

ISSUED 5-FEB- 2010	DESIGN STANDARD ELECTRIC OPERATIONS ORGANIZATION 	D3820 – Appendix Rev. 0 Page 1 of 7
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D3820 - Appendix

200 Amp Underground Electric Distribution Material Manufacturers and Part Numbers

Scope

This appendix is to be used in conjunction with several NSTAR standards including:

D3820- 15/25kV PRIMARY UNDERGROUND DISTRIBUTION SYSTEMS TO 200 AMPS.

C1100 Appendix Standard for all conduit, fittings, risers, accessories

C3813 Appendix Standard for all common manholes, frames and covers, accessories

The document lists the approved manufacturer names and part numbers for most key equipment used in an underground distribution system. Most of these parts may be purchased at local supply houses or NSTAR's approved distributor/supplier.

Catalog ID numbers are intended for use internally at NSTAR to reference materials. They are typically referred to by NSTAR designers and can also be used in requests to NSTAR's approved suppliers to ensure parts meet NSTAR requirements.

NSTAR Material Standards (such as M1310) may provide specific dimensional and design information needed for manufacturers; they may detail one or several similar catalog ID items.

Approved NSTAR Supplier (not limited to):

WESCO Distribution Co. Inc.
Manchester 1120
117 Londonderry Turnpike
Hooksett, NH 3106
603-391-3118
603-391-3126 fax

ISSUED 5-FEB- 2010	DESIGN STANDARD ELECTRIC OPERATIONS ORGANIZATION 	D3820 – Appendix Rev. 0 Page 2 of 7
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1.0 15kV Primary Cable and Accessories

DESCRIPTION	NSTAR CATALOG ID	MANU- FACTURER	PART #
PRIMARY CABLE			
15KV #1 SOL AL, 1/C SINGLE, EPR CABLE	92	OKONITE	CS-10334
15KV #1 SOL AL, 3x1/C TRIPLEX, EPR CABLE	93	OKONITE	CS-10329
15KV 4/0 AL, 3x1/C TRIPLEX, EPR CABLE	16332	OKONITE	CS-12181
JOINTS AND TERMINATIONS			
JOINT, 15KV PREMOLDED KIT, #2 STR / #1 SOL	1454	COOPER	SP15A002
JOINT, 15KV PREMOLDED KIT, 4/0	16334	COOPER	SP15B007
TERMINATION, 15/25KV 1PH, COLD SHRINK, 1/0 AL, #1 SOL or #2 STR	9937	3M	7652-S-4-2
TERMINATION 15KV HEAT SHRINK, 4/0 AL,	1423	RAYCHEM	HVT-152-BECO
200 AMP ACCESSORIES			
FEEDTHROUGH BUSHING, 15KV	516	HUBBELL	9U07AKF200
		COOPER	LPF215H
BUSHING WELL INSERT, 15KV	515	COOPER	ISB215S
		ELASTIMOLD	164OSP
INSULATING CAP, 15KV	1119	COOPER	DPC625UT
ELBOW, 15 kV LOADBREAK, 4/0 STR	16333	COOPER	LE215C09T
ELBOW, 15 kV LOADBREAK, #1 SOL AL, #2 STR CU	517	COOPER	LE215B04T
	"	ELASTIMOLD	166LR-B-5220
INSULATED STANDOFF BUSHING, 15 kV	515	COOPER	ISB215S
	"	ELASTIMOLD	164OSP
MULTI-TAP, 15KV, 3 WAY	806	ELASTIMOLD	164J3

ISSUED 5-FEB- 2010	DESIGN STANDARD ELECTRIC OPERATIONS ORGANIZATION 	D3820 – Appendix Rev. 0 Page 3 of 7
-----------------------	--	--

	“	ELASTIMOLD	164FT
MULTI-TAP, 15KV, 4 WAY	1486	HUBBELL	9U07AGD4201
	“	COOPER	LJ215C4B
	“	ELASTIMOLD	164J4
1 PHASE CABLE SWITCHING STATION MULTI-TAP ENCLOSURE (TURTLE), 15KV, 4 POSITION	9533	HIGH LINE	FSC3248GA41-NS
	“	NORDIC	ND-155-MG- 102A4152W1A-CWE
3 PHASE CABLE SWITCHING STATION MULTI-TAP ENCLOSURE (TURTLE), 15KV, 3 x 4 POSITION	2590	POWER DESIGN	CJP30-56-WG-L2- 2415-BECO

2.0 25kV Primary Cable and Accessories

DESCRIPTION	NSTAR CATALOG ID	MANU- FACTURER	Approved PART #
PRIMARY CABLE			
25KV 1/0 SOL AL, 1/C SINGLE, EPR CABLE	8714	OKONITE	CS-10335
25KV 1/0 SOL AL, 3x1/C TRIPLEX, EPR CABLE	8716	OKONITE	CS-10326
JOINTS AND TERMINATIONS			
JOINT, 25KV PREMOLDED KIT, 1/0 SOL AL	9864	3M	5451-C1-1A
	“	HUBBELL	9U06AFE100
	“	COOPER	SP25B003
	“	ELASTIMOLD	25PCJ1G1230
JOINT, 25KV PREMOLDED KIT, TRANSITION, 1/0 SOL TO #2 STR	9865	COOPER	SP25BT03
	“	ELASTIMOLD	25PCJ1G1-230
TERMINATION, 15/25KV 1PH, COLD SHRINK, 1/0 SOL AL,#1 SOL or #2 STR	9937	3M	7652-S-4-2

ISSUED 5-FEB- 2010	DESIGN STANDARD ELECTRIC OPERATIONS ORGANIZATION 	D3820 – Appendix Rev. 0 Page 4 of 7
-----------------------	--	--

200 AMP ACCESSORIES			
FEEDTHROUGH BUSHING, 25KV	9540	RAYCHEM	EPPA-121-HESP-100-FILLED
	“	COOPER	LPF225H
	“	ELASTIMOLD	274FT
	“	HUBBELL	9U07BCF200
BUSHING WELL INSERT, 25KV	9756	COOPER	LBI225
	“	ELASTIMOLD	2701A4
	“	HUBBELL	9U02BAB001
INSULATING CAP, 25KV	9457	HUBBELL	9U01BEW500
	“	COOPER	LPC225
	“	ELASTIMOLD	273DRG
ELBOW, 25 kV LOADBREAK, 1/0 SOL AL	9754	HUBBELL	9U01BBD634
	“	COOPER	LE225MC05
	“	ELASTIMOLD	275LR-CC5230
MULTI-TAP, 25KV, 4 WAY	9772	COOPER	LJ226C4B
	“	ELASTIMOLD	274J4
	“	HUBBELL	9U07BED4201
1 PHASE CABLE SWITCHING STATION MULTITAP ENCLOSURE (TURTLE), 25KV, 4 POSITION	9534	HIGH LINE	FSC3248GA42-NS
	“	NORDIC	ND-155-MG-102A-4252-W1A-C
	“	POWER DESIGN	CJP-10-54-L2-MG-2425-GB2S-1519
3 PHASE CABLE SWITCHING STATION MULTI-TAP ENCLOSURE (TURTLE), 25KV, 3x4 POSITION	9536	HIGH LINE	FSC6860GA42-NS
	“	NORDIC	ND-450-MG-101-4252-W3A-*
	“	POWER DESIGN	CJP-41-56-L2-MG-2425-GB2S-1799

ISSUED 5-FEB- 2010	DESIGN STANDARD ELECTRIC OPERATIONS ORGANIZATION 	D3820 – Appendix Rev. 0 Page 5 of 7
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3.0 Secondary Cable and Connectors

DESCRIPTION	NSTAR CATALOG ID	MANUFACTURER	Approved PART #
600 VOLT CABLE			
600V 4/0 AL, 3x1/C TRIPLEX, XLPE INSUL CABLE	87	ALCAN	SWEETBRIAR XLP
600V 4/0 CU, 3x1/C TRIPLEX, EPR/HYP CABLE	8746	HENDRIX	EH043
600V 500 CU, 3x1/C TRIPLEX, EPR/HYP CABLE	16016	OKONITE	3-500EP HYP
HANDHOLE CONNECTORS, 600 Volt Insulated			
MOLE BUS, 4 POS, 1 WAY, #12 - 350 KCMIL	9761	BLACKBURN CONNECTOR MFG	USB43 U227000001
	“	UTILICO	PED4-350-SSP
MOLE BUS, 4 POS, 1 WAY, #2 - 750 KCMIL	9764	UTILCO	PED4-750-SSP
MOLE BUS, 6 POS, 1 WAY, #10 - 500 KCMIL	9763	BLACKBURN UTILCO	USB65 PED6-500-SSP
	“	UTILCO	PED6-750SSP
MOLE BUS, 6 POS, 1 WAY, #2 - 750 KCMIL	9762	UTILCO	PED6-750SSP
MOLE BUS, 8 POS, 2 WAY, #2 - 750 KCMIL	15981	UTILCO	PSA8-750SSP

4.0 Miscellaneous Accessories

DESCRIPTION	NSTAR CATALOG ID	MANUFACTURER	Approved PART #
FAULT INDICATORS			
FCI, 25kV or 15kV Cable, auto range trip, current reset	9660	FISHER PIERCE	1547-A-38728
FCI, 15 kV Elbow Test Point Mount, 800 Amp trip, volt reset	692	EOSCHWEITZER	1TPR10800K
GROUNDING MATERIALS			
5/8" Dia. Ground Rod	9229	BLACKBURN	6258S
		ERICO INC	635880

ISSUED 5-FEB- 2010	DESIGN STANDARD ELECTRIC OPERATIONS ORGANIZATION 	D3820 – Appendix Rev. 0 Page 6 of 7
---------------------------	--	--

1/0 Copper Ground Wire, bare tinned, 7 strand	115	NEHRING	BS017WTIN
Ground Wire Connector 1/0-1/0 Cu Wire	608	BLACKBURN	2B40W
	“	BURNDY	KVS-W28
Ground Rod Connector to 1/0 Cu Wire	9009	ANDERSON	GC-103-01
	“	BLACKBURN	JAB-58H
	“	ERICO INC	NDC58R

5.0 Conduit, Riser Stand Pipes, and Manholes

DESCRIPTION	NSTAR CATALOG ID	MANUFACTURER	Approved PART #
See C1100 Appendix Standard for all conduit, fittings, risers, accessories			
See C3813 Appendix Standard for all common manholes, frames and covers, accessories			

6.0 Equipment Box Pads and Handholes

DESCRIPTION	NSTAR CATALOG ID	MANUFACTURER	Approved PART #
(Dimension included are top surface x height)			
Handholes			
Fiberglass handhole: 15"x10"x12" –lighting only	840	ASSOCIATED PLASTICS	SGA132415C000
	“	CARSON	1419-12PB
	“	FARGO	B-112A-G
	“	NEWBASIS	SGA141912Y000
	“	PENCELL	PE-14HDX-EWB
Fiberglass handhole: 23"x14"x15" -single residence	9571	CARSON	1324-15-PB
	“	FARGO	B-125A-G
	“	HIGH LINE	HL-41A
	“	NEWBASIS	SGA132415C000
Fiberglass handhole: 30"x17"x18" – <u>standard use</u>	841	ASSOCIATED PLASTICS	SEA173015C000

ISSUED 5-FEB- 2010	DESIGN STANDARD ELECTRIC OPERATIONS ORGANIZATION 	D3820 – Appendix Rev. 0 Page 7 of 7
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	“	CARSON	1730-18-PB
	“	FARGO	B-138A-G
	“	NEWBASIS	SGA173015C000
	“	PENCELL	PE-30HDX-2-EWB
Composite handhole: 30”x17”x18”, H20 rated	9572	CDR	PA12-1730-18
	“	HIGH LINE	CH173018H
	“	SYNERTECH	*

Box Pads – Transformers and Splices			
Fiberglass box pad/splice box: 43”x37.5”x32” For NSTAR North Transformers (single phase) or splice box (top opening = 26”w x 32”d)	1622	HIGH LINE	HL-48M-DS
Fiberglass box pad/splice box (ledge areas only): 43”x37.5”x15” For NSTAR North Transformers (single phase) – shallow depth or splice box (top opening = 26”w x 32”d)	7747	NORDIC	CBP-37-43-15F
Fiberglass Cover (Use with Cat. IDs 1622, 7747, 16955)	1349	HIGH LINE	HL-45-2EP
Fiberglass box pad/splice box: 43”x37”x32” For NSTAR South Transformers (single phase; top opening = 26”w x 26”d)	16955	HIGH LINE	HL374332-2626DS
Large Box Pads – Switchgear			
Fiberglass box pad for 15kV PME-9 Switches (and 3 phase primary splice box) 75”x72”x36”	14024	HIGH LINE	FSG757236XYNS
	“	NORDIC	GS-75-72-36
Fiberglass cover for use with Cat. ID 14024	14078	HIGH LINE	FBP757300AAC
	“	NORDIC	GSC-75-72
Fiberglass box pad for use with 25kV PME-9 Switchgear: 86”x84”x36”	14556	NORDIC	GS-86-84-36
Fiberglass base cover for use with Cat. ID 14556	14557	NORDIC	GSC-86-84