

# Hydra-Switch Yard Machine

Hundreds of cars. Hundreds of destinations. Hundreds of connections. Your key to optimum freight movement with the most efficient use of labor is the versatile 3000LP Hydra-Switch Powered Switch Machine.

## GENERAL DESCRIPTION

The Hydra-Switch 3000LP (Low Profile) is a hydraulically actuated, trailable switch machine which can be controlled through several options, including local Pushbutton, DTMF / UHF /VHF Radios, and also Central Office Radio Networks. Should manual operation be necessary, a built in hand pump allows personnel to operate the machine. It can be equipped with presence detection & crossover route locking options to prevent unwanted movement of the machine while the track is occupied. Additionally, LED Signals or a simple mechanical target are offered for position indication. With no requirement for signal cabling or interlocking equipment, a machine can be installed and operational by a minimal crew in less than four hours.

## CUSTOMER BENEFITS

### Flexible Power Sources

The Hydra-Switch operates on an internal 12-volt DC battery which allows the switch to throw up to 300 times per charge, and can operate even in the event of a power disruption. The battery is charged either through local utility power or through an available solar panel option.

### Control & Routing

The most basic remote control is through UHF or VHF voice radios. DTMF recognition hardware is also available. For larger or growing yards, a DTMF-to-Data Radio Translator is available, enabling DTMF control in the presence of additional stations. The translator continuously monitors all Hydra-Switch machines in the yard network and executes commands only when they do not conflict with other commands or states. The addition of a data radio, Ethernet or fiber-optic communication allows seamless and low cost integration into a host of control panel or Personal Computer (PC) or Remote Control Locomotive (RCL) based control systems. This remote access allows increased capacity through more efficient operation and utilization of manpower. By providing scalable mature technology, Alstom can improve safety immediately and establish the cornerstone for future growth, capacity and automation.

### Diagnostics

Each Hydra-Switch Point machine includes built-in diagnostics and an event recorder, which effectively reduce troubleshooting time, increase yard operations safety and overall point machine reliability. Diagnostic information can be accessed through 30 diagnostic LED indicators on the processor card or through a serial data port. The machine can also be configured to indicate machine faults by alternately illuminating normal and reverse signals, energize a directly connected strobe, or both if so equipped.

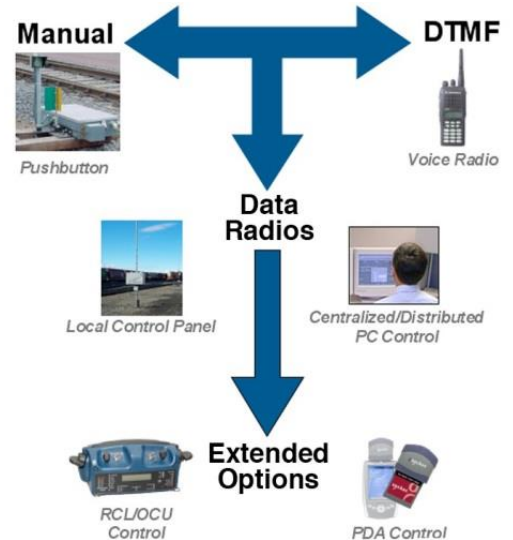


**SPECIFICATIONS**

Battery Power	12 VDC, (100 amp hour, absorbed gel cell Battery)
Charging Options	120-VAC or Solar power source
Operating Temperature	-40°C to 70°C
Force at Closure	4,500 pounds (2,722 kg)
Throw length (self-adjusting)	4.74" to 6.5" (120 to 165 mm)
Throw Time	2.0 seconds average
Height	9.5" (241 mm)
Length	50" (1270 mm)
Width	22" (559 mm)
Weight	820 pounds (372 kg)
Voice radio options	8-channel, standard 20-channel scanning (VHF UHF)
Data radio options	Frequency hopping, spread spectrum 900 MHz, 2.4 GHz

**ORDERING INFORMATION**

<b>3000LP Point Machine, Complete Kit</b>	
Complete kits (point machine & options) available in various configurations	1008700-xxx
<b>3000LP Point Machine</b>	
110V AC, EVENT RECORDING CONTROLLER, INTERNAL ELECTRONICS	1008600-901
110V AC, EVENT RECORDING CONTROLLER, POLE MOUNTED ELECTRONICS	1008600-902
220V AC, EVENT RECORDING CONTROLLER, INTERNAL ELECTRONICS	1008600-908
SOLAR, EVENT RECORDING CONTROLLER, INTERNAL ELECTRONICS	1008600-801
SOLAR, EVENT RECORDING CONTROLLER, POLE MOUNTED ELECTRONICS	1008600-802
<b>Point Machine Solar Power</b>	
SINGLE PANEL SOLAR KIT, 140W	1008894-901
TANDEM PANEL SOLAR KIT, 280W	1008894-902
<b>Point Machine Drive / Connecting Rods</b>	
CONNECTING ROD, SAE, 1" PIN	1008615-901
CONNECTING ROD, SAE, 1-1/8" PIN	1008615-903
<b>Point Machine Control Indicators</b>	
MECHANICAL TARGET OPTION, GREEN/YELLOW	1008601-901
LED POSITION INDICATION (4" ASPECTS), DOUBLE SIDED, GREEN/AMBER	1009063-901
LED POSITION INDICATION (4" ASPECTS), DOUBLE SIDED, GREEN/RED/AMBER	1009063-911
BLUE FLAG KIT	1009280-901
BLUE STROBE OPTION	1009282-901
<b>Point Machine Control Accessories</b>	
WIRED CROSSOVER KIT W/ 500' CABLE (ONE PER CROSSOVER PAIR)	1006789-901
WIRELESS CROSSOVER KIT (ONE PER CROSSOVER PAIR)	1007044-901
DTMF RADIO KIT, VHF	1006807-901
DTMF RADIO KIT, UHF	1006807-902
FREQUENCY HOPPING DATA RADIO KIT, 900 MHZ	1006968-901
FREQUENCY HOPPING DATARADIO KIT, 2.4 GHZ	1006968-903
<b>Point Machine Protection / Occupancy Detection</b>	
RTI WHEEL DETECTION SYSTEM, 4-ZONE, 4-COUNTER	1009623-901
RTI WHEEL DETECTION SYSTEM, 4-ZONE, 3-COUNTER	1009623-902
<b>Point Machine Installation Supplies</b>	
2" RIGID CONDUIT x 5' AC MAST	1009056-001
2" RIGID CONDUIT X 10' SOLAR MAST	1008895-001
MACHINE GROUNDING KIT	1007134-901
<b>Point Machine Components</b>	
SWITCH PROGRAMMING KIT (INCLUDES CABLE AND SOFTWARE)	1007729-901
SWITCH CONTROLLER BOARD & BASEPLATE KIT	1006371-901
SWITCH CONTROLLER BOARD & BASEPLATE KIT W/ DTMF OPTION BOARD	1006371-902
DTMF OPTION BOARD	1006451-902
AC SWITCH BATTERY CHARGER, 110/120V AC	1006975-002
AC SWITCH BATTERY CHARGER, 220/240V AC	1006975-001
SOLAR SWITCH BATTERY CHARGER, 12V DC	1008725-001
BATTERY, 100AH (GNB INDUSTRIAL POWER)	12-5000X
HAND PUMP PUSH HANDLE, CARTRIDGE-STYLE	1009368-001



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