

ALL-FLEX MTW, THHW Heavy Duty Flexible Power Cable - Unshielded



Click on the above thumbnail or go to <https://www.automationdirect.com/VID-WD-0016> for a short introduction on our cut to length cable



Overview

Direct Wire's ALL-FLEX MTW / THHW multipurpose power cable is a 1kV rated flexible power cable with a variety of possible applications including industrial control panel power distribution, power feeds for variable frequency drives (VFDs), servo systems, and motor leads in non-drive related applications, as well as non-traditional industrial applications like marine board application and uninterruptible power supplies (UPS), transformer wiring, battery chargers, and more.

With the THHW and MTW ratings these cables are suitable for use in both wet and dry locations and can be used in conduits, ducts, troughs, and control panels. Enhanced temperature ratings of -50°C to 75°C (-58°F to 167°F) wet; 105°C (221°F) dry makes it ideal for most wiring applications. ALL-FLEX is resistant to battery acid, crushing force, diesel fuel, engine coolant, engine oil, ethanol, extreme temperatures, flame, gasoline, power-steering fluid, and transmission fluid and is UL tested for 60°C (140°F) oil resistant temperature rating and is extremely flexible with a tight bend radius allowing easy installations in limited spaces.

Features

- 8AWG to 500MCM
- Single conductor
- PVC conductor insulation
- Cut to length in 1 foot increments
- Minimum cut lengths as low as 10 feet
- Flexibility for easy installation
- Multiple ratings and approvals
- Wide operating temperature range
- 1000V Maximum Voltage Rating
- UL1063 (MTW) and UL 83 (THHW)
- CSA C22.2 No. 75 (THHW), 127-18 (TEW), 210-15 (AWM), and 2556
- Made in USA



Construction

1. Rope-lay, bunch-stranded 30AWG copper conductor; bare or tinned ASTM Class K copper
2. PVC conductor insulation

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ALL-FLEX MTW, THHW Cable Selection

Part Number	AWG	Strands ##/AWG	Color	Insulation Thickness (PVC)	Overall Diameter		Approximate Weight (lb/ft)	Minimum Cut Length (ft) (See Note)	Price per foot
				(inches)	(inches)	(mm)			
MTW8BK-1	8	182/30	Black	0.060	0.270	6.9	0.077	20	\$;4,5q:
MTW8GYL-1	8	182/30	Green with Yellow stripe	0.060	0.270	6.9	0.077	20	\$;5t0:
MTW8BR-1	8	182/30	Brown	0.060	0.270	6.9	0.077	20	\$;5t4:
MTW8YL-1	8	182/30	Yellow	0.060	0.270	6.9	0.077	20	\$;5t1:
MTW8OR-1	8	182/30	Orange	0.060	0.270	6.9	0.077	20	\$;5t#:
MTW6BK-1	6	273/30	Black	0.060	0.315	8.0	0.111	20	\$;4,5s:
MTW6GYL-1	6	273/30	Green with Yellow stripe	0.060	0.315	8.0	0.111	20	\$;5t7?:
MTW6BR-1	6	273/30	Brown	0.060	0.315	8.0	0.111	20	\$;5t7:
MTW6YL-1	6	273/30	Yellow	0.060	0.315	8.0	0.111	20	\$;5t8:
MTW6OR-1	6	273/30	Orange	0.060	0.315	8.0	0.111	20	\$;5t9:
MTW4BK-1	4	429/30	Black	0.060	0.350	8.9	0.164	20	\$;4,5t:
MTW4GYL-1	4	429/30	Green with Yellow stripe	0.060	0.350	8.9	0.164	20	\$;5t6:
MTW2BK-1	2	676/30	Black	0.060	0.419	10.6	0.246	20	\$;4,5u:
MTW2GYL-1	2	676/30	Green with Yellow stripe	0.060	0.419	10.6	0.246	20	\$;5tj:
MTW1BK-1	1	845/30	Black	0.080	0.490	12.5	0.320	20	\$;4,5v:
MTW1GYL-1	1	845/30	Green with Yellow stripe	0.080	0.490	12.5	0.320	20	\$;5t1t:
MTW1-OBK-1	1/0	1066/30	Black	0.080	0.531	13.5	0.392	20	\$;4,5k:
MTW1-OGYL-1	1/0	1066/30	Green with Yellow stripe	0.080	0.531	13.5	0.392	20	\$;5tu:
MTW2-OBK-1	2/0	1339/30	Black	0.080	0.579	14.7	0.485	20	\$;-4,5l:
MTW2-OGYL-1	2/0	1339/30	Green with Yellow stripe	0.080	0.579	14.7	0.485	20	\$;5tv:
MTW3-OBK-1	3/0	1677/30	Black	0.080	0.632	16.0	0.596	10	\$;4,5n:
MTW3-OGYL-1	3/0	1677/30	Green with Yellow stripe	0.080	0.632	16.0	0.596	10	\$;5tx:
MTW4-OBK-1	4/0	2109/30	Black	0.080	0.695	17.7	0.741	10	\$;4,5o:
MTW4-OGYL-1	4/0	2109/30	Green with Yellow stripe	0.080	0.695	17.7	0.741	10	\$;5ty:
MTW250MCMBK-1	250 MCM	2527/30	Black	0.100	0.793	20.2	0.916	10	Retired
MTW350MCMBK-1	350 MCM	3478/30	Black	0.100	0.915	23.3	1.242	10	Retired

Note - See web store for maximum cut lengths

ALL-FLEX MTW, THHW Cable Specifications

Conductor Stranding	Rope-lay, bunch-stranded 30 AWG copper conductor; bare ASTM Class K copper	Applicable Standards	UL 758, 1232, 1283, 1284, 1337, 1338, 1339, 1581, 2556, 10070, and 10269 UL 1063 (MTW) and UL 83 (THHW) UL 1426 (BC-5W2 Boat Cable) For CT Use (1/0 and larger sizes) CSA C22.2 No. 75 (THHW), 127-18 (TEW), 210-15 (AWM), and 2556 ASTM B3, B33, B49, and B172 SAE J1127 Type SGT NEC (NFPA 70) ABYC E-11 (AC/DC - Electrical Boat Systems) 33 CFR Subchapter S FT-1, FT-2, FT-4, and VW-1
Voltage Rating	600 V; AWM Style 10269 — 1,000 V		
Insulation Color	Black with white print		
Insulation Material	PVC		
Cold Bend Test	-40°C (-40°F)	Approvals & Compliance*	UL, CSA, ABYC, RoHS, REACH, Prop 65 ALL-FLEX (UL) {E#} {AWG SIZE} BC5W2 or THHW FOR CT USE or MTW or AWM STYLES 1232/1284/1338/10070 600V or 10269 1000V VW-1 --- cRU TEW or AWM I A/B 105°C 600V O FT-2 --- (CSA) {MCF #} {AWG SIZE} TEW 600V or AWM I A/B 105°C 1000V FT-1/FT-2/ VW-1 --- ABYC E-11 --- SAE-J1127 TYPE SGT
Operating Temperature	-50°C to 75°C (-58°F to 167°F) wet; 105°C (221°F) dry		
Temperature Rating	75°C (167°F) wet; 105°C (221°F)	Sample Print Legend	

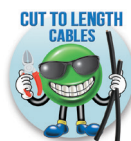
* To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page at www.AutomationDirect.com



Please Note: Our prices on Power cable are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.

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ALL-FLEX MTW, THHW Cable Additional Specifications							
Part Number	AWG	Allowable Ampacity In Conduit*		Allowable Ampacity In Air**		Min. Bend Radius (inches)	Max. Pulling Tension (lb)
		75°C (167°F)	90°C (194°F)	75°C (167°F)	90°C (194°F)		
<u>MTW8BK-1</u>	8	50	55	70	80	2.16	132
<u>MTW8GYL-1</u>	8	50	55	70	80	2.16	132
<u>MTW8BR-1</u>	8	50	55	70	80	2.16	132
<u>MTW8YL-1</u>	8	50	55	70	80	2.16	132
<u>MTW8OR-1</u>	8	50	55	70	80	2.16	132
<u>MTW6BK-1</u>	6	65	75	95	140	2.52	210
<u>MTW6GYL-1</u>	6	65	75	95	140	2.52	210
<u>MTW6BR-1</u>	6	65	75	95	140	2.52	210
<u>MTW6YL-1</u>	6	65	75	95	140	2.52	210
<u>MTW6OR-1</u>	6	65	75	95	140	2.52	210
<u>MTW4BK-1</u>	4	85	95	125	165	2.80	334
<u>MTW4GYL-1</u>	4	85	95	125	165	2.80	334
<u>MTW2BK-1</u>	2	115	130	190	190	3.35	531
<u>MTW2GYL-1</u>	2	115	130	190	190	3.35	531
<u>MTW1BK-1</u>	1	130	150	195	220	3.92	670
<u>MTW1GYL-1</u>	1	130	150	195	220	3.92	670
<u>MTW1-OBK-1</u>	1/0	150	170	230	260	4.24	845
<u>MTW1-OGYL-1</u>	1/0	150	170	230	260	4.24	845
<u>MTW2-OBK-1</u>	2/0	175	195	265	300	4.63	1065
<u>MTW2-OGYL-1</u>	2/0	175	195	265	300	4.63	1065
<u>MTW3-OBK-1</u>	3/0	200	225	310	350	5.06	1342
<u>MTW3-OGYL-1</u>	3/0	200	225	310	350	5.05	1342
<u>MTW4-OBK-1</u>	4/0	230	260	360	405	5.56	1693
<u>MTW4-OGYL-1</u>	4/0	230	260	360	405	5.56	1693
<u>MTW250MCMBK-1</u>	250 MCM	255	290	405	455	6.35	2000
<u>MTW350MCMBK-1</u>	350 MCM	310	350	505	570	7.32	2800
* Ampacities based on Table 12.5.1 of the NFPA 79 Electrical Standards for Industrial Machinery							
** Ampacities based on Table 310.17 of the National Electrical Code®							



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