SURE GRIP
CONTROLS INC.

1949 Keating Cross Road, Saanichton, British Columbia, Canada   V8M 2A4
Phone: 250-544-2207   Fax: 250-544-2279   www.suregripcontrols.com

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Single Axis Driver Board
Part# SDB-P1

Description

12/24 VDC in
Ground
Aux out
PWM 1 out
PWM 2 out

12/24 VDC out
Ground
+5V
Signal in 1
Signal in 2

The Single Axis Driver Board is designed to proportionally drive two solenoids from proportional signal devices such as Variable Voltage Modules or a Joystick. The SDB-P1 driver board can be configured to accept one 0.5 - 2.5 - 4.5 VDC signal or two 0-5 VDC input signals (Variable Voltage Modules).
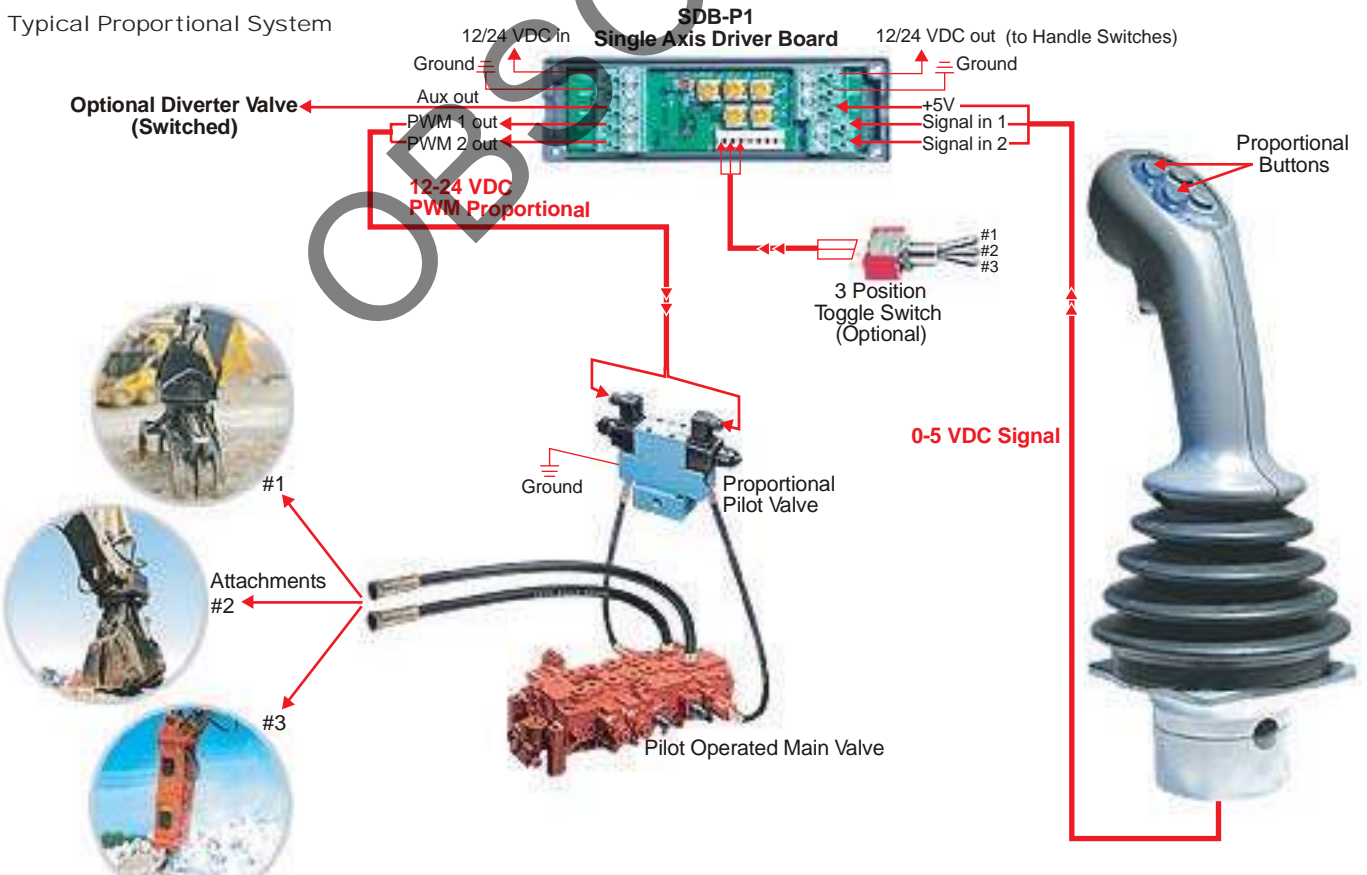
The SDB-P1 has two proportional high current PWM outputs and one switched "auxiliary" output that is turned on when either of the PWM outputs are activated. This "auxiliary" function is often used to divert hydraulic oil to an auxiliary valve for the attachment. The PWM outputs are also "current compensated" to correct for changes in coil resistance as the solenoid coils heat up and cool down.

All the outputs include protection against inductive kick back and are short circuit protected. If any of the outputs are accidentally shorted to ground, the board will automatically shut down to protect itself until the problem is corrected.

Optional

The SDB-P1 driver board can be supplied with special software that allows up to three different settings to be stored in the memory for three different attachments. When an attachment is changed, the operator moves the toggle switch to the new position corresponding to the new attachment and restarts the machine to activate the new flow setting. This feature allows the operation of up to three attachments using one valve.
Calibration of the board is performed using onboard potentiometers to set the minimum and maximum flow for each solenoid. There are also LED's that show when the board is in "Run" or "Calibrate" mode.

Specifications

Parameter	Min.	Typ.	Max.	Unit
Power Supply:				
Supply voltage	6	-	28	VDC
Supply current (idle)	-	20	-	mA
Supply current (max)	-	5	-	A
Aux. V out	-	5	-	VDC
Aux. Current (+5V)	20	-	30	mA
Analog Inputs:				
Input range	0.5	-	4.5	VDC
Neutral point (single)	-	2.5	-	VDC
Neutral point (dual)	-	0.5	-	VDC
PWM Outputs:				
Frequency	-	200	-	Hz
Min. duty cycle	-	5	-	%
Max. duty cycle	-	99	-	%
Output current	-	-	2.5	A
Current Compensation:				
Correction range	-40	-	+40	%
Max. coil size	-	3000	-	mA

Typical Proportional System

SDB-P1
Single Axis Driver Board

12/24 VDC in
Ground
Aux out
PWM 1 out
PWM 2 out

12/24 VDC out (to Handle Switches)
Ground
+5V
Signal in 1
Signal in 2

Optional Diverter Valve
(Switched)

12-24 VDC
PWM Proportional

#1
#2
#3

3 Position
Toggle Switch
(Optional)

Proportional
Buttons

Ground
Proportional
Pilot Valve

0-5 VDC Signal

#1
Attachments
#2
#3

Pilot Operated Main Valve

OBSOLETE