

The OESC 28th Edition Proposals for Ontario Amendments

Proposal Number: 2021-OA-015

Rule 75-604

Description of Change: Revised Rule 75-604 to provide sag of quadruplex conductors.

Submitted by: Section 75 Committee

Background: Revising this rule will help alleviate stray voltage concerns on buildings housing livestock. It provides an option for the installer or farmer at other buildings not to establish neutral grounding at the service box supplied from a central metering system.

Rationale: Revised heading of Table 105 to clarify the table is for triplex conductors since the addition of quadruplex conductors.

Table 106 added to include sags and tensions for quadruplex conductors.

Proposed Change:

The OESC 28th Edition
Proposals for Ontario Amendments

75-604 Sag between poles or between poles and buildings

Open wire bus, neutral-supported cable, and ACSR shall be installed so that the sag of the conductors between poles or between poles and a building is determined by using Tables 105 or Tables 107 to 112, whichever is applicable to the size and type of conductor being installed and with respect to applicable span and temperature.

Table 105
Sag of neutral-supported ~~cable~~ triplex cable
(ruling span* — 30.0 m)
(See Rule 75-604.)

Temp. °C	Triplex: 2-No. 4 Polyethylene AL. 1-No. 4 Bare ACSR				Triplex: 2-No. 2 Polyethylene AL. 1-No. 2 Bare ACSR				Triplex: 2-No. 1/0 Polyethylene AL. 1-No. 1/0 Bare ACSR			
	Span, m				Span, m				Span, m			
	15	23	30	38	15	23	30	38	15	23	30	38
	Sag, mm				Sag, mm				Sag, mm			
-29	127	279	508	787	203	432	762	1194	254	584	1016	1575
-18	152	330	559	838	203	457	813	1270	279	584	1041	1626
0	152	356	635	914	229	483	864	1346	279	610	1092	1702
16	178	406	711	1118	229	533	940	1473	279	635	1143	1778
32	203	432	762	1194	254	559	991	1549	305	660	1168	1829

Temp. °C	Triplex: 2-No. 3/0 Polyethylene AL. 1-No. 1/0 Bare ACSR				Triplex: 2-No. 4/0 Polyethylene AL. 1-No. 3/0 Bare ACSR			
	Span, m				Span, m			
	15	23	30	38	15	23	30	38
	Sag, mm				Sag, mm			
-29	305	686	1194	1880	406	889	1600	2489
-18	305	686	1219	1905	406	914	1626	2540
0	305	711	1245	1956	406	940	1651	2591
16	330	711	1270	1981	432	940	1676	2616
32	330	737	1321	2057	432	965	1727	2692

* Ruling span formula:
Ruling span = average span + 2/3 (maximum span — average span)

**The OESC 28th Edition
Proposals for Ontario Amendments**

Table 106
Sags and tensions for pre-assembled
Quadruplex cable
(ruling span*-30m)
(see Rule 75-604)

Temp. (deg C)	# No. 1/0 AL 600 V (Neut. # No.1/0 Bare ACSR)				# No. 3/0 AL 600 V (Neut. # No. 3/0 Bare ACSR)			
	Span (m)				Span (m)			
	15	23	30	38	15	23	30	38
	Sag (mm)				Sag (mm)			
-29	220	520	880	1410	210	610	1110	1840
-20	230	540	920	1470	240	640	1140	1870
0	250	580	990	1590	290	690	1190	1930
16	260	610	1040	1670	330	730	1230	1970
32	270	640	1090	1740	360	770	1270	2010

**Ruling span formula:*

Ruling span = average span + 2/3 (maximum span-average span)