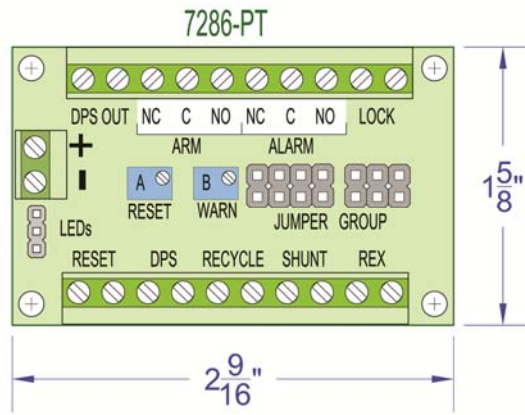**DORTRONICS**

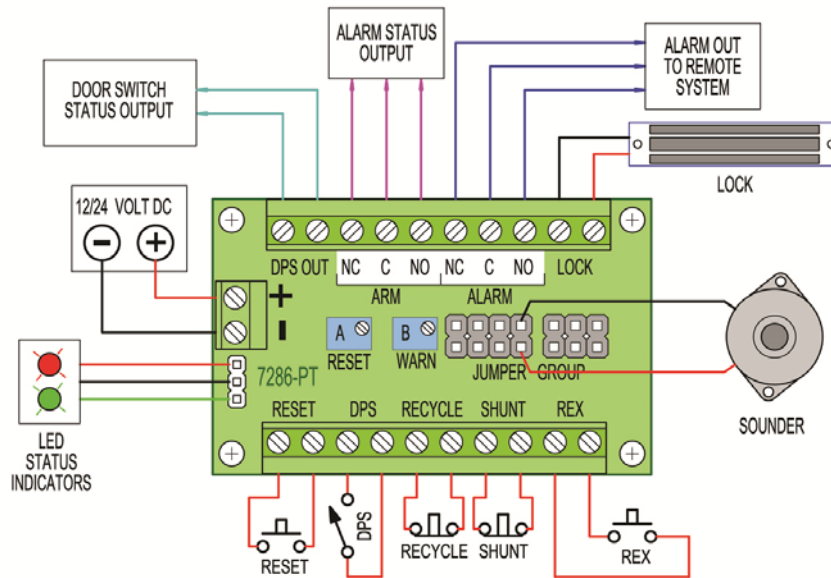# 7286 SERIES DOOR PROP ALARM USER MANUAL

Overview

The 7286 Door Prop Timer sounds an alarm when a door being monitored remains open beyond a user set time limit, or if the door is opened without a valid Request for Access (REX).

INPUTS	VOLTAGE	12 or 24 Vdc
	REX	Request for access (REX) input connect to normally open dry contact device such as card reader, pushbutton, or motion detector.
	REX RESET	A closed contact at the RECYCLE input enables REX during alarm condition. Normally, REX is disabled by alarm.
	DOOR POSITION	Connect to door position switch or bond sense switch to monitor door status. Supervised input is available as an option.
	ALARM SHUNT	Closed contact (keyed switch or similar) at input disables alarm.
OUTPUTS	LOCK POWER	Magnetic lock or electric strike can be powered directly. Select fail-safe or fail-secure operation by jumper.
	AUDIO POWER	Power connection for local or remote sounder. Select high or low volume by jumper.
	DPS MIRROR OUT	Relay output follows Door Position Switch status – contacts close when door is closed.
	ALARM OUT	SPDT Relay contacts. Relay is energized during alarm.
	SHUNT STATUS OUT	SPDT Relay output follows SHUNT input.
SETTINGS	WARNING TIME	Is adjustable from immediate alarm to 5 minute warning.
	PROP TIME	Is adjustable from no delay to 90 minutes.
	AUTO RESET	Auto alarm reset time.

INSTALLATION

INPUT CONNECTIONS

POWER: Power supply voltage must match lock requirements, either 12V or 24V dc and the current rating should exceed the expected load including the lock, lights, sounder and control circuitry. A minimum current rating of 1 Amp @ 12 Volts is recommended. Some installations will require a larger supply. Make sure the power connection polarity is correct.

RESET: An Alarm is continuous until reset. Connect a normally open, momentary contact switch to the Reset input for manual reset or a normally closed contact switch (or wire jumper) for automatic reset. See SETUP (below) to adjust the auto reset timing. To prevent unauthorized manual reset, the use of a keyed switch, a keypad with numeric code or card reader is recommended.

DPS/MBS: Connect either a Door Position Switch (DPS) or a Magnetic Bond Sensor (MBS) to the DPS input. Contacts must be closed when the door is secure.

REX RECYCLE OPTION: Normally the REX input is ignored while the system is in alarm. With closed contacts at the REX RECYCLE input, either a normally closed switch or a wire jumper, a REX input will reset the alarm if the door is secure.

SHUNT: Connect a maintained contact switch (typically a keyed switch) to the Shunt input to disarm the alarm function. When the switch contacts are closed, the alarm is disabled even if it is active. If the SHUNT switch contacts are opened while a door is open the system will go into alarm immediately.

REX: Connect the dry output, normally open contacts of a pushbutton, keyed switch, digital keypad, card reader, or other access control device to the REX input.

OUTPUT CONNECTIONS

DPS MIRROR: Connect the Mirror relay output to any external device (or console) for monitoring the door status. The output follows or "mirrors" the Door Position Switch.

ARM RELAY2: Connect the Arm output to any external device used to monitor or indicate the status of the alarm bypass.

ALARM RELAY1: Connect the Alarm relay output to any device used to monitor or indicate an alarm (horns, lights etc.).

LOCK: Connect a magnetic lock or electric strike to the powered Lock output. Use properly sized conductors for the load and wire run. 18 Gauge or larger is recommended. Select either fail-safe or fail-secure operation by installing a jumper at JP-10 of Header 1, see SETUP below for more details.

LED: A dedicated 3 pin header is provided for connecting a bi-color LED to indicate system status. The middle pin (see diagram above) is common. The top pin (shown connected to red LED) is powered when the system is in alarm and cycles on and off during warning mode. The bottom pin (shown connected to green) is powered when the system is idle and operating normally. Both pins are powered (amber) when the door is unlocked and power cycles on and off when the door is open.

HEADER 1

JP5 (AUDIO OUT): Connect a piezo sounder rated for 9 to 12 volts DC to JP5 – **observe correct electrical polarity**.

HEADER 2

The 7600 interface connector is used to interface the 7200 to the Dortronics 7600 Annunciator unit. All connections are isolated dry contact. Polarity does not matter:

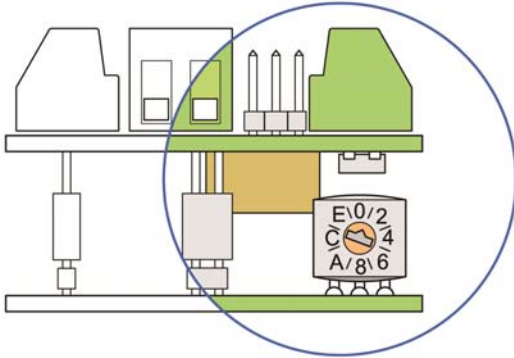**ARM:** Connects to the ARM input of the 7600.

ALARM: Connects directly to the ALARM input of the 7600.

DOOR: Connects directly to the DOOR input of the 7600.

A separate 7286-PT unit must be used for each individual zone of the 7600 on which door prop protection is needed.

SETUP

SETTING THE PROP TIME: The prop time is adjustable from 0 seconds to 90 minutes. A 16 position rotary switch is used to make the adjustment. The switch is labeled 0-9 and A-F. Refer to the chart below for switch settings to achieve various timer settings.
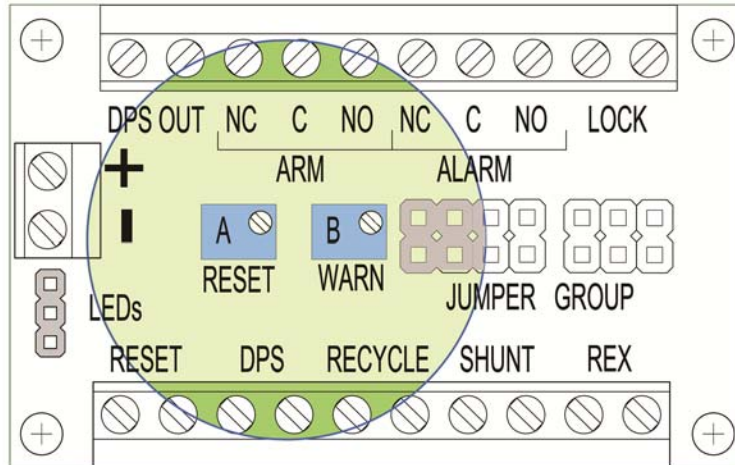
Position	Seconds	Minutes
0	0	
1	5	
2	10	
3	15	
4	20	
5	25	
6	30	
7	45	
8	60	1
9	120	2
A	300	5
B	600	10
C	900	15
D	1800	30
E	3600	60
F	5400	90

JP-10 ⊠ ⊠ FAIL SAFE/SECURE
JP-7 ⊠ ⊠ FORCED DOOR BY-PASS
JP-4 ⊠ ⊠ HI/LO VOLUME
JP-5 ⊠ ⊠ AUDIO OUT
\+ \-

JP4 (AUDIO VOLUME): The volume of the audio sounder can be adjusted for low or high volume. Install a jumper on JP4 for high volume. Remove the jumper for low volume.

JP7: (FORCED DOOR BY-PASS): Install a jumper at JP-7 for doors without a REX (normally unlocked or monitored by others). Prop timer starts when the door opens. Forced door alarm is disabled. For installations without a REX, the jumper must be used to prevent continuous alarm.

JP10 (FAIL SAFE / SECURE): Set Lock Output logic to either cut power for unlock (typically used with a magnetic locks or a fail-safe strike) or provide power for unlock (typically used with fail-secure strike). **With NO jumper - power is OFF for unlock. With jumper installed - power is ON for unlock**.

A - SETTING THE AUTO-RESET TIME: Use a small screw driver to turn the adjusting screw of the RESET trim pot (A) – clockwise to increase the delay up to 5 minutes and counterclockwise for less or none. This is a multi-turn adjustment. An exact setting or a very short delay may require more than one adjustment.

B - SETTING THE WARNING TIME: The multi-turn trim pot to adjust the duration of the propped door warning (B) is adjustable from no delay to 5 minutes. Turn clockwise to increase and counterclockwise for less or none. An exact setting or a very short delay may require more than one adjustment.

Note: trim pots do not have stops at the limit of travel. They use a clutch to prevent damage from excessive turning. Once the clutch disengages at the end of travel (in either direction) additional turns have no effect on the time setting.

IMPORTANT!

When the Reset input is closed and the Auto-Reset time is less than the Warning time the system will **not go into alarm**.

If the system does not alarm as expected, rotate the Reset adjusting screw two or three turn **clockwise** to increase the reset delay.

Once the alarm is working, adjust the screw for the desired delay before auto-reset.

OPERATION

IDLE:

In normal operation, the door being monitored is closed. The Lock Output is powered (for magnetic lock) or not powered (for electric strike). The alarm relay is de-energized. The sounder is quiet. No timers are running. The LED status lights are green. The alarm is armed.

REQUEST FOR ACCESS:

Contact closure at the REX input changes the state of the LOCK output (depending on the fail-safe or fail-secure setting, the default being fail-safe) releasing the door lock. The door is now accessible. The indicator light changes from green to amber. The door will remain accessible for as long as the REX input contacts are closed. The REX device must be adjusted to provide sufficient time delay for the user to initiate a request and then move to open the door. The ideal delay time will vary by installation. If the REX contacts open before the door is opened, the system returns to IDLE and the door is no longer accessible.

OPEN DOOR WITH VALID REX:

During the unlock period, the door may be opened. When the DPS input sees open contacts, the indicator light changes to blinking amber. The internal door prop timer begins counting down the pre-set prop time. If the door is still open when the prop timer expires, the system enters the WARNING period – see below.

DOOR CLOSE WITH NO ALARM:

In normal operation the door will close before the prop timer has timed out and the system returns to IDLE.

PROP WARNING:

If the door remains open after the prop timer has timed out, the WARNING timer begins. During the warning phase, the sounder beeps and the indicator light flashes red. If the door is closed during the warning period, the system returns to IDLE.

DOOR PROP ALARM:

If the door remains open when the warning timer expires, the system enters ALARM state, the sounder tone is continuous and the indicator light is steady red. The system will remain in ALARM state until it is reset. Note, the alarm relay is not energized during the warning period.

DOOR OPEN ALARM:

With the **WARN adjustment set to zero**, and the **prop time set to zero**, the system goes into ALARM as soon as the door opens.

MANUAL RESET:

Momentary closed contacts at the RESET input will clear an alarm and return the system to IDLE if the door is closed and secure.

AUTO RESET:

With maintained closed contacts at the RESET input (or wire jumper), the system will auto-reset. The auto reset may be timed or immediate depending on the setting of the RESET trim pot.

1. With closed contacts (or jumper) at the Reset input, the system will clear an alarm when the auto-reset timer expires if the door is left open.
2. With the Reset Input shorted, the system will clear an alarm if the door closes before the auto-timer expires. See *Setting the Auto Reset Timer*.

FORCED DOOR ALARM:

If a door is opened without a valid REX (forced) the system goes into ALARM mode. The sounder tone is constant and the indicator is steady red. On manual reset the system returns to IDLE if the door is closed.

REX RECYCLE (RESET ON REX):

A request for access (REX) signal is ignored during an Alarm condition unless the REX RECYCLE input is closed. When the RCY input is closed, (with a switch or wire jumper) a REX contact closure will reset an alarm and return the system to IDLE. The door must be secure.

SHUNT (ALARM BYPASS):

When the SHUNT input is closed, the alarm sounder is silenced and the alarm relay is bypassed. A propped door and or a forced door will not result in an alarm. The LED will change to amber to indicate that the system is in SHUNT and that the alarm is bypassed. An open door while in SHUNT mode will cause the LED to flash amber.

SPECIFICATIONS:

Current Draw:	**100 mA** - sounder driven – no lock. Add approximately 300 mA for mag lock at 24 VDC. Add approximately 600 mA for mag lock at 12 VDC
Sounder:	**90 dB** in High Volume mode.
Form Factor:	**2 9/16 x 1 5/8"** fits in a standard single gang box.
Voltage In:	**12 or 24 VDC**
Off Board Connection:	22 Euro style screw and clamp terminals in blocks. Header pin connectors for bi-color LED and Horn

OPERATION NOTES