

# OVERHEAD CATENARY SYSTEMS MESSENGER WIRE - BARE COPPER

Messenger Wire for Transit Systems



Images not to scale. See Table 1 for Dimensions

## Construction

This product can be made in variations of Hard Drawn or Medium-Hard Drawn Copper with concentric or unilay stranding options. Tinned coated copper and Proof Positive™ anti-theft conductors are also available upon request.

## Applications and Features

For use in Trolley and High Speed Rail applications as supports for contact and dropper wires in overhead catenary systems. Messenger wire is designed for long service life with the ability to maintain rugged strength through sustained performance.

- Pure Copper
- Flexible to Wind and Vibration
- Durable and Reliable Support
- Mechanically Rugged
- High Tensile Strength and Breaking Load
- RoHS/Proposition 65 Compliant

## Specifications

- ASTM B1 - Hard-Drawn Copper
- ASTM B8 - Concentric-Lay-Stranded Hard or Medium-Hard Drawn Copper
- ASTM B33 - Tinned Copper Wire
- ASTM B787 - 19 Wire Combination Unilay-Stranded Copper Conductors

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**Table 1 – Weights & Measurements**

Cond. Size	Strands	Strand Class	Approx. Weight	Approx. OD Inches		Hard Drawn Rated Strength	Resistance DC @ 20 °C	Allowable Ampacity†
			lbs./MFT	Individual	Complete Table	lbs.	Amps	Amps
8	7	B	51	0.049	0.146	777	0.6663	95
6	7	B	81	0.061	0.184	1228	0.4191	130
4	7	A, B	129	0.077	0.232	1938	0.2636	170
3	7	A, B	163	0.087	0.26	2433	0.209	200
2	7	A, B	205	0.097	0.292	3050	0.166	230
1	7	A	258	0.109	0.328	3801	0.1316	265
1/0	7	A, AA	326	0.123	0.368	4752	0.1042	310
1/0	19	B	326	0.075	0.373	4752	0.1042	310
2/0	7	A, AA	411	0.138	0.414	5926	0.0827	355
2/0	19	B	411	0.084	0.418	6690	0.0827	355
3/0	7	A, AA	518	0.155	0.464	7366	0.0656	410
4/0	7	A, AA	653	0.174	0.522	9154	0.052	480
4/0	19	B	653	0.106	0.528	9617	0.052	480
250	19	A	772	0.115	0.574	11360	0.044	530
250	37	B	772	0.082	0.575	11600	0.044	530
300	19	A	926	0.126	0.628	13510	0.0367	590
350	19	A	1081	0.136	0.679	15590	0.0314	650
500	19	A	1544	0.116	0.814	22510	0.022	810
500	37	B	1544	0.116	0.814	22510	0.022	810
600	37	A, AA	1853	0.127	0.891	27020	0.0183	910
750	61	A, B	2316	0.111	0.998	34090	0.0147	1040
1000	61	A, B	3088	0.128	1.152	45030	0.011	1240

Notes:

+Ampacity based on 75°C conductor temperature 25°C ambient temperature 2 ft./sec. wind in sun.

Numbers shown above are for concentrically stranded constructions and may vary slightly for combination unilay stranded constructions. Dimensions and weights shown above are nominal and subject to industry tolerances.

Email us at [texcan.sales@Texcan.com](mailto:texcan.sales@Texcan.com) and visit our website at [Texcan.com](http://Texcan.com)

**VANCOUVER**

1-800-665-1025  
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