

Transmission & Distribution
Material & Installation Specification

Loadbreak Elbow - 200 Amp

I. Quantity

The base bid shall include the indicated number of 200A, "Loadbreak Elbows" with test point and appropriate accessories included but not limited to jacket seals, supplemental tapes, silicon lubricant, grounding kits, grounding braid, shielding braid, solder, h-tap connectors, abrasives, cleaners, and all necessary items for complete and operational load break terminations.

II. Material

- A. The material shall be equal in quality, design, performance, and appearance to the items specified on drawing TDMIS-1100. All components shall be Elastimold or engineer approved equal.
- B. All steel hardware to be 302 stainless steel.
- C. Elbow body shall be a molded rubber housing with semi-conductive outer coating. Elbow housing shall display two (2) white stripes around the lower throat to indicate the elbow is capable of load-make and load-break switching.
- D. Load-make and load-break performance shall be at 15 kV class three phase and single phase, 8.3kV line to ground, 14.4kV max across open contacts. 10 loadmake/break operations at 200 Amps max, with 70 to 80% lagging power factor. 1 fault close operation at 8.3 kV or 14.4 kV; 10000 Amps, rms. sym. 10 cycles (0.1/sec) 1.3 max. asym. factor applies to new or used mating parts (up to maximum designated switching operations).
- E. Jacket seals shall be of sufficient diameter and length for the cable being terminated and shall include two (2) minimum mastic strips applied one at each end of the seal to prevent moisture intrusion.

- F. Grounding kits and adapters shall include flexible tin plated braided extensions from a constant pressure spring or soldered connection to the apparatus ground conductor. A solder block shall be provided under the jacket seal mastic to prevent wicking of moisture.
- G. Ground shield adapter shall be Cooper Power System SA series shield adapter kit.

III. Installation

- A. The installation shall be as appropriate on drawing TDMIS-1100 as related to and called out on TDMIS unit assembly drawings.
- B. Size and type hardware shall not be substituted without express approval of engineer.
- C. Only qualified personnel with at least 5 years' experience with high voltage terminations, or certificate from a certified training school as approved by COC-DOP may be assigned to terminate MV cables. A resume of personnel's experience shall be submitted to DOP for approval 30 days prior to beginning terminations.
- D. Cables and cable accessories shall be kept clean and dry at all times during termination process. Suitable tents and heaters shall be employed as needed. Person performing cable termination shall clean hands frequently with MEK or other approved solvent to assure semi-conductive materials are not transferred from component to component.
- E. Silicone lubricants shall be applied liberally to separable components. It is recommended that additional tubes of lubricant be on hand as kits are not furnished with adequate lubricant.
- F. Cable shall be cleaned and prepped according to the elbow manufacturers' directions.
- G. Terminations shall be considered complete when in final position and energized at operating voltage.

CITY OF COLUMBUS DEPT. OF PUBLIC UTILITIES – DIVISION OF POWER LOADBREAK ELBOW - 200 AMP		
DRAWN BY: AEC	DATE: 01/01/2018	TDMIS-1100
APPROVED: R. SPRITE		
	SHEET 1 of 3	

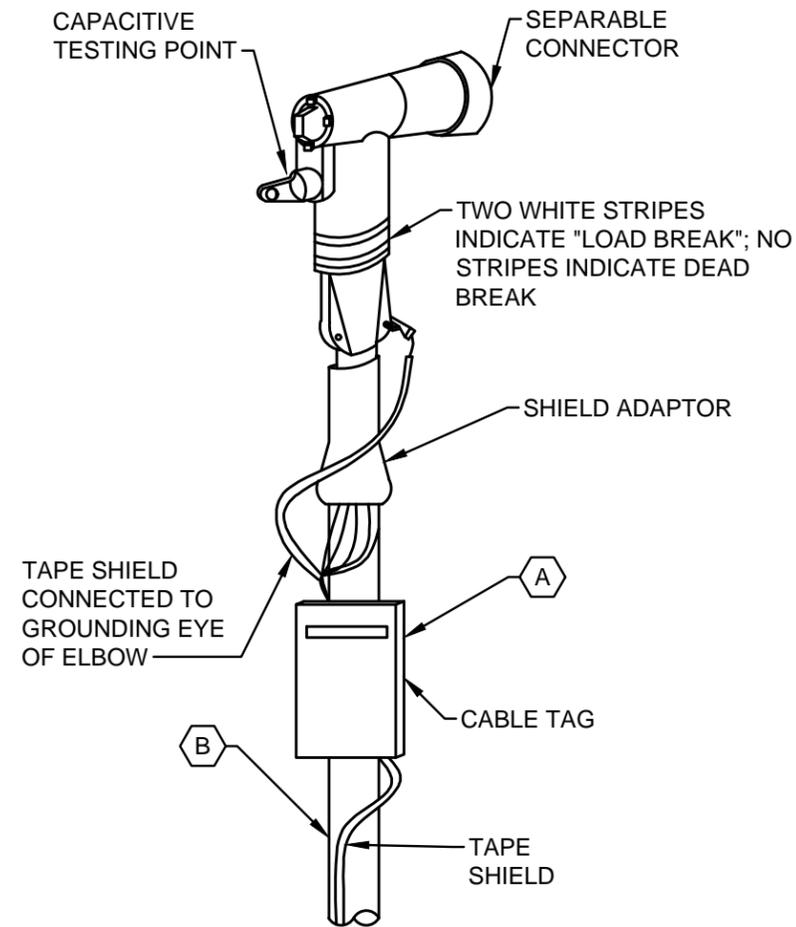
IV. Method of measurement

Shall be included with the unit for conductors and shall include all materials, accessories, lubricants, abrasives, tools, labor, equipment, and supervision required for a complete and operational module.

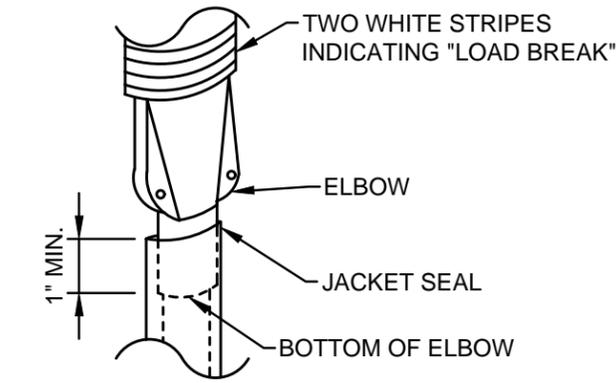
V. Basis of payment

Shall be included with the unit price for conductors.

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DETAIL 1
JACKET SEAL AT ELBOW CONNECTION



DETAIL 2
ELBOW

CODED NOTES:

- A** INDICATE ON TAG THE LOCATION OF THE OTHER END OF THE CABLE.
- B** LEAVE ENOUGH SLACK IN CABLE LENGTH TO OPERATE ELBOW WITH HOT STICK.

CITY OF COLUMBUS, OHIO
DEPT. OF PUBLIC UTILITIES - DIVISION OF POWER

LOADBREAK ELBOW-200AMP

DRAWN BY: AEC	DATE: 01/01/2018
APPROVED: R. SPRITE	
SCALE: NTS	SHEET: 3 OF 3

TDMIS-1100