

# Bulletin 1411 Current Transformers

Catalog Numbers 1411-2xxx, 1411-8xxx, 1411-125, 1411-126, 1411-180, 1411-600, 1411-601, 1411-604, 1411-606, 1411-608, 1411-615, 1411-616, 1411-617, 1411-AL

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## Additional Resources

These documents contain additional information concerning related products from Rockwell Automation.

Resource	Description
Bulletin 1411 Current Transformer Selection Matrix, publication <a href="#">1411-SG001</a>	Provides selection information for the current transformers.
Industrial Automation Wiring and Grounding Guidelines, publication <a href="#">1770-4.1</a>	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, <a href="http://www.ab.com">http://www.ab.com</a>	Provides declarations of conformity, certificates, and other certification details.

You can view or download publications at <http://www.rockwellautomation.com/literature/>. To order paper copies of technical documentation, contact your local Allen-Bradley distributor or Rockwell Automation sales representative.





**ATTENTION:** Proper safety precautions must be followed during installation by a trained electrician. Never install while bus is energized. The current transformer must have its secondary terminals short circuited or the burden connected, before energizing the primary circuit.

## 1411-2xxx Dimensions and Accuracy

Figure 1 - 1411-2xxx Dimensions

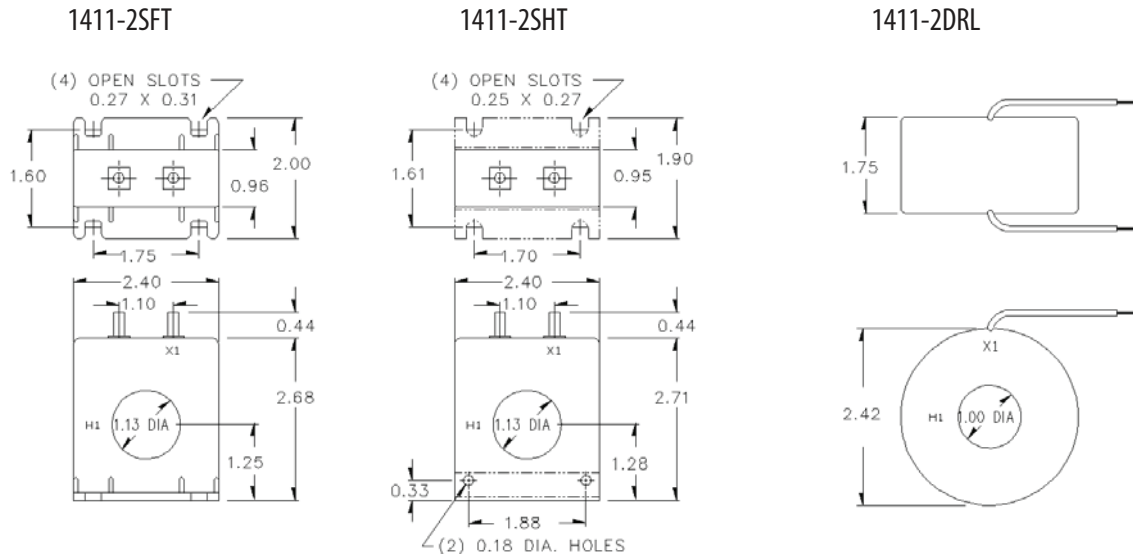


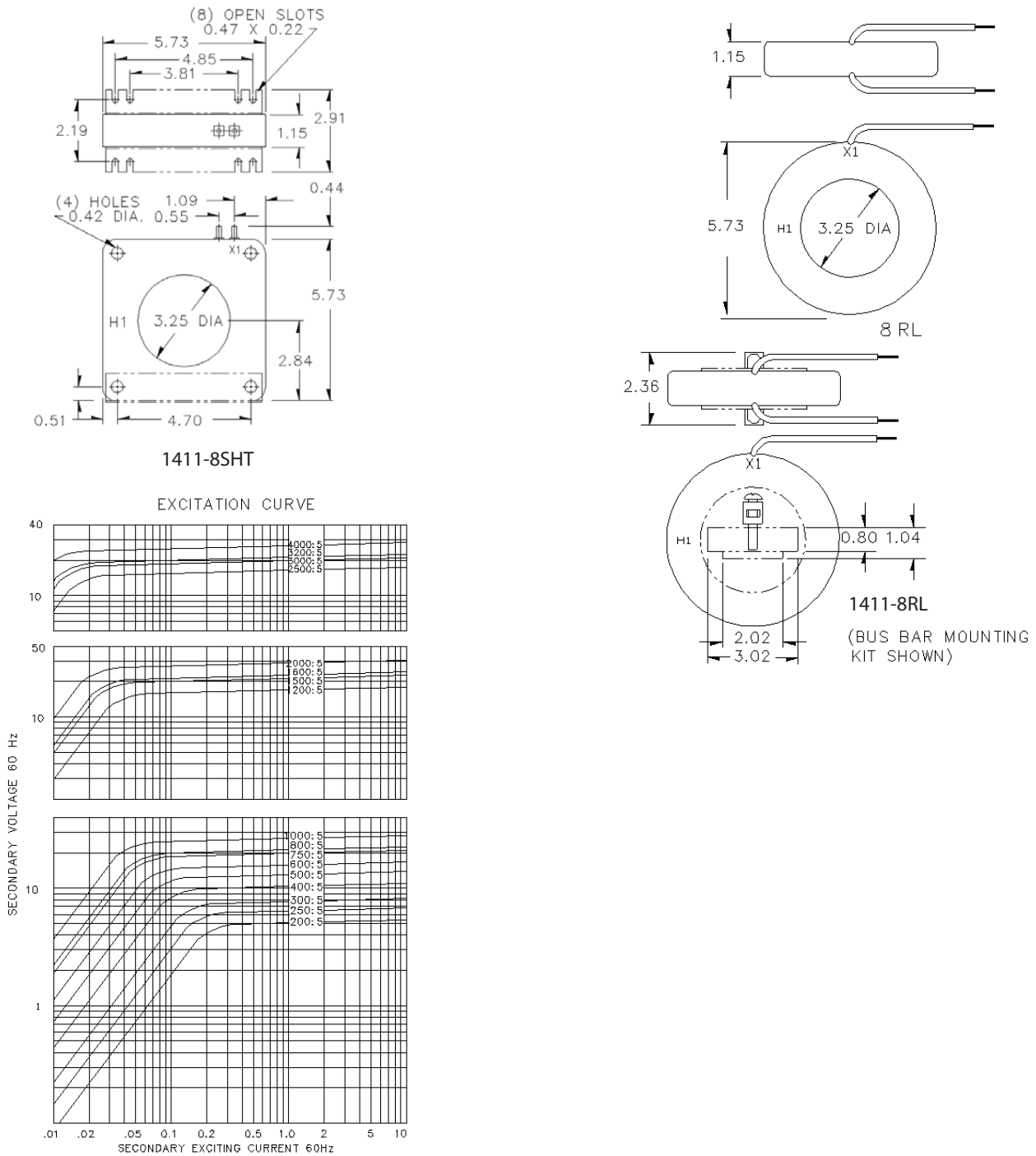
Table 1 - 1411-2xxx Accuracy

Cat. No.	Current Ratio	Models 2SFT, 2SHT		Model 2DRL	
		Accuracy at 60 Hz	Burden VA at 60 Hz	Accuracy at 60 Hz	Burden VA at 60 Hz
1411-2 <sup>(1)</sup> -500	50:5	±3 %	1.5	±2 %	1.5
1411-2 <sup>(1)</sup> -600	60:5	±3 %	2.0	±2 %	2.0
1411-2 <sup>(1)</sup> -750	75:5	±2 %	2.0	±2 %	3.0
1411-2 <sup>(1)</sup> -600	80:5	±2 %	2.0	±2 %	4.0
1411-2 <sup>(1)</sup> -101	100:5	±1 %	2.0	±1 %	5.0
1411-2 <sup>(1)</sup> -121	120:5	±1 %	2.5	±1 %	5.0
1411-2 <sup>(1)</sup> -1250	125:5	±1 %	2.5	±1 %	5.0
1411-2 <sup>(1)</sup> -151	150:5	±1 %	4.0	±1 %	8.0
1411-2 <sup>(1)</sup> -201	200:5	±1 %	4.0	±1 %	10.0
1411-2 <sup>(1)</sup> -251	250:5	±1 %	6.0	±1 %	12.5
1411-2 <sup>(1)</sup> -301	300:5	±1 %	8.0	±1 %	15.0

(1) When ordering, prefix Cat No. with model designation required, for example, 1411-2SFT-301 or 1411-2DRL-301.

# 1411-8xxx Dimensions and Accuracy

Figure 2 - 1411-8xxx Dimensions



**Table 2 - 1411-8xxx Accuracy**

Cat. No.	Current Ratio	VA for $\pm 1\%$ Class	ANSI Metering Class at 60 Hz					Secondary Winding Resistance (ohms at 75 °C)	Continuous Thermal Rating Factor	
			B0.1	B0.2	B0.5	B0.9	B1.8		at 30 °C	at 55 °C
1411-8 <sup>(1)</sup> -201	200:5	5.0	1.2	1.2	2.4	4.8	4.8	0.030	2.0	2.0
1411-8 <sup>(1)</sup> -251	250:5 *	7.5	0.6	0.6	1.2	2.4	4.8	0.044	2.0	2.0
1411-8 <sup>(1)</sup> -301	300:5 *	15.0	0.6	0.6	1.2	2.4	2.4	0.049	2.0	2.0
1411-8 <sup>(1)</sup> -401	400:5 *	25.0	0.3	0.3	0.6	1.2	2.4	0.079	2.0	1.5
1411-8 <sup>(1)</sup> -501	500:5 *	35.0	0.3	0.3	0.6	0.6	1.2	0.102	2.0	1.5
1411-8 <sup>(1)</sup> -601	600:5 *	50.0	0.3	0.3	0.6	0.6	1.2	0.147	1.5	1.33
1411-8 <sup>(1)</sup> -751	750:5 *	50.0	0.3	0.3	0.6	0.6	1.2	0.184	1.5	1.0
1411-8 <sup>(1)</sup> -801	800:5 *	60.0	0.3	0.3	0.3	0.6	0.6	0.197	1.5	1.0
1411-8 <sup>(1)</sup> -102	1000:5 *	75.0	0.3	0.3	0.3	0.6	0.6	0.246	1.33	1.0
1411-8 <sup>(1)</sup> -122	1200:5 *	75.0	0.3	0.3	0.3	0.3	0.6	0.169	1.5	1.0
1411-8 <sup>(1)</sup> -152	1500:5 *	90.0	0.3	0.3	0.3	0.3	0.6	0.316	1.33	1.0
1411-8 <sup>(1)</sup> -162	1600:5 *	100.0	0.3	0.3	0.3	0.3	0.6	0.337	1.33	0.8
1411-8 <sup>(1)</sup> -202	2000:5 *	120.0	0.3	0.3	0.3	0.3	-	0.422	1.0	0.8
1411-8 <sup>(1)</sup> -252	2500:5 *	50.0	0.3	0.3	0.3	0.3	-	0.438	1.0	0.8
1411-8 <sup>(1)</sup> -302	3000:5	60.0	0.3	0.3	0.3	0.3	-	0.526	1.0	0.8
1411-8 <sup>(1)</sup> -322	3200:5	70.0	0.3	0.3	0.3	0.3	-	0.561	1.0	0.8
1411-8 <sup>(1)</sup> -402	4000:5	80.0	0.3	0.3	0.3	0.3	-	0.973	0.8	0.6

(1) When ordering, prefix catalog number with model designation required, for example, 1411-8SHT-201 or 1411-8RL-301.

# 1411-125 Dimensions and Accuracy

Figure 3 - 1411-125 Dimensions

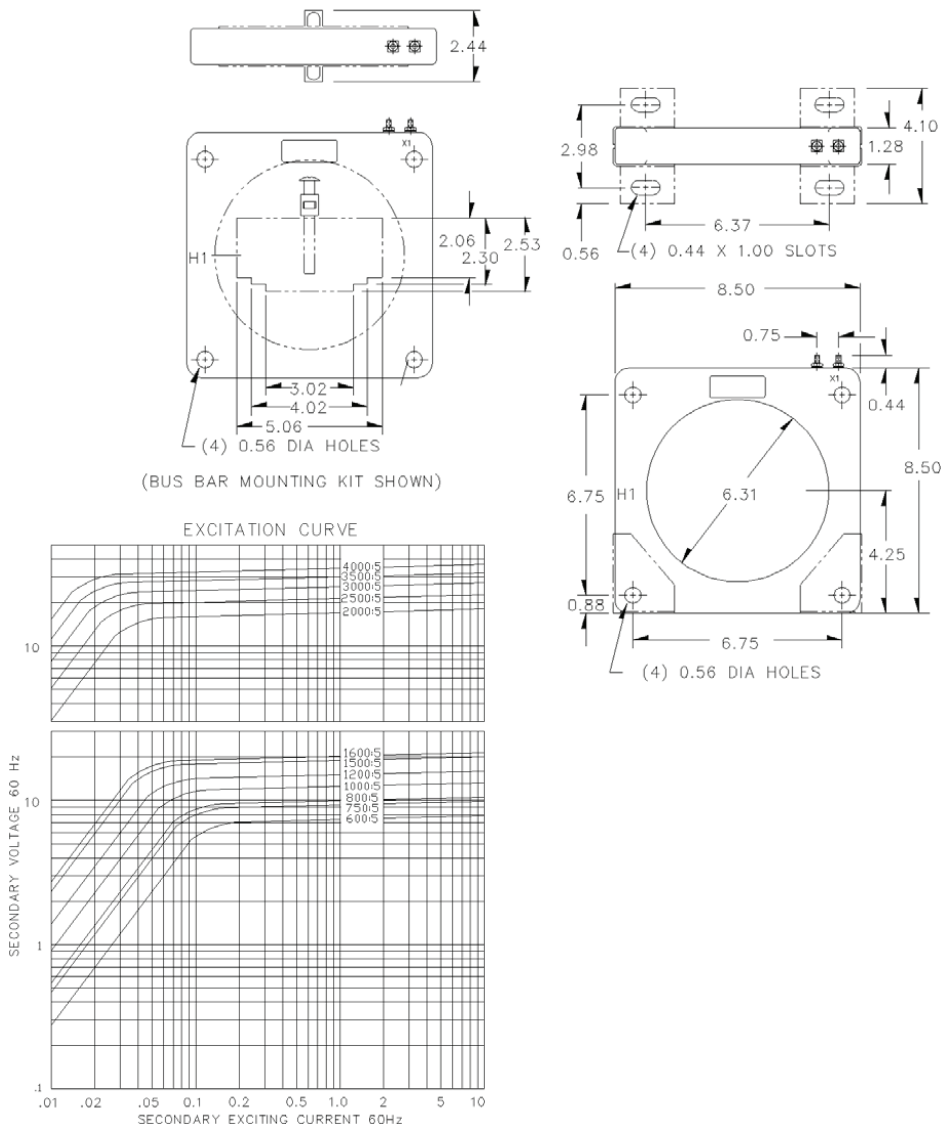


Table 3 - 1411-125 Accuracy

Cat. No.	Current Ratio	ANSI Metering Class at 60 Hz					Secondary Winding Resistance (ohms at 76 °C)	Continuous Thermal Rating Factor	
		B0.1	B0.2	B0.5	B0.9	B1.8		at 30 °C	at 66 °C
1411-125-102	1000:6	0.3	0.3	0.3	0.6	1.2	0.187	1.6	1.33
1411-125-122	1200:6	0.3	0.3	0.3	0.6	1.2	0.224	1.6	1.33
1411-125-152	1500:5	0.3	0.3	0.3	0.3	0.6	0.285	1.5	1.33
1411-125-162	1600:6	0.3	0.3	0.3	0.3	0.6	0.304	1.6	1.33
1411-125-202	2000:6	0.3	0.3	0.3	0.3	0.6	0.280	1.6	1.0
1411-125-252	2500:5	0.3	0.3	0.3	0.3	0.6	0.361	1.33	1.0
1411-125-302	3000:5	0.3	0.3	0.3	0.3	0.6	0.421	1.33	1.0
1411-125-352	3500:5	0.3	0.3	0.3	0.3	0.3	0.491	1.33	1.0
1411-125-402	4000:6	0.3	0.3	0.3	0.3	0.3	0.696	1.0	0.8

# 1411-126 Dimensions and Accuracy

Figure 4 - 1411-126 Dimensions

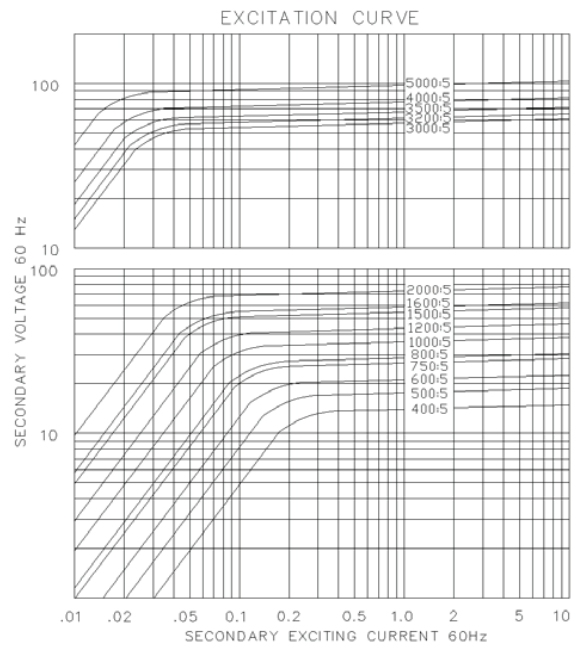
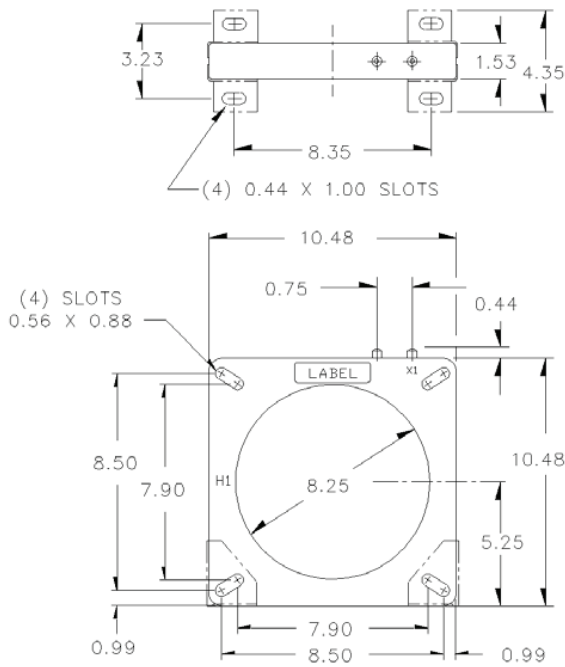
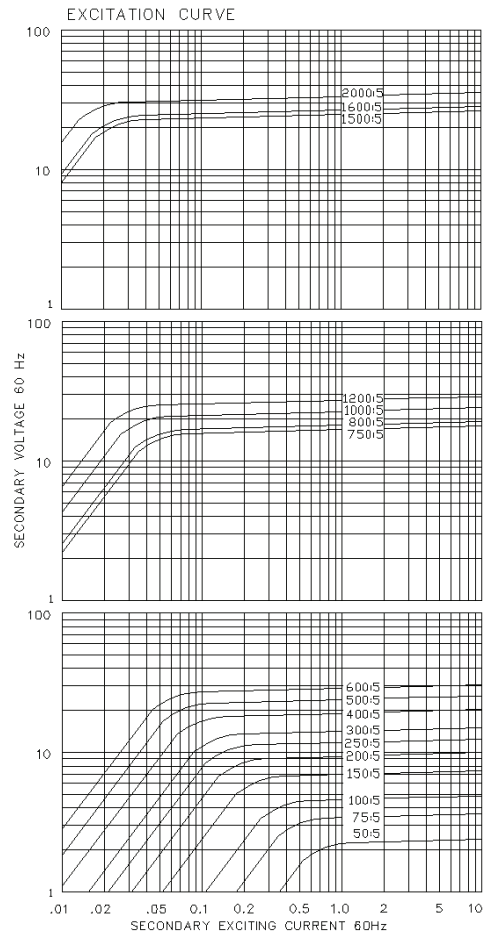
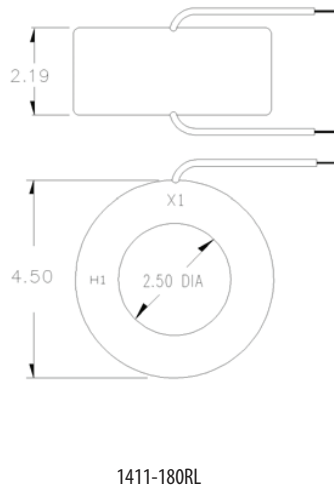
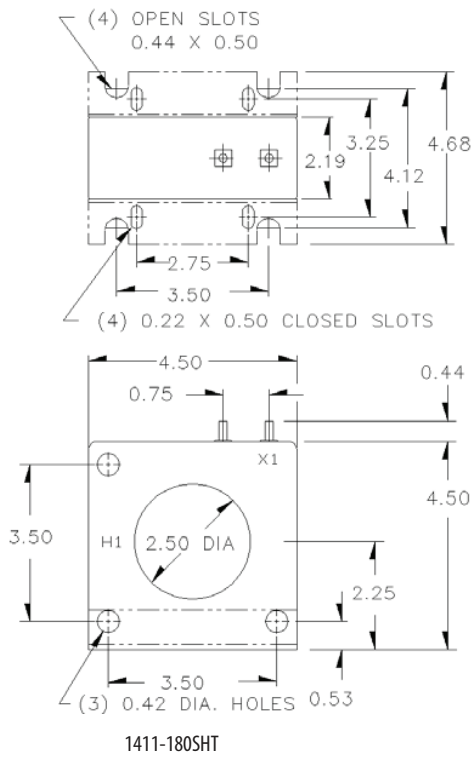


Table 4 - 1411-126 Accuracy

Cat. No.	Current Ratio	VA For ±1% Class	ANSI Metering Class at 60 Hz					Secondary Winding Resistance (ohms at 75 °C)	Continuous Thermal Rating Factor	
			B0.1	B0.2	B0.5	B0.9	B1.8		at 30 °C	at 55 °C
1411-126-41)1	400:5	4.0	0.6	1.2	2.4	2.4	4.8	0.116	2.0	2.0
1411-126-501	500:5	7.5	0.6	0.6	1.2	2.4	2.4	0.145	2.0	2.0
1411-126-601	600:5	10.0	0.6	0.6	1.2	1.2	2.4	0.173	2.0	2.0
1411-126-801	800:5	20.0	0.3	0.3	0.6	0.6	1.2	0.231	2.0	1.5
1411-126-102	1000:5	25.0	0.3	0.3	0.6	0.6	1.2	0.289	2.0	1.5
1411-126-122	1200:5	40.0	0.3	0.3	0.3	0.8	0.6	0.347	1.5	1.33
1411-126-152	1500:5	60.0	0.3	0.3	0.3	0.3	0.6	0.434	1.5	1.0
1411-128-182	1800:5	50.0	0.3	0.3	0.3	0.3	0.6	0.462	1.5	1.0
1411-126-202	2000:5	60.0	0.3	0.3	0.3	0.3	0.3	0.578	1.33	1.0
1411-126-252	2500:5	75.0	0.3	0.3	0.3	0.3	0.3	0.904	1.0	0.8
1411-126-302	3000:5	90.0	0.3	0.3	0.3	0.3	0.3	0.722	1.33	1.0
1411-126-322	3200:5	95.0	0.3	0.3	0.3	0.3	0.3	0.770	1.33	1.0
1411-128-352	3500:5	100.0	0.3	0.3	0.3	0.3	0.3	0.842	1.0	0.8
1411-126-402	4000:5	126.0	0.3	0.3	0.3	0.3	0.3	0.962	1.0	0.8
1411-126-502	5000:5	140.0	0.3	0.3	0.3	0.3	0.3	1.203	1.0	0.8
1411-126-802	6000:5	140.0	0.3	0.3	0.3	0.3	0.3	1.278	1.0	0.8

# 1411-180 Dimensions and Accuracy

Figure 5 - 1411-180 Dimensions



**Table 5 - 1411-180 Accuracy**

Cat. No.	Current Ratio	VA for $\pm 1\%$ Class	ANSI Metering Class at 60 Hz					Secondary Winding Resistance (ohms at 75 °C)	Continuous Thermal Rating	
			B0.1	B0.2	B0.5	B0.9	B1.8		at 30 °C	at 55 °C
1411 - 180 <sup>(1)</sup> -500	50:5	1.5	2.4	-	-	-	-	0.009	1.33	1.0
1411 - 180 <sup>(1)</sup> -750	75:5	2.5	1.2	2.4	-	-	-	0.018	1.33	1.0
1411 - 180 <sup>(1)</sup> -101	100:5	2.5	1.2	2.4	4.8	-	-	0.021	1.33	1.0
1411 - 180 <sup>(1)</sup> -151	150:5 <sup>(2)</sup>	5.0	0.6	1.2	2.4	4.8	-	0.038	1.33	1.0
1411 - 180 <sup>(1)</sup> -201	200:5 <sup>(2)</sup>	12.5	0.6	0.6	1.2	2.4	-	0.051	1.33	1.0
1411 - 180 <sup>(1)</sup> -251	250:5 <sup>(2)</sup>	12.5	0.3	0.3	0.6	1.2	-	0.064	1.33	1.0
1411 - 180 <sup>(1)</sup> -301	300:5 <sup>(2)</sup>	25.0	0.3	0.3	0.6	1.2	2.4	0.076	1.33	1.0
1411 - 180 <sup>(1)</sup> -401	400:5 <sup>(2)</sup>	50.0	0.3	0.3	0.3	0.6	1.2	0.102	1.33	1.0
1411 - 180 <sup>(1)</sup> -501	500:5 <sup>(2)</sup>	50.0	0.3	0.3	0.3	0.6	1.2	0.148	1.33	1.0
1411 - 180 <sup>(1)</sup> -601	600:5 <sup>(2)</sup>	50.0	0.3	0.3	0.3	0.6	1.2	0.177	1.33	1.0
1411 - 180 <sup>(1)</sup> -751	750:5 <sup>(2)</sup>	50.0	0.3	0.3	0.3	0.6	1.2	0.174	1.33	1.0
1411 - 180 <sup>(1)</sup> - 801	800:5 <sup>(2)</sup>	75.0	0.3	0.3	0.3	0.6	1.2	0.202	1.33	1.0
1411 - 180 <sup>(1)</sup> -102	1000:5 <sup>(2)</sup>	100.0	0.3	0.3	0.3	0.3	0.6	0.253	1.33	1.0
1411 - 180 <sup>(1)</sup> - 122	1200:5 <sup>(2)</sup>	125.0	0.3	0.3	0.3	0.3	0.3	0.303	1.33	1.0
1411 - 180 <sup>(1)</sup> -152	1500:5 <sup>(2)</sup>	160.0	0.3	0.3	0.3	0.3	0.3	0.307	1.33	1.0
1411 - 180 <sup>(1)</sup> -162	1600:5 <sup>(2)</sup>	175.0	0.3	0.3	0.3	0.3	0.3	0.359	1.25	1.0
1411 - 180 <sup>(1)</sup> -202	2000:5 <sup>(2)</sup>	200.0	0.3	0.3	0.3	0.3	0.3	0.449	1.0	0.75

(1) When ordering, prefix catalog number with model designation required, for example, 1411-180RL-301 or 1411-180SHT-301.

(2) Approved for revenue metering by Industry Canada. No. T-189



# 1411-600 and 1411-601 Dimensions and Accuracy

Figure 6 - 1411-600 and 1411-601 Dimensions

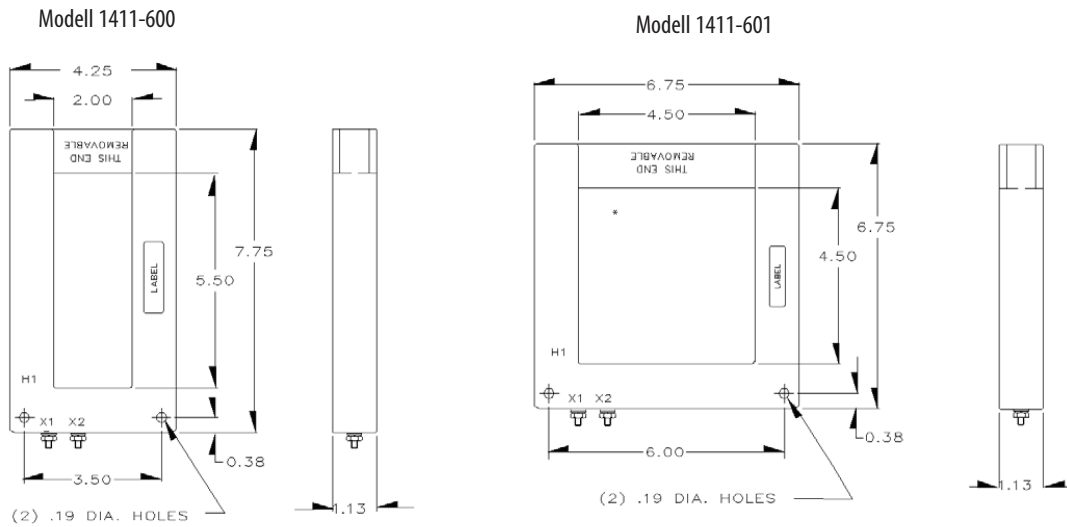


Table 6 - 1411-600 Accuracy

Cat. No.	Current Ratio	VA at 1% Class	ANSI Metering Class at 60 Hz		
			B0.1	B0.2	B0.5
1411-600-251	250:5 A	1.5	4.8	-	-
1411-600-301	300:5 A	2.0	2.4	-	-
1411-600-401	400:5 A	1.5	2.4	4.8	-
1411-600-501	500:5 A	2.0	2.4	4.8	-
1411-600-601	600:5 A	2.5	2.4	2.4	-
1411-600-801	800:5 A	5.0	1.2	1.2	2.4
1411-600-102	1000:5 A	7.5	1.2	1.2	2.4
1411-600-122	1200:5 A	15.0	0.6	1.2	1.2
1411-600-152	1500:5 A	20.0	0.6	0.6	1.2
1411-600-162	1600:5 A	20.0	0.6	0.6	1.2
1411-600-202	2000:5 A	30.0	0.6	0.6	0.6

Table 7 - 1411-601 Accuracy

Cat. No.	Current Ratio	VA at 1% Class	ANSI Metering Class at 60 Hz		
			B0.1	B0.2	B0.5
1411-601-401	400:5 A	1.0	4.8	-	-
1411-601-501	500:5 A	1.5	4.8	4.8	-
1411-601-601	600:5 A	2.0	2.4		-
1411-601-801	800:5 A	2.5	1.2	2.4	4.8
1411-601-102	1000:5 A	5.0	1.2	1.2	4.8
1411-601-122	1200:5 A	10.0	1.2	1.2	2.4
1411-601-152	1500:5 A	15.0	1.2	1.2	1.2
1411-601-162	1600:5 A	15.0	1.2	1.2	1.2
1411-601-202	2000:5 A	20.0	0.6	0.6	1.2

# 1411-604 Dimensions and Accuracy

Figure 7 - 1411-604 Dimensions

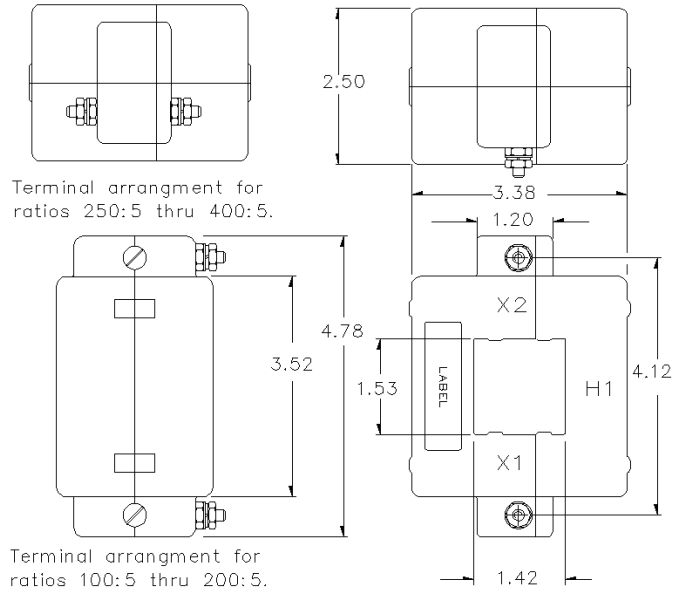


Table 8 - 1411-604 Accuracy

Cat. No.	Current Ratio	Burden VA	Accuracy
1411-604-101	100:5	1	±5%
1411-604-151	150:5	1	±4%
1411-604-201	200:5	1	±2%
1411-604-251	250:5	2	±2%
1411-604-301	300:5	2	±1.5%
1411-604-401	400:5	2.5	±1.5%

## 1411-606 and 1411-608 Dimensions and Accuracy

Figure 8 - 1411-606 and 1411-608 Dimensions

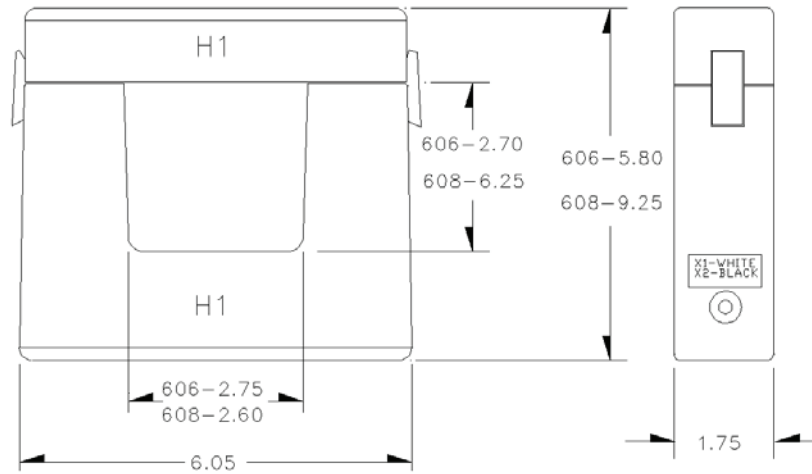


Table 9 - 1411-606 Accuracy

Cat. No.	Current Ratio	Burden VA	Accuracy at 60 Hz
1411 - 606 - 201	200:5	2.5	2 %
1411 - 606 - 251	250:5	3	1 %
1411 - 606 - 301	300:5	3.5	1 %
1411 - 606 - 351	350:5	4	1 %
1411 - 606 - 401	400:5	5	1 %
1411 - 606 - 501	500:5	6	1 %
1411 - 606 - 601	600:5	8	1 %
1411 - 606 - 751	750:5	10	1 %
1411 - 606 - 801	800:5	12	1 %
1411 - 606 - 102	1000:5	15	1 %
1411 - 606 - 122	1200:5	20	1 %

Table 10 - 1411-608 Accuracy

Cat. No.	Current Ratio	Burden VA	Accuracy
1411 - 608 - 501	500:5	6	1 %
1411 - 608 - 601	600:5	8	1 %
1411 - 608 - 801	800:5	12	1 %
1411 - 608 - 102	1000:5	13	1 %
1411 - 608 - 122	1200:5	16	1 %
1411 - 608 - 152	1500:5	25	1 %
1411 - 608 - 162	1600:5	27	1 %
1411 - 608 - 202	2000:5	33	1 %
1411 - 608 - 252	2500:5	42	1 %
1411 - 608 - 302	3000:5	50	1 %
1411 - 608 - 322	3200:5	54	1 %

# 1411-615 Dimensions and Accuracy

Figure 9 - 1411-615 Dimensions

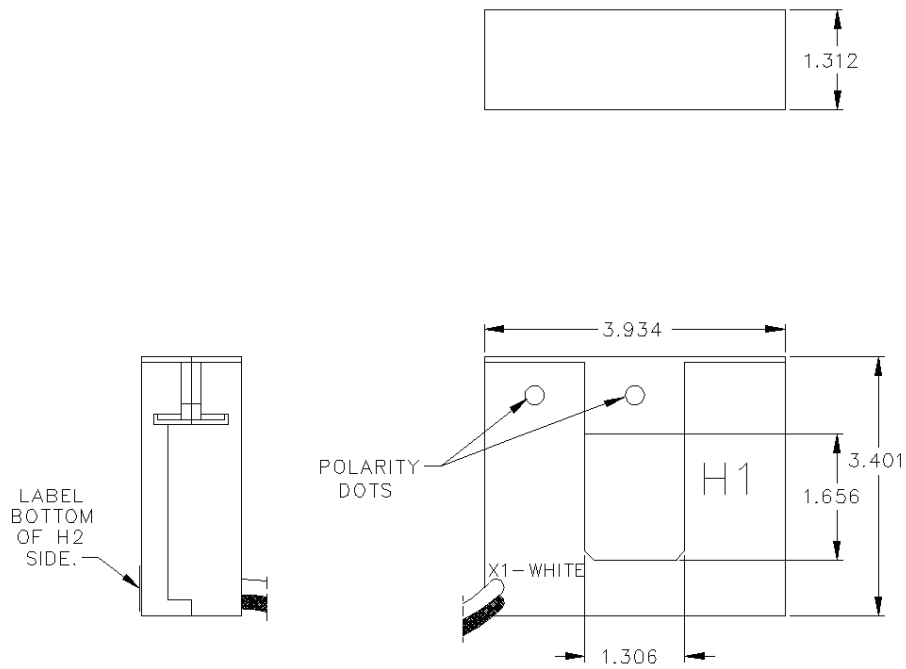


Table 11 - 1411-615 Accuracy

Cat. No.	Current Ratio	Burden VA	Accuracy
1411 - 615 - 101	100:5	1	5%
1411 - 615 - 201	200:5	2	3%
1411 - 615 - 301	300:5	3.5	1%
1411 - 615 - 401	400:5	8.5	1%
1411 - 615 - 201-1	200:1	1.5	1%

# 1411-616 Dimensions and Accuracy

Figure 10 - 1411-616 Dimensions

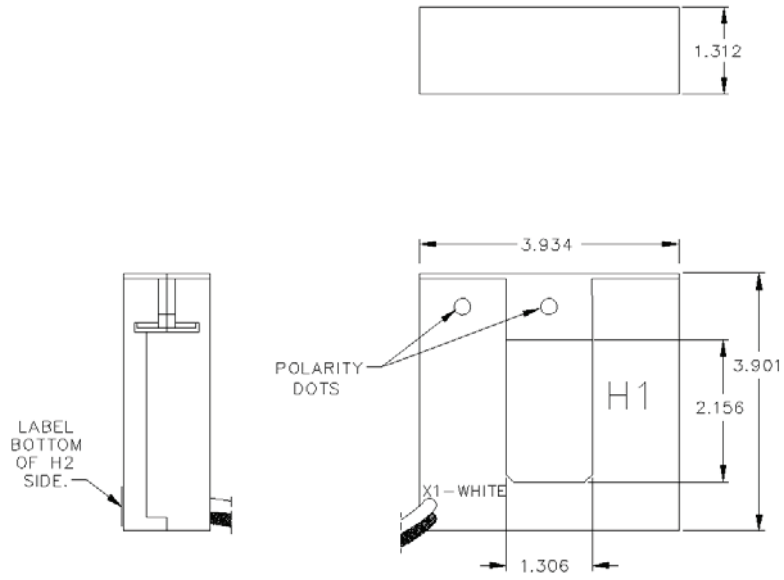


Table 12 - 1411-616 Accuracy

Cat. No.	Current Ratio	Burden	Accuracy
1411 - 616 - 201	200:5	2 VA	3%
1411 - 616 - 401	400:5	5 VA	1%
1411 - 616 - 801	800:5	5 VA	1%
1411 - 616 - 401-01	400:0.1	5 ohm	1%

# 1411-617 Dimensions and Accuracy

Figure 11 - 1411-617 Dimensions

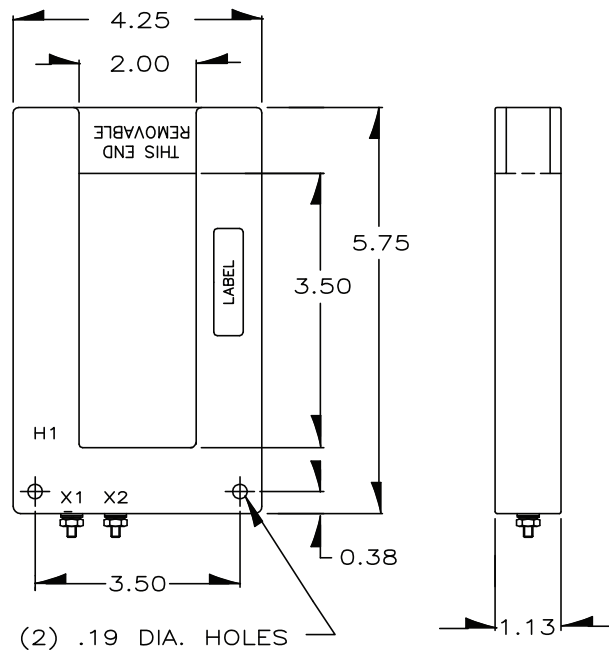


Table 13 - 1411-617 Accuracy

Cat. No.	Current Ratio	VA at 1% Class	ANSI Metering Class		
			B0.1	B0.2	B0.5
1411-617-401	400:5 A	1.5	2.4	4.8	-
1411-617-501	500:5 A	2.0	2.4	4.8	-
1411-617-601	600:5 A	2.5	2.4	2.4	-
1411-617-601	800:5 A	5.0	1.2	1.2	2.4
1411-617-102	1000:5 A	7.5	1.2	1.2	2.4
1411-617-122	1200:5 A	15.0	0.6	1.2	1.2

## 1411-AL Dimensions and Accuracy

Figure 12 - 1411-AL Dimensions

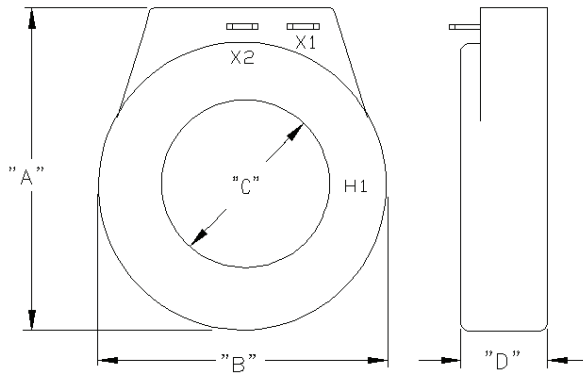




Table 14 - 1411-AL Accuracy

Cat. No.	Current Ratio	Accuracy at 60 Hz	Burden VA at 60 Hz
1411-AL-500	50:5	±3%	1.5
1411-AL-600	60:5	±3%	2.0
1411-AL-750	75:5	±2%	2.0
1411-AL-800	80:5	±2%	2.0
1411-AL-101	100:5	±1%	2.0
1411-AL-121	120:5	±1%	2.5
1411-AL-1250	125:5	±1%	2.5
1411-AL-151	150:5	±1%	4.0
1411-AL-201	200:5	±1%	4.0
1411-AL-251	250:5	±1%	6.0
1411-AL-301	300:5	±1%	8.0
1411-AL-401	400:5	±1%	10.0

## Agency Certifications

Cat. No.	1411-2xxx	1411-8xxx	1411-125	1411-126	1411-180	1411-600 and 1411-601	1411-604	1411-606	1411-608	1411-615	1411-616	1411-617	1411-AL
 LR89403	X	X	X	X	X	X	X	X					
 E93779	X	X	X	X	X	X	X	X	X	X	X	X	X
ANSI/IEEE C57.13	X	X	X	X	X	X	X	X	X	X	X	X	X
IEC 44-1	X	X	X	X	X	X	X	X	X	X	X	X	X

## Important User Information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.

If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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