

MODEL PLD

HYDROSTATIC PRESSURE LEVEL MONITOR



Features

- High accuracy by digital compensation
- Protected against lightning surge
- Body of sensor is interchangeable

General Description

The PLD series, hydrostatic liquid level monitor, is comprised of a sensor and converter. This combination allows measuring of depth up to 100 meter. The PLD series are ideal for use in water reservoirs, rivers, dams, deep wells, water gates, and tanks. The body of PLD is interchangeable. When the sensor is damaged by direct lightning, it can be easily replaced at site. Moreover, the replacement cost can be saved by using existing cable.

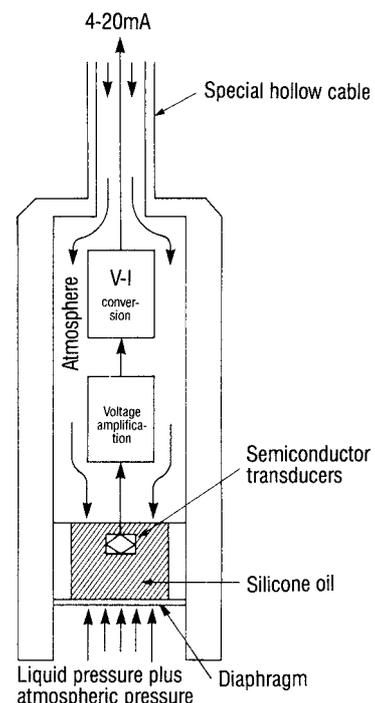
Operational Description

The sensor converts liquid pressure into current signals proportional to the liquid level. A semiconductor transducer and a Hastelloy C-22 diaphragm for PLD120 series and FPM/ FKM diaphragm for PLD420 series are employed to achieve accuracy and durability. In order to compensate for atmospheric pressure the cable contains a hollow "breathing" tube. Internal circuit is fully potted to provide immunity from humidity and condensation.

An integrated lightning arrester protects the sensor from damage caused by lightning surges and storm activity.

Advantages

1. Protected against lightning surge
Model PLD is provided with integral lightning arrester and surge absorber to protect against lightning surge.
2. Humidity/Dew immunity
Internal circuit is fully potted to avoid humidity or dew.



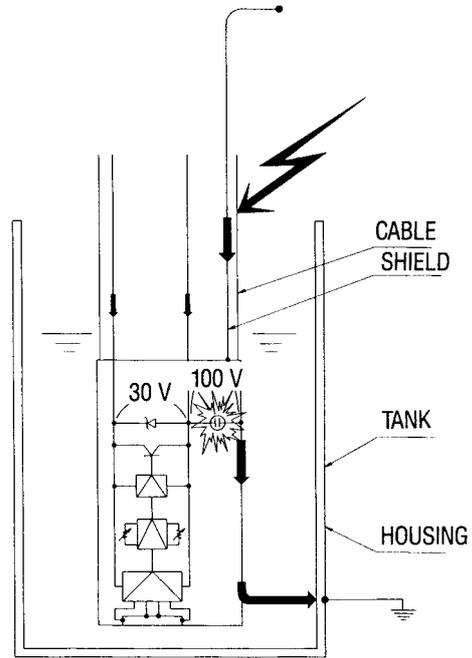
Surge Protection

To protect the PLD from damage caused by lightning or electrical surges, the shield of the cable shall not be grounded. The shield wire in the cable is internally connected with the transducer housing. Thus, without any external grounding, the shield wire is already grounded through the water and the grounded tank.

When lightning struck to the cable, the large electric current flows from the shield wire to the ground through the housing, the water and the tank. This induced current may generate differential voltage between the positive and the negative signal wire or between the positive and the negative signal wire or between the signal wire and the housing. The Zener Diode should suppress it and the Button Arrester should discharge it by flashing to change it into light energy.

Technical Note

Do not connect to loop power system. The supply power on the loop power may be decreased, and PLD may be malfunctioned.



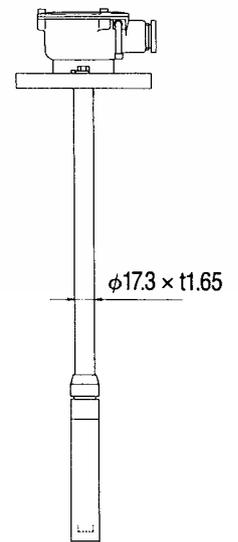
Open angle control of the rever gate



Deep well monitoring with Terminal box

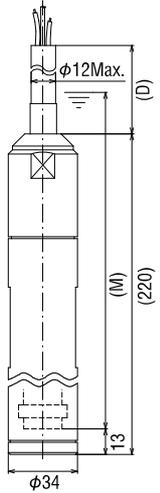
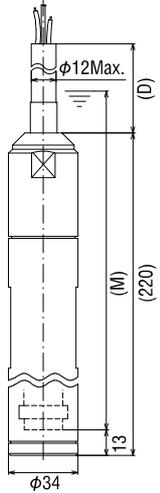
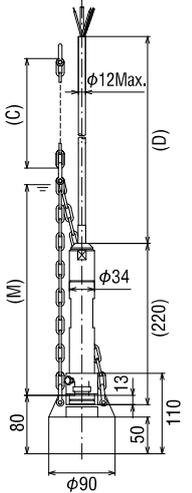


Flange mounting for indoor tank



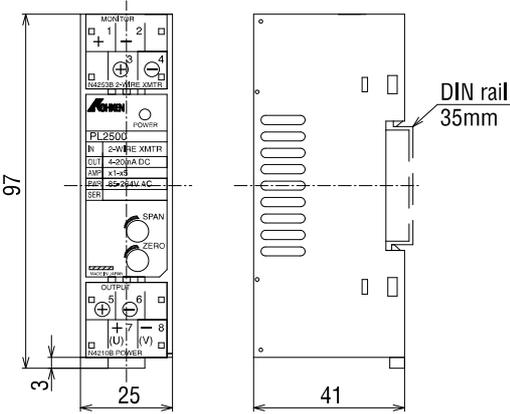
Rigid stainless steel pipe

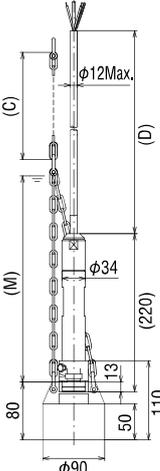
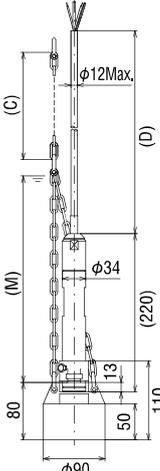
Specifications

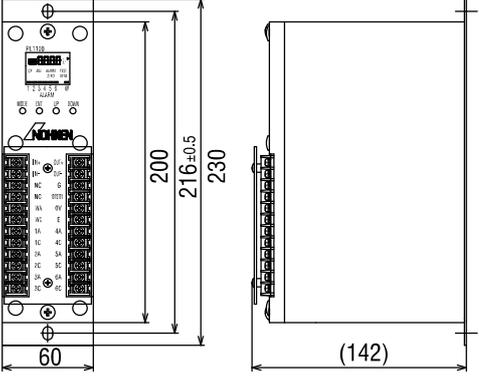
Model	PLD120	PLD130	PLD420/PLD4300*
Description	Standard	High Accuracy	Waste water
Drawing			
Measuring Range	4m, 10m, 35m, 100m	4m, 10m	4m, 10m, 35m, 100m
Supply Power	14 to 30V DC		18 to 26V DC
Output	4 to 20mA DC		
Operating Temperature	0 to 50°C		
Accuracy	±0.2% F.S.	±0.1% F.S.	±0.2% F.S.
Lightning Protection	13kV (1.2/50us), 6.5kA (8/20μs)		
Material	Body	316SS	
	Diaphragm	Hastelloy C-22	FPM/FKM
	Cable	PVC	
	Weight	-	304SS, 3kg
Protection	IP68		
Cable Length	15 meter (100m Max.)		
Separation distance	1km Max.		100m Max.

*PLD420 and PLD430 need junction box of PLD4300.

Converter

Model	PL2500	PL2510
Drawing		
Supply Power	85 to 264V AC, 50/60Hz	24V DC ± 10%
Power Source	24V DC	
Power Consumption	Approx. 3VA (at 20mA output)	Approx. 3VA (at 20mA output)
Input	4 to 20mA DC (2-wire)	
Output	4 to 20mA DC	
Amplification	1 to 5 times	
Load Resistance	550 Ω Max.	
Operating Temperature	-10 to 50°C	
Protection	-	
Material	PBT	
Mounting	35mm DIN rail	
Connected sensor	PLD120, PLD130	

PLD430/PL4300*	PLD120-11-□02
High Accuracy for Waste Water	Munhall Pump
	
4m, 10m	4m, 10m
18 to 26V DC	14 to 30V DC
4 to 20mA DC (Resistive)	
0 to 50°C	
±0.1% F.S.	±0.2% F.S.
13kV (1.2/50us), 6.5kA (8/20μs)	
316SS	
FPM/FKM	Hastelloy C-22
PVC	
304SS, 3kg	
IP68	
15 meter (100m Max.)	
100m Max	1km Max.

PL1100

100 to 240V AC, 50/60Hz
24V DC
Approx. 20VA
4 to 20mA DC (2-wire)
4 to 20mA DC
-
600 Ω Max.
0 to 50°C
IP20
SPCC
2×M6 screw mounting
PLD120-11-□02