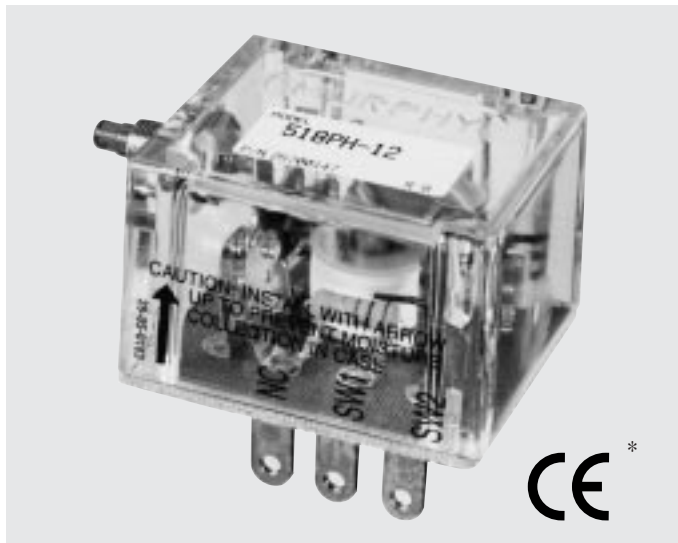


TATTLETALE® Annunciators and Magnetic Switches

M-6797B
Revised 04-02
Catalog Section 25
(00-02-0078)

FWMurphy



■ Nerve Centers for Murphy SWICHGAGE® Instruments and Automation Systems

Description

TATTLETALE® annunciators and Magnetic Switches are the nerve centers that translate SWICHGAGE® contact operations into decisions and operate the alarm or shutdown device. They are the electrical load carrying devices for the alarm or shutdown device. TATTLETALE® annunciators indicate which monitored function failed leading to the alarm or shutdown whereas magnetic switches do not. Magnetic switches operate basically as a latching relay.

Application

Magnetic Switches and TATTLETALE® annunciators are available for use with engines or electric motors. Various circuits, time delays, and contact configurations are available to match the power source and mode of operation required for alarm only, alarm before shutdown or shutdown only.

For distributor ignition engines, the magnetic switch opens the distributor coil circuit to cause shutdown. For magneto or CD ignitions the magnetic switch grounds the ignition output. Some models can also trip fuel valves instead of or in addition to grounding the ignition. Diesel engines are shut down by either closing off the fuel or air supply. Magnetic switches and TATTLETALE® annunciators can make or break circuits for these engines.

For electric motor applications, various magnetic switches are available to operate the motor starter, holding coil directly or in conjunction with appropriate Murphy Transformer-Relay assembly.

Features

Magnetic switches and TATTLETALE® annunciators described in this bulletin are electrically tripped relay type devices. Models are available to operate from battery power, 120 VAC, conventional magnetos and capacitor discharge type ignitions. Energized to run models allow CLOSED LOOP circuitry. Others draw momentary power to trip. Configurations are available for contact make or contact break to cause shutdown. Some models have both make and break contacts.

All models have a weather resistant case with screw terminals for ease of customer hookup. Manually reset models have a face mounted reset push button which also serves as a fault indicator in the TATTLETALE® version. In this application, one or more TATTLETALE®/magnetic switches are used to advise operating personnel which monitored function caused shutdown. Only the TATTLETALE® connected to that function sensor trips causing the reset push button to pop out.

Electrically reset models perform the same functions as the manually reset models and are reset by cycling the power supply off and then on.

Time delay models use reliable solid state timing circuits to lockout operated switch contacts for start-up and/or to allow operation of alarms before shutdown occurs. Specific models allow application of power to a shutdown circuit and automatic disconnect of power after a given time delay.

See the chart on page 2 for features by part number.

* Applies to selected models.

Specifications	117	117PH	MS2100	MS2110	MS2120	518PH	518APH	520APH	521PH	760A	761APH	822PH	MM204-1	MM204-2	MM204-3	RT29A	ETS30S	713	TD/81
Coil Voltage																			
12 volt					•	•	•	•	•	•							•		
24 volt					•	•	•	•	•	•						•			
12/24 volt*	•	•		•								•					•	•	•
120 VAC			•																
Magneto ignition				•									•	•	•				
CD ignition			•										•	•	•				
Contacts (see Note 2 below)																			
NCH	•	•	A	A		•	•	•		•	•	•							
NOH			A	A		•	•			•	•	•					•	•	•
NCG					B								B	B	B	B			
NOG					B			•					B	B	B	B			
Latch Type																			
Energize to trip	•	•	•	•	•					•	•	•	•	•	•	•	•	•	•
Energize to latch						•	•	•	•										
Reset Type																			
Manual indicating		•	•	•	•	•	•	•	•		•	•	•	•	•				
Manual non-indicating	•																		
Electric non-indicating										•						•	•	•	•
Time Delay																			
Before shutdown								•		•	•								•
Start only										•	•								•
After shutdown																	•	•	

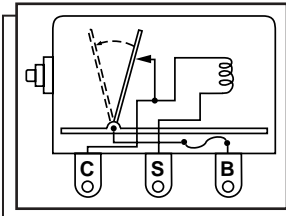
* Multi-voltage AC or DC systems. See circuit descriptions below and on next page.

A: Dry contacts normally wired in hot circuit.
B: Dry contacts normally wired in ground circuit.

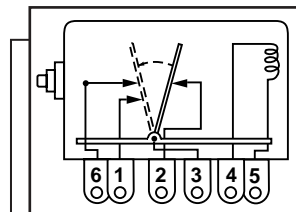
NOTES

The chart above indicates features/configurations available for each model.

- Coil Voltage**-Coils are specific voltage rated or multiple voltage rated.
- Contacts**-This is the control circuit output. In the latched position the NCH contact has a "hot" output; in the tripped position the NOH contact has a "hot" output. In the latched position, the NCG has a "grounded" output; in the tripped position, the NOG has a "grounded" output.
- Latch Type**-Refers to whether the magnetic coil is momentarily energized to trip or requires continuous power in the operating mode and de-energizes to trip.
- Reset Type**-Refers to manual or electric reset; manual indicating type is a TATTLETALE®.
- Time Delay**-Indicates operation of the time delay.

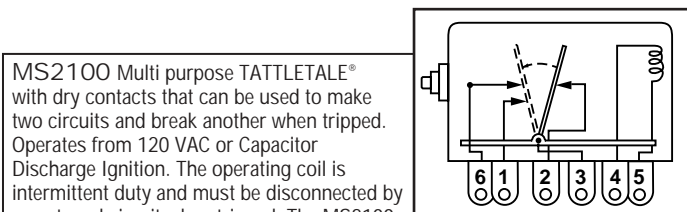


117/117PH Use to shutdown 12V thru 32V distributor ignition or diesel engines. Breaks circuit when tripped. Opens distributor coil circuit or power circuit to diesel run device. Automatically disconnects from battery after trip. Contacts 10 amps 32 VDC. 14 amp fuse.



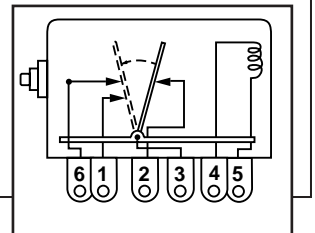
MS2110 Multi purpose TATTLETALE® with dry contacts that can be used to make two circuits and break another when tripped. Operates from 12 or 24 VDC or 24 VAC. The operating coil is intermittent duty and must be disconnected by an external circuit when tripped. The MS2110 is a replacement for

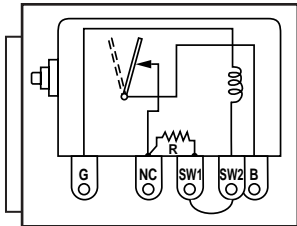
221PH, 169PH, 274 and 274PH.



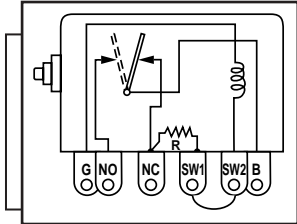
MS2100 Multi purpose TATTLETALE® with dry contacts that can be used to make two circuits and break another when tripped. Operates from 120 VAC or Capacitor Discharge Ignition. The operating coil is intermittent duty and must be disconnected by an external circuit when tripped. The MS2100 is a replacement for 100PH, 307CD, 307PHCD and 224CD.

MS2120 Multi purpose TATTLETALE® with dry contacts that can be used to make two circuits and break another when tripped. Operates from Magneto Ignition. The operating coil is intermittent duty and must be disconnected by an external circuit when tripped. The MS2120 is a replacement for 307, 307PH and 224.



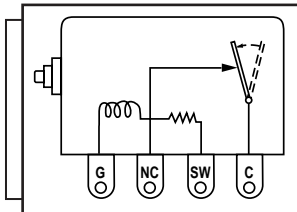
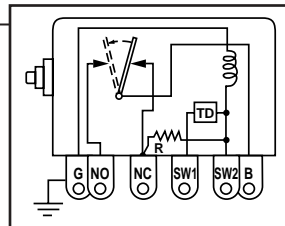


518PH Same as 517PH except allows for SWICHGAGE® and/or N.C. contacts to be wired "Closed Loop" (in series). Any contact open or SWICHGAGE® contact close in the circuit shunt trips the 518PH. Specify 12 or 24 VDC. Contacts 10 amps 24V. 14 amp fuse.



518APH Same as 517APH except allows for SWICHGAGE® and/or N.C. contacts to be wired "Closed Loop" (in series). Any contact open or SWICHGAGE® contact close in the circuit shunt trips the 518APH. Specify 12 or 24 VDC. Contacts 10 amps 24V. 14 amp fuse.

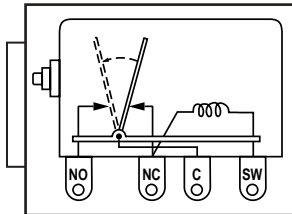
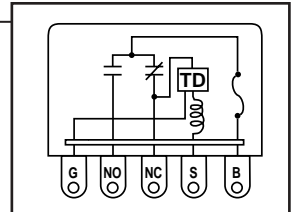
520APH Same as 518APH except with 30 second time delay before trip on one SWICHGAGE® contact input but immediate trip on the second SWICHGAGE® contact input. Typical use is for immediate stop of engine from oil pressure or coolant temperature, but delayed shutdown from alignment switches on center pivot irrigation system. Specify 12 or 24 VDC and length of time delay. Time delays are available from 5 to 120 seconds. Contacts 10 amps 24 V. 14 amp fuse.



521PH Use with N.C. SWICHGAGE® or switches to ground magneto or CD ignition when tripped. Trip coil energized to run, de-energized to shutdown when N.C. contacts open. Specify 12 or 24 VDC. Contacts 10 amps 24 V.

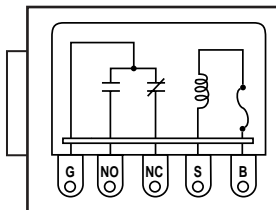
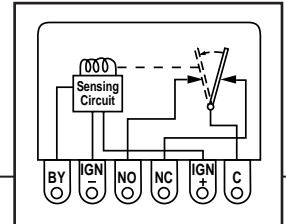


760A/760AF/761APH Use for distributor ignition or diesel. Time delay lockout of SWICHGAGE® contacts on start-up only; customer wired for delayed or immediate trip on shutdown. Breaks and makes circuits when tripped. 760A resets automatically when power is removed. 761APH has manual reset. 760AF is 760A with inline fuse. Must specify 12 or 24 VDC, and length of time delay. Optional time delays: 15, 30 (standard) or 60 seconds. Contacts 10 amps 24 V. 14 amp fuse. Models 760A and 761APH carry the CE mark.



822PH Used in Murphy TR-assemblies as master disconnect. 24 VAC coil energizes when SWICHGAGE® contact closes to ground; breaks and makes circuit when tripped. Manual reset.

M4264 Series Detects loss of magneto/CD ignition output and transfers contacts for customer use. Contacts 10 amps; 48 VAC/VDC.
M42641M/M42641CD transfers SPDT dry contacts when tripped.
M42642M/M42642CD is used with Murphy M-series fuel valve. Power is stored in the M42642 to trip the fuel valve coil.
M42643M/M42643CD is version M42641 with a bypass terminal which allows manual shutdown of the engine without tripping the M42643.



R129A A SPDT relay with 10 amp dry contacts. Specify 12 or 24 VDC. Contacts 10 amps 24 VDC. 14 amp fuse.

ETS30S All solid-state time delay for energized to stop circuits such as solenoids. When a shutdown signal is received, the ETS30S applies power to the shutdown device for 30 seconds and then disconnects the power. Input power 12 or 24 VDC.

773 All solid-state time delay magnetic switch for energized to stop circuits such as engine intake air shutoff. SWICHGAGE® contact closure causes unit to apply power to the shutdown device for 10 seconds and then disconnects the power. Input voltage 8-40 VDC. Contacts rated 10 amps 30 VDC.

773 has a 30 second time delay lockout on start only—immediate shutdown on all functions. Overspeed is not locked out on start.

TD781 Turbo cool-down module. Manual push button starts 5 minute cool-down delay; key switch must then be turned off. De-energizes engine run solenoid/device. Key switch "on" overrides shutdown. Input power 12–30 VDC.

* Complies with EMC Council directive 89/336/EEC regarding electromagnetic compatibility.

How to Order

Specify model number and options using the diagram below. List options in alphabetical order (A to Z) followed by numeric in ascending order. Place a dash (-) between each option.

760AF - 15 - 12 -

Base Models

117*	M42642M
117PH*	M42642CD
518PH	M42643M
518APH	M42643CD
520APH	R129A
521PH	773
760A*	TD781
761APH*	ETS30S
822PH	MS2100
M42641M	MS2110
M42641CD	MS2120

Options
 Not all options may not be available on all models in combination with other options. See "Configurations Available" chart below.
AS = Auxiliary SPDT switch
ES = Environmentally sealed
EL = Explosion-proof less case

Voltage/Ground (where applicable)
 12 = 12 VDC
 24 = 24 VDC

Time Delay (where applicable)
 15 = 15 seconds
 30 = 30 seconds
 60 = 60 seconds
 Specify other.

*Add the letter "F" to the base model to indicate an inline fuse instead of a base mounted fuse. Example: 760AF, 761APHF, 117F.

Configurations Available

	117	MS2100	MS2110	MS2120						517/517A	518/518A	520A	521	760A	760AF	761A	822	M4264-1	M4264-2	M4264-3
Non-PH	1,2													1	1			1	1	1
PH	1,2	1,2	1,2	1,2						1	1	1	1			1	1			
PH-ES	1	1	1	1						1										

1= Offered
 2= Auxiliary snap-switch

Accessories

Order accessories as a separate item. Specify part number when ordering.

- 25050016 Weathercap.
- 25050547 Clear flexible dust boot for push button.
- 30050323 Single unit mounting panel.
- 65010026 In-line fuse holder with 14 amp fuse.

Warranty

A two-year limited warranty on materials and workmanship is given with this Murphy product. Details are available on request and are packed with each unit.