



TAPESWITCH CONTROL UNIT TYPE PSCU/4 INSTALLATION INSTRUCTIONS

1. INTRODUCTION

Tapeswitch PSCU/4 control units are designed to be used with Tapeswitch pressure sensitive sensors, such as ribbon switches, sensing edges and signal mats, in control or low risk safety applications. For control applications either two wire (i.e. single lead) sensors or four wire (i.e. failsafe lead) sensors can be used. For low risk safety applications only sensors with failsafe wiring should be used.

2. PRODUCT DESCRIPTION

The unit operates from a 24V d.c. supply. From this is derived a current limited 24V d.c. supply. The sensor and control circuit operate from this current limited supply. The unit is housed in a DIN rail mounting enclosure with 16 integral terminals. This unit is intended to be mounted in an existing electrical enclosure on the machine. This existing enclosure must be sealed to minimum rating of IP54. See Figure 1 for unit dimensions.

The unit can be used to monitor a sensor (or several sensors connected in series). The sensor is effectively a normally open switch. When the sensor is actuated, i.e. pressure is applied to it, the switch closes causing the output relay to de-energise and therefore the output contacts to change state. The output is a set of volt-free changeover relay contacts.

The unit provides a manual or auto reset function.

In manual reset mode the reset function provides start and restart interlock functions as follows:

START INTERLOCK - When power is applied to the system, the output relay cannot be energised until the reset signal has been applied.

RESTART INTERLOCK - Once the sensor has been actuated and the output relay has been de-energised, it cannot be re-energised until the reset signal has been applied.

In auto reset mode the output relay will be energised whenever power is applied to the system and the sensor is clear.

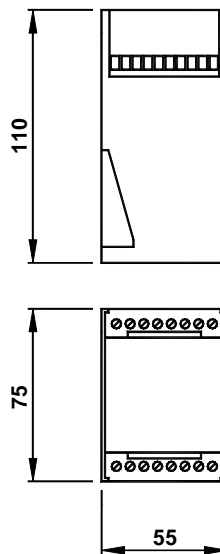
In manual or auto reset, the output relay will not energise whilst the sensor is actuated. If a short circuit or open circuit fault occurs in a four wire sensor, the output relay will not energise.

3. INSTALLATION (SEE FIGURE 2)

POWER SUPPLY - Connect +24V to terminal 9 and 0V to terminal 11 as shown in Figure 2.

Maximum power consumption is 6VA.

SENSOR CONNECTION - See Figure 2 and Table 1 for connection details between the control unit and the sensors.



RESET CONNECTION - For manual reset connect a normally open switch across terminals 3 and 4. For auto reset connect a link across terminals 3 and 4.

OUTPUT CONNECTION - Connect the output contacts into the machine control system to provide required function.

Figure 1

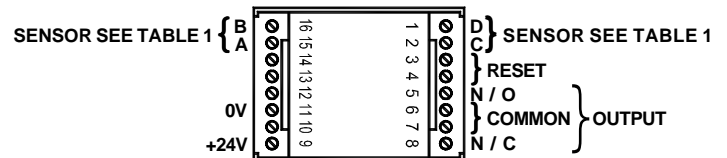


Figure 2

SENSOR TYPE	SENSOR CONNECTION			
	A	B	C	D
Tapeswitch Safety Mat (single lead 4 wire)	Brown or Black	Green or Red	Yellow	White
Tapeswitch Safety Mat (dual lead 4 wire)	Brown 1 or Black 1	White 1	Brown 2 or Black 2	White 2
Tapeswitch Sensor: Edge / Switch / Mat (dual lead 4 wire)	Brown 1 or Black 1 or Ribbed 1	White 1 or Smooth 1	Brown 2 or Black 2 or Ribbed 2	White 2 or Smooth 2
Tapeswitch Sensor: Edge / Switch / Mat (single lead 2 wire)	Brown or Black or Ribbed	White or Smooth	Link to A	Link to B

Table 1

Supply Voltage:	24V d.c.
Power Consumption	6VA
Temperature Range:	
Operating	0°...50°C
Storage	-20°...70°C
Reset Function	Manual or Auto (link selectable)
Outputs:	
Type	Changeover relay contacts
Rating	4A @ 240Vac 50/60 Hz
Maximum Sensor Capability:	
Safety Mat	15m ²
Sensing Edge or Switch	20m
Enclosure:	
Protection Rating	IP20
Terminal capacity	2,5mm ²
Material	Polycarbonate

Table 2