

# Tattletale® Annunciators and Magnetic Switches

Tattletale annunciators and magnetic switches are the nerve centers that translate Swichgage® contact operations into decisions and operate the alarm or shutdown device. These switches 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; magnetic switches do not. Magnetic switches operate basically as a latching relay.

## Application

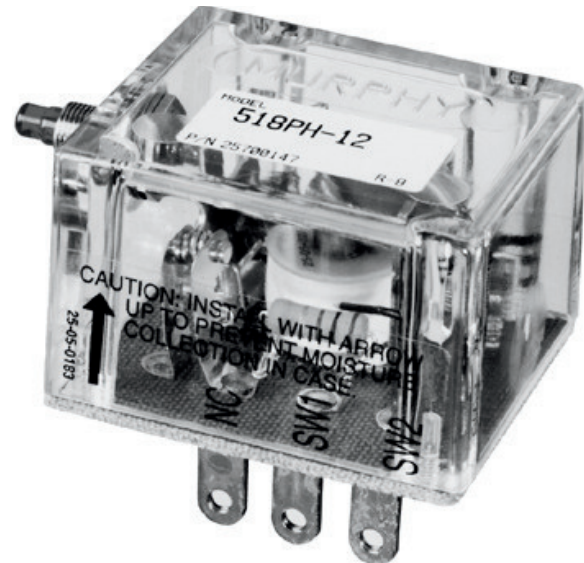
Magnetic switches and Tattletale annunciators are available for use with engines or electric motors. Various circuits, time delays and contact configurations are available to match the power source and mode of operation required for alarm only, alarm before shutdown or shutdown only.

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 application, 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 time 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.

# Specifications

	117	117PH	MS2100	MS2110	MS2111	MS2120	518PH	518APH	518E	520APH	521PH	760A ‡	761APH	822PH	M4264-I	R129A
<b>Coil Voltage</b>																
12 volt							•	•	•	•	•	•	•			•
24 volt							•	•	•	•	•	•	•			•
12/24 volt*	•	•		•	•									•		
120 VAC			•													
Magneto ignition					•										•	
CD ignition			•												•	
<b>Coil</b> (see Note 6 below)	2	2	6	2	4	1	7	7	7	8	7	5	2	3		5
<b>Contacts</b> (see Note 2 below)																
NCH	•	•	A	A	A		•	•	•	•	•	•	•	•		
NOH			A	A	A		•	•	•	•	•	•	•			
NCG						B									B	B
NOG						B				•					B	B
<b>Latch Type</b>																
Energize to trip	•	•	•	•	•	•						•	•	•	•	•
Energize to latch							•	•	•	•	•					
<b>Reset Type</b>																
Manual indicating		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Manual non-indicating	•															
Electric non-indicating											•					•
<b>Time Delay</b>																
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.

‡ Does not latch after shutdown signal clears, automatically resets.

## NOTES

This chart indicates features/configurations available for each model.

**1. Coil Voltage** – Coils are specific voltage rated or multiple voltage rates.

**2. 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.

**3. 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.

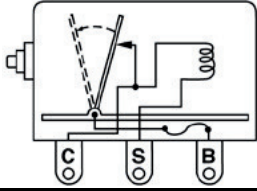
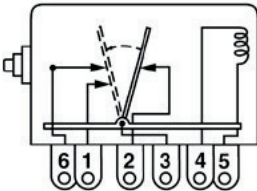
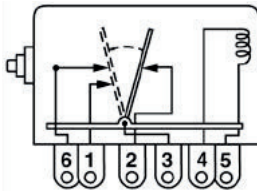
**4. Reset Type** – Refers to manual or electric reset; manual indicating type is a Tattletale.

**5. Time Delay** – Indicates operation of the time delay.

**6. Coil Resistances** – In OHMS or coil and resistor

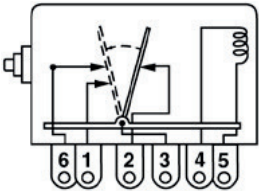
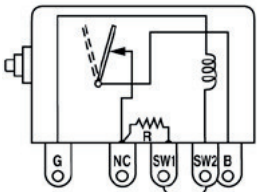
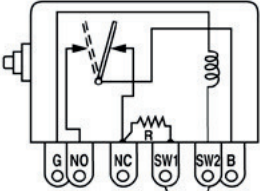
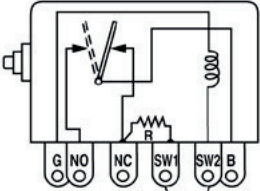
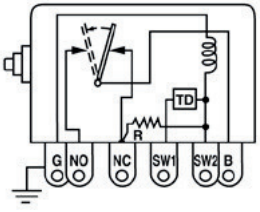
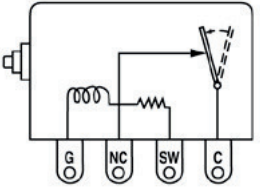
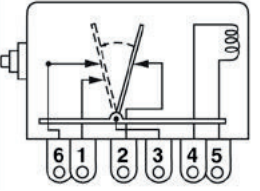
1.) 0.5 2.)18 3.)30 4.)72 5.)90/190 for 12/24 6.)288 7.)339/678 for 12/24 8.)339/618 for 12/24

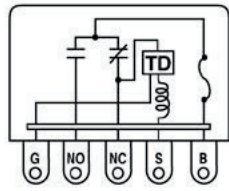
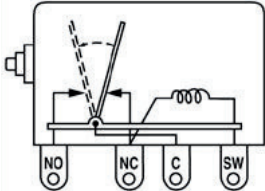
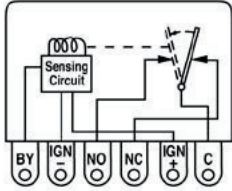
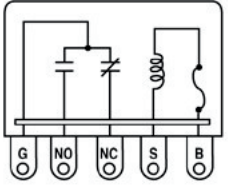
## Models

Model	Description	Illustration
117/117PH	Use to shutdown 12V through 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.	
MS2100	Multipurpose 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.	
MS2110	Multipurpose 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.	

**Warranty** – A limited warranty on materials and workmanship is given with this Murphy product.

A copy of the warranty may be viewed or printed by going to [www.murphybynovationcontrols.com/support/warranty.htm](http://www.murphybynovationcontrols.com/support/warranty.htm)

Model	Description	Illustration
MS2120	Multipurpose 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	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	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 trips the 518APH. Specify 12 or 24 VDC. Contacts 10 amps 24V. 14 amp fuse.	
518E	Same as 518APH but recommended for high vibration application where nuisance shutdowns typically occur due to higher than normal vibrations (i.e. wood chippers). 12 Volt only.	
520APH	Same as 518PH 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 shutdown when N.C. contacts open. Specify 12 or 24 VDC. Contacts 10 amps 24V.	
MS2111	Replaces 221PH with 72 ohm coil. Used with NICS-78 non-incendive control system. Service part only.	

Model	Description	Illustration
760A/ 760AF/ 761APH	<p>Use for distributor ignition or diesel. Time delay lockout of Switchgag contacts on start up only. Customer wired for delay or immediate trip on shutdown. Breaks and makes circuits when tripped. 760A resets automatically when the shutdown signal is removed or power is removed. 761APH has manual reset. 760AF is 760A with in-line fuse. Must specify 12 or 24 VDC and length of time delay. Option time delays: 15, 30 (standard) or 60 seconds. Contacts 10 amps 24 V. 14 amp fuse. Models 760A and 761APH carry the CE mark.</p> <p><i>Note: The 760A cannot be adequately protected by a circuit breaker in a dead short condition with a battery as the power source. The circuit breaker will take a finite amount of time to react, during which time the circuit board of the 760A will be damaged beyond repair. Fuses are the optimal method for protecting 760A.</i></p>	
822PH	<p>Used in Murphy TR assemblies as master disconnect. 24VAC coil energizes when Switchgag contact closes to ground; breaks and makes circuit when tripped. Manual reset</p>	
M4264 Series	<p>Detects loss of magneto/CD ignition output and transfers contacts for customer use. Contacts 10 amps; 48 VAC/ VDC. M42641CS transfers SPDT dry contacts when tripped.</p>	
R129A	<p>A SPDT relay with 10 amp dry contacts. Specify 12 or 24 VDC. Contacts 10 amps 24 VDC. 14 amp fuse.</p>	

Always provide proper circuit protection with fuses or circuit breakers.

# How to Order

Options listed below. All configurations may not be available. Call your sales representative or Enovation Controls for more information.

**760AF - 15 - 12 - EL**

Base Models	
<b>117*</b>	= In-line fuse available
<b>117PH*</b>	= In-line fuse available
<b>518PH</b>	
<b>518APH</b>	
<b>518E</b>	= 12-Volt Neg Ground version only
<b>520APH</b>	
<b>521PH</b>	
<b>760A*</b>	= In-line fuse available
<b>761APH*</b>	= In-line fuse available
<b>822PH</b>	
<b>M42641CD</b>	
<b>ETS30S</b>	
<b>MS2100</b>	
<b>MS2111</b>	
<b>MS2110</b>	
<b>MS2120</b>	

\* Add letter F to base model to indicate an in-line fuse instead of a base-mounted fuse.

Time Delay
(Where applicable)
<b>15</b> =15 Seconds
<b>30</b> =30 Seconds
<b>60</b> =60 Seconds
<b>Specify other</b>

Voltage Ground
(Where applicable)
<b>12</b> =12 VDC
<b>24</b> =24 VDC

Options
<b>AS</b> =Auxiliary SPDT Switch
<b>ES</b> =Environmentally Sealed
<b>EL</b> =Explosion-Proof Less Case
Not all options are available on all models in combination with other options. <b>See Configurations Available chart.</b>

Base Number	Configurations Available		
	Non-PH	PH	PH-ES
<b>117</b>	X, AS	X, AS	X
<b>MS2110</b>		X, AS	X
<b>MS2120</b>		X, AS	X
<b>MS2111</b>		X, AS	X
<b>517/517A</b>		X	X
<b>518/518A/518E</b>		X	
<b>520A</b>		X	
<b>521</b>		X	
<b>760A</b>	X		
<b>760AF</b>	X		
<b>761A</b>		X	
<b>822</b>		X	
<b>M4264-1</b>	X		

X = Available / AS = Auxiliary SPDT Switch

Part Number	Description	Notes
25050016	Weather cap	Accessories
25050547	Clear, flexible dust boot for push button	
30050323	Single unit mounting plate	
65010026	In-line fuse holder with 14 amp fuse	