



PROCESS
INDUSTRY
PRACTICES

COMPLETE REVISION
May 2017

Process Control

**PIP PCSPA003
Instructions for Process Analyzer Shelter
Data Sheets**

PURPOSE AND USE OF PROCESS INDUSTRY PRACTICES

In an effort to minimize the cost of process industry facilities, this Practice has been prepared from the technical requirements in the existing standards of major industrial users, contractors, or standards organizations. By harmonizing these technical requirements into a single set of Practices, administrative, application, and engineering costs to both the purchaser and the manufacturer should be reduced. While this Practice is expected to incorporate the majority of requirements of most users, individual applications may involve requirements that will be appended to and take precedence over this Practice. Determinations concerning fitness for purpose and particular matters or application of the Practice to particular project or engineering situations should not be made solely on information contained in these materials. The use of trade names from time to time should not be viewed as an expression of preference but rather recognized as normal usage in the trade. Other brands having the same specifications are equally correct and may be substituted for those named. All Practices or guidelines are intended to be consistent with applicable laws and regulations including OSHA requirements. To the extent these Practices or guidelines should conflict with OSHA or other applicable laws or regulations, such laws or regulations must be followed. Consult an appropriate professional before applying or acting on any material contained in or suggested by the Practice.

This Practice is subject to revision at any time.

© Process Industry Practices (PIP), Construction Industry Institute, The University of Texas at Austin, 3925 West Braker Lane (R4500), Austin, Texas 78759. PIP Member Companies and Subscribers may copy this Practice for their internal use. Changes or modifications of any kind are not permitted within any PIP Practice without the express written authorization of PIP. Authorized Users may attach addenda or overlays to clearly indicate modifications or exceptions to specific sections of PIP Practices. Authorized Users may provide their clients, suppliers and contractors with copies of the Practice solely for Authorized Users' purposes. These purposes include but are not limited to the procurement process (e.g., as attachments to requests for quotation/ purchase orders or requests for proposals/contracts) and preparation and issue of design engineering deliverables for use on a specific project by Authorized User's client. PIP's copyright notices must be clearly indicated and unequivocally incorporated in documents where an Authorized User desires to provide any third party with copies of the Practice.

PUBLISHING HISTORY

<i>August 2000</i>	<i>Issued</i>
<i>February 2001</i>	<i>Editorial Revision</i>
<i>August 2006</i>	<i>Complete Revision</i>
<i>June 2012</i>	<i>Reaffirmation with Editorial Revision</i>
<i>May 2017</i>	<i>Complete Revision</i>

Not printed with State funds



PIP PCSPA003 Instructions for Process Analyzer Shelter Data Sheets

Table of Contents

1. Scope.....	2
2. References	2
2.1 Process Industry Practices	2
2.2 Industry Codes and Standards	2
3. Requirements.....	3
3.1 General	3
3.2 <i>PIP PCSPA003-D</i> Data Sheet Instructions.....	3

Data Form

PIP PCSPA003-D - Process Analyzer Shelter Data Sheets

1. Scope

This Practice provides instructions for preparing a Process Analyzer Shelter Data Sheet.

The four general types of analyzer shelters that can be specified using *PIP PCSPA003-D* are as follows:

- a. Type I – Field Mounted - An analyzer in an integral cabinet mounted on a freestanding support
- b. Type II – Freely Ventilated - Typically a three-sided shelter
- c. Type III – Climate Controlled - Shelter with a controlled interior that is necessary for proper operation of the analyzer system(s)
- d. Type IV – Controlled for Electrical Area Classification Reduction - Shelter designed to accommodate and allow safe operation of analyzer system(s) that are not rated for the exterior electrical area classification of the shelter

Each analyzer shelter in a project shall have a separate *PIP PCSPA003-D* data sheet specifically tailored for its intended analyzer complement. This data sheet can be supplied directly to a shelter vendor for small applications or, with other supporting documentation, to companies specializing in analyzer system integration and packaging.

2. References

Applicable parts of the following Practices, industry codes and standards, and references shall be considered an integral part of this Practice. The edition in effect on the date of contract award shall be used, except as otherwise noted. Short titles are used herein where appropriate.

2.1 Process Industry Practices (PIP)

- PIP PCCCEL001 - *Instrumentation Electrical Design Criteria*
- PIP PCCGN001-D - *General Instrumentation Design Basis Data Sheet*
- PIP PCEPA001 - *Process Analyzer System Engineering Guidelines*
- PIP PCSPA003-D - *Process Analyzer Shelter Data Sheet*
- PCCIP001 - *Instrument Piping and Tubing Systems Criteria*
- PCSIP001 - *Instrument Tubing Material Specification*

2.2 Industry Codes and Standards

- National Fire Protection Association (NFPA)
 - NFPA 101 - *Life Safety Code*
 - NFPA 496 - *Standard for Purged and Pressurized Enclosures for Electrical Equipment*

3. Requirements

3.1 General

- 3.1.1 Each analyzer shelter in a project shall have a separate *PIP PCSPA003-D* data sheet specifically tailored for its intended analyzer complement.
- 3.1.2 The *PIP PCSPA003-D* data sheet shall provide the basis for specifying an analyzer installation that assures adequate protection of associated analyzer system(s) while maintaining safe operation within the plant.
- 3.1.3 All data entry fields in *PIP PCSPA003-D* shall be completed to ensure that the shelter is fabricated in accordance with project requirements.
Comment: The data entry fields are designed to be expandable as needed. Position the cursor just outside of the right hand vertical margin. Press “Enter” and another line will become available for continued data entry.
- 3.1.4 Units of measurement shall be provided for all specified values.
- 3.1.5 Fields that cannot be completed at the time of preparation should contain entries such as “NA” (not applicable) or “TBA” (to be advised) to acknowledge consideration of the field and to inform the reviewer that additional information may be forthcoming. If appropriate, responsibility for design details or component selection shall be designated (e.g., “ASV” to designate responsibility to the Analyzer System Vendor).
- 3.1.6 A “Chg/Date” (change) column is provided on each line for tracking changes made after the form has been issued.
- 3.1.7 The *PIP PCSPA003-D* data sheet shall be completed with input from all appropriate parties.
- 3.1.8 *PIP PCSPA003-D* may also be used as part of the permanent project documentation.

3.2 *PIP PCSPA003-D* Data Sheet Instructions

The following instructions for data sheet entries are numbered in accordance with the *PIP PCSPA003-D* line numbering system.

1.0 PHYSICAL ENVIRONMENT

Much of the data for this section can be obtained from *PIP PCCGN001-D* or another project document that provides site and project information.

- 1.1 *Site Location:* Name and location of the plant where the equipment shall be installed.
- 1.2 *Process Unit:* Name of the process unit in which the shelter shall be installed.
- 1.3 *Atmosphere/Environment:* List of local site conditions that will impact the shelter design (e.g., summer and winter temperature and humidity ranges, corrosive vapor, hours of direct sun, annual rainfall, snow loading, elevation, vibration, etc.).