

Application Note

Series 1000 (Standard) Pressure Switch

For Potential Hydraulic Brake Light Applications

BACKGROUND

Customer is an OEM of brake systems for sport vehicles, small vehicles, motorcycles and off-road vehicles. They wanted to eliminate the mechanical switch, linkage, and the mounting brackets required in their brake light actuation system to a single pressure switch with a banjo bolt that mounts directly to the master cylinder. This new pressure switch had to actuate at very low pressure set point (imagine a glove-covered hand squeezing the brake on a snowmobile) while still maintaining integrity in high pressure and harsh environments.

While other manufacturers may have offered a potential solution, none could meet the burst rating requirements at the low set point.

SOLUTION


Honeywell's Series 1000 pressure switch is a small, low-cost switch actuated by hydraulic fluid or gas. The pressure switch is highly responsive for low-set-point and high burst rating requirements, and may also be used when converting the brake system to hydraulic applications.

With its IP65 sealing and high burst rating, Honeywell's Series 1000 switch often excels in harsh environments such as extreme weather conditions or particle-filled areas. In addition to its high resistance to shock and vibration, this pressure switch is designed to maintain its tolerances across temperature ranges in high system pressure environments.

Honeywell Sensing and Control has utilized our engineering expertise to reduce part count on this product by approximately 75% compared to Honeywell 5000 Series Pressure Switches. With fewer parts, the switch cost and complexity are dramatically lower. The new design may contribute to faster installation time by reducing the time required for adjustments and potentially the need for field maintenance.

The result is reduced field failures, even in the most demanding environments. Custom versions of this product have been in operation for over two years in 20,000 ATVs with no known field failures reported.

Table 1. Series 1000 pressure switches used in vehicle applications

Series 1000	
	
Features and Benefits	
<ul style="list-style-type: none"> • Low set point: actuates at 20 psi • Reduced part count • High burst rating (for high cost-of-failure applications) • Banjo bolt fitting • Sealed to IP65 	<ul style="list-style-type: none"> • Low set point is highly responsive • Reduced field failures at part level • Enhanced reliability, lowers warranty costs • Minimized footprint • Designed for use in high shock and vibration along with most extreme weather conditions

Hydraulic Brake Lights

WARNING

PERSONAL INJURY

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

Failure to comply with these instructions could result in death or serious injury.

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items it finds defective. The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.

While we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer to determine the suitability of the product in the application. Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this printing. We assume no responsibility for its use.

WARNING

MISUSE OF DOCUMENTATION

- The information presented in this application note is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

SALES AND SERVICE

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office or:

E-mail: info.sc@honeywell.com

Internet: www.honeywell.com/sensing

Phone and Fax:

Asia Pacific	+65 6355-2828 +65 6445-3033 Fax
Europe	+44 (0) 1698 481481 +44 (0) 1698 481676 Fax
Latin America	+1-305-805-8188 +1-305-883-8257 Fax
USA/Canada	+1-800-537-6945 +1-815-235-6847 +1-815-235-6545 Fax

Sensing and Control
Honeywell
1985 Douglas Drive North
Golden Valley, MN 55422
www.honeywell.com/sensing

009582-1-EN IL50 GLO Printed in USA
October 2008
Copyright © 2008 Honeywell International Inc. All rights reserved.

Honeywell