

SS100M1A Instruction Manual
Slave Switch, senses PWM duty cycle of a proportional valve coil, trips relay

Spec. Voltage: 12vdc operation
Input: Sink or Source valve driver types. Use internal input def. jumpers
Output: Form C relay NO, NC, Com. Relay contacts are fused internally at 5 amp
Adjustment: Internal trim adj. for PWM duty cycle trip point. Factory pre-set is 10% PWM

Installation The SS1 mounts using (2) 8-32 captive fasteners located on the back side of the enclosure. Select a dry location to mount the SS1, the enclosure is not sealed. Remove the four cover screws and separate the front cover, circuit board and cable as one assembly. Locate and drill the (2) 11/64" holes at 2-1/8" spacing. Mount the enclosure box using the 8-32 screws supplied. Replace the cover assembly and re-install the (4) cover screws.

Wiring The SS1 has a single cable w/ (6) color-coded 22 ga conductors. See the attached wiring diagram showing the connections for sink and source valve drives. The SS100 can be damaged if the valve drive signal (PWM) coming from the spreader control is connected to the power lead [RED wire] on the SS100. The valve drive signal should only be connected to wires YEL or (WHT)

RED	-	(+) 12vdc power [Do not connect Red to Spreader PWM output]
BLK	-	(-) vehicle ground
YEL	(WHT)*	valve drive signal PWM, sink or source
ORG	(BLU)*	relay output common contact
BRN	-	relay N.O contact
GRN	-	relay N.C. contact

* alt wire colors used w/ Carol wire cable no. C4066

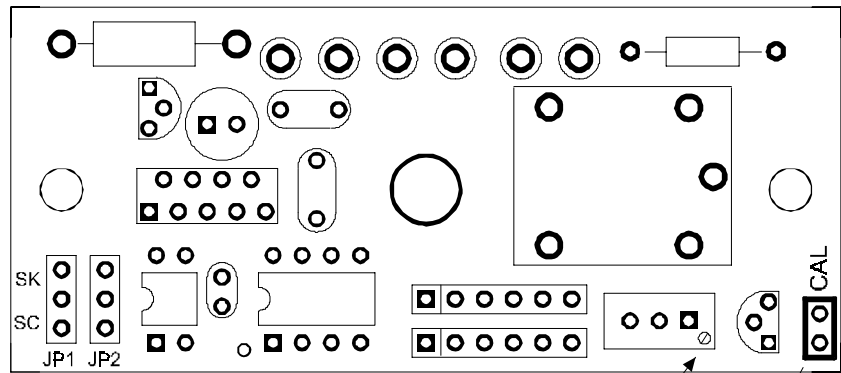
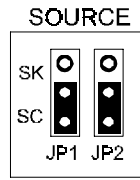
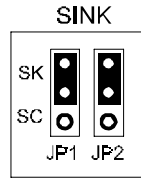
Internal jumpers The SS1 uses two internal jumpers to set the valve drive type. To locate these two jumpers remove the four cover screws and pull the cover from the box. The jumpers are labeled JP1 and JP2. Each 3-pin jumper has one slide-on shunt (pushes down over two pins). Next to each jumper is a label; SK for sinking and SC for sourcing. To set the SS1 for sinking valve drives set both the JP1 and JP2 shunts to the SK position. To set the SS1 for sourcing valve drives set both the JP1 and JP2 shunts to the SC position.

Internal trip point The SS1 is preset to trip at a 10% PWM duty cycle. Note; A PWM (pulse width modulated) signal used to drive a proportional hydraulic flow control valve is a square wave. The ration of the on to off time is referred to as the duty cycle. The SS1 converts the PWM signal to a DC voltage. Generally the factory setting of 10% is an acceptable trip point for most applications. If the installer wants to change the setting, use the trim pot R1, its located next to the relay. Locate in the far corner of the board are two solder pads labeled, CAL. Put a DC voltage meter on these pads to read the PWM signal as an RMS voltage.

Application The SS1 is commonly used to drive a cross-conveyor. Connect the SS1 to the main material spreader (conveyor or auger) valve. Connect the relay output (Com and NO contacts) to the cross conveyor valve. Each time the (conveyor or auger) comes on so will the cross-conveyor. Most PWM valves do not actually flow oil at a drive signal of 10%. This way the SS1 will trigger its relay ON before the (conveyor or auger) starts to turn.

For more technical information please call your dealer or for factory assistance call 253 854 1002

SS100A1A BOARD LAYOUT



VALVE DRIVE SINK OR SOURCE JUMPERS

PWM DUTY CYCLE ADJ.

METER CONNECTION

CABLE TYPE MAY VARY, NOTE WIRE COLOR CHANGES (A) (B)

A ALPHA WIRE P/N 1718C

B CAROL WIRE P/N C4066

