

Cable Types and Max CT Wire Lengths

Product: VerifEye™ Current Transformers

Article ID: 082120-TL/AA-04

Date: August 21, 2020

Summary: This technical article identifies typical wire recommendations and maximum lengths for the wide variety of cables used with VerifEye devices.

Communication Cable Types/Lengths: The following is a compilation of cable specifications used with VerifEye data acquisition products and meters. In addition to the specifications below, all cables entering electrical panels must have insulation ratings meeting or exceeding the service voltage. All installations must conform to any applicable electrical and building codes.

Table 1: Cable Type Lengths

Connection Type	Wire Type	Max Length (ft/m)
RS485 ¹	Belden 1120A or equivalent	4000/1219.2
Ethernet	CAT5/5E/6 (shielded cable recommended for noisy environments)	328/100
Analog Inputs (0-10V, 4-20mA, Pulse, Resistance)	18-24 AWG (shielded cable recommended for noisy environments)	200/60.9
USB for Modem	USB 2.0	16/4.8

CT Wire Extensions: The below specifications are applicable to VerifEye equipment only. If 3rd party equipment is used, please refer to the specific manufacturer’s specifications and use the shortest length recommended.

Standard lead-length for the split core CT is 48 inches/1.22 meters or 144 inches/3.65 meters. Overall, maximum lead-length allowed for CTs are shown below.

Table 2: Meter CT Wiring Lengths

Meter Series	CT Type/Ratio	CTs Max Combined Length ² (ft/m)
Mini Meters	Split or Solid Core/0.1A	500/152.4
Series 1000		
Series 2000		
Series 8000		300/91.44
Series 4000/4100K Series 7000/7100	Split/0.333V	200/60.9
A8814	Split/0.333V	100/30.4

WIRE TYPE: 18AWG UL1015, 600V, 221° F/105° C, twisted pair black and white

Meter Series	CT Type/Ratio	CTs Max Combined Length ² (ft/m)
Series 4000/4100R	Rope/Rogowski	20/6.0
Series 7000/7100	Rope/Rogowski	100/30

WIRE TYPE: Shielded cable with thermoplastic insulation, 1000VAC VW-1, 2x26AWG, 80°C, cURus
RECOMMENDED SPLICING METHOD/MATERIALS: (“Bare” Only) Sure-Connect sealed butt splices from McMaster-Carr (p/n 9895K11) which require a crimping tool and hot air gun. Always follow manufacturer’s instructions. For additional information, visit Leviton.com/verifeye.

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