

Walk-in Slide: AU 2014 Social Media Feed

1. Click on the link below, this will open your web browser

<http://aucache.autodesk.com/social/visualization.html>

2. Use “Extended Display” to project the website on screen if you plan to work on your computer. Use “Duplicate” to display same image on screen and computer.

Cables and Harnesses in AutoCAD Electrical

Randy Brunette

Electrical Subject Matter Expert

Class summary

Modern electrical design is becoming more modular every day. Instead of individual wires attaching to individual screw terminals, pre-made harnesses are used to provide connections between components. Take this class to learn about the cable and harness tools in AutoCAD Electrical. We cover how to manipulate the tools to provide intelligent reports for rack systems, console interfaces, and other non “standard” requirements.

Key learning objectives

At the end of this class, you will be able to:

- Add cable markers, cable part numbers, and color labels
- Create Cable reports listing From/To connections
- Add wire fan in/out markers to define cable wires.
- Create rack and console inter-connection designs

Introduction

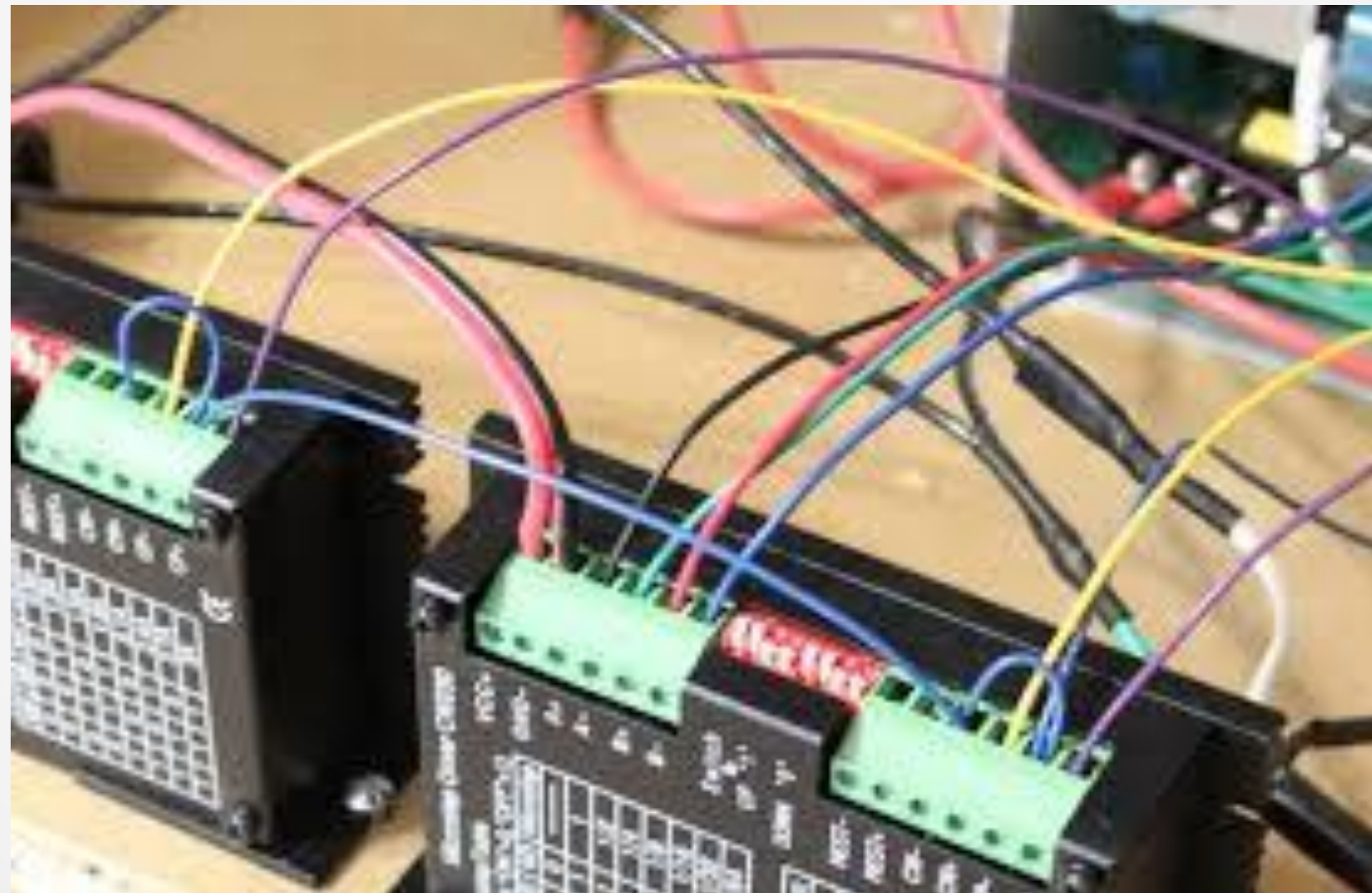
- **Randy Brunette**

- Electrical Subject Matter Expert
- 30 years in industry, 8 years authoring AutoCAD Electrical training materials.
- 15th year as presenter at AU
- RC airplanes , helicopters, cars



Wires and Connections

- Wires MUST be used to provide connectivity for reports, etc.

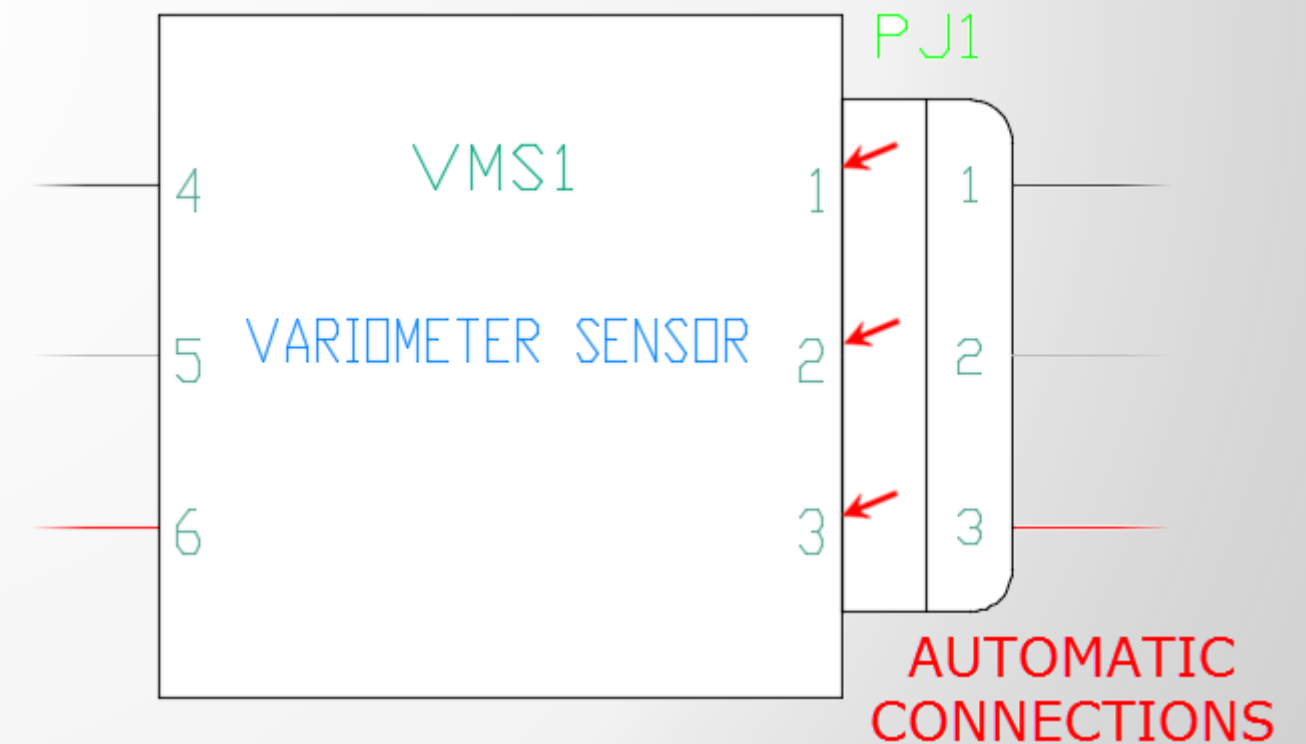
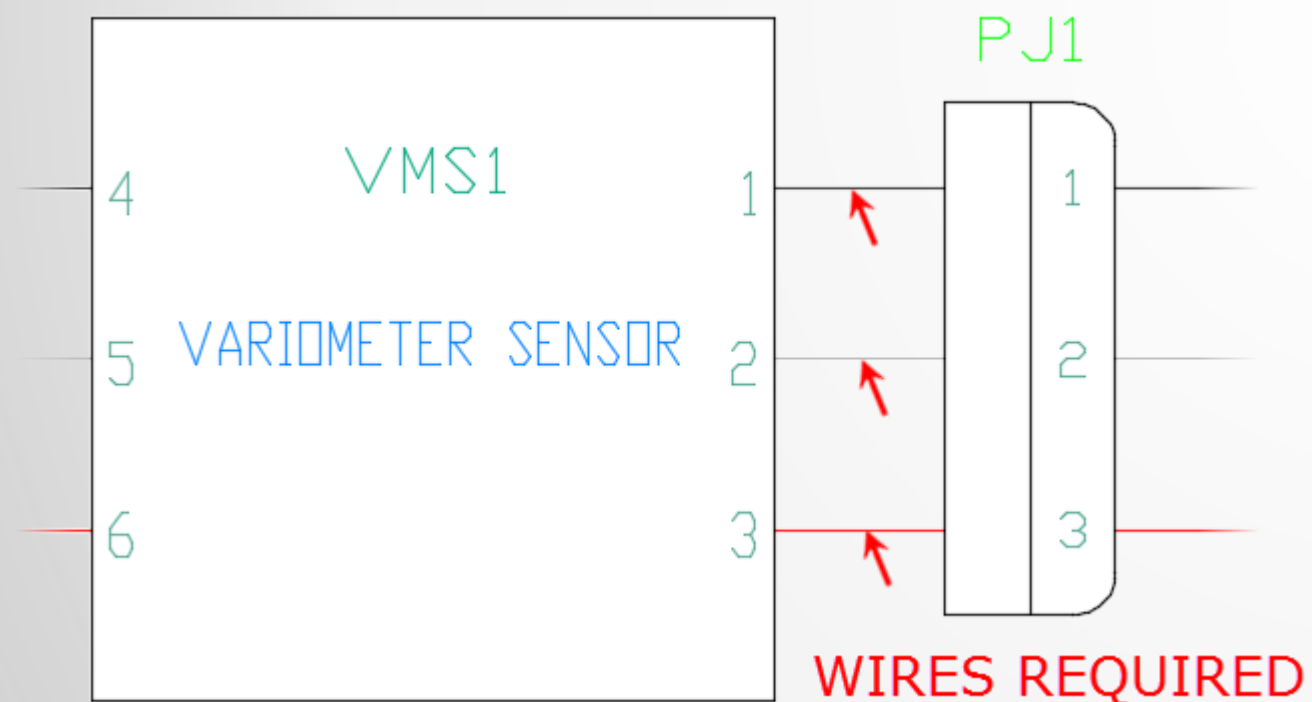


Wires and Connections



AcadE Idea Station

- Component to Component Connections
- <http://forums.autodesk.com/t5/autocad-electrical-ideastation>



Wire Connections Hint #1

Coziness

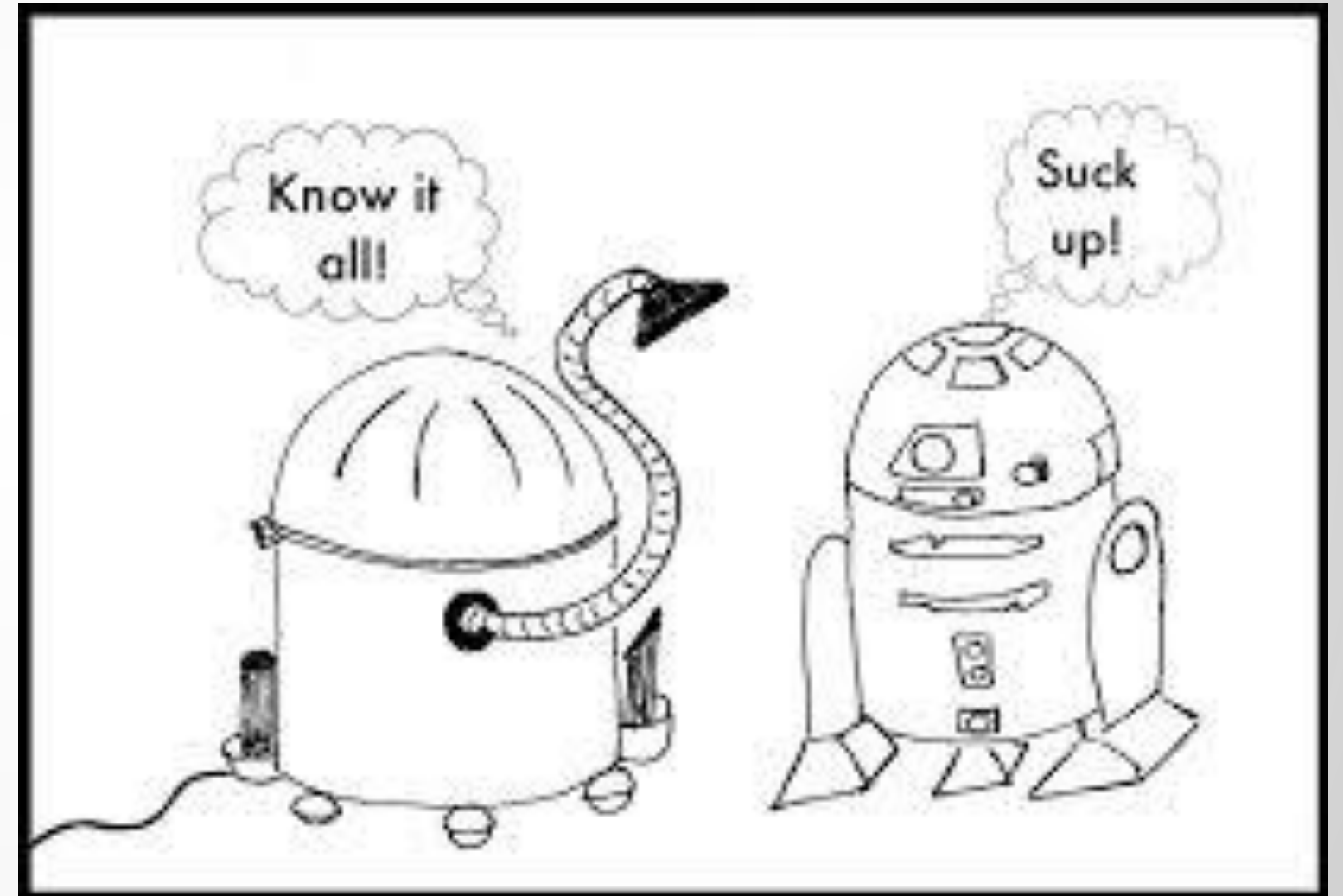
- Use very small distances between components to hide connection wires



Wire Connections Hint #2

Name Calling

- Connection wires will be listed in reports
- Label connection layers to identify them
 - E.g. “Connection”



Wire Connections Hint #3

No Labels

- Set Wire Numbering to Off on connection layers



Multiple Wire Bus

- Inserts Multiple wires in single operation, including routing.



Wire Fan In/Out

- Automates Source/Destination Arrows
- Moves wires to _Multiwire layer
 - _Multiwire is a special “No Short” layer
 - Doesn't appear in reports
 - Provides some connectivity



Rack Connections

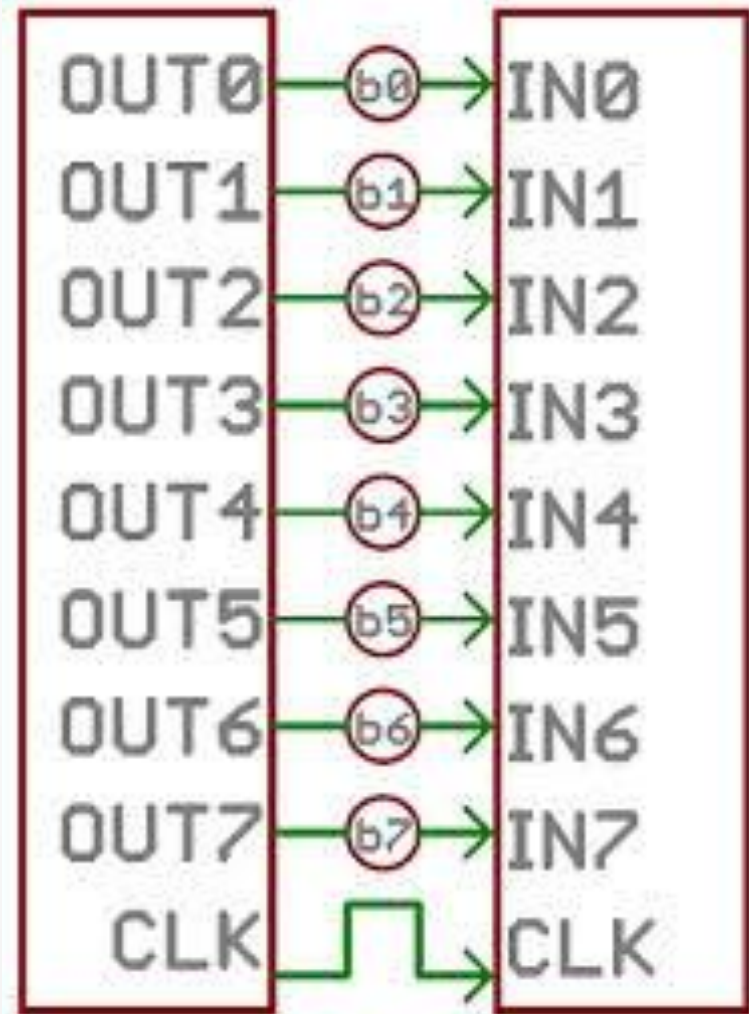
- Generally only Component receptacle to Component receptacle connections required, not individual wires
 - Simple plug pin description
 - Component pin label as receptacle, e.g. J1, Out1
- Point-to-Point Wiring diagram



■ Off to AutoCAD Electrical

Wires and Connections

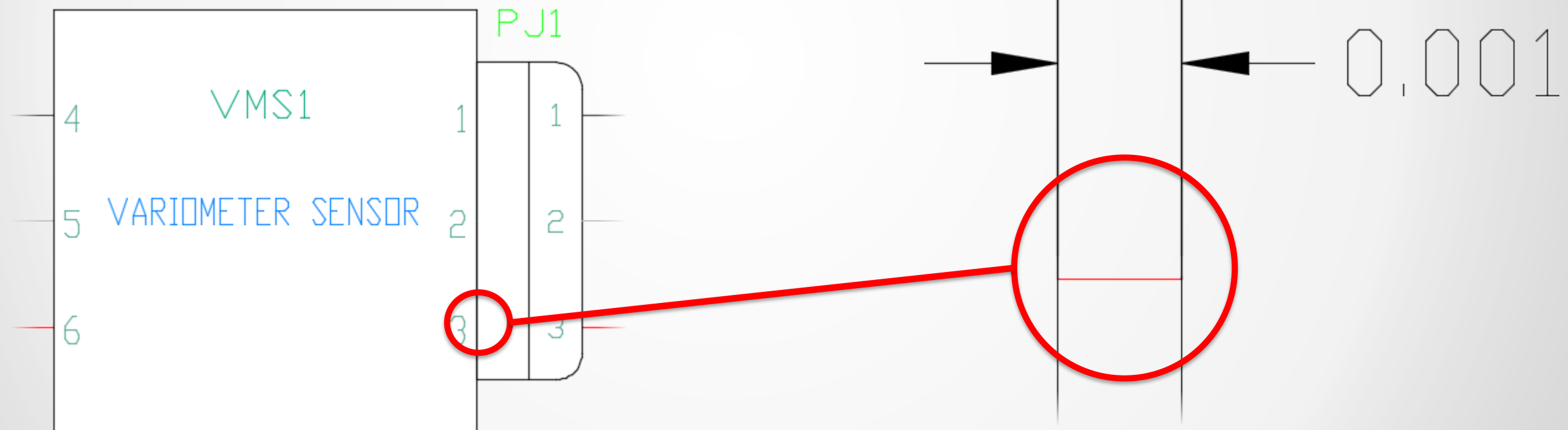
- Wires **MUST** be used to provide connectivity for reports, etc.



Wire Connections Hint #1

Coziness

- Use very small distances between components to hide connection wires



Wire Connections Hint #2

Name Calling

- Connection wires will be listed in reports
- Label connection layers to identify them
 - E.g. “Connection”

WLAY1	WIRENO	LOC1	CMP1	PIN1	LOC2	CMP2	PIN2
PLUG CONNECTIONS			UMS1	1		PJ1	1
PLUG CONNECTIONS			UMS1	2		PJ1	2
PLUG CONNECTIONS			UMS1	3		PJ1	3
22AWG-RED			PJ1	3		GPS1	3
22AWG-WHT			PJ1	2		GPS1	2
22AWG-BLK			PJ1	1		GPS1	1
16AWG-RED	1		POT1	1		CSD1	1



Wire Connections Hint #3

No Labels

- Set Wire Numbering to Off on connection layers

Create/Edit Wire Type						
	Used	Wire Color	Size	Layer Name	Wire Numbering	USE
1	X			22AWG-RED	Yes	
2	X			PLUG CONNECTION	No	
3	X			22AWG-BLK	Yes	
4	X			22AWG-WHT	Yes	
5	X			22AWG-GRN	Yes	

Session Feedback

- Via the Survey Stations, email or mobile device
- AU 2014 passes given out each day!
- Best to do it right after the session
- Instructors see results in real-time

Remember, the suggested
response is...

Awesome!

Or 10, 10 is good





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