbon steel Stainless steel	Carbon steel Stainless steel
Trim material	316SS, 316SS with CoCr-A	440CSS 316SS, 316SS with CoCr-A 316LSS, 316LSS with CoCr-A	SCS24 SCS14, SCS14 with CoCr-A
Operating temperature limit	0 to 200 °C	-196 to +400 °C	-60 to +350 °C
Features/usage	JIS10K line for chemistry, food, fiber, and mechanical equipment markets	General-use process for petrochemical and chemical plant	• High rangeability • Powder or high viscosity service
Options	-	Low leakage packing system	Multi-hole plate for anticavitation and low noise

01 Press

02 Body assembly

03 Painting

04 Casting, forging


05 Heat treatment

06 Engine machining

07 Parts molding



Specifications, etc.

Control Motors


Name and model		Control Motor Model ECM3000	
Appearance			
Control operation		Position proportional	
Output torque		12.5 N·m or 6 N·m	
Rated power supply voltage	24 V AC	●	
	100 V AC	●	
	200 V AC	●	
	85 to 264 V AC	●	

Flame Safeguard System


Burner controllers

Name and model	Burner interlock module and burner control module Model RX-___	Name and model	Dynamic Self-Checking Burner controllers Model AUR455
Appearance		Appearance	
Power supply voltage	24 V DC	Power supply voltage	100 V AC/200 V AC
Compatible operation method	Continuous/batch	Compatible operation method	Continuous


Ultraviolet phototubes (UV sensors)

Name and model	Advanced Ultraviolet Flame Detector Model AUD300C
Appearance	


Safety Shutoff Valve

Name and model	High-Performance Gas Solenoid Valve for Industrial Applications Model GV-A-___
Appearance	
Bore	10A/15A/20A/25A/32A/40A/50A/65A


Pressure Switch

Name and model	Gas Pressure Switch Model C6097A
Appearance	
Pressure setting range	0.1 to 1 kPa/0.25 to 5 kPa/ 3 to 15 kPa/10 to 50 kPa/ 10 to 70 kPa


Ignition Transformers

Name and model	Ignition Transformer Model ATN110A-1
Appearance	

GAS Flow Monitors


Name and model	GAS Flow Monitors Model CMG-___
Appearance	
Bore	15A/25A/40A/50A
Maximum measurable flow rate	City gas(13A): 150m³/h Propane gas: 50m³/h Butane gas: 40m³/h

Micro Flow Rate Liquid Flow Meter


Name and model	Micro Flow Rate Liquid Flow Meter Model F7M
Appearance	
Minimum measurable flow rate	F7M9010: 0.1 mL/min F7M9030: 0.3 mL/min F7M9050: 0.5 mL/min

Pressure Detectors


Pressure Transmitters

Name and model	Advanced Transmitter Model GTX-__D
Appearance	
Measurement Range	0.1 kPa to 14 MPa (depends on the model)
Accuracy	0.04 % to 0.3 % (depends on the model)
Input power supply voltage	See the specification sheet.

Pressure Detectors

Name and model	Digital Pressure Detectors Intelligent Pressure Sensor and Switch Model SPS300A
Appearance	
Measurement Range	-100 kPa to 3500 kPa (depends on the model)
Accuracy	1 % (depends on the model)
Input power supply voltage	See the specification sheet.

Smart Pressure Transmitters

Name and model	Smart Pressure Transmitters Model PTG71G/72G
Appearance	
Measurement range	-100 kPa to +50 MPa (depending on the model)
Accuracy	±0.2 % FS
Mounting angle	-
Input power supply voltage	See the specification sheet.

01 Press

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Specifications, etc.