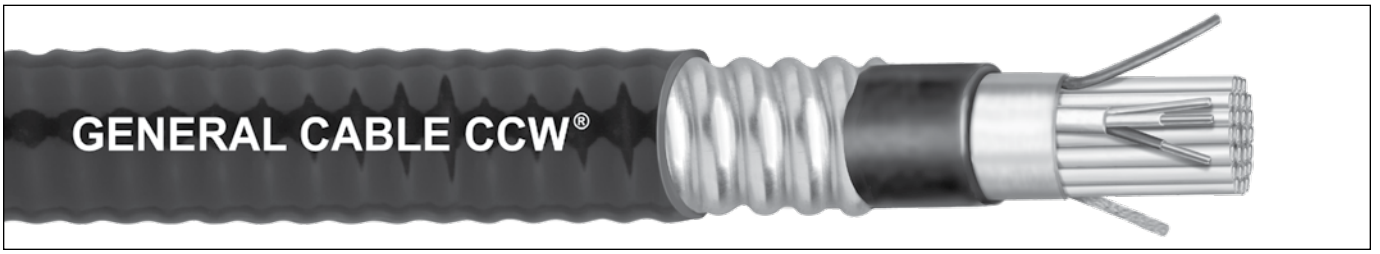
CCW® Armored Thermocouple, Pairs, Individual and Overall Shield

UL Type ITC-HL/PLTC, PVC, 105°C, Sunlight-Resistant, Direct Burial
UL Marine Shipboard Cable, ABS CWCMC



Product Construction:

Conductor:
- 20 AWG solid alloy wire per ANSI MC 96.1

Insulation:
- Flame-retardant Polyvinyl Chloride (PVC), rated 105°C per UL Standards 13 and 2250
- ANSI color-coded insulation, with one conductor in each pair printed alpha numerically for easy identification

Shielded Pairs:
- Isolated and individually twisted pairs with a Flexfoil® aluminum/polyester tape shield providing 100% coverage
- Stranded tinned copper drain wire, two sizes smaller than insulated conductors

Cable Assembly:
- Individually shielded pairs and communication wire are cabled together with a left-hand lay
- Communication wire: 22 AWG solid bare copper, flame-retardant Polyvinyl Chloride (PVC), rated 105°C, orange

Overall Shield:
- Flexfoil® aluminum/polyester tape shield providing 100% coverage
- Stranded tinned copper drain wire, same size as insulated conductors

Inner Jacket:
- Flame-retardant Polyvinyl Chloride (PVC) per UL Standards 13 and 2250
- ANSI color-coded inner jacket
- Low temperature performance meets ASTM D746 brittleness temperature at or below -40°C
- Nylon rip cord to facilitate jacket removal

CCW Armor:
- Impervious, continuously welded and corrugated aluminum alloy sheath per UL 1569
- CCW armor conductivity meets the grounding requirements of NEC Article 250

Overall Jacket:
- Flame-retardant, moisture- and sunlight-resistant Polyvinyl Chloride (PVC) per UL Standards 13 and 2250
- ANSI color-coded overall jacket
- Low temperature performance meets ASTM D746 brittleness temperature at or below -40°C

Applications:

- CCW armored Thermocouple Extension cables with individually shielded pairs and an overall shield provide superior protection and reliability against physical damage for use in instrumentation and process control applications requiring ITC-HL or PLTC wiring methods where shielding against both external EMI and EMI between pairs is required
- For use as Power Limited Tray Cable on circuits rated 150 V or less and 5 amps or less in Class 2 or Class 3 circuits in accordance with NEC Article 725
- For use as Instrumentation Tray Cable on circuits rated 150 V or less and 5 amps or less in accordance with NEC Article 727
- Recognized for use in Class I and III, Divisions 1 and 2; Class II, Division 2; or Class I, Zones 1 and 2 hazardous locations per NEC Articles 501, 502, 503 and 505

Applications: (cont'd.)

- Installed indoors or outdoors, in wet or dry locations, in a raceway, as aerial cable on a messenger, in cable trays, or for direct burial
- Recognized for use on fixed or floating offshore petroleum facilities as recommended by the American Petroleum Institute

Features:

- CCW armor provides superior mechanical protection and an impervious barrier to moisture, gas and liquids
- CCW armor provides EMI shielding performance
- Meets cold impact at -40°C

Specifications:

Design Adherence:
- UL 13 Power-Limited Circuit Cables
- UL 2250 Instrumentation Tray Cable
- UL 1569 Metal Clad Cables
- UL 1309/CSA C22.2 No. 245 Marine Shipboard Cable

Flame Tests:
- ICEA T-29-520 (210,000 BTU/hr)
- IEEE 383 (70,000 BTU/hr)
- CSA FT4
- IEEE 1202 (70,000 BTU/hr)
- UL 1581 (70,000 BTU/hr)
- IEC 60332-3 Cat. A

Compliances:
- UL Type PLTC, SUN RES, DIR BUR, -40°C, UL File # E36118
- UL Type ITC-HL, UL File # E177408
- UL Listed Marine Shipboard, UL File # E85994
- American Bureau of Shipping (ABS) Listed for CWCMC
- RoHS Compliant

General Cable

ABS

RoHS Compliant Directive 2011/65/EU

UL LISTED

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CATALOG NUMBER	WIRE TYPE/ SIZE (AWG)	NO. OF PAIRS	INSULATION THICKNESS		COMMUNICATION WIRE			INNER JACKET THICKNESS		NOMINAL CORE O.D.		NOMINAL ARMOR O.D.		JACKET THICKNESS		NOMINAL OVERALL O.D.		CROSS-SECTIONAL AREA[1]	APPROXIMATE NET WEIGHT	
					SIZE	INS. THICKNESS														
			mils	mm	AWG	mils	mm	mils	mm	INCHES	mm	INCHES	mm	mils	mm	INCHES	mm	SQ. IN.	LBS/1000 FT	kg/1000 m
20 AWG TYPE EX MULTIPLE PAIRS INDIVIDUAL AND OVERALL SHIELDED THERMOCOUPLE EXTENSION CABLE																				
9075.20041221	EX / 20	4	20	0.51	22	12	0.30	78	1.98	0.52	13.2	0.72	18.3	50	1.27	0.83	21.1	0.55	297	442
9075.20081221	EX / 20	8	20	0.51	22	12	0.30	78	1.98	0.65	16.5	0.86	21.8	50	1.27	0.97	24.6	0.75	401	597
9075.20101221	EX / 20	10	20	0.51	22	12	0.30	93	2.36	0.78	19.8	1.02	25.9	50	1.27	1.13	28.7	1.02	526	783
9075.20121221	EX / 20	12	20	0.51	22	12	0.30	93	2.36	0.80	20.3	1.07	27.2	50	1.27	1.18	30.0	1.11	587	874
9075.20161221	EX / 20	16	20	0.51	22	12	0.30	93	2.36	0.88	22.4	1.15	29.2	50	1.27	1.26	32.0	1.26	667	993
9075.20201221	EX / 20	20	20	0.51	22	12	0.30	109	2.77	1.00	25.4	1.32	33.5	50	1.27	1.43	36.3	1.63	831	1,237
9075.20241221	EX / 20	24	20	0.51	22	12	0.30	109	2.77	1.10	27.9	1.45	36.8	50	1.27	1.56	39.6	1.94	980	1,458
9075.20361221	EX / 20	36	20	0.51	22	12	0.30	109	2.77	1.24	31.5	1.59	40.4	60	1.52	1.72	43.7	2.35	1,231	1,832
9075.20501221	EX / 20	50	20	0.51	22	12	0.30	124	3.15	1.47	37.3	1.73	43.9	60	1.52	1.86	47.2	2.75	1,580	2,351
20 AWG TYPE JX MULTIPLE PAIRS INDIVIDUAL AND OVERALL SHIELDED THERMOCOUPLE EXTENSION CABLE																				
9075.20041222	JX / 20	4	20	0.51	22	12	0.30	78	1.98	0.52	13.2	0.72	18.3	50	1.27	0.83	21.1	0.55	295	439
9075.20081222	JX / 20	8	20	0.51	22	12	0.30	78	1.98	0.65	16.5	0.86	21.8	50	1.27	0.97	24.6	0.75	398	592
9075.20101222	JX / 20	10	20	0.51	22	12	0.30	93	2.36	0.78	19.8	1.02	25.9	50	1.27	1.13	28.7	1.02	522	777
9075.20121222	JX / 20	12	20	0.51	22	12	0.30	93	2.36	0.80	20.3	1.07	27.2	50	1.27	1.18	30.0	1.11	582	866
9075.20161222	JX / 20	16	20	0.51	22	12	0.30	93	2.36	0.88	22.4	1.15	29.2	50	1.27	1.26	32.0	1.26	661	984
9075.20201222	JX / 20	20	20	0.51	22	12	0.30	109	2.77	1.00	25.4	1.32	33.5	50	1.27	1.43	36.3	1.63	823	1,225
9075.20241222	JX / 20	24	20	0.51	22	12	0.30	109	2.77	1.10	27.9	1.45	36.8	50	1.27	1.56	39.6	1.94	971	1,445
9075.20361222	JX / 20	36	20	0.51	22	12	0.30	109	2.77	1.24	31.5	1.59	40.4	60	1.52	1.72	43.7	2.35	1,218	1,813
9075.20501222	JX / 20	50	20	0.51	22	12	0.30	124	3.15	1.47	37.3	1.73	43.9	60	1.52	1.86	47.2	2.75	1,561	2,323
20 AWG TYPE KX MULTIPLE PAIRS INDIVIDUAL AND OVERALL SHIELDED THERMOCOUPLE EXTENSION CABLE																				
9075.20041223	KX / 20	4	20	0.51	22	12	0.30	78	1.98	0.52	13.2	0.72	18.3	50	1.27	0.83	21.1	0.55	297	432
9075.20081223	KX / 20	8	20	0.51	22	12	0.30	78	1.98	0.65	16.5	0.86	21.8	50	1.27	0.97	24.6	0.75	401	597
9075.20101223	KX / 20	10	20	0.51	22	12	0.30	93	2.36	0.78	19.8	1.02	25.9	50	1.27	1.13	28.7	1.02	526	783
9075.20121223	KX / 20	12	20	0.51	22	12	0.30	93	2.36	0.80	20.3	1.07	27.2	50	1.27	1.18	30.0	1.11	587	874
9075.20161223	KX / 20	16	20	0.51	22	12	0.30	93	2.36	0.88	22.4	1.15	29.2	50	1.27	1.26	32.0	1.26	666	991
9075.20201223	KX / 20	20	20	0.51	22	12	0.30	109	2.77	1.00	25.4	1.32	33.5	50	1.27	1.43	36.3	1.63	830	1,235
9075.20241223	KX / 20	24	20	0.51	22	12	0.30	109	2.77	1.10	27.9	1.45	36.8	50	1.27	1.56	39.6	1.94	979	1,457
9075.20361223	KX / 20	36	20	0.51	22	12	0.30	109	2.77	1.24	31.5	1.59	40.4	60	1.52	1.72	43.7	2.35	1,229	1,829
9075.20501223	KX / 20	50	20	0.51	22	12	0.30	124	3.15	1.47	37.3	1.73	43.9	60	1.52	1.86	47.2	2.75	1,577	2,347
20 AWG TYPE TX MULTIPLE PAIRS INDIVIDUAL AND OVERALL SHIELDED THERMOCOUPLE EXTENSION CABLE																				
9075.20041224	TX / 20	4	20	0.51	22	12	0.30	78	1.98	0.52	13.2	0.72	18.3	50	1.27	0.83	21.1	0.55	299	445
9075.20081224	TX / 20	8	20	0.51	22	12	0.30	78	1.98	0.65	16.5	0.86	21.8	50	1.27	0.97	24.6	0.75	404	601
9075.20101224	TX / 20	10	20	0.51	22	12	0.30	93	2.36	0.78	19.8	1.02	25.9	50	1.27	1.13	28.7	1.02	530	789
9075.20121224	TX / 20	12	20	0.51	22	12	0.30	93	2.36	0.80	20.3	1.07	27.2	50	1.27	1.18	30.0	1.11	592	881
9075.20161224	TX / 20	16	20	0.51	22	12	0.30	93	2.36	0.88	22.4	1.15	29.2	50	1.27	1.26	32.0	1.26	672	1,000
9075.20201224	TX / 20	20	20	0.51	22	12	0.30	109	2.77	1.00	25.4	1.32	33.5	50	1.27	1.43	36.3	1.63	839	1,249
9075.20241224	TX / 20	24	20	0.51	22	12	0.30	109	2.77	1.10	27.9	1.45	36.8	50	1.27	1.56	39.6	1.94	989	1,472
9075.20361224	TX / 20	36	20	0.51	22	12	0.30	109	2.77	1.24	31.5	1.59	40.4	60	1.52	1.72	43.7	2.35	1,243	1,850
9075.20501224	TX / 20	50	20	0.51	22	12	0.30	124	3.15	1.47	37.3	1.73	43.9	60	1.52	1.86	47.2	2.75	1,599	2,380

Dimensions and weights are nominal; subject to industry tolerances.
[1] Cross-sectional area for cable tray fill is in accordance with NEC® Section 392.22.

ANSI MC 96.1 CONDUCTOR ALLOY AND COLOR CODE								
COND. TYPE	POSITIVE WIRE		NEGATIVE WIRE		OVERALL JACKET COLOR	TEMP. RANGE	LIMITS OF ERROR	NOM. LOOP RESISTANCE PER 100 FT @ 20°C
	ALLOY	COLOR	ALLOY	COLOR				
EX	Chromel	Purple	Constantan	Red	Purple	0°C To +200°C	+/- 1.7°C	70.7 Ohms
JX	Iron	White	Constantan	Red	Black	0°C To +200°C	+/- 2.2°C	35.7 Ohms
KX	Chromel	Yellow	Alumel	Red	Yellow	0°C To +200°C	+/- 2.2°C	59.0 Ohms
TX	Copper	Blue	Constantan	Red	Blue	-60°C To +100°C	+/- 1.0°C	29.8 Ohms

UL® LISTED
RoHS Compliant Directive 2011/65/EU
ABS®
General Cable