



# TS0021 & TS084/0/1/3

8 input expander, 4 and 8 output expander boards



#### Overview

The TS0021 is an eight input expander board that when connected to TS0820 Data Gathering Panel (DGP) can provide an inexpensive way to increase the capacity for detection sensors and other inputs on the system.

Up to three TS0021 units (8 input expander boards) can be added to a single DGP (which already has 8 inputs as standard) increasing its total capacity to 32 Inputs.

An important consideration is that using more than one TS0021 in a single DGP to expand its capacity beyond 16 inputs, will ultimately result in one less DGP being available to connect to the Challenger panel.

The TS0840 and TS0841 output expander boards can be connected to the Challenger panel, door/lift controllers and DGP to extend the number of outputs available. These boards are typically used to control physical devices such as lighting circuits, pump motors and generators as well as heating and air-conditioning systems.

The TS0840 is a 4-way output expander board that provides 4 relays to the Challenger Panel (one allocated to strobe), 4 relays to the door/lift controllers, or a possible 8 when two are used on a TS0820 DGP. When fitted to a Challenger Panel or door/lift controller, the TS0840 cannot be combined with other relay boards.

The TS0841 is an 8-way output expander that can provide an additional 8 dry contact relays to the Challenger Panel, door/lift controllers and the TS0820 DGPs. Using a TS0841 a Challenger panel or door/lift controller can be fully expanded to 150 relays, while each standard DGP can be expanded to 16 relays. (A maximum of 255 relays can be deployed system wide per Challenger panel).

The TS0843 is a 4 way buffered output expander that provides four double pole, double throw relays to activate physical devices from either positive or negative level triggers. While its uses are many and varied, typically this device is used to extend the capability of a convenient open collector output on a RAS to a more powerful relay that can be used to trigger a strike on a door. The TS0843 can be used as a whole unit of 4 relays, or easily snapped apart as single or double relays.

#### **Features**

- 8 input expander can increase number of input devices to 32 in a single DGP
- Expand total number of inputs in a system to 256
- · Four or eight Form C relay outputs on board
- Expand total number of outputs in a system to 255
- Buffered relay can extend capability of open collector output on RAS

## TS0021 & TS084/0/1/3

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# 8 input expander, 4 and 8 output expander boards

### **Specifications**

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TS0021	
Input Voltage	10.5 – 13.8 Volts DC (supplied by DGP)
Operating Current	10mA maximum
Specified Cable between TS0021 & DGP	10 Way Cable (supplied)
Addressing	Individually addressed by dip switches
Total Number per DGP	3 expanders possible; restrictions on input numbering apply
Alarm Points	8
Board size	'B' size board
TS0840	
Number of Relays	4
Connects to	Challenger, Access Controllers & DGP's
Operating current	No current on standby, 100mA with all 4 relays active.
Max. Number on a Challenger	1
Max. Number on an Intelligent Access Controller	1
Max. Number on a DGP	2
Contact Ratings	One Amp @ 24V
Normally Open and Normally Closed Dry Contacts	Yes
Board size	'B' size board
TS0841	
Number of Relays	8
Connects to DGP's	Challenger, Access Controllers & DGP's
Operating current	50mA standby current and 250mA with all 8 relays active.
Max. Number on a Challenger	18
Max. Number on an Intelligent Access Controller	18
Max. Number on a DGP	2
Contact Ratings	One Amp @ 24V
Normally Open and Normally Closed Dry Contacts	Yes
Board size	'BB' size board
TS0843	
Input voltage	10.5 - 13.8 VDC
Operating current	50mA per relay
Trigger levels	Positive >+2.8 Volts DC
	Negative <+2.8 Volts DC
Connections	Double poll, double throw
Contact	One Amp @ 24V
Operating temperature	0 to +70°C
Board size	'B' size board

## Ordering information

TS0021	8 Input Expansion Module, Board only with Connection Cable
TS0840	4 Way Relay Board, Board only
TS0841	8 Way Relay Board, Board only
TS0843	4 Way Buffered Relay Board, Board only

Specifications subject to change without notice.



