

Shielded HV Cables

100kV – 300 kVDC Voltage Capability



High Voltage Products. High Voltage Experts

Overview

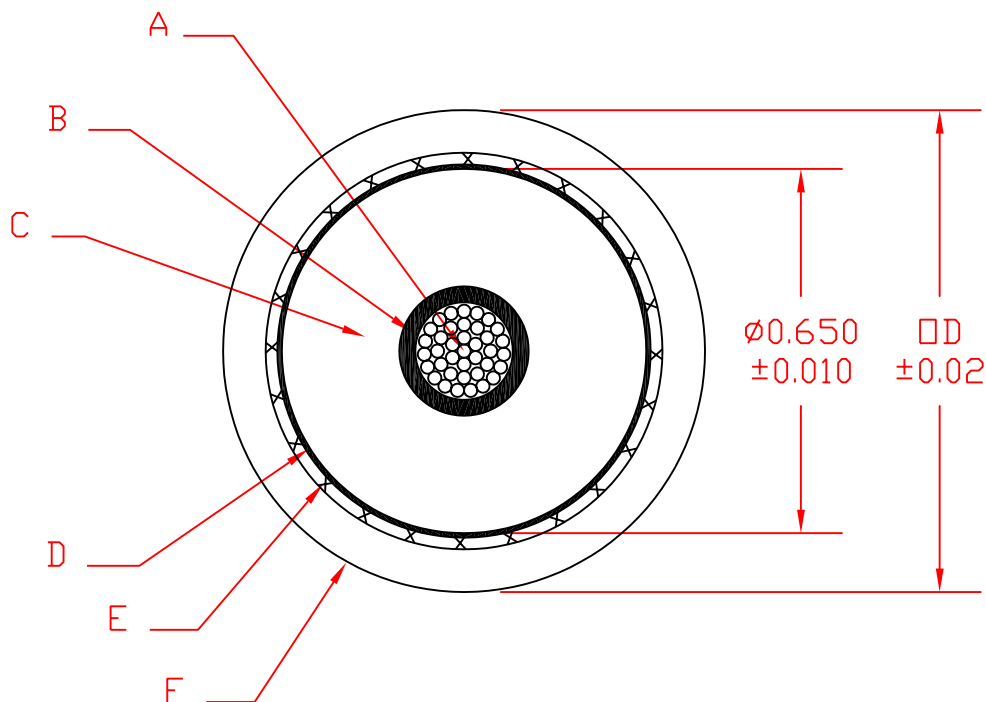
HVP offer a standard range of shielded high voltage cables rated up to 300kVDC, as well as bespoke options. Dielectric materials including silicone, FEP & Polyethylene are available, with many featuring a semi conductive layer to deliver low partial discharge and an AC rating. A selection of custom shielding and jacketing options are available to deliver mechanical protection, electrical return and an electro-magnetic screen to suit specific applications.



HV Cables 100-300kV

Rated Voltage (kV)		Part Number	Conductor Size			Semicon. Ø (mm)	Dielectric Material	Shield		Jacket Material	Outside Ø (mm)	Min. Bend Radius (mm)	Max. T (°C)
DC	AC		AWG	mm ²	Ø (mm)			AWG (equ.)	Coverage (%)				
100	30	2062S J	8	8.37	4.20	5.60	Silicone	16	82	-	20.57	140	200
100	-	2124	16	1.31	1.50	2.50	LDHMW PE	13	90	PVC	11.18	152	60
100	-	2125	12	3.31	2.30	3.30	LDHMW	13	90	PVC	11.18	152	60
100	30	2242	10	4.92	2.90	4.80	EPR	14	90	PU	21.59	127	130
125	-	2196	10	5.31	3.00	4.00	LDHMW	12	90	PVC	15.88	229	60
125	40	2128	6	13.30	5.30	7.60	EPR	8	82	PU	24.77	127	121
150	-	2121	12	3.31	2.30	3.30	LDHMW	12	90	PVC	15.88	216	60
150	60	2265	2	6.54	6.50	8.00	XLPE	10	90	Polyolefin	25.65	406	60
200	-	2134	12	3.31	2.30	5.60	LDHMW	13	80	PVC	21.59	25	60
250	-	2158	00	67.43	10.30	12.20	LDHMW	6	90	PVC	38.61	457	60
300	-	2077	4	21.15	5.20	6.10	LDHMW PE	6	90	PVC	38.10	305	60
300	-	2182	7	10.00	3.60	5.10	LDHMW	6	90	PVC	38.10	305	60
300	100	2019-01	0	107.20	11.70	13.50	LDHMW	1	100	HD PE	50.80	711	71

For customized solutions or missing data please contact HVP.



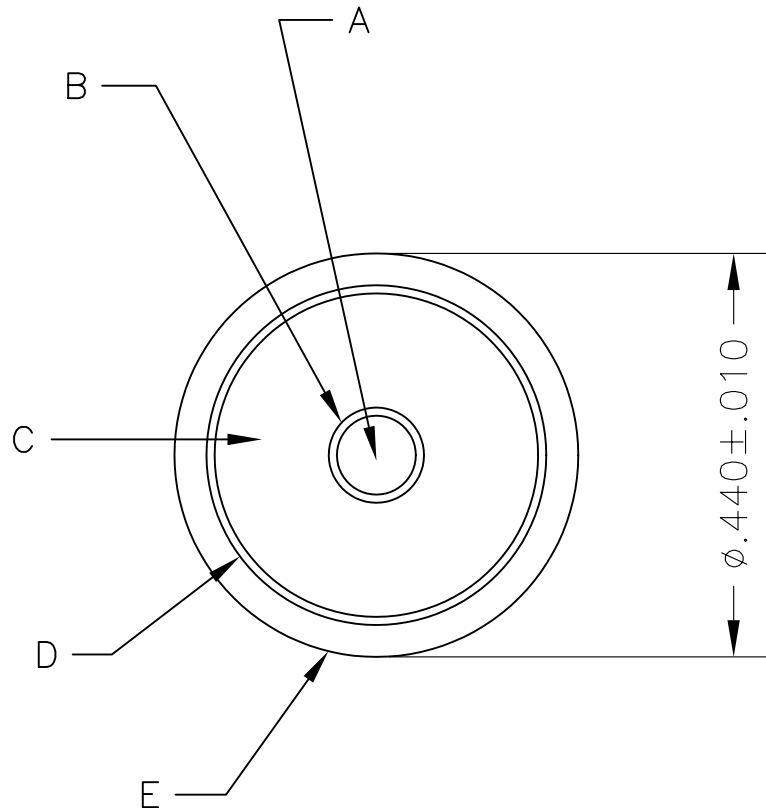
LEGEND

- A. #8AWG(133x) SILVER PLATED COPPER
B. SEMI CON SILICONE TO $\varnothing.220$, .020 MIN WALL
C. SILICONE RUBBER TO $\varnothing.650 \pm .010$
D. SEMI CON INK & TAPE TO $\varnothing.672 \pm .010$
E. SHIELD 0.0063 TIN COATED COPPER BRAID
10 ENDS, 24 CARRIER, 8.1 PICKS/INCH
85% MINIMUM COVERAGE
F. JACKET

JACKET TYPE	DEFINTION	COLOR	WALL	OD
N	NEOPRENE RUBBER	BLACK	0.06	0.82
S	SILICONE RUBBER	RED	0.06	0.82
T	THERMOPLASTIC RUBBER	BLACK	0.06	0.82
V	VINYL	BLACK	0.06	0.82

REVISIONS

REV	ECO NUMBER	APPD	DATE	UNLESS OTHERWISE SPECIFIED	DRAWN D. ABDULKY	DATE 11AUG08	 www.hvproducts.de info@hvproducts.de			
-	RELEASE DRAWING			DIMENSIONS ARE IN INCHES TOLERANCE ON	CHECKED	DATE				
				DECIMALS .XX $\pm .01$.XXX $\pm .005$	APPROVED	DATE	CABLE: 1/C #8AWG 100KVDC			
				ANGLES $\pm$	MATERIAL					
				CONCENTRICITY .005 TIR REMOVE BURRS & SHARP EDGES ALL MACHINE SURFACES 125 $\checkmark$	FINISH		SIZE A	FSCM NO. 50509	DWG NO. 2062SJ	REV
				 			SCALE		SHEET	OF



LEGEND

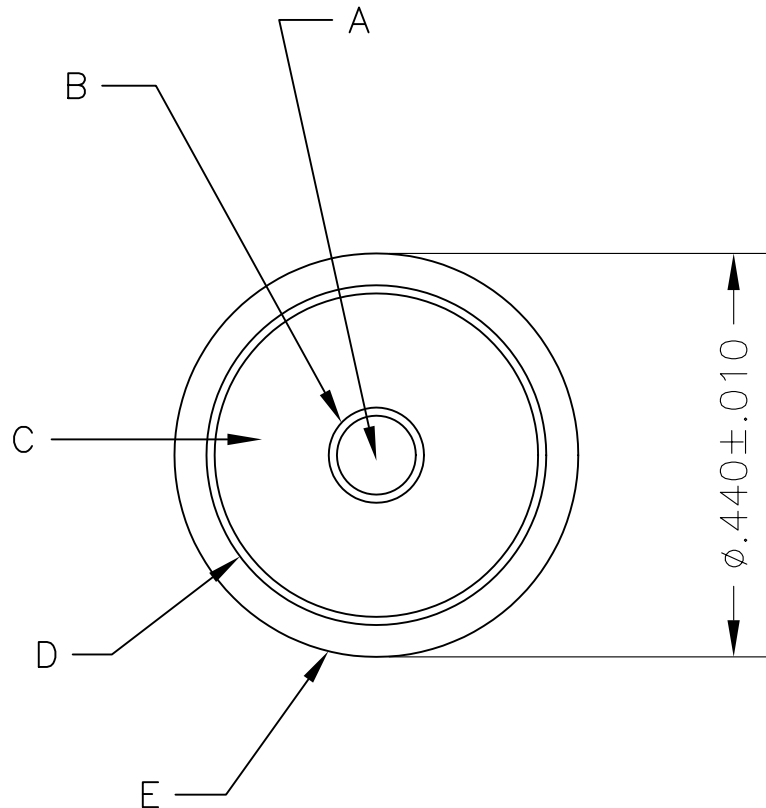
- A. #16 AWG (19/29) T.C.
 B. SEMICON POLYETHYLENE TO $\text{Ø}.100$
 C. INSULATING POLYETHYLENE TO $\text{Ø}.360 \pm .010$
 D. BRAIDED SHIELD, #34 AWG T.C. , 90% COV
 9 ENDS, 24 CARRIER
 E. JACKET: PVC: BLACK

NOTES:

1. TEST VOLTAGE: 110KVDC— 10 MINUTES
 2. JACKET SPARK TEST: 5KV

REVISIONS

REV	ECO NUMBER	APPD	DATE	UNLESS OTHERWISE SPECIFIED	DRAWN GPLAMBERT	DATE 15NOV00	 www.hvproducts.de info@hvproducts.de	
—	RELEASE DRAWING			DIMENSIONS ARE IN INCHES TOLERANCE ON	CHECKED DJ LEARY	DATE 15NOV00		
				DECIMALS .XX $\pm .01$.XXX $\pm .005$	APPROVED DJ LEARY	DATE 15NOV00	CABLE: HV; 100KVDC, 16AWG	
				ANGLES $\pm$	MATERIAL			
				CONCENTRICITY .005 TIR REMOVE BURRS & SHARP EDGES ALL MACHINE SURFACES 125 $\checkmark$	FINISH		SIZE A	FSCM NO. 50509
				DO NOT SCALE THIS DRAWING			DWG NO. 2124	REV
							SCALE	SHEET 1 OF 1



LEGEND

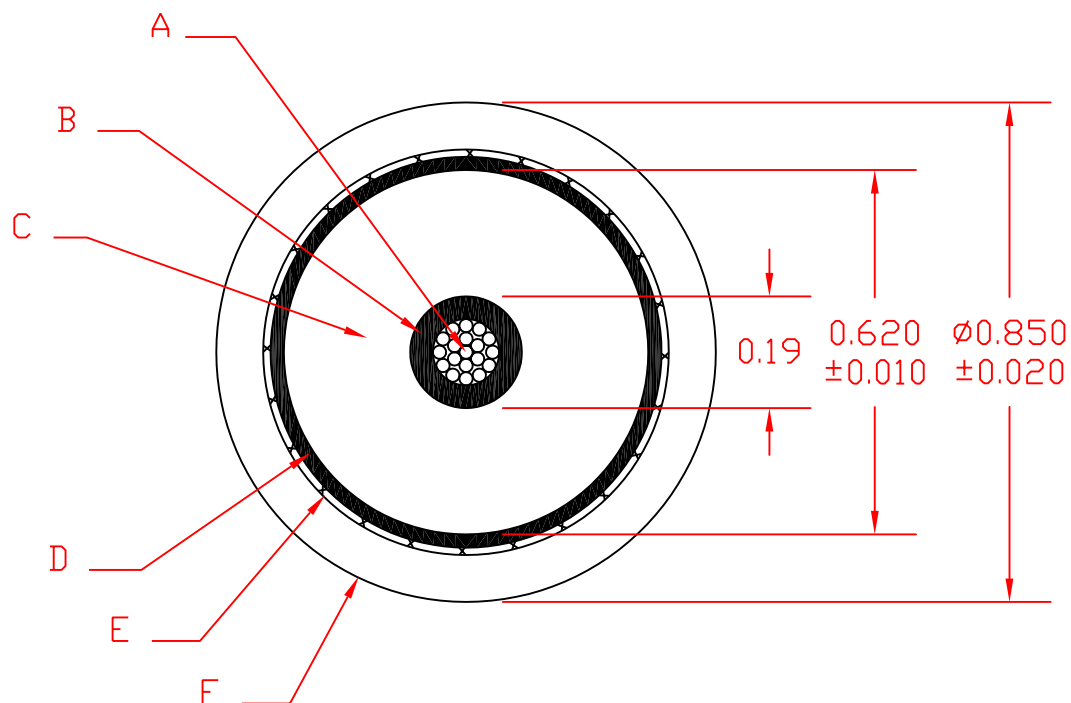
- A. #12 AWG (19/25) T.C.
- B. SEMICON POLYETHYLENE TO $\text{Ø}.130$
- C. INSULATING POLYETHYLENE TO $\text{Ø}.360 \pm .010$
- D. BRAIDED SHIELD, #34 AWG T.C. , 90% COV
9 ENDS, 24 CARRIER
- E. JACKET: PVC: BLACK

NOTES:

1. TEST VOLTAGE: 110KVDC— 10 MINUTES
2. JACKET SPARK TEST: 5KV

REVISIONS

REV	ECO NUMBER	APPD	DATE	UNLESS OTHERWISE SPECIFIED	DRAWN GPLAMBERT	DATE 15NOV00	 www.hvproducts.de info@hvproducts.de	
—	RELEASE DRAWING			DIMENSIONS ARE IN INCHES TOLERANCE ON	CHECKED DJ LEARY	DATE 15NOV00		
				DECIMALS .XX $\pm .01$.XXX $\pm .005$	APPROVED DJ LEARY	DATE 15NOV00	CABLE: HV; 100KVDC, 12AWG	
				ANGLES $\pm$	MATERIAL			
				CONCENTRICITY .005 TIR REMOVE BURRS & SHARP EDGES ALL MACHINE SURFACES 125✓	FINISH		SIZE A	FSCM NO. 50509
				DO NOT SCALE THIS DRAWING			DWG NO. 2125	REV
					SCALE		SHEET	1 OF 1

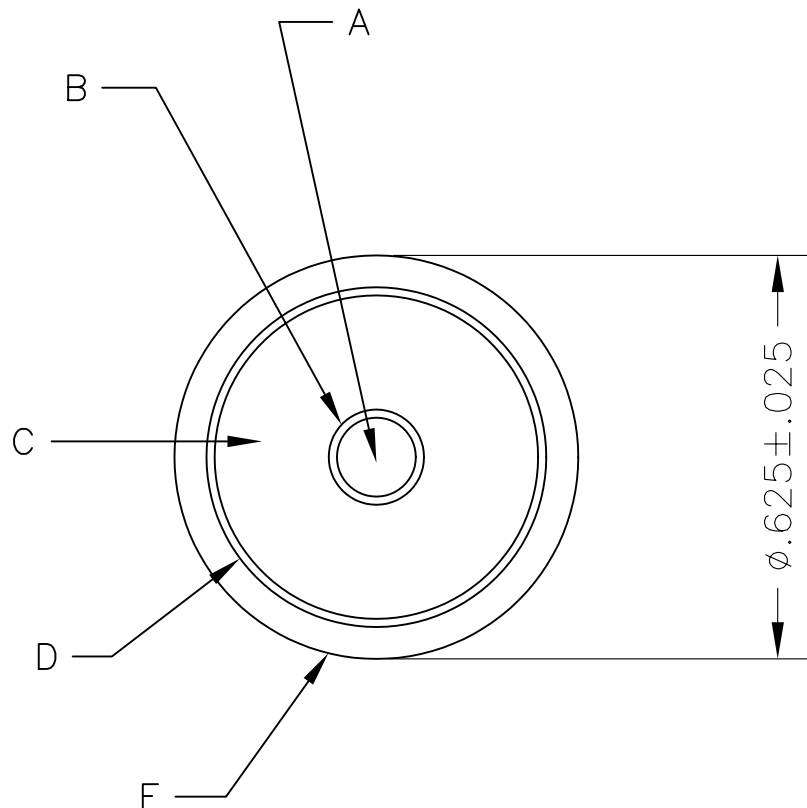


LEGEND

- A. CORE CONDUCTOR
#10AWG(19/23) SILVER PLATED COPPER
- B. SEMI CON EPR TO $\phi.190$.010 MIN WALL
- C. INSULATING EPR TO $\phi.620 \pm .010$
- D. SEMI CON EPR TO $\phi.665 \pm .010$
- E. SHIELD 0.0063 TIN COATED COPPER BRAID
90% MINIMUM COVERAGE TO $\phi.690 \pm .010$
- F. JACKET: POLYURETHANE; BLACK OVER .002 MYLAR
SEPARATOR. .075 WALL NOMINAL (.060 WALL MIN)
TO $\phi.850 \pm .020$

REVISIONS

REV	ECO NUMBER	APPD	DATE	UNLESS OTHERWISE SPECIFIED	DRAWN G LAMBERT	DATE 05NOV98	 www.hvproducts.de info@hvproducts.de			
-	RELEASE DRAWING			DIMENSIONS ARE IN INCHES TOLERANCE ON	CHECKED	DATE				
1				DECIMALS .XX ±.01 .XXX ±.005	APPROVED	DATE	CABLE: 1/C #10AWG 100KV			
				CONCENTRICITY .005 TIR REMOVE BURRS & SHARP EDGES ALL MACHINE SURFACES 125✓	MATERIAL					
					FINISH		SIZE A	FSCM NO. 50509	DWG NO. 2242	REV 1
							SCALE		SHEET	OF



LEGEND

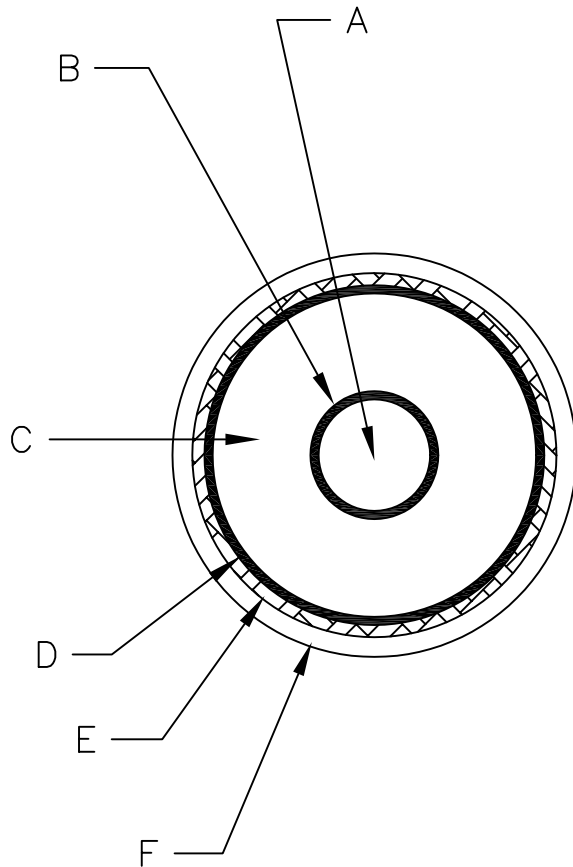
- A. #12 AWG (19/25) T.C.
- B. SEMICON POLYETHYLENE TO $\phi.130$
- C. LDHMMW POLYETHYLENE: NATURAL TO $\phi.490 \pm .010$
- D. BRAIDED SHIELD, #34 AWG T.C., 90% COV
10 ENDS, 24 CARRIER
- E. JACKET: PVC: BLACK (1 MIL MYLAR SEPARATOR
TAPE MAY BE USED UNDER JACKET IF REQD)

NOTES:

- 1. TEST VOLTAGE: 165KVDC— 10 MINUTES
- 2. JACKET SPARK TEST: 5KV

REVISIONS

REV	ECO NUMBER	APPD	DATE	UNLESS OTHERWISE SPECIFIED	DRAWN GPLAMBERT	DATE 15NOV00	 www.hvproducts.de info@hvproducts.de	
-	RELEASE DRAWING			DIMENSIONS ARE IN INCHES TOLERANCE ON	CHECKED DJ LEARY	DATE 15NOV00		
				DECIMALS .XX $\pm .01$.XXX $\pm .005$	APPROVED DJ LEARY	DATE 15NOV00	CABLE: PULSE	
				ANGLES $\pm$	MATERIAL			
				CONCENTRICITY .005 TIR REMOVE BURRS & SHARP EDGES ALL MACHINE SURFACES 125 $\checkmark$	FINISH		SIZE A	FSCM NO. 50509
				DO NOT SCALE THIS DRAWING			DWG NO. 2121	REV
							SCALE	SHEET 1 OF 1



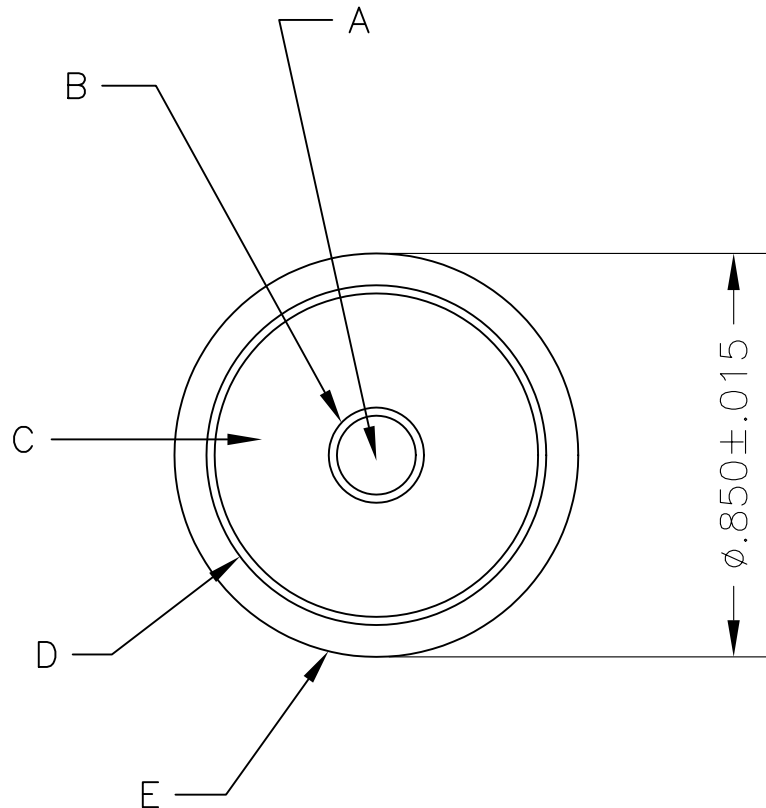
LEGEND

- A. #2 AWG SOLID TO $\phi 0.257$
 B. SEMICONDUCTING PE TO $\phi 0.32$
 C. INSULATING POLYETHYLENE TO $\phi 0.82$
 D. SEMICONDUCTING PE TO $\phi 0.91$
 E. BRAIDED SHIELD, #30 AWG T.C. , 90% COV
 F. JACKET: PVC: BLACK; .06 WALL TO $\phi 1.08$

CAPACITANCE: 43 pF/FT
 IMPEDANCE: 42 Ohms
 RATED VOLTAGE: 150 KVDC

REVISIONS

REV	ECO NUMBER	APPD	DATE	UNLESS OTHERWISE SPECIFIED	DRAWN O. ABDULKY	DATE 08JUL05	 www.hvproducts.de info@hvproducts.de	
-	RELEASE DRAWING			DIMENSIONS ARE IN INCHES TOLERANCE ON	CHECKED	DATE		
				DECIMALS .XX ± 0.1 .XXX ± 0.005	APPROVED	DATE	CABLE: HV	
				ANGLES $\pm$	MATERIAL			
				CONCENTRICITY .005 TIR REMOVE BURRS & SHARP EDGES ALL MACHINE SURFACES 125 $\checkmark$	FINISH		SIZE A	FSCM NO. 50509
				DO NOT SCALE THIS DRAWING			DWG NO. 2265	REV
					SCALE		SHEET	1 OF 1



LEGEND

- A. #12 AWG (19/25) T.C.
 B. SEMICON POLYETHYLENE TO $\phi.220$
 C. INSULATING POLYETHYLENE TO $\phi.760\pm.015$
 D. BRAIDED SHIELD, #34 AWG T.C. , 90% COV
 10ENDS, 24 CARRIER
 E. JACKET: PVC: BLACK

NOTES:

1. TEST VOLTAGE: 220KVDC— 10 MINUTES
 2. JACKET SPARK TEST: 5KV

REVISIONS

REV	ECO NUMBER	APPD	DATE	UNLESS OTHERWISE SPECIFIED	DRAWN GPLAMBERT	DATE 15NOV00	 www.hvproducts.de info@hvproducts.de	
—	RELEASE DRAWING			DIMENSIONS ARE IN INCHES TOLERANCE ON	CHECKED DJ LEARY	DATE 15NOV00		
				DECIMALS .XX $\pm.01$.XXX $\pm.005$	APPROVED DJ LEARY	DATE 15NOV00	CABLE: HV; 200KVDC, 12AWG	
				ANGLES $\pm$	MATERIAL			
				CONCENTRICITY .005 TIR REMOVE BURRS & SHARP EDGES ALL MACHINE SURFACES 125 $\checkmark$	FINISH		SIZE A	FSCM NO. 50509
				DO NOT SCALE THIS DRAWING			DWG NO. 2134	REV
					SCALE		SHEET	1 OF 1

LEGEND

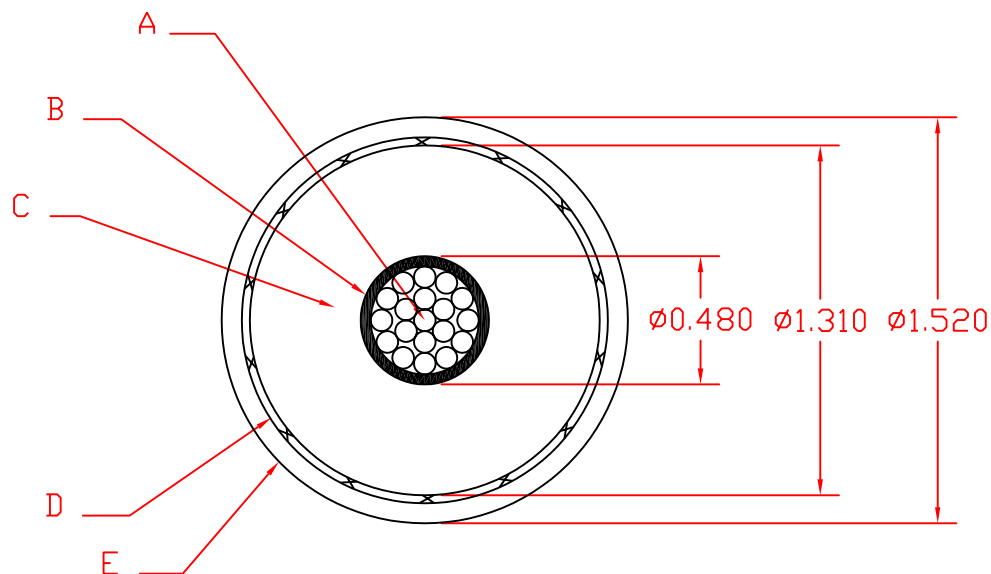
A. #00 COPPER, 19 STRANDS, COMPRESSED, $\phi 0.405$

B. SEMICONDUCTIVE POLYETHYLENE

C. INSULATING POLYETHYLENE, LDHMMW, NATURAL

D. TINNED COPPER SHIELD, #30AWG, 8 ENDS, 48 CARRIER
90% COVERAGE WITH 1.5 – 2.0 MIL MYLAR TAPE 1/2
LAPPED OVERALL

E. PVC JACKET, BLACK, NO PRINT, 0.075 WALL



TOLERANCE: $\pm 2\%$ ANY DIAMETER
CAPACITANCE: 37 PICO FARADS/FT
IMPEDANCE: 41 Ω

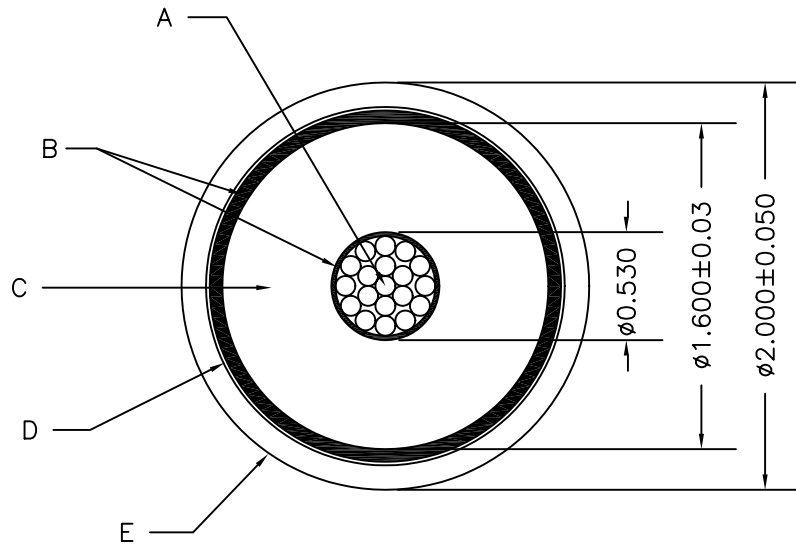
REVISIONS

REV	ECO NUMBER	APPD	DATE	UNLESS OTHERWISE SPECIFIED	DRAWN JAG	DATE 02NOV88	 www.hvproducts.de info@hvproducts.de		
-	RELEASE DRAWING			DIMENSIONS ARE IN INCHES TOLERANCE ON	CHECKED	DATE			
				DECIMALS .XX $\pm .01$.XXX $\pm .005$	APPROVED	DATE	CABLE, COAXIAL, #00 AWG		
				ANGLES $\pm$	MATERIAL				
				CONCENTRICITY .005 TIR REMOVE BURRS & SHARP EDGES ALL MACHINE SURFACES 125 $\checkmark$	FINISH		SIZE A	FSCM NO. 50509	DWG NO. 2158
				 			SCALE		SHEET OF



- CAPACITANCE @ 1KHZ=25 pfd/ft
TOLERANCE= $\pm 2\%$, ANY DIAMETER.
NO PRINTING ON JACKET.
TEST VOLTAGE: 400 KVDC, 10 MIN.

REVISIONS																	
REV	ECO NUMBER	APPD	DATE	UNLESS OTHERWISE SPECIFIED		DRAWN JAG		DATE 29JUN81		 www.hvproducts.de info@hvproducts.de							
—	RELEASE DRAWING			DIMENSIONS ARE IN INCHES TOLERANCE ON DECIMALS ANGLES .XX ±.01 ± .XXX ±.005		CHECKED		DATE		PULSE CABLE							
						APPROVED		DATE									
				CONCENTRICITY .005 TIR REMOVE BURRS & SHARP EDGES ALL MACHINE SURFACES 125✓		MATERIAL		FINISH		SIZE		FSCM NO.		DWG NO.		REV	
										A		50509		2077			
										SCALE				SHEET		OF	



LEGEND

- A. 4/0 AWG, 19 STRAND COMPRESSED COPPER, $\phi 0.49$
- B. SEMICONDUCTIVE POLYETHYLENE
0.020 WALL STRAND SHIELD
0.062 WALL INSULATED SHIELD
- C. CROSS-LINKED POLYETHYLENE, 0.535 WALL NOM.
- D. 2X 0.004 COPPER TAPE, DEAD SOFT, HELICALLY APPLIED
- E. POLYETHYLENE JACKET, BLACK, 0.125 WALL

REF: Z=40 OHMs

REVISIONS							
REV	ECO NUMBER	APPD	DATE	UNLESS OTHERWISE SPECIFIED	DRAWN JAG	DATE 01MAR74	 www.hvproducts.de info@hvproducts.de
-	RELEASE DRAWING			DIMENSIONS ARE IN INCHES TOLERANCE ON	CHECKED	DATE	
				DECIMALS .XX ± 0.01 .XXX ± 0.005	APPROVED	DATE	CABLE: 300 KVDC
				ANGLES $\pm$	MATERIAL		
3	PER ECO NUMBER 1700	D.L.	04APR06	CONCENTRICITY .005 TIR REMOVE BURRS & SHARP EDGES ALL MACHINE SURFACES 125 $\checkmark$	FINISH		SIZE A FSCM NO. 50509 DWG NO. 2019-01 REV 3
				 			SCALE SHEET 1 OF 1