



UL 2225 / UL 1569 Type MC-HL 600 V cable

MC-HL Instrumentation

Metal-Clad Instrumentation Cable

UL 2225 600 V continuously welded corrugated aluminium armoured Class I Div 1 cable



UL 2225 & UL 1569 Type MC-HL

600 V · Class I, II, III Div 1

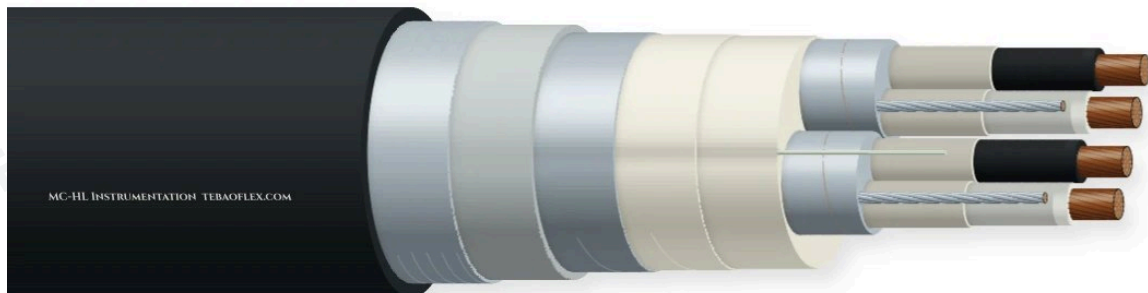
Welded Corrugated Al Armour

Application

Impervious 600 V Type MC-HL Metal-Clad Hazardous Location instrumentation cable certified to UL 2225 and UL 1569 with 90 °C XHHW-2 (XLPE) cores, individual/overall Al/PET shields, continuous welded corrugated aluminium armor and PVC or LSZH jacket.

Typical uses: Gulf of Mexico & Offshore Production Platforms, Class I Division 1 Refinery & Chemical Units, LNG Export & Regasification Terminals, Grain, Coal & Class II/III Dust Hazard Plants, Direct-Burial & Substructure Process Trunks

Construction



Cross-section, not to scale

- 1 Stranded copper conductors + equipment ground
- 2 600 V 90 °C XHHW-2 cross-linked polyethylene
- 3 Individual & overall 100 % Al/PET shields
- 4 Polymeric core binder tape
- 5 Continuously welded corrugated aluminium sheath
- 6 Sunlight & Oil Resistant PVC or LSZH jacket

Technical data

Typical values

Rated voltage	600 V rms (Type MC-HL) · 300 V rms (Type ITC-HL)	Dielectric test voltage	2000 V AC rms for 5 min
Insulation resistance	≥ 2000 MΩ·km at +20 °C	Shielding effectiveness	Dual-layer: internal Al/PET foil + 360° solid welded Al tube
Operating temperature	−40 °C to +90 °C (wet or dry)	Short-circuit conductor temperature	+250 °C (XHHW-2 thermoset XLPE)
UL 2225 crush & impact rating	≥ 2,000 lbf (8.9 kN) crush · ≥ 50 ft-lbf (68 J) impact	Sheath pressure tightness	100 % air-pressure & weld-integrity tested continuous tube
Min. bending radius	10 × OD (fixed) · 12 × OD (pulling)	Flame test ratings	UL 1685 · IEEE 1202 (70,000 BTU/hr) · IEC 60332-3-22 · CSA FT4
Chemical & hydrocarbon barrier	100 % impervious welded metallic sheath (zero permeation)	Standards	UL 2225 (Type MC-HL / ITC-HL) & UL 1569 (Type MC)

Sizes

15 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Configuration	Shielding	Outer Ø ≈ mm	Copper kg/km	Weight ≈ kg/km	Min. bend R fixed mm
18 AWG (0.82 mm ²) XHHW-2 — 600 V Type MC-HL 6 sizes						
☐ MC-HL-INST 1P×18AWG OS	1 Pair × 18 AWG + GND	OS	13.2	28	178	132
☐ MC-HL-INST 2P×18AWG IS/OS	2 Pairs × 18 AWG + GND	IS+OS	16.4	52	265	164
☐ MC-HL-INST 4P×18AWG IS/OS	4 Pairs × 18 AWG + GND	IS+OS	19.2	96	378	192
☐ MC-HL-INST 8P×18AWG IS/OS	8 Pairs × 18 AWG + GND	IS+OS	24.1	182	610	241
☐ MC-HL-INST 12P×18AWG IS/OS	12 Pairs × 18 AWG + GND	IS+OS	28.2	268	845	282
☐ MC-HL-INST 24P×18AWG IS/OS	24 Pairs × 18 AWG + GND	IS+OS	37.6	515	1,490	376
16 AWG (1.31 mm ²) XHHW-2 — 600 V Type MC-HL 6 sizes						
☐ MC-HL-INST 1P×16AWG OS	1 Pair × 16 AWG + GND	OS	14.0	42	202	140
☐ MC-HL-INST 2P×16AWG IS/OS	2 Pairs × 16 AWG + GND	IS+OS	17.6	78	308	176
☐ MC-HL-INST 4P×16AWG IS/OS	4 Pairs × 16 AWG + GND	IS+OS	20.8	146	452	208
☐ MC-HL-INST 8P×16AWG IS/OS	8 Pairs × 16 AWG + GND	IS+OS	26.2	278	735	262
☐ MC-HL-INST 12P×16AWG IS/OS	12 Pairs × 16 AWG + GND	IS+OS	30.8	410	1,020	308
☐ MC-HL-INST 24P×16AWG IS/OS	24 Pairs × 16 AWG + GND	IS+OS	41.2	795	1,810	412
14 AWG (2.08 mm ²) XHHW-2 — 600 V Type MC-HL 3 sizes						
☐ MC-HL-INST 1P×14AWG OS	1 Pair × 14 AWG + GND	OS	15.2	64	245	152
☐ MC-HL-INST 4P×14AWG IS/OS	4 Pairs × 14 AWG + GND	IS+OS	22.8	224	575	228
☐ MC-HL-INST 8P×14AWG IS/OS	8 Pairs × 14 AWG + GND	IS+OS	29.0	428	945	290

– Terminate with UL 2225 listed MC-HL potted/elastomeric barrier connectors (e.g. TMCX) in Class I Division 1 enclosures.

Electrical parameters by AWG gauge

3 sizes

AWG size metric	Equip. ground wire AWG	Max. DCR @ 20 °C Ω/km	Nom. C (core/core) pF/m	AC test V rms
18 AWG (0.82 mm ² · 7×26)	18 AWG	21.4	82	2,000
16 AWG (1.31 mm ² · 7×24)	16 AWG	13.7	88	2,000
14 AWG (2.08 mm ² · 7×22)	14 AWG	8.6	94	2,000

– 12 AWG (3.31 mm²) and multi-triad (1T–12T) MC-HL instrumentation cables are also available.

Standards and approvals

- ✓ UL 2225 & UL 1569 Listed Type MC-HL (600 V)
- ✓ NEC Art. 330, 501, 502, 503 & 505 Div 1 / Zone 1
- ✓ API RP 14F, USCG & ABS Offshore

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/mc-hl-metal-clad-instrumentation-cable



Typical values for this cable type, based on UL 2225 / UL 1569 / NEC Articles 330, 501.10(A) & 505. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.