


INTER PLANT STANDARD – STEEL INDUSTRY		
 IPSS	SPECIFICATION FOR PRESSURE SWITCH & DIFFERENTIAL PRESSURE SWITCH <i>(Second Revision)</i>	IPSS:2-07-042-11
	Corresponding IS does not exist	Formerly: IPSS:2-07-042-97 (First Revision)

0. FOREWORD

- 0.1 This Interplant Standard (Second Revision) has been prepared by the Standards Committee on Computerization & Automation, IPSS 2:7, with the active participation of the representatives of all the steel plants, major consultancy organizations and established manufacturers, and was adopted in March 2011.
- 0.2 Inter Plant Standards on design parameters primarily aim at achieving rationalization and unification of parts and assemblies of process and auxiliary equipment used in steel plants and these are intended to provide guidance to the steel plant engineers, consultants and manufacturers in their design activities.
- 0.3 This standard was first published in 1988. The Second revision has been carried out to update the standard after reviewing from implementation point of view.

1. SCOPE

- 1.1 This Inter Plant Standard covers the requirements for pressure switches and differential pressure switches.

2. REQUIREMENTS

- 2.1 Pressure switches and differential pressure switches shall meet the following requirements:
- a) Type :
 - i) Mechanical (Diaphragm / bellows / bourdon tube depending on application range)
 - ii) Electronic type with local display
 - b) Sensing Element Materials :
 - i) Neoprene, Silicone, Nitrile (Diaphragm)
 - ii) SS AISI 316 (Diaphragm, bellows)
 - iii) Hastally, Monel, Phosphor Bronze/ Copper/SS (bellows / bourden tube)
 - iv) Remote seal type

- c) Accuracy : To be specified as per process requirement
- d) Scale : 0 to 100% graduation with red pointer, Non-indicating type or digital display
- e) Repeatability : 0.25 to 0.50 % FSR
- f) Over range protection
 - i) Pressure Switch : 150% of maximum pressure
 - ii) Differential Pressure (DP) Switch : Max. static pressure on one side with other side open to atmosphere
- g) Adjustment :
 - i) Provision for local adjustment for Span, zero, set point over full range.
 - ii) ON / OFF differential limit: $\pm 0.5\%$ Full Scale Deflection (FSD) or better adjustable Throughout the range for DP switches
- h) Switch :
 - i) One number (standard, additional one number optional) snap acting Single Pole Double Throw (SPDT) switch / solid state switch.
 - ii) Contact rating-: 240V, 3A ac or 220 V, 0.5 A dc
- i) Operating ambient Temperature : 80°C standard (higher operating temperature are to be specified by the customer)
- j) Protection Class : Hermetically sealed (IP 66)
- k) Enclosure Class : Conforming to IPSS:2-07-001-87 `Guide for tests for hardware and enclosures for different environments.
- l) Process Connections : $\frac{1}{2}$ " NPT (m) as standard or as specified by the customer / remote seal to be specified by the purchaser.
- m) Electrical Termination : Suitable for 2.5 mm² cable, screw terminal/ Spring loaded type.

- n) Cable Entry : Cable glad with neoprene / Teflon grommet. Nominal dia of the glad shall be $\frac{3}{4}$ " or as specified by the customer

- o) Accessories : 2/3 way cock, snubber, pig-tail, etc as specified by the customer.
