

DRIP PROOF & WATER PROOF CONTROLS

SERIES NS-W & NS-P

SAGInoMIYA

GENERAL DESCRIPTION

- Approved by various marine standards such as Bureau Veritas, Lloyd's Register, Germanischer Lloyd, Det Norske Veritas, Nippon Kaiji Kyokai, ABS etc.
- Suitable for indoor or outdoor applications where water drips and dusts are apt to enter, such as marine refrigeration units or industrial plants.
- External wiring is made by cabtyre cable connection with cable glands.
Standard gland size: $\phi 20\text{mm}$
Semi standard gland size: $\phi 15\text{mm}$
- To order, specify catalog No. with "W" or "P".
Example: Type SNS-C106XW Drip proof model
Type SNS-C106XP Water proof model



Type SNS-P, FNS-P, ANS-P



Type SNS-W, FNS-W, ANS-W

- Type SNS-W/P – Drip proof model of single function pressure controls.

TYPE NUMBER SELECTION (SPECIFICATIONS)

Automatic reset type

Catalog No.	Range		Differential		Factory Setting		Max. Working Pressure	Contact Function	Wt. (kg)	
	Min.	Max.	Min.	Max.	Off (On)	On (Off)				
SNS-C101X	W	-0.06 {-50cmHg}	0.1 {1}	0.015 {0.15}	0.05 {0.5}	0.025 {0.25}	0.05 {0.5}	0.3 {3}	Diagram 1	SNS-W: Approx. 1.1 SNS-P: Approx. 0.6
SNS-C102X	W, P	-0.02 {-20cmHg}	0.2 {2}	0.025 {0.25}	0.15 {1.5}					
SNS-C103X	W, P	-0.06 {-50cmHg}	0.3 {3}	0.035 {0.35}	0.2 {2}	0.05 {0.5}	0.15 {1.5}	1 {10}		
SNS-C104X	W, P	-0.06 {-50cmHg}	0.4 {4}	0.04 {0.4}		0.1 {1}	0.2 {2}	1.5 {15}		
SNS-C106X	W, P	-0.06 {-50cmHg}	0.6 {6}	0.06 {0.6}	0.2 {2}	0.3 {3}	3 {30}			
SNS-C110X	W, P	0.1 {1}	1 {10}	0.1 {1}	0.3 {3}	0.4 {4}		0.6 {6}		
SNS-C120X	W	0.5 {5}	2 {20}	0.2 {2}	0.5 {5}	1.2 {12}	1.5 {15}			
SNS-C130X	W, P		3 {30}	0.3 {3}	1 {10}	2 {20}	2.5 {25}	3.8 {38}		
SNS-C135X	W, P	1 {10}	3.5 {35}	0.5 {5}	1.5 {15}	2.5 {25}	3 {30}			

Manual reset type

Catalog No.	Range		Manual Reset	* Factory Setting		Max. Working Pressure	Contact Function	Wt. (kg)
	Min.	Max.		Off (On)	On (Off)			
SNS-C102XM2	W, P	-0.02{-20cmHg}	Automatic operation on pressure decrease, and manual reset.	0.025 {0.25}	Manual Reset	0.5 {5}	Diagram 2	SNS-W: Approx. 1.1 SNS-P: Approx. 0.6
SNS-C106XM2	W, P	-0.06{-50cmHg}		0.2 {2}		1.5 {15}		
SNS-C130XM2	W, P	0.5 {5}		2 {20}		3.3 {33}		

* Based on the 1-3 terminal connection.

ELECTRICAL RATINGS

Rated Voltage (V)		Power Factor (cos ϕ)	125/250V. AC
Rated Amps. (A)			
Non-Inductive Current		1	12
Inductive Current	Full Load	0.75	
	Locked Rotor	0.45	72

Minimum contact capacity: 50mA

CONTACT FUNCTIONS

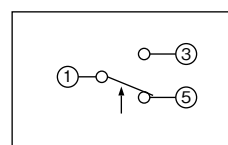


Diagram 1

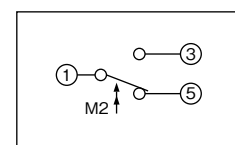


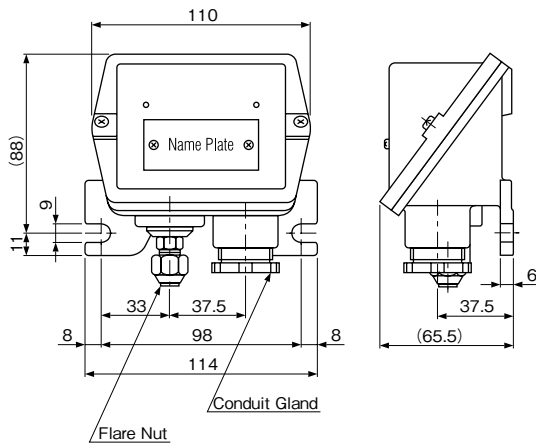
Diagram 2

Diagram 1 & 2	
1	Common Terminal
3	Close on Pressure Increase
5	Close on Pressure Decrease

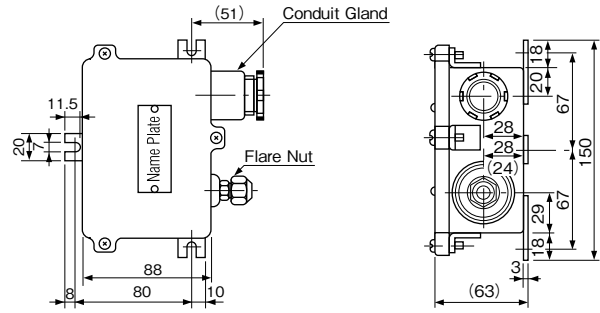
↑ : Operating direction on press. increase at High Press. Side
M2 ↑ : Operating direction on manual reset

DIMENSIONS

Type SNS-P, FNS-P, ANS-P



Type SNS-W, FNS-W, ANS-W



Unit: mm

● Type DNS-W/P – Drip proof model of dual function pressure controls



Type DNS-P



Type DNS-W

TYPE NUMBER SELECTION (SPECIFICATIONS)

Automatic reset type

Unit: MPa {kgf/cm²}

Catalog No.	Pressure Side	Range		Differential		Factory Setting		Max. Working Pressure	Contact Function	Wt. (kg)
		Min.	Max.	Min.	Max.	Off	On			
DNS-D304X	W, P	Low Side	-0.06 {-50cmHg}	0.4 {6}	0.04 {0.4}	0.2 {2}	0.1 {1}	0.2 {2}	1.5 {15}	Diagram 3 DNS-W: Approx. 1.4 DNS-P: Approx. 0.9
	High Side	0.8 {8}	3 {30}	Approx. 0.4 fixed. {Approx. 4 fixed.}	2 {20}	1.6 {16}	3.3 {33}			
DNS-D306X	W, P	Low Side	-0.06 {-50cmHg}	0.6 {6}	0.06 {0.6}	0.4 {4}	0.2 {2}	0.3 {3}	1.5 {15}	
	High Side	0.8 {8}	3 {30}	Approx. 0.4 fixed. {Approx. 4 fixed.}	2 {20}	1.6 {16}	3.3 {33}			
DNS-D604X	W, P	Low Side	-0.06 {-50cmHg}	0.4 {6}	0.04 {0.4}	0.2 {2}	0.1 {1}	0.2 {2}	1.5 {15}	
	High Side	0.8 {8}	3 {30}	Approx. 0.4 fixed. {Approx. 4 fixed.}	2 {20}	1.6 {16}	3.3 {33}			
DNS-D606X	W, P	Low Side	-0.06 {-50cmHg}	0.6 {6}	0.06 {0.6}	0.4 {4}	0.2 {2}	0.3 {3}	1.5 {15}	
	High Side	0.8 {8}	3 {30}	Approx. 0.4 fixed. {Approx. 4 fixed.}	2 {20}	1.6 {16}	3.3 {33}			

Manual reset type

Unit: MPa {kgf/cm²}

Catalog No.	Pressure Side	Range		Differential		Factory Setting		Max. Working Pressure	Contact Function	Wt. (kg)
		Min.	Max.	Min.	Max.	Off	On			
DNS-D304XM	W, P	Low Side	-0.06 {-50cmHg}	0.4 {4}	0.04 {0.4}	0.2 {2}	0.1 {1}	0.2 {2}	1.5 {15}	Diagram 4 DNS-W: Approx. 1.4 DNS-P: Approx. 0.9
	High Side	0.8 {8}	3 {30}	Automatic operation on pressure increase, and manual reset.	2 {20}	manual reset	3.3 {33}			
DNS-D306XM	W, P	Low Side	-0.06{-50cmHg}	0.4 {4}	0.06 {0.6}	0.4 {4}	0.2 {2}	0.3 {3}	1.5 {15}	
	High Side	0.8 {8}	3 {30}	Automatic operation on pressure increase, and manual reset.	2 {20}	manual reset	3.3 {33}			
DNS-D604XM	W, P	Low Side	-0.06{-50cmHg}	0.4 {4}	0.04 {0.4}	0.2 {2}	0.1 {1}	0.2 {2}	1.5 {15}	
	High Side	0.8 {8}	3 {30}	Automatic operation on pressure increase, and manual reset.	2 {20}	manual reset	3.3 {33}			
DNS-D606XM	W, P	Low Side	-0.06{-50cmHg}	0.6 {6}	0.06 {0.6}	0.4 {4}	0.2 {2}	0.3 {3}	1.5 {15}	
	High Side	0.8 {8}	3 {30}	Automatic operation on pressure increase, and manual reset.	2 {20}	manual reset	3.3 {33}			
DNS-D606XMM	W	Low Side	-0.06{-50cmHg}	0.6 {6}	Automatic operation on pressure decrease, and manual reset.	0.2 {2}	manual reset	1.5 {15}	Diagram 7	
	High Side	0.8 {8}	3 {30}	Automatic operation on pressure increase, and manual reset.	2 {20}	3.3 {33}				

ELECTRICAL RATINGS

Rated Voltage (V)		Power Factor (cos ϕ)	125/250V. AC
Rated Amps. (A)			
Non-Inductive Current		1	12
Inductive Current	Full Load	0.75	
	Locked Rotor	0.45	72

CONTACT FUNCTIONS

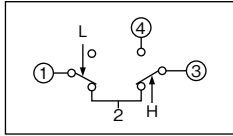


Diagram 3

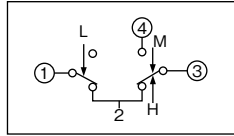


Diagram 4

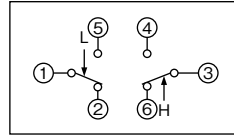


Diagram 5

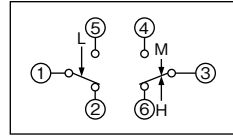


Diagram 6

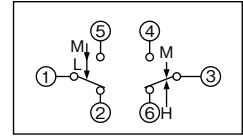
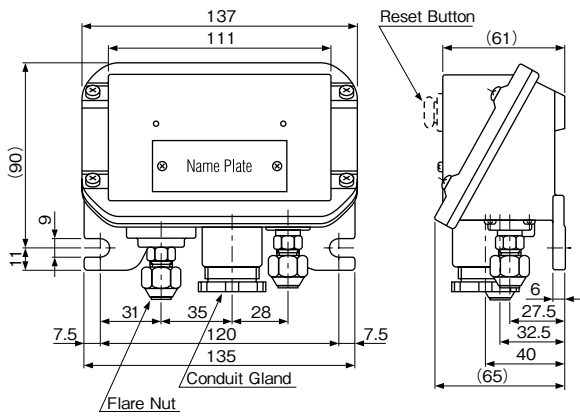


Diagram 7

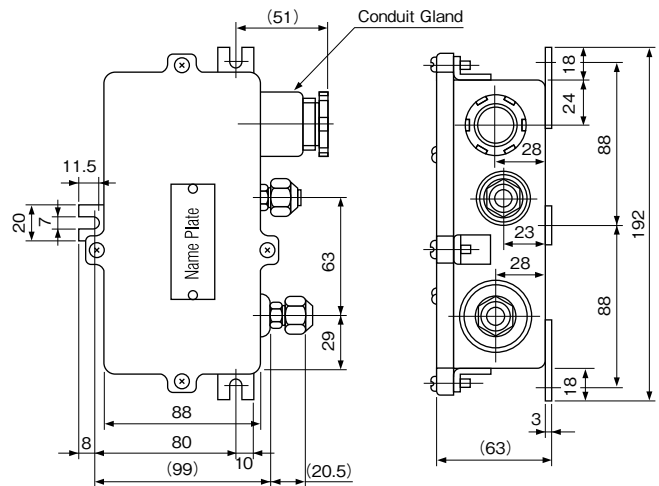
L ↓ : Operating direction on press. increase at Low Press. Side
 H ↑ : Operating direction on press. increase at High Press. Side
 M ↓ : Operating direction on manual reset

DIMENSIONS

Type DNS-P



Type DNS-W



Unit: mm

● Type HNS-W — Drip proof model of dual function pressure controls



TYPE NUMBER SELECTION (SPECIFICATIONS)

Automatic reset type

Unit: MPa {kgf/cm²}

Catalog No.		Range		Differential	* Factory Setting		Max. Working Pressure	Wt. (kg)
		Min.	Max.		Off	On		
HNS-C130X	W	0.8 {8}	3 {30}	0.3 to 0.5 Fixed {3 to 5 fixed}	2 {20}	1.6 {16}	3.3 {33}	Approx. 1.1

For specifications, electrical ratings, and contact functions, refer to page 14.

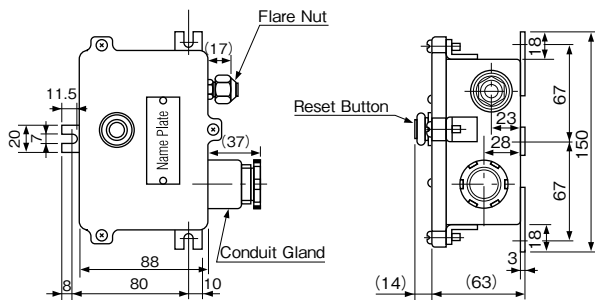
Manual reset type

Unit: MPa {kgf/cm²}

Catalog No.		Range		Manual Reset	* Factory Setting		Max. Working Pressure	Wt. (kg)
		Min.	Max.		Off	On		
HNS-C130XM1	W	0.8 {8}	3 {30}	Automatic operation on pressure increase, and manual reset.	2 {20}	manual reset	3.3 {33}	Approx. 1.1

For specifications, electrical ratings, and contact functions, refer to page 14.

DIMENSIONS



Unit: mm

● Type FNS-W/P & ANS-W/P — Drip proof model of dual function pressure controls

TYPE NUMBER SELECTION (SPECIFICATIONS)

Type FNS – Fixed narrow differential

Unit: MPa {kgf/cm²}

Catalog No.		Range		Differential	Factory Setting		Max. Working Pressure	Wt. (kg)
		Min.	Max.		Fixed	Off		
FNS-C1**X	W, P	-0.06 {-50cmHg} to 0.5 {5}	0.1 {1} to 3 {30}	0.006 Approx. {0.06 Approx.} to 0.12 Approx. {1.2 Approx.}	(0.019) {(0.19)} to (2.38) {(23.8)}	0.025 {0.25} to 2.5 {25}	0.3 {3} to 3.3 {33}	FNS-W: Approx. 1.3 FNS-P: Approx. 0.6

* FNS-C101X, type W is the only available.

For specifications, electrical ratings, and contact functions, refer to page 17, 18.
For dimensions, refer to page 47.

Type ANS – Adjustable narrow differential

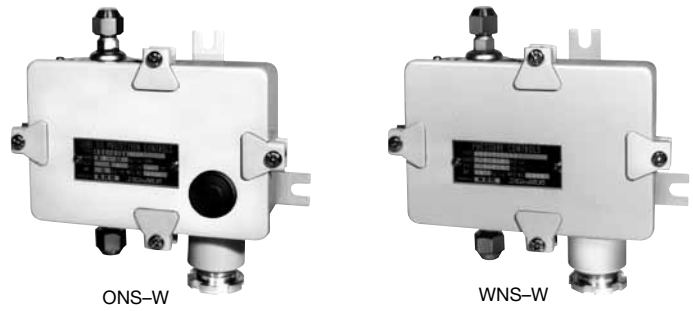
Unit: MPa {kgf/cm²}

Catalog No.		Range		Differential				Factory Setting		Max. Working Pressure	Wt. (kg)
				Min.		Max.		Off	On		
		Min.	Max.	Bottom	Top	Bottom	Top				
ANS-C1**XB	W, P	-0.06 {-50cmHg} to 1 {10}	0.1 {1} to 3.5 {35}	0.007 {0.07} to 0.12 {1.2}	0.007 {0.07} to 0.2 {2.0}	0.014 {0.14} to 0.24 {2.4}	0.015 {0.15} to 0.39 {3.9}	0.018 {0.18} to 2.82 {28.2}	0.025 {0.25} to 3 {30}	0.3 {3} to 3.8 {38}	ANS-W: Approx. 1.3 ANS-P: Approx. 0.6

* ANS-C101XB, type W is the only available.

For specifications, electrical ratings, and contact functions, refer to page 17, 18.
For dimensions, refer to page 47.

● Type ONS-W & WNS-W — Drip proof model of dual function pressure controls



TYPE NUMBER SELECTION (SPECIFICATIONS)

Type ONS – for oil protection

Unit: MPa {kgf/cm²}

Catalog No.		Range		Differential	Timer Specification			Wt. (kg)
		Min.	Max.	Fixed	Delay Time (sec.)	Timer Voltage	Timer Circuit	
ONS-C106X	W	0.05 {0.5}	0.35 {3.5}	Approx. 0.05 {Approx. 0.5}	45, 90, 110	100/200V. AC 110/220V. AC 115/230V. AC 120/240V. AC	Standard (SPST) without Alarm Contact (SPDT)	Approx. 1.3

For specifications, electrical ratings, and contact functions, refer to page 19, 20.

Type WNS – for water, air and fluorinated refrigerant

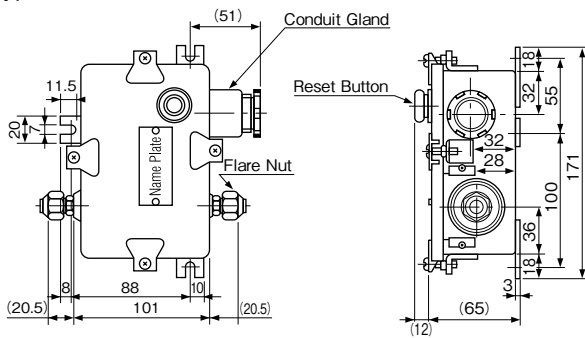
Unit: MPa {kgf/cm²}

Catalog No.		Range		Differential		Factory Setting		Max. Working Pressure	Limit of Press. Differential (HP > LP)	Wt. (kg)
		Min.	Max.	Min.	Max.	Off	On			
WNS-C102X	W	0.03 {0.3}	0.2 {2}	0.03 {0.3}	0.15 {1.5}	0.05 {0.5}	0.02 {0.2}	0.5 {5}	0.5 {5}	Approx. 1.3
WNS-C106X		0.05 {0.5}	0.35 {3.5}	0.05 {0.5}	0.25 {2.5}	0.1 {1.0}	0.05 {0.5}	1.5 {15}	1.5 {15}	

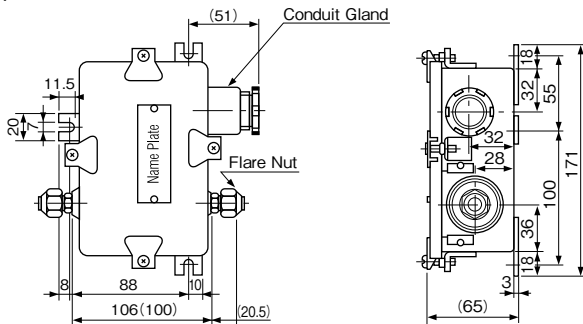
For specifications, electrical ratings, and contact functions, refer to page 21.

DIMENSIONS

Type ONS-W

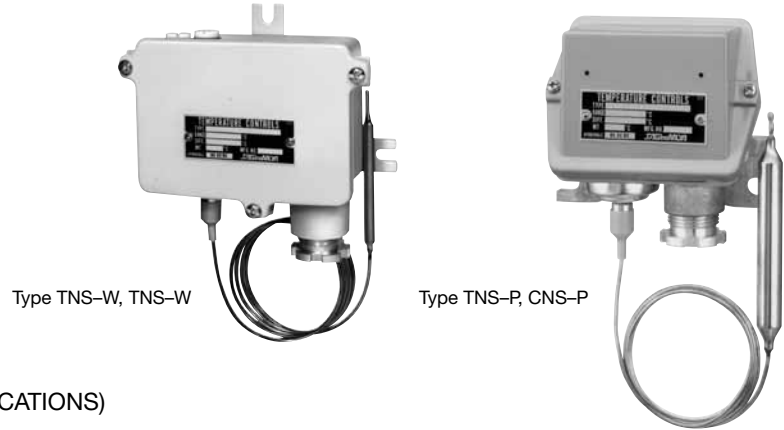


Type WNS-W



Unit: mm

● Type TNS-W/P, CNS-W/P & INS-W — Drip proof model of dual function pressure controls



TYPE NUMBER SELECTION (SPECIFICATIONS)

Type TNS – Automatic reset type

Unit: °C

Catalog No.	W, P	Range		Differential		Factory Setting		Limit Temp.	Usage Condition	Wt. (kg)
		Min.	Max.	Min.	Max.	Off (On)	On (Off)			
TNS-C1* *X	W, P	-45 to 115	0 to 150	2 to 5	15, 20	-18 to 140	-15 to 145	40 to 180	$T_s > T_b$, $T_s < T_b$, $T_s \leq T_b$	TNS-W: Approx. 1.3 TNS-P: Approx. 0.7

For specifications, electrical ratings, and contact functions, refer to page 29, 30.

Type CNS – Automatic reset type

Unit: °C

Catalog No.	W, P	Range		Differential	Factory Setting		Limit Temp.	Usage Condition	Wt. (kg)
		Min.	Max.		Off	On			
CNS-C1* *X	W, P	-35 to 0	-15 to 35	Bottom 4 Top 3	-28 to 17	-25 to 20	70	$T_s > T_b$	CNS-W: Approx. 1.3 CNS-P: Approx. 0.7

For specifications, electrical ratings, and contact functions, refer to page 29, 30.

Type CNS – Manual reset type

Unit: °C

Catalog No.	W, P	Range		Manual Reset	Factory Setting		Limit Temp.	Usage Condition	Wt. (kg)
		Min.	Max.		Off	On			
CNS-C1* *XM2	W, P	-35 to 0	-15 to 35	Automatic operation on temperature decrease and manual reset	-28 to 17	Manual Reset	70	$T_s > T_b$	CNS-W: Approx. 1.3 CNS-P: Approx. 0.7

For specifications, electrical ratings, and contact functions, refer to page 29, 30.

Type INS – Manual reset type

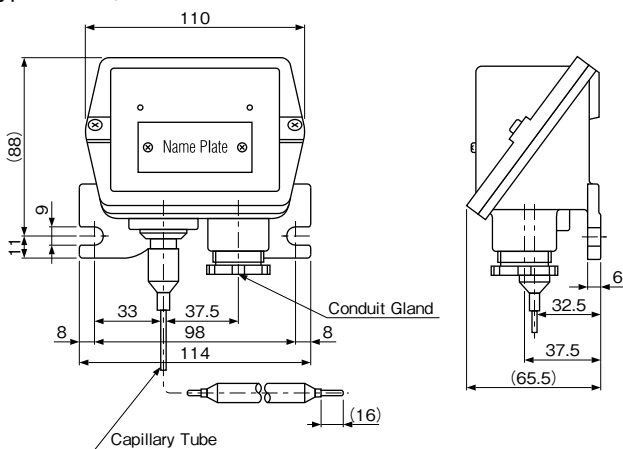
Unit: °C

Catalog No.	W	Range		Manual Reset	Factory Setting		Limit Temp.	Usage Condition	Wt. (kg)
		Min.	Max.		Off	On			
INS-C1070XM1	W	25 to 115	75 to 150	Automatic operation on temperature increase and manual reset.	Manual Reset	65 to 140	115 to 180	$T_s < T_b$	Approx. 1.3

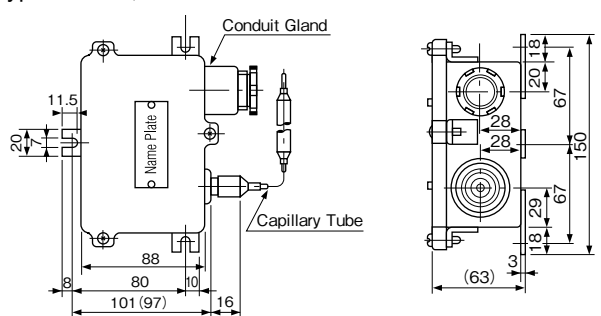
For specifications, electrical ratings, and contact functions, refer to page 29, 30.

DIMENSIONS

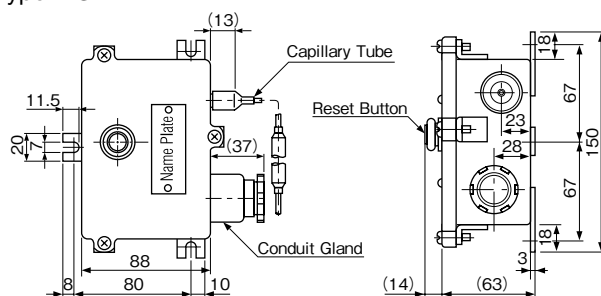
Type TNS-P, CNS-P



Type TNS-W, CNS-W



Type INS-W



Unit: mm