

SELECTRONIC® TATTLETALE®**Remote Alarm Annunciators ST Series****Features**

- Provide Audible and Visual Alarm
- Simple and Inexpensive
- Wide Range of Applications
- Gen-Set Models Meet NFPA-99 and NFPA-110 Requirements

The ST Series SELECTRONIC® TATTLETALE® annunciators are a simple and inexpensive answer to your remote alarm annunciator needs.

Basic models **ST5AS** and **ST10AS** are general purpose alarms suitable for a variety of applications.

Model ST8 gives first out annunciation of fault. Model **STA16** is designed for generator set applications and can be configured to meet NFPA requirements for standby generators.

These compact TATTLETALE® annunciators tell you by a flashing LED which variable malfunctioned. Many feature a pulsating MINI-SIREN® to audibly alert you to the malfunction. The audible alarm is silenced by depressing the Alarm Silence push button, but the visual signal remains in operation until the fault is corrected and the contacts are cleared.

A test push button allows you to test all alarm LEDs. Because LEDs are solid state, cold light, electronic devices, they don't burn out as incandescent light bulbs do.

Basic models accept 8-32 VAC or 8-40 VDC input voltage. Others are available for either 12 VDC or 24 VDC input.

Preprinted peel and stick nameplates for common faults are supplied with each unit. Most of the SELECTRONIC® TATTLETALE® annunciators accept either normally open (N.O.) or normally closed (N.C.) contacts. You can mix N.O. and N.C. contacts on the same unit.

Two mounting styles are offered; a recessed panel mounting flange and a freestanding gimbal mounting. (Model STA16 is available only in flange mount).

All models except STA16 have a time delay available to lockout the audible alarm on startup. These unique alarm panels have wide ranging applications and can be grouped in many configurations. Ask any Murphy sales/engineer for assistance.

Basic Operation

When an alarm sensor trips, the LED flashes and, if equipped, the MINI-SIREN® sounds. At the same time an output circuit is activated which allows you to connect an external relay to operate a general alarm, operate a shutdown device, etc.

Applications

- Marine
- Agriculture
- Generator Sets
- Construction
- Oil Field

BASIC: ST5AS, ST10AS and ST5DAS Series

Murphy Basic ST-SERIES ELECTRONIC® TATTLETALE® annunciators are used wherever a remote alarm and annunciation is required. Typical applications are in marine pilot houses to alert the crew of problems developing in engine, gear, bilge, auxiliary power plants, etc. Repeater panels can be added for additional locations such as flybridge, on deck, galley or engineer's quarters. Each repeater panel can be acknowledged individually or alternate wiring allows for one master control to silence all repeater panels.

Other applications include power plant control rooms or building maintenance, for remote drilling rigs, construction sites, agricultural and construction equipment.

When a fault occurs, the contact operation causes the appropriate LED to flash and the audible MINI-SIREN® to pulse. At the same time an output signal is generated which allows an external relay to be wired to operate a general alarm such as a bell or horn. Depressing the Alarm Silent button silences the local audible alarm and disconnects the output for the remote alarm. The flashing LED remains in operation until the fault is corrected and the contacts reset. Alarm Silence/Test button allows you to test all LEDs.

Preprinted peel and stick nameplates for common faults are supplied with each unit.

5-Points

- ST5ASF (flange mount) and ST5ASG (gimbal mount)
- Provides 5 alarm points and output for remote alarm relay.
- Accepts N.O. and/or N.C. contacts.
- Use individually or gang for multiple applications.
- Input voltage 8-32 VAC or 8-40 VDC.



10-Points

- ST10ASF (flange mount) and ST10ASG (gimbal mount)
- Provides 10 alarm points and output for remote alarm relay.
- Accepts N.O. and/or N.C. contacts.
- Use individually or gang for multiple applications.
- Input voltage 8-32 VAC or 8-40 VDC.



Dual 5-Points

ST5DASF (flange mount) and **ST5DASG** (gimbal mount)

- Provides two separate sets of 5 alarm points in one package. Each set of 5 points is powered separately from the other, but they share the same negative of the power source.
- Primary application is on twin engine boats. Since each set of alarm points is powered separately, if only one engine is running there is no alarm on the engine not running.
- Accepts N.O. and/or N.C. contacts.
- Input voltage 8-32 VAC or 8-40 VDC.



FIRST OUT FAULTS: ST8 Series

First out fault TATTLETALE® tells you which monitored variable malfunctioned first. The fault is annunciated and locked in until reset by the operator. Applications include process monitoring such as compressors, pumps, generators, etc. Preprinted peel and stick nameplates for common faults are supplied with each unit.

8 First Out

- ST8F (flange mount) and ST8G (gimbal mount)
- Provides 8-point first out cause of shutdown TATTLETALE®. A flashing LED indicates the cause of shutdown identified by the nameplate.
- Accepts N.O. and/or N.C. contacts.
- Includes SPDT dry contact output rated 2 A @ 28 VDC.
- Selectable sensor lockout for delay on startup.
- Input voltage 8-32 VAC or 8-40 VDC.



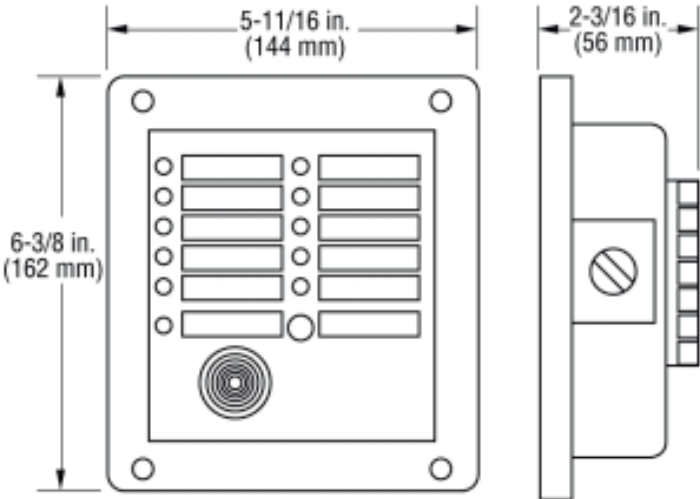
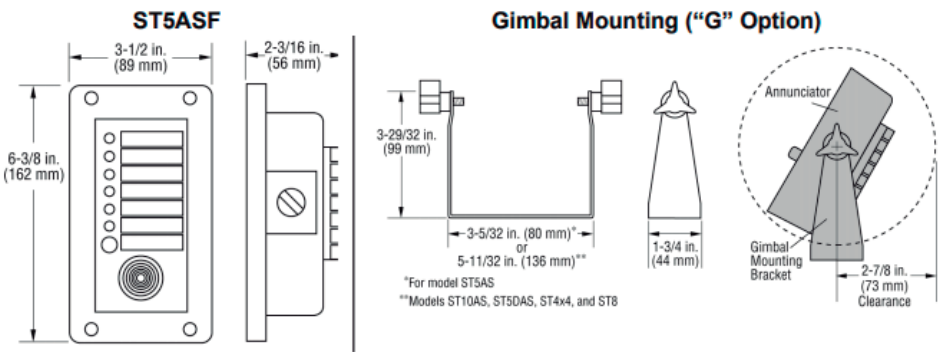
GENERATORS: STA16 Series

The STA16 is a multi-functional visual and audible 16-point alarm typically applied as a remote alarm. Its picture frame bezel allows for flush mounting into a control panel or customer supplied wall mounted pull box. Preprinted peel and stick nameplates for all common engine and generator functions allow for generic applications or for NFPA-110 REQUIREMENTS.

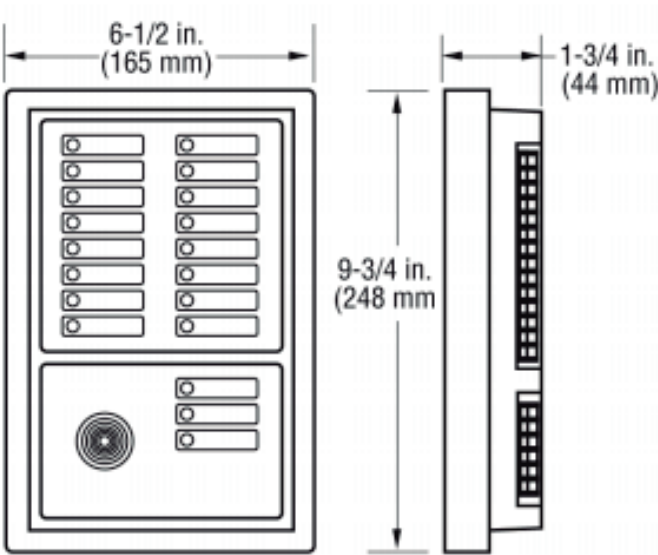
16-Points

- STA16 is a 16-point annunciator for generator sets.
- Provides 16 points of visual and audible alarms including built-in sensing for low battery voltage and battery charger malfunction.
- Accepts N.O. switch inputs
- Negative switch input.





STA16



Specifications	Models				
	ST5AS	ST10AS	ST5DAS	ST8	STA16
Number of Alarm Points					
• 5 Visual	•				
• 10 Visual		•	•		
• 8 First Out Visual				•	
• 16 Visual					•
Audible Alarm					
• 1 local; common to all inputs	•	•	•		•
• 1 local; common to all inputs except battery charger malfunction and generator operating					
Alarm Silence: Silences audible only	•	•	•		•
Test Push Button: Tests all LED's	•	•	•		•
Alarm Output: Customer supplied relay same voltage as input; coil not to exceed 500 mA.	•	•	•		•
Input Voltage					
• 8-32 VAC / 8-40VDC	•	•	•	•	
• 12 or 24 VDC (specify)					•
Startup Time Delay: Customer selectable: 25-35 seconds	•	•	•	•	
Sensor Input					
• Accepts N.O. positive or negative					•
• Accepts N.O. and/or N.C.	•	•	•	•	
Mounting Options					
• Less Mounting kit	•	•	•	•	
• Flange Mounting kit	•	•	•	•	
• Gimbal Mounting kit	•	•	•	•	
					•
First Out Shutdown: Amber-No; Red-Yes				•	
Shutdown Relay Output: SPDT dry contacts; 2 A @ 28 VDC				•	
Alarm Reset: Repair fault; contacts open					
Shutdown Reset: Repair fault; contacts open; push reset button; remove power				•	
Battery Charger Malfunction: Built-in sensing; visual alarm only					•
Shipping Weights					
• 1.25 lbs (567 g)	•				
• 1.50 lbs (680 g)		•	•	•	
• 2 lbs (907 g)					•
Shipping Dimensions					
• 6-1/4 x 6-1/4 x 6-1/4 in. (159 x 159 x 159 mm)	•	•	•	•	
• 12 x 7-1/2 x 5-1/2 in. (305 x 191 x 140 mm)					•

ACCESSORIES and OPTIONS

TDST3-5 and TDST8-10

TDST3-5 and TD8-10 single point time delays inhibit sensor input to ST Series annunciators for 3-5 or 8-10 seconds. Compensates for momentary contact operation due to vessel movement, etc.

GIMBAL and FLANGE Mounting Kits

These kits are available for change-over mounting and as service parts. They fit all "LM" (less mounting) configurations.

25700007 Gimbal mount kit fits ST5ASLM. **25020138**

25700008 Flange mount kit fits ST5ASLM. **25020139**

25700034 Gimbal mount kit fits ST10ASLM, ST5DASLM and ST8LM. **25020141**

25700371 Flange mount fits ST10ASLM, ST5DASLM and ST8LM. **25020142**

FLANGE Mount

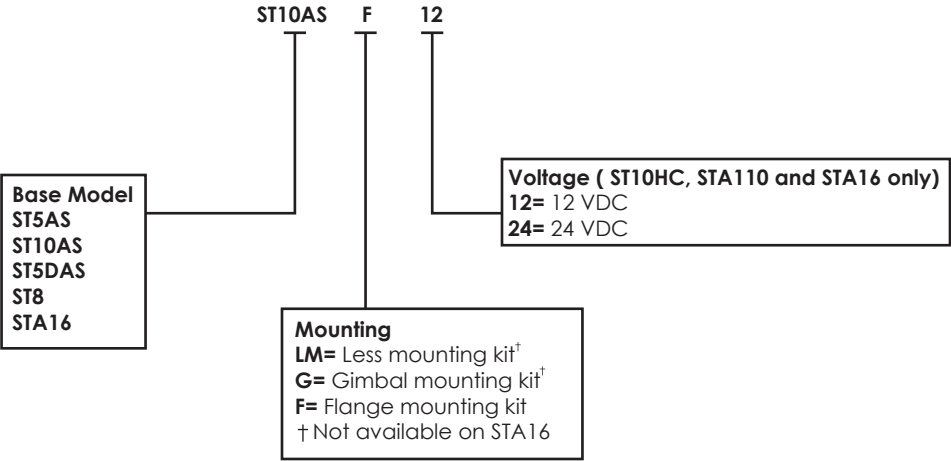


GIMBAL Mount



HOW TO ORDER

SELECTRONIC® TATTLETALE® Annunciator
Specify model number using diagram below.

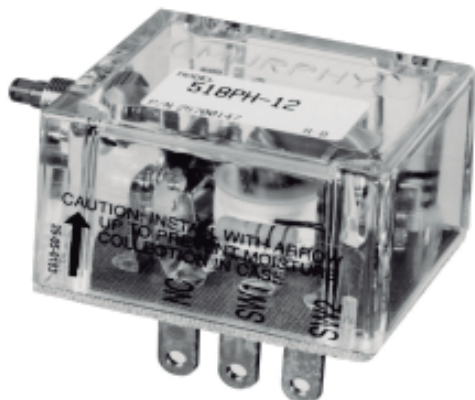


Accessories and Options

Specify part number.

Part Number	Description
TDST3-5	3–5 second time delay
TDST8-10	8–10 second time delay
25700007	Gimbal mount kit; fits ST5ASLM.
25700008	Flange mount kit; fits ST5ASLM.
25700034	Gimbal mount kit; fits ST10ASLM, ST5DASLM, and ST8LM
25700371	Flange mount fits; ST10ASLM, ST5DASLM, and ST8LM.

TATTLETALE® Annunciators and Magnetic Switches



Features

- Nerve Centers for Murphy SWICHGAGE® Instruments and Automation Systems
- Available for Use with Engines or Electric Motors
- Electrical Load Carrying Devices for Alarm or Shutdown Device

Tattletale annunciators and magnetic switches are the nerve centers that translate Switchgauge 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 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	M4284-1	F128A
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.

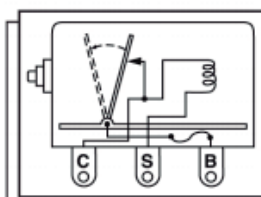
3. **Latch Type**-Refers to whether the magnetic coil is momentarily energized to trip or requires continuous power in the operating mode and de-energizes to trip.

4. **Reset Type**-Refers to manual or electric reset; manual indicating type is a TATTLETALE®.

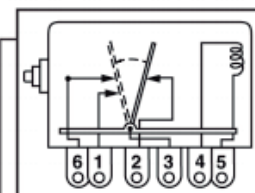
5. **Time Delay**-Indicates operation of the time delay.

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



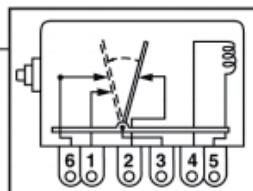
117/117PH Use to shutdown 12V thru 32V distributor ignition or diesel engines. Breaks circuit when tripped. Opens distributor coil circuit or power circuit to diesel run device. Automatically disconnects from battery after trip. Contacts 10 amps 32 VDC. 14 amp fuse.



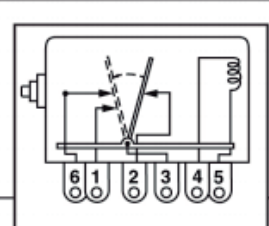
MS2110 Multi purpose TATTLETALE® with dry contacts that can be used to make two circuits and break another when tripped. Operates from 12 or 24 VDC or 24 VAC. The operating coil is intermittent duty and must be disconnected by an external circuit when tripped. The MS2110 is a replacement for

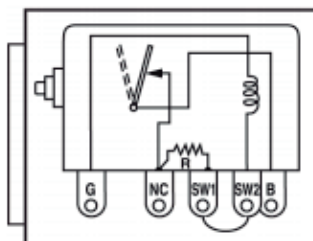
221PH, 169PH, 274 and 274PH.

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.

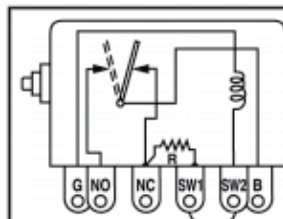


MS2120 Multi purpose TATTLETALE® with dry contacts that can be used to make two circuits and break another when tripped. Operates from Magneto Ignition. The operating coil is intermittent duty and must be disconnected by an external circuit when tripped. The MS2120 is a replacement for 307, 307PH and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





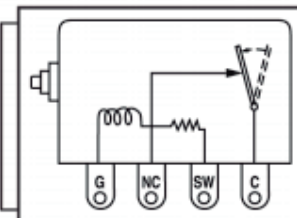
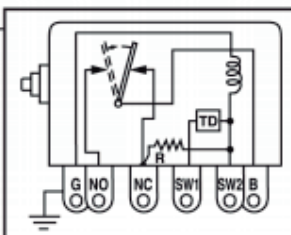
518PH Allows for SWICHGAGE® and/or N.C. contacts to be wired "Closed Loop" (in series). Any contact open or SWICHGAGE® contact close in the circuit shunt trips the 518PH. Specify 12 or 24 VDC. Contacts 10 amps 24V. 14 amp fuse.



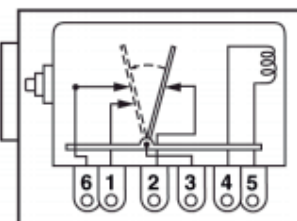
518APH Allows for SWICHGAGE® and/or N.C. contacts to be wired "Closed Loop" (in series). Any contact open or SWICHGAGE® contact close in the circuit shunt trips the 518APH. Specify 12 or 24 VDC. Contacts 10 amps 24V. 14 amp fuse.

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.



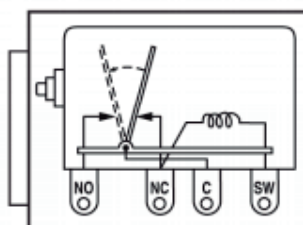
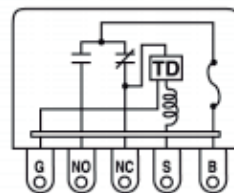
521PH Use with N.C. SWICHGAGE® or switches to ground magneto or CD ignition when tripped. Trip coil energized to run, de-energized to shutdown when N.C. contacts open. Specify 12 or 24 VDC. Contacts 10 amps 24 V.



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

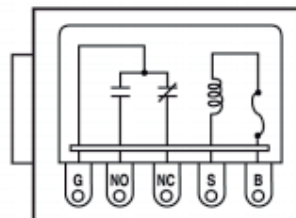
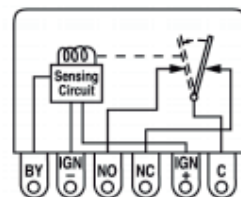
760A/760AF/761APH Use for distributor ignition or diesel. Time delay lockout of SWICHGAGE® contacts on start-up only; customer wired for delayed or immediate trip on shutdown. Breaks and makes circuits when tripped. 760A resets automatically when the shutdown signal is removed or power is removed. 761APH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

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.

760AF - 15 - 12 -

Base Models

117*	M42641CD
117PH*	R129A
518PH	ETS30S
518APH	MS2100
518E**	MS2111
520APH	MS2110
521PH	MS2120
760A*	
761APH*	
822PH	
M42641M	

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.

**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.

MEREX