

# ATO

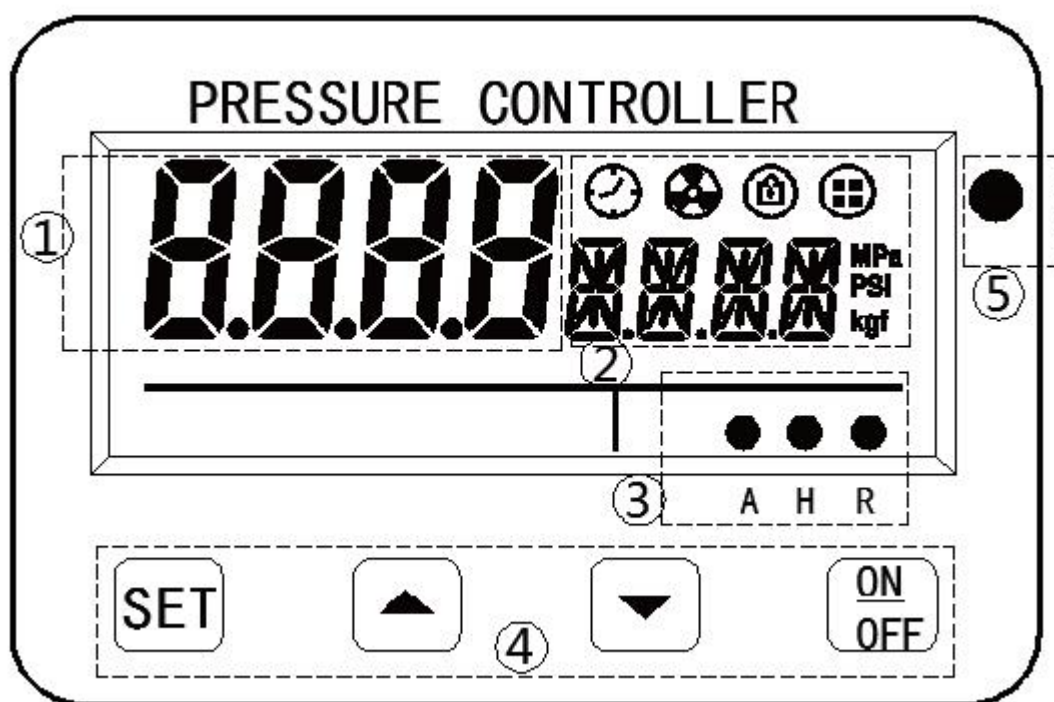
## Digital Air Compressor Pressure Switch User Manual



## Product Description

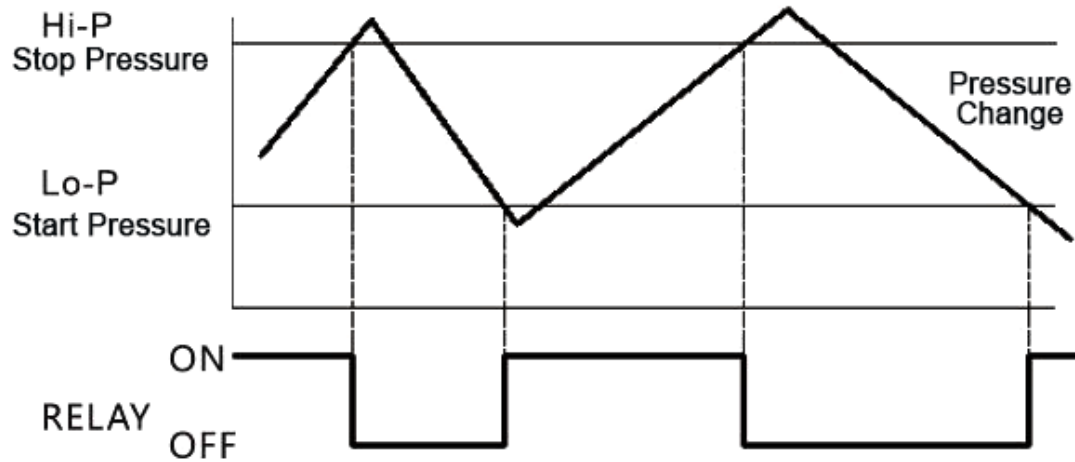
The LFDS63 (630/632) series intelligent pressure controller is an intelligent control instrument integrating pressure measurement, display, and control. This instrument can automatically open/close the relay output according to the pressure state inside the container to ensure the pressure condition within the container. It features simple operation, clear display, vibration resistance, high control accuracy, and long service life.

## Interface Introduction



① <b>Main display screen:</b>	Displays current pressure; displays prompts when setting parameters.
② <b>Secondary display screen:</b>	Displays set parameters.
③ <b>Status prompts:</b>	A: Automatic mode; H: Manual mode; R: Running status
④ <b>Button area:</b>	SET: Confirms the parameter used for switching or setting.
	Up: Increases the number.
	Down: Decreases the number.
⑤ <b>Indicator lights:</b>	Prompts notifications for abnormal conditions such as system overpressure, overload, or leakage.

## Relay Operating Mode



In automatic mode, the relay automatically ON/OFFs the load based on the set start pressure (Lo-P) and stop pressure (Hi-P). It is OFF when powered on and requires manual pressing of

the start/stop button  to operate.

On: The operation indicator  flashes. OFF:  light remains on.

## Operation Method

### Adjusting Start and Stop Pressures

Press **SET** to cycle through the stop pressure (Hi-P) and start pressure (Lo-P). Stop pressure (Hi-P) > Start pressure (Lo-P).



(Display on secondary screen)

Press **SET** to view Hi-P.



Adjust the Hi-P baseline value; long press for quick adjustment.

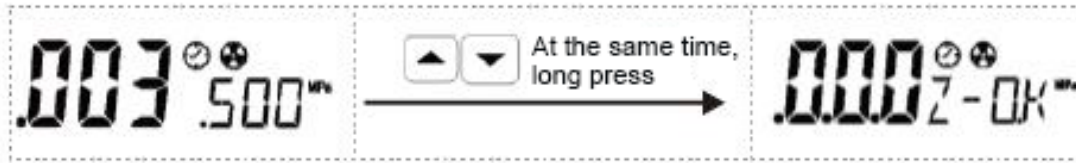
Press **SET** again to view Lo-P.



Adjust the Lo-P baseline value; long press for quick adjustment.

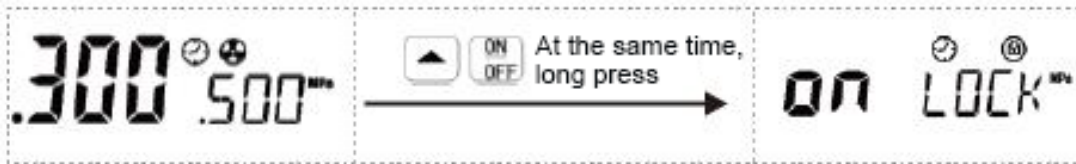
## Zeroing Function

The zeroing function is a function that forces the pressure value to be displayed as "0" when the pressure orifice is under atmospheric pressure.



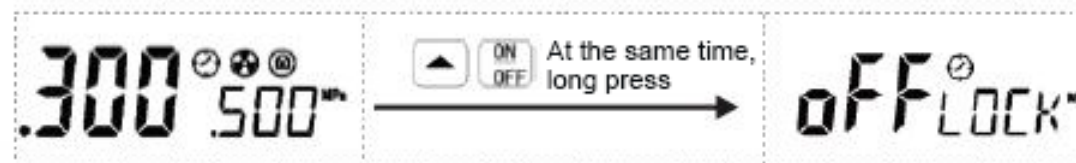
## Button Lock Function

<lock>

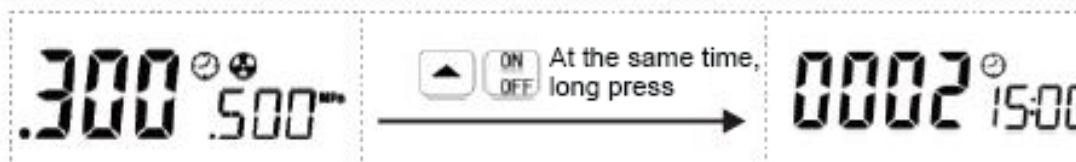


At this time, a lock icon will be displayed on the secondary screen .

<Unlock>












## View Relay Running Time



**Note:** This value indicates that the relay has accumulated 2 hours and 15 minutes of operating time. This screen will automatically return after 8 seconds.

## Menu Functions

To enter function settings, press and hold **SET** for approximately 2 seconds. Function descriptions are as follows:

Function Keys	Operating Instructions	Instructions
Set Working Mode <b>F1</b>	Press  to select <b>AUTO</b> or <b>HAND</b> , then <b>SET</b> to confirm and proceed to the next function.	Automatic: The system automatically controls the load based on the pressure setting; Manual: Force start or stop.
Set Keyboard Lock Mode <b>F2</b>	Press  to select <b>EASY</b> or <b>CODE</b> , activate the password and shift the operation settings, then <b>SET</b> to confirm and proceed to the next function.	<b>EASY Mode</b> : Lock or unlock directly using key combination   ; <b>CODE Mode</b> : Not only is key combination   required to unlock, but the correct password must also be entered. The initial password is 0000.  is unaffected by locking.
Unit Selection <b>F3</b>	Press  to select the unit: <b>MPa</b> , <b>PSI</b> , or <b>kgf</b> , then <b>SET</b> to confirm and proceed to the next function.	Selectable pressure unit: <b>MPa</b> , <b>PSI</b> , or <b>kgf/cm<sup>2</sup></b> . Default: kgf/cm <sup>2</sup> (Note 1)
Run Function Selection <b>F4</b>	Press  to select " <b>R on</b> " or " <b>RoFF</b> ", then <b>SET</b> to confirm and return to the main operating state.	" <b>R on</b> ": Starts automatically upon power-on. " <b>RoFF</b> ": Requires manual operation upon power-on (default).

**Note 1:** 1 kgf/cm<sup>2</sup>s is typically defined as 1 Bar for ease of calculation. Please be aware of this.



## Technical Indicators

<b>Type</b>	Vacuum Type (Negative Pressure)	Positive Pressure
<b>Pressure range</b>	-101~0kPa	0~1...5MPa
<b>Pressure resistance</b>	1.5 times	
<b>Measured medium</b>	Compatible with 1Cr18Ni9Ti, copper, fluororubber, or nitrile rubber for gases or liquids	
<b>Rated voltage</b>	110/220VAC	
<b>Energy consumption</b>	1.3W	
<b>Load capacity</b>	10A max	
<b>Protection level</b>	IP54	
<b>Connection</b>	Brass NPT 1/4 external thread (optional)	
<b>Accuracy</b>	±1%F.S	
<b>Storage temperature</b>	-40~85°C	
<b>Operation temperature</b>	-10~50°C	

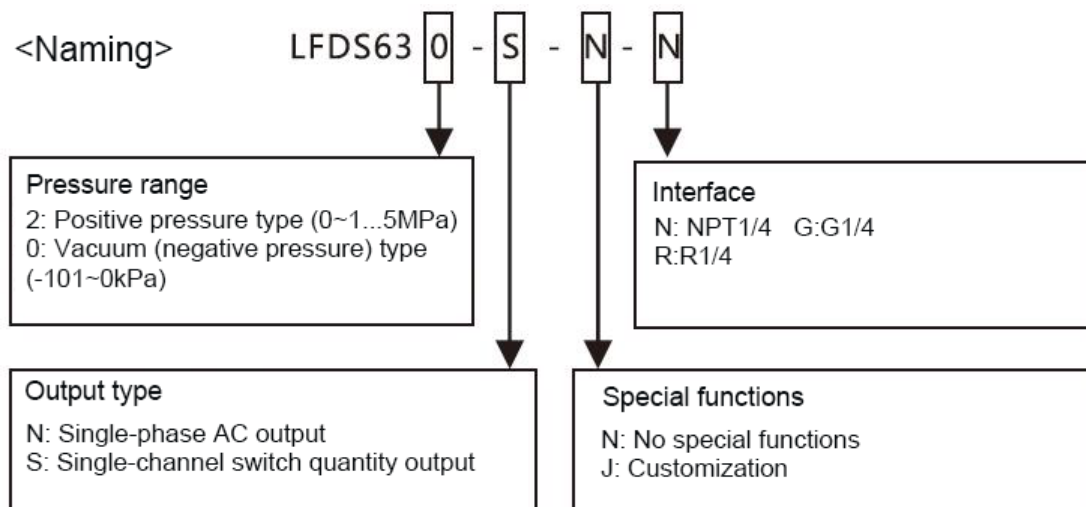
## Precautions

- This product is developed and manufactured for use in industrial environments.
- Please use within the rated voltage range; do not exceed the withstand pressure, otherwise it may damage the product and endanger safety.
- Please ensure that wiring is performed with the power off. Incorrect wiring may cause malfunctions or endanger personal safety.
- If the equipment starts frequently, please check the difference between Hi-P and Lo-P and adjust accordingly.
- Do not disassemble the machine yourself, as it contains high voltage; only qualified personnel can perform repairs.

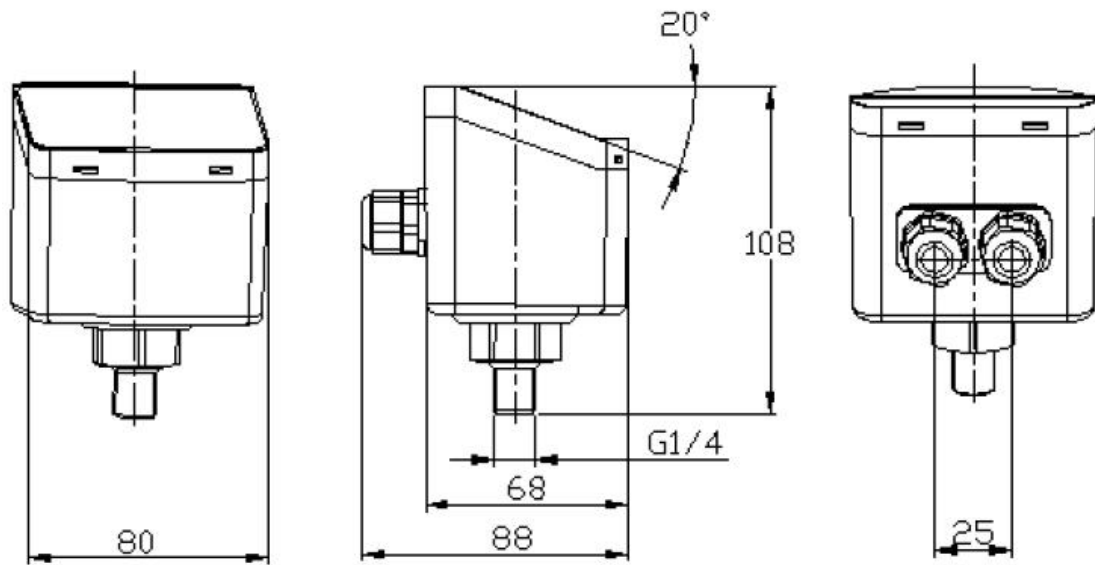
## Explanation of Error Messages

Error Name	Abnormal Indicators	Error Description	Solution
Residual Pressure Error	Err1	Excessive pressure during zeroing	During zeroing, the applied pressure at the pressure port should be atmospheric pressure
Incorrect Password Input	Err5	Password mismatch	Please enter the correct password
Usage Pressure Error	UP	Settings reached upper limit	Adjust the Hi-P value
	DOWM	Settings reached lower limit or stop pressure is lower than start pressure	Adjust the Lo-P value
Excessive Pressure	FULL	Exceeded sensor range	Reduce the pressure
Overpressure	Indicator light is always on (Note 1)	Pressure greater than Hi-P	Reduce the pressure
Underpressure Protection	Indicator light is flashing	Pressure shortage, air leakage, or other faults	Check the air circuit sealing or load condition, or adjust the Hi-P and Lo-P values
Key Lock	LOCK	Button locked	Press the unlock key combination  

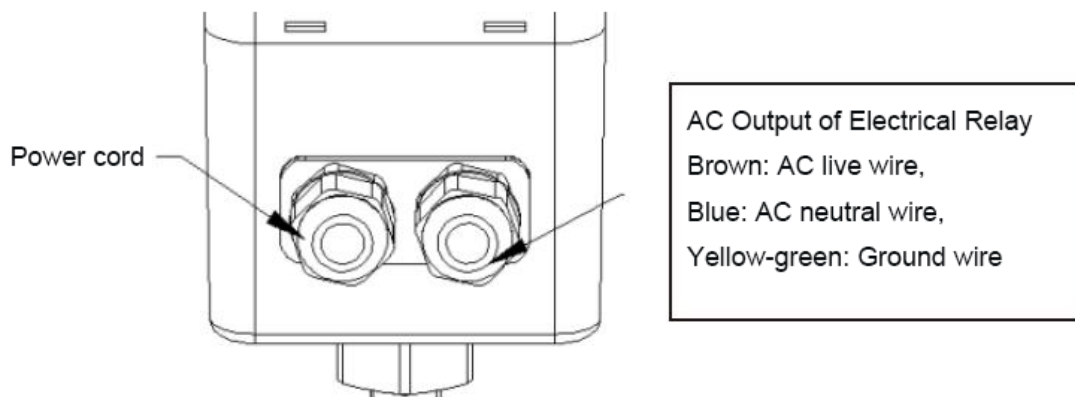
## Selection Table



## External Dimensions



## Wiring Method



For models with digital outputs (S/D), the brown and blue wires connect to the two terminals of the relay contacts; there is no distinction between positive and negative.