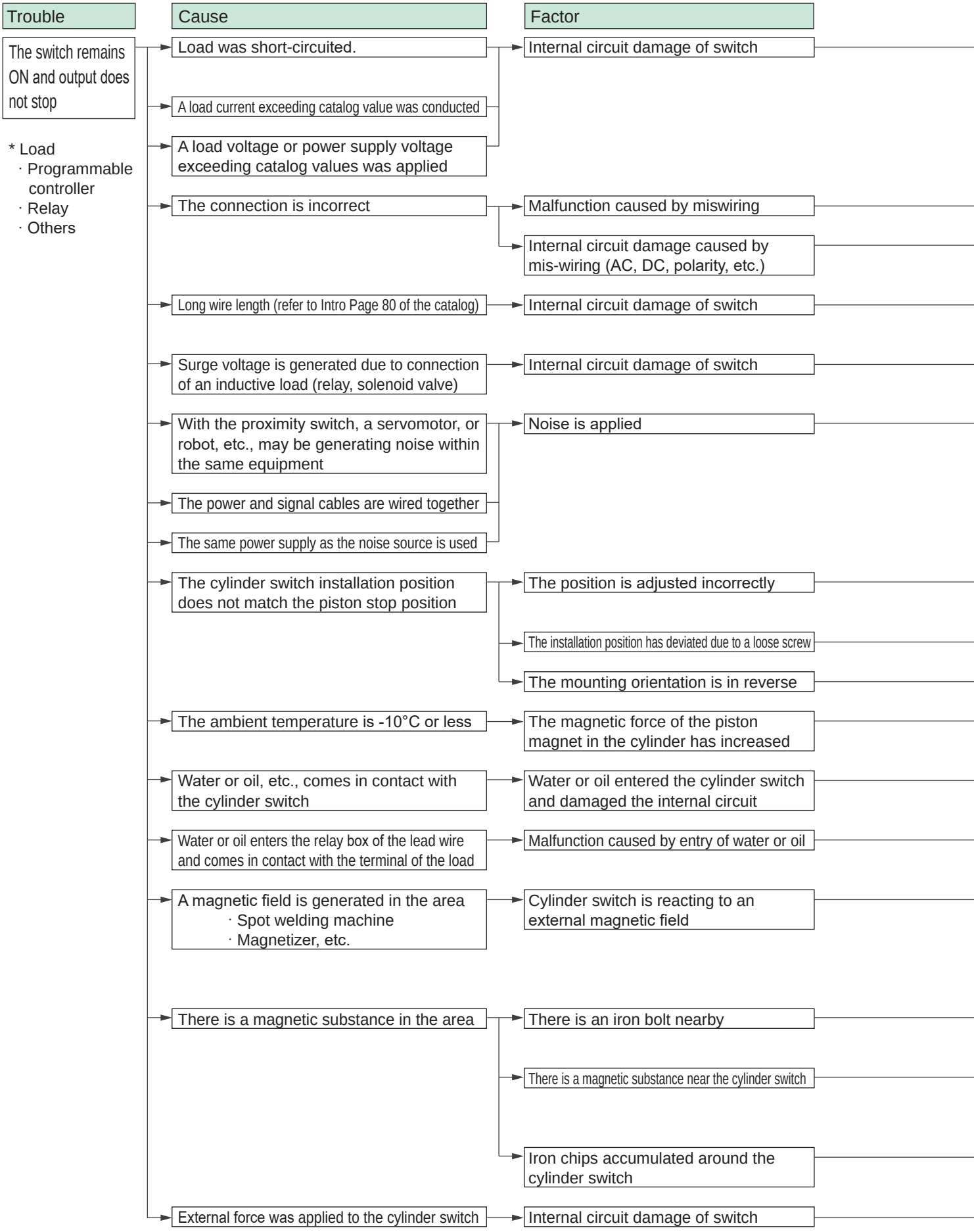
Troubleshooting [Cylinder switch] (1)



Countermeasures
(1) Replace the cylinder switch and select a cylinder switch with maximum rating matching the load rating
(1) Connect correctly
(1) Replace the cylinder switch and connect correctly
(1) Replace the cylinder switch and wire the protective circuit (Refer to Intro Pages 80 and 82)
(1) Replace the cylinder switch and wire the protective circuit (Refer to Intro Pages 80 and 82)
(1) Add a noise filter or replace with a reed switch
(2) Separate the power cable and signal cable
(3) Separate the power source
(1) Adjust the position again
(1) Tighten within the specified tightening torque range
(1) Mount in the correct direction
(1) Raise the ambient temperature to -10°C or higher
(1) Change from standard cylinder switch to T□YL of coolant proof specifications (T-switch only)
(2) Replace the cylinder switch, and provide a partition so that water and oil do not make excessive contact.
(1) Set a partition so water and oil do not come in contact with the relay box, or place the relay box in a waterproof box
(1) Change to a strong magnetic field proof switch. The cylinder body must also be changed to one for strong magnetic fields
(2) Check that magnetic fields are not applied a. Move the magnetic field generator away. b. Set a magnetic material partition between the magnetic field origin and cylinder switch
(3) Provide magnetic shield
(1) Replace with a stainless steel bolt
(2) Mount the cylinder switch on a surface distanced from the iron bolt
(1) Separate the cylinder switch from the magnetic substance to the value recommended in the catalog
(2) Mount the cylinder switch on a surface distanced from the magnetic substance
(3) Change the magnetic substance's material to a nonmagnetic material such as stainless steel, aluminum, copper, etc.
(1) Remove iron chips
(1) Replace the cylinder switch and check that external force is not applied to the cylinder switch

Troubleshooting [Cylinder switch] (2)

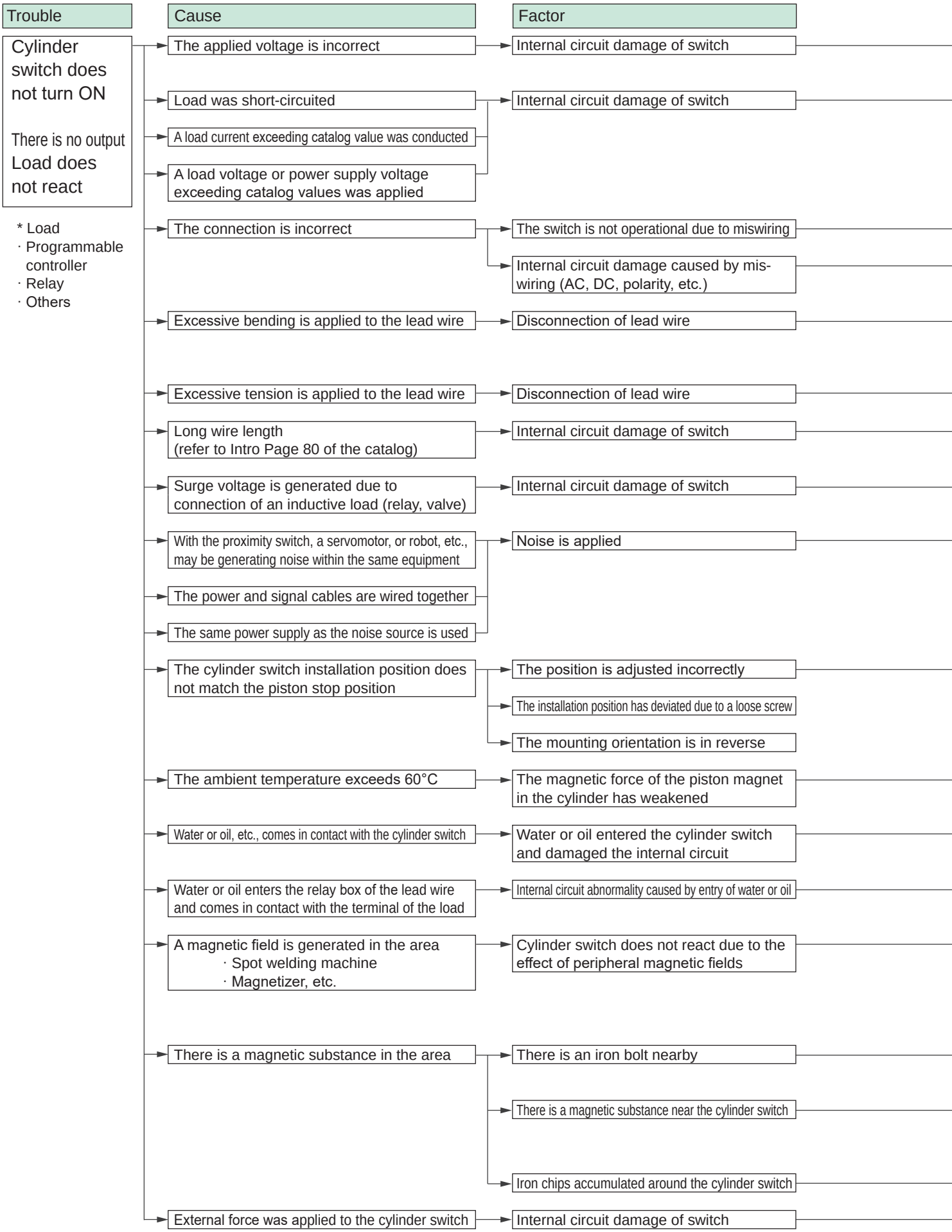
Trouble	Cause	Factor
The cylinder switch turns ON/OFF but the load remains ON	The relation of the cylinder switch leakage current and load input specifications is Leakage current > OFF current	The load reacts to the leakage current.
		Leakage current increases because of the parallel connection (Refer to Intro Page 81 of the catalog)
The output correctly turns ON/OFF but the indicator lamp does not turn on	The wiring poles are reversed (only when using reed □0 with DC).	Malfunction caused by miswiring

Countermeasures
(1) Change the cylinder switch from □2 to □0 or □3 type
(2) Change the cylinder switch to one with a large load OFF current value
(3) Wire the bleeder resistance

* Select a programmable controller or relay, etc.,
  that does not malfunction due to proximity switch leakage current.
* For the load input specifications, check the model No.
  and contact the manufacturer or CKD.

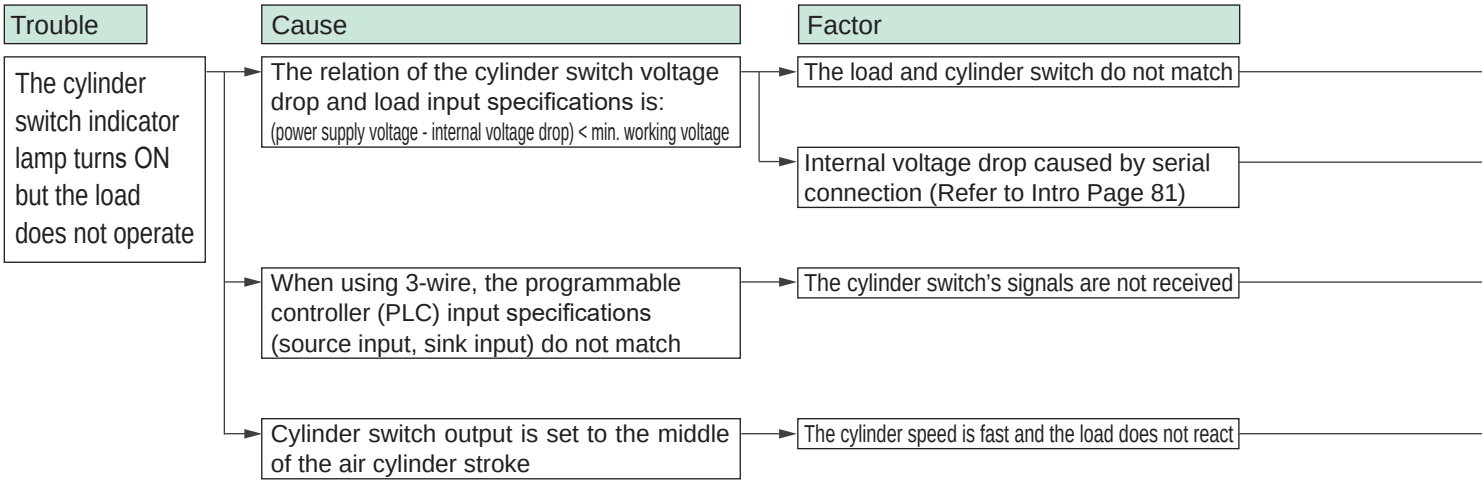
Countermeasures
(1) Wire normally

Troubleshooting [Cylinder switch] (3)



Countermeasures
(1) Replace the cylinder switch and set the correct rated voltage (2) Replace with a cylinder switch in correct rated voltage
(1) Replace the cylinder switch and select a cylinder switch with maximum rating matching the load rating
(1) Connect correctly
(1) Replace the cylinder switch and connect correctly
(1) Replace the cylinder switch and provide a sufficient bending radius (9 mm or over) for the lead wire so that one location is not subject to excessive bending (2) Change the cylinder switch to T2□R type with elasticity specifications (T-switch only)
(1) Replace the cylinder switch, and take measures to prevent excessive tension from being applied
(1) Replace the cylinder switch and wire the protective circuit (Refer to Intro Pages 80 and 82)
(1) Replace the cylinder switch and wire the protective circuit (Refer to Intro Pages 80 and 82)
(1) Add a noise filter or replace with a reed switch
(2) Separate the power cable and signal cable
(3) Separate the power source
(1) Adjust the position again
(1) Tighten within the specified tightening torque range
(1) Mount in the correct direction
(1) Lower the ambient temperature to 60°C or less (2) Replace with a heat-resistant cylinder switch (Refer to the catalog for compatible models)
(1) Change from standard cylinder switch to T□YL of coolant proof specifications (T-switch only) (2) Replace the cylinder switch, and provide a partition so that water and oil do not make excessive contact
(1) Set a partition so water and oil do not come in contact with the relay box, or place the relay box in a waterproof box
(1) Change to a strong magnetic field proof switch. The cylinder body must also be changed to one for strong magnetic fields (2) Check that magnetic fields are not applied a. Move the magnetic field generator away. b. Set a magnetic material partition between the magnetic field origin and cylinder switch (3) Provide magnetic shield
(1) Replace with a stainless steel bolt (2) Mount the cylinder switch on a surface distanced from the iron bolt
(1) Separate the cylinder switch from the magnetic substance to the value recommended in the catalog (2) Mount the cylinder switch on a surface distanced from the magnetic substance (3) Change the magnetic substance's material to a nonmagnetic material such as stainless steel, aluminum, copper, etc.
(1) Remove iron chips
(1) Replace the cylinder switch and check that external force is not applied to the cylinder switch

Troubleshooting [Cylinder switch] (4)



Countermeasures
(1) Replace the cylinder switch with a model with small internal voltage drop □2 type → □0 type → □3 type → □5 type
(2) Replace the load with one with smaller min. working voltage

(1) Source input ---- Select NPN output □3 type (NPN output is standard)
(2) Sink input -------- Select PNP output □3P type (T, K, M or F-switch only)
(3) Change the cylinder switch to 2-wire

(1) Change to T2J with OFF delay specifications (T-switch only)
(2) Connect several cylinder switches in parallel to increase the operating range.
(3) Connect a sensor controller, etc., between the cylinder switch and load, and change to a signal time that matches load performance. Example: OMRON S3D2
(4) Decrease cylinder speed