Migrating PLC point descriptions back to overall module representation

Controlling the Machine is no longer being updated. Don't worry, though, you can still follow Nate Holt at his new blog, AutoCAD Electrical Etcetera. You'll find it at http://nateholt.wordpress.com/. Or you can subscribe to his feed to get latest words of wisdom automatically: http://nateholt.wordpress.com/feed/. You also can continue to view the Controlling Machine archives for Nate's AutoCAD Electrical tips and tricks.

About Nate

LATEST POST

Migrating PLC point descriptions back to overall module representation
July 16, 2006, 01:38 AM Nate Holt

Add to Bookmarks
Send to Peer

This one might appeal to 1% (or less) of the audience, but I'm posting it because it was a challenge and, more than that, it was flat-out fun to do. Here's the deal... user wants to insert a bunch of single I/O points throughout the design and, when finished, insert a full version of the module on some master drawing. No problem so far. User then wants to have some kind of cross-reference data on this master drawing (next to the module) to show where all the individual I/O point symbols are located throughout the drawing set. Again, no problem (can use the "Cross-reference table" under the "Components" > "Cross-Reference" pull-down menu or use the PLC I/O Address/Descriptions report and insert as a table).

BUT, here's the rub. The user wants the 3-5 lines of description text assigned on the individual I/O points inserted throughout the drawing set to back-annotate to this overall module. Each single I/O point's description attributes need to find the right module and the right I/O point on that module. That's where we run into trouble.

Example of what is desired is shown here.

SUBSCRIBE TO BLOG

Want to keep up with the latest? Subscribe to the RSS feed today.

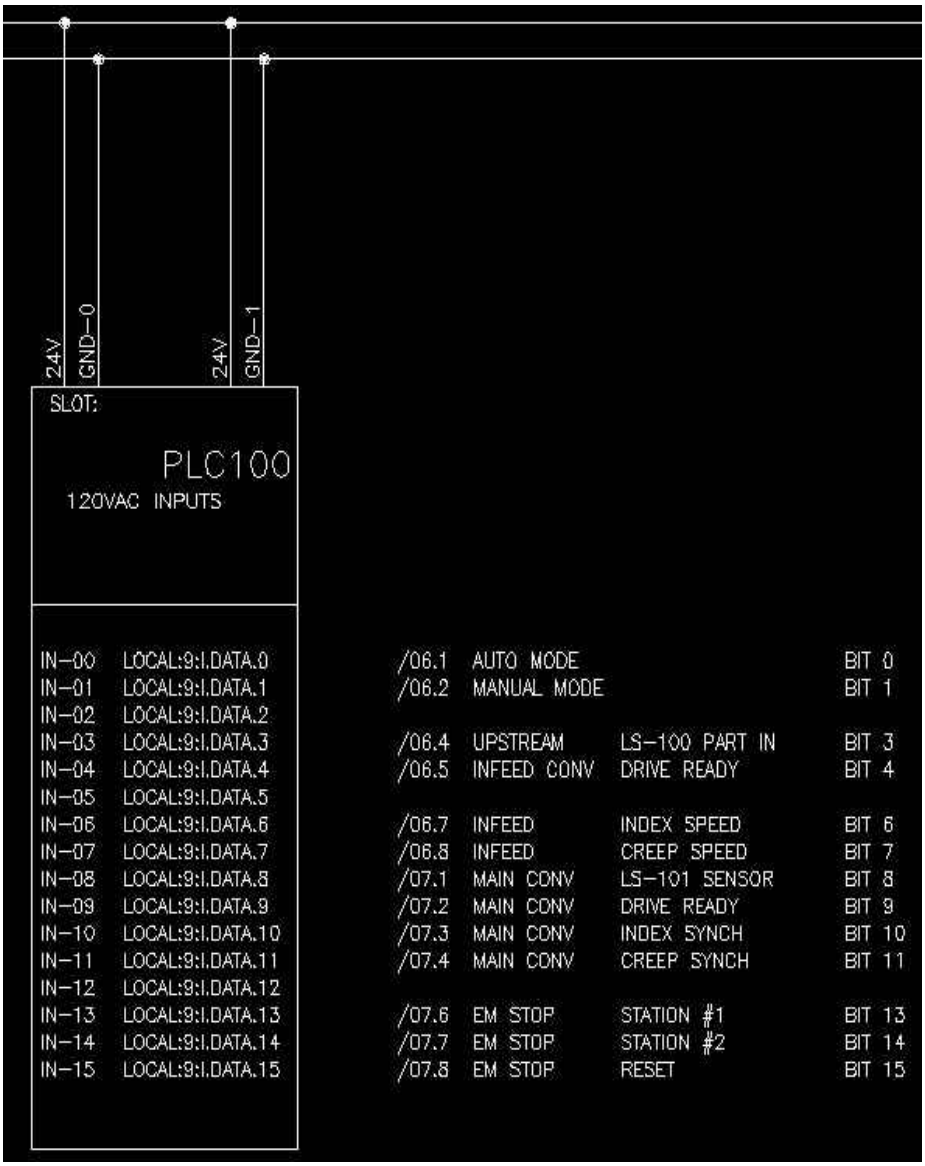
RSS

TAGS

You must be logged in to add a tag.

ARCHIVES

August 2009 (1)
July 2009 (2)
June 2009 (2)
May 2009 (1)
April 2009 (4)
March 2009 (3)
February 2009 (4)
January 2009 (1)
December 2008 (6)
November 2008 (3)
October 2008 (7)
September 2008 (1)
August 2008 (1)
July 2008 (1)
June 2008 (1)
May 2008 (2)
April 2008 (7)
March 2008 (8)
February 2008 (6)
December 2007 (2)
November 2007 (2)
October 2007 (1)
September 2007 (6)
August 2007 (2)
July 2007 (2)
June 2007 (5)
May 2007 (3)
April 2007 (5)



Solution: Make the overall module just a simple, stripped down version of an AutoCAD Electrical PLC I/O module. It is inserted into the drawing (example stripped-down PLC I/O symbol with necessary attributes here) using the normal Insert Component command (ex: enter the block's name in the "Type it" edit box). Enter the starting address for the module.

So far, so good. But the description text for each I/O point starts out blank. We need to suck these all in from the individual I/O points inserted throughout the drawing set (just the ones that point back at this particular module via TAG-id and I/O address values).

So, how do we get this data (shown on the right) pulled in and matched up with the module tag and I/O addresses? Write a little AutoLisp utility, that's how. Example utility can be downloaded here. It prompts the user to pick a module to update. It then queries the project's "scratch database" file, finds all the related single I/O points, and pulls the descriptions and cross-ref locations over to the main module.

APPLOAD it and then try it (type PLC_DESC_CROSSREF at the command line and pick on the overall module). It seems to work. Don't be afraid to modify the utility to suit your specific needs. It can be fun...!

UPDATE: a reader suggested an improvement... blank out the old cross-reference text before writing the new text back out. This made good sense and a revised version of the utility is in place.

Controlling the Machine > All 1 Comment | Add Comment

COMMENTS

January 4, 2007 09:41 AM Robert Janes

Nate, Do you have an example of a child module? And do you think that this could be used in conjunction with a parametric plc module that spaned several pages? Thanks, Dean

March 2007 (11)
February 2007 (8)
January 2007 (4)
December 2006 (6)
November 2006 (2)
October 2006 (5)
September 2006 (5)
August 2006 (8)
July 2006 (9)
June 2006 (7)
May 2006 (6)
April 2006 (10)

SEND TO A PEER

You must login to share pages.

FEEDBACK

Tell us what you think of the site.

Send Feedback

You must be logged in to post a comment.

© Copyright 2009 Autodesk, Inc. All rights reserved. Legal Notices & Trademarks — Privacy Policy