

## **Machine and Unit States**

### **ANSI/ISA-TR88.00.02-2015**

## **1 Scope**

Since its inception, the OMAC Packaging Machine Language (PackML) group has been using a variety of information sources and technical documents to define a common approach, or machine language, for automated machines. The primary goals are to encourage a common “look and feel” across a plant floor, and to enable and encourage industry innovation. The PackML group is recognized globally and consists of control vendors, OEM’s, system integrators, universities, and end users, which collaborate on definitions that endeavour to be consistent with the ISA88 standards and consistent with the technology and the changing needs of a majority of automated machinery. The term “machine” used in this report is equivalent to an ISA88 “unit”.

This has led to the following:

1. A definition of machine/unit state types
2. A definition of machine/unit control modes
3. A definition of unit control mode management
4. State models, state descriptions, and mode and state transitions
5. A definition of the minimum PackTags required for performance monitoring

## **2 References**

The following documents contain provisions that are referenced in this text. At the time of publication the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this technical report are encouraged to investigate the possibility of applying the most recent editions of the reference documents indicated below.

- ANSI/ISA-88.00.01-2010, Batch Control - Part 1: Models and Terminologies
- ISA-88.00.02-2001, Batch Control - Part 2: Data Structures and Guidelines for Languages
- ANSI/ISA-88.00.03-2003, Batch Control - Part 3: General and Site Recipe Models and Representation
- ANSI/ISA-88.00.04-2006, Batch Control - Part 4: Batch Production Records
- ISA Draft 88.00.05 Batch Control - Part 5: Implementation Models & Terminology for Modular Equipment Control
- IEC 61131-1 Programmable controllers – Part 1: General Information
- IEC 61131-3 Programmable controllers - Part 3: Programming Languages
- IEC TR61131-4 Programmable controllers - Part 4: User Guidelines
- PLCopen TC5 Safety Software
- Weihenstephan Standard – Part 2 Version 2005 [www.weihenstephaner-standards.de/index.php?id=2&L=1](http://www.weihenstephaner-standards.de/index.php?id=2&L=1)
- ANSI/ISA-95.00.01-2010 (IEC 62264-1 Mod) Enterprise – Control System Integration - Part 1: Models and Terminologies
- ANSI/ISA-95.00.02-2010 (IEC 62264-2 Mod) Enterprise – Control System Integration - Part 2: Object Model Attributes
- ANSI/ISA-95.00.05-2013, Enterprise - Control System Integration - Part 5: Business-to-Manufacturing Transactions
- DIN 8782, Beverage Packaging Technology; Terminology Associated with Filling Plants and their Constituent Machines