

Control Cable & Instrumentation Cable

600V / 300V | Multi-Conductor | Shielded & Unshielded | Switchgear · MCC · SCADA · DCS

PRODUCT OVERVIEW

Mirabel Energy USA control and instrumentation cables are purpose-engineered for the low-level signal transmission, control circuit wiring, and process automation applications that form the nervous system of power plants, substations, refineries, water treatment facilities, and industrial manufacturing plants. Control cables provide multi-conductor wiring for switchgear control circuits, motor starter interlocks, relay panel wiring, and MCC control connections — available in 2 through 37 conductor configurations with or without an overall shield. Instrumentation cables feature individually shielded pairs (IS) and overall shields (OS) to eliminate cross-talk and electromagnetic interference in signal circuits carrying 4–20mA, thermocouple, RTD, and digital fieldbus signals. Both product lines are available with XLPE or PVC insulation, PVC or LSZH outer jackets, and drain wire constructions compatible with standard single-point or multi-point grounding practices.

600V / 300V Voltage Rating	90°C Temperature Rating	IS + OS Shield EMI Protection	SCADA / DCS Ready Key Application
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APPLICATIONS

- Switchgear and circuit breaker control circuit wiring
- MCC control circuits — motor starter, VFD, and contactor interlocks
- Protection relay panel wiring — SEL, GE, ABB, Schweitzer relay systems
- SCADA, DCS, and PLC field instrument wiring (4–20mA, digital I/O)
- Thermocouple, RTD, and resistance temperature detector signal circuits
- Substation control building and relay room panel wiring

KEY SPECIFICATIONS

- Control: 2–37 conductors, #18–#12 AWG, 600V, unshielded or OS shielded
- Instrumentation: individually shielded pairs/triads + overall shield (IS/OS)
- Aluminum/polyester foil IS shields with tinned copper drain wire
- 90°C temperature rating — XLPE or PVC insulation
- Pairs and triads color-coded per ICEA or custom client specifications
- Low-capacitance construction for signal integrity in long field runs
- Flame-retardant per IEEE 1202 and UL vertical tray flame test
- LSZH jacket option for enclosed control rooms and cable vaults

TECHNICAL SPECIFICATIONS

Parameter	Control Cable	Instrumentation Cable
Voltage Rating	600V	300V
Conductor Count	2–37 conductors	2–24 pairs / triads
Shielding	None or OS	IS per pair + OS overall
Conductor Size	#18 AWG – #12 AWG	#18 AWG – #16 AWG
Insulation	XLPE or PVC	XLPE or PVC
Jacket	PVC / LSZH	PVC / LSZH
Standard	UL 508 / NEC 725	ISA-S5.1 / IEC 61158

SIZES & CONFIGURATIONS #18–#12 AWG 2–37 conductors IS/OS shielded XLPE or PVC LSZH available	STOCKING LOCATIONS Reno, NV · Houston, TX Standard & project-phased delivery	OEM REPRESENTATIVE GCP Energy LLC — Salt Lake City, UT portal.gcpenergy.us
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