TATTLETALE® Annunciators and Magnetic Switches

Nerve Centers for Murphy SWICHGAGE® Instrument and Automation Systems

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 mjotors. 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	M4264-1	R129A
Coil Voltage																
12 volt						●	●	●	●	●	●	●				●
24 volt						●	●		●	●	●	●				●
12/24 volt*	●	●		●	●								●			
120 VAC			●													
Magneto ignition						●								●		
CD ignition			●											●		
Coil (see Note 6 below)	2	2	6	2	4	1	7	7	7	8	7	5	2	3		5
Contacts (see Note 2 below)																
NCH	●	●	A	A	A		●	●	●	●		●	●	●		
NOH			A	A	A			●	●	●		●	●	●		
NCG						B									B	B
NOG						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.

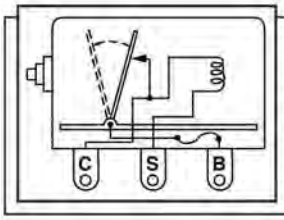
A: Dry contacts normally wired in hot circuit.
B: Dry contacts normally wired in ground circuit.

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

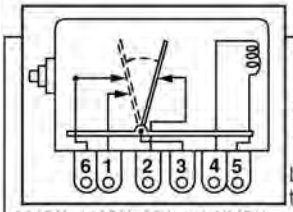
NOTES

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

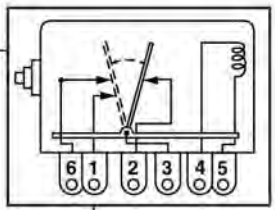
1. **Coil Voltage**-Coils are specific voltage rated or multiple voltage rated.
2. **Contacts**-This is the control circuit output. In the latched position the NCH contact has a "hot" output; in the tripped position the NOH contact has a "hot" output. In the latched position, the NCG has a "grounded" 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



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.

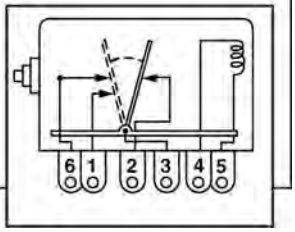


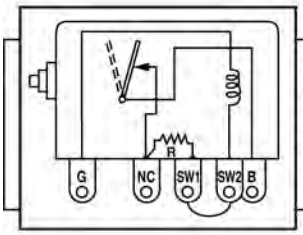
MS2110 Multi purpose TATTLETALE® with dry contacts that can be used to make two circuits and break another when tripped. Operates from 12 or 24 VDC or 24 VAC. The operating coil is intermittent duty and must be disconnected by an external circuit when tripped. The MS2110 is a replacement for 221PH, 169PH, 274 and 274PH.



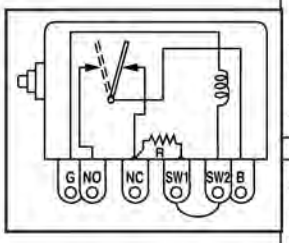
MS2100 Multi purpose TATTLETALE® with dry contacts that can be used to make two circuits and break another when tripped. Operates from 120 VAC or Capacitor Discharge Ignition. The operating coil is intermittent duty and must be disconnected by an external circuit when tripped. The MS2100 is a replacement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



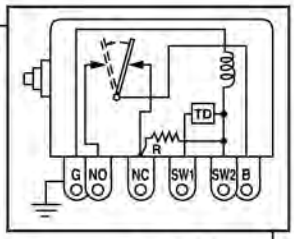


518PH Allows for SWICHGAGE® and/or N.C. contacts to be wired "Closed Loop" (in series). Any contact open or SWICHGAGE® contact close in the circuit shunt trips the 518PH. Specify 12 or 24 VDC. Contacts 10 amps 24V. 14 amp fuse.



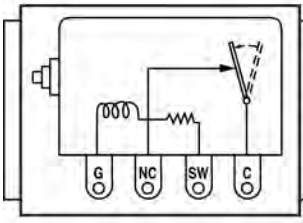
518APH Allows for SWICHGAGE® and/or N.C. contacts to be wired "Closed Loop" (in series). Any contact open or SWICHGAGE® contact close in the circuit shunt trips the 518APH. Specify 12 or 24 VDC. Contacts 10 amps 24V. 14 amp fuse.

518E Same as 518APH but recommended for high vibration application where nuisance shutdowns typically occur due to higher than normal vibrations (ie. wood chippers) 12 Volt only.



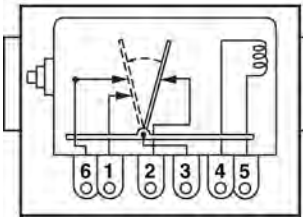
520APH Same as 518APH except with 30 second time delay before trip on one SWICHGAGE® contact input but immediate trip on the second SWICHGAGE® contact input. Typical use is for immediate stop of engine from oil pressure or coolant temperature, but delayed shutdown from alignment switches on center pivot 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.

CE*

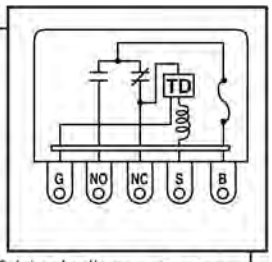


521PH Use with N.C. SWICHGAGE® or switches to ground magneto or CD ignition when tripped. Trip coil energized to run, de-energized to shutdown when N.C. contacts open. Specify 12 or 24 VDC. Contacts 10 amps 24 V.

CE*



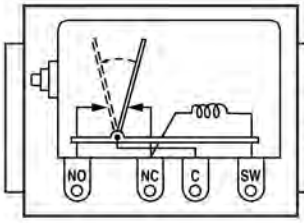
MS2111 Replaces 221PH w/72 ohm coil. Used with NICS-78 non-incendive control system. Service part only.



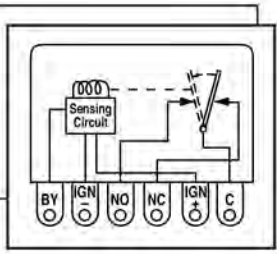
760A/760AF/761APH Use for distributor ignition or diesel. Time delay lockout of SWICHGAGE® contacts on start-up only; customer wired for delayed or immediate trip on shutdown. Breaks and makes circuits when tripped. 760A resets automatically when the shutdown signal is removed or power is removed. 761APH 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.

CE*

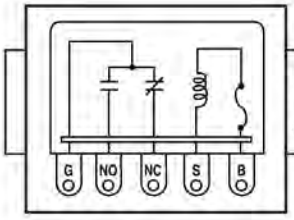
NOTE : The 760A cannot be adequately protected by a circuit breaker in a dead short condition with a battery as the power source. The circuit breaker will take a finite amount of time to react, during which time the circuit board of the 760A will be damaged beyond repair. Fuses are the optimal method for protecting the 760A.



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.

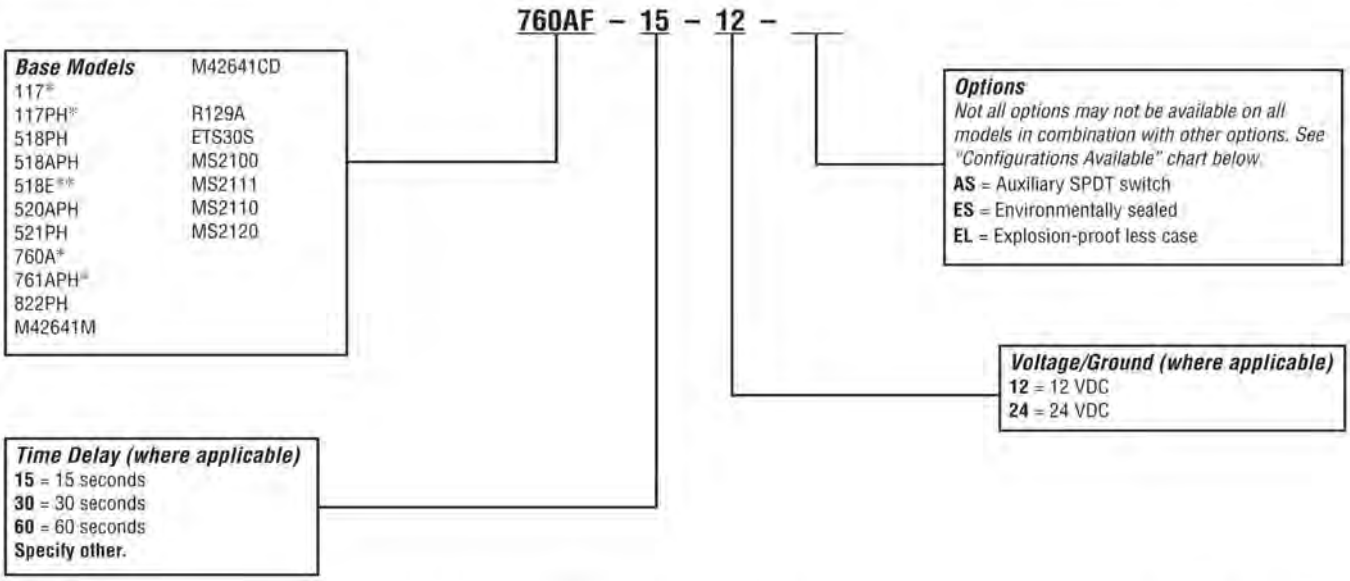


M4264 Series Detects loss of magneto/CD ignition output and transfers contacts for customer use. Contacts 10 amps; 48 VAC/VDC. **M42641CD** transfers SPDT dry contacts when tripped.



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

Warranty - A limited warranty on materials and workmanship is given with this FW Murphy product.
A copy of the warranty may be viewed or printed by going to http://www.fwmurphy.com/warranty



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

Configurations Available

	117	MS2110	MS2110	MS2120	MS2111	517/517A	518/518A/518E	520A	521	760A	760AF	761A	822	M4264-1
Non-PH	1,2									1	1			1
PH	1,2	1,2	1,2	1,2	1,2	1	1	1	1			1	1	
PH-ES	1	1	1	1	1	1								

1= Offered
2= Auxiliary snap-switch

Model Number	Hold up (Time Delay)	Minimum Charge Time
ETS10S	10-12 seconds	7 seconds
ETS30S	30-35 seconds	20 seconds

NOTE:

- Hold up time is directly related to the capacitor charge time.
- Caution must be taken by the user to assure minimum charge time is met for proper operation of timer.

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.

CAUTION: Certain dangers to human safety and to equipment may occur if some equipment is stopped without pre-warning. It is recommended that monitored functions be limited to alarm-only or to alarm before shutdown.

FW MURPHY
P.O. Box 470248
Tulsa, Oklahoma 74147 USA
Phone: +1 918 317 4100 Fax: +1 918 317 4266
E-mail: sales@fwmurphy.com

INDUSTRIAL PANEL DIVISION
Fax: +1 918 317 4124
E-mail: ipdsales@fwmurphy.com

MURPHY POWER IGNITION
Web site: www.murphy-pi.com

CONTROL SYSTEMS & SERVICES DIVISION
P.O. Box 1819
Rosenberg, Texas 77471 USA
Phone: +1 281 633 4500 Fax: +1 281 633 4588
E-mail: css-solutions@fwmurphy.com

FRANK W. MURPHY LTD.
Church Road, Laverstock
Salisbury, SP1 1QZ, UK
Phone: +44 1722 410055 Fax: +44 1722 410088
E-mail: sales@fwmurphy.co.uk
Web site: www.fwmurphy.co.uk

COMPUTRONIC CONTROLS
41 - 46 Railway Terrace
Nechells, Birmingham, B7 5NG, UK
E-mail: sales@computroniccontrols.com
Web site: www.computroniccontrols.com

www.fwmurphy.com

FW MURPHY INSTRUMENTS (HANGZHOU) CO., LTD.
77 23rd Street
Hangzhou Economic & Technological Development Area
Hangzhou, Zhejiang, 310018, China
Phone: +86 571 8788 6060 Fax: +86 571 8684 8878
E-mail: apsales@fwmurphy.com

ISO 9001

Registered Facilities Printed in U. S. A.

02/11/2011