12/20(24) kV AND 18/30(36) kV SEPARABLE CONNECTORS FOR MV CABLES ADDENDUM Ed 0.

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Revision	Data	List of modifications
00	25/11/2015	First emission.
01	23/02//2018	Material codes updated. Chapter on barcode updated, Painted semiconducting layer not allowed; New tests: UV test for outdoor accessories; Modification of requirements for resistance to fire; Modification of requirements of screen connecting plate; modification of requirements of tracking and erosion test, introduction of PE-bag packaging instead of obstruction cups. Class 24 kV for Italy and Rumania. Modification of max width for elbow type. Rated short time withstand current in the screen, Increase of the minimum section of the earthing lug for Italy, Rumania, Spain and Peru from 16 to 25 mm2
02	25/05/2018	Revised tables 8, 9 and 10.
03	09/07/2018	Tracking and erosion test withdrawn. Revised material codes for Brazil.
Addendum Ed 0.	12/2020	Enel Distribuição São Paulo is included ; Revised material code for Argentina,Brasil,Chile,Colombia,Italia and Peru; Rated short time withstand current in the screen (kA) is updated for Colombia; Revised table 6.; Special consideration for São Paulo in type tests.

1 SCOPE

This addendum of the Global Standard GSCC006 rev. 3 specifies the requirements applicable to Enel Distribucion Group. They are specified in this document with reference to the same paragraph number of GSCC006 rev.3 (09/07/2018)

These Global Standard applies to the Distribution Companies of Enel Group listed below:

Enel Distribución Colombia	*Colombia*
Enel Distribución Perú	*Perú*
e-distributie Banat	*Romania*
e-distributie Dobrogea	*Romania*
e-distributie Muntenia	*Romania*
e-distribuzione	*Italy*
Enel Distribución Chile	*Chile*
Enel Distribuição Ceará	*Brazil*
Enel Distribuição Rio	*Brazil*
Enel Distribuição Goiás	*Brazil*
Enel Distribuição São Paulo	*Brazil*

3.2 Global Standards

- GSC001[1]
- GSCC015.
- GSCC008

7 DIMENSIONAL CHARACTERISTICS

The following requirements apply:

Rated voltage U_0/U (U_m) (kV)	**12/20(24)**	**18/30(36)**
Rated power frequency withstand voltage (kV)	50	70
Rated impulse withstand voltage (kV)	125	170
Rated short time withstand current in the conductor (kA)	According to HD629-1 (EN 61442)	
Rated short time (0,5 s[a]) withstand current in the screen (kA)	5[b]; 10[c]	
NOTE (see Table 8): a: for E-distribuzione, E-distributie, Endesa Distribución Eléctrica, the rated short time is 1 s b: for 16 mm^2 and 25 mm^2 joint screen c: 50 mm^2 joint screen		

Table 2 – Electrical characteristics

The rated voltage levels of the cables for which is foreseen the installation of the separable connectors is the following:

[1] The characteristics of the cables are included in the Enel Group Global Standard. Besides installation on new cables, which comply to GSC001, the separable connectors may be installed on the existing network, which is made of cables compliant to older local standards. Nevertheless, this Global Standard also takes into account the main characteristics of existing cables for each Country (rated voltage, section and min/max diameter over insulation).

Rated voltage of the separable connector U_0/U (U_m) (kV)	**12/20(24)**	**18/30(36)**
Distribution Company (Country)	**Rated voltage of the cables U_0/U (U_m) (kV)**	
Enel Distribuição São Paulo (Brazil)	8.7/15(17.5)	15/25(31) 20/35(42)
Enel Distribuição Ceará (Brazil) Enel Distribución Colombia (Colombia)	8.7/15(17.5)	-
Enel Distribución Chile (Chile)	8.7/15(17.5)	15/25(31)
Enel Distribución Perú (Perù)	8.7/15(17.5); 12/20(24)	-
Edesur (Argentina) Enel Distribuição Rio (Brazil) Enel Distribuição Goiás (Brazil)	8.7/15(17.5)	18/30(36)
Endesa Distribución Eléctrica (Spain)	12/20(24)	18/30(36)
E-distributie Banat (Romania); E-distributie Dobrogea (Romania); E-distributie Muntenia (Romania); E-Distribuzione (Italy)	12/20(24)	-

Table 3 – Rated voltage of the cables

9.2.6 Interface and contact device

Interface type	**U_m (kV)**	**I_n (A)**	**d_1 (mm)**	**d_2 (mm)**	**d_3 (mm)**	**l_2 (mm)**	**l_3 (mm)**	**Contact type**
A	24	250	$31^{+0.1}_{-0.3}$	$32.5^{\pm 0.2}$	$48.5^{\pm 0.2}$	$48^{+0}_{-0.2}$	9	Pin
B	24; 36	400	$46^{\pm 0.2}$	$56^{\pm 0.2}$	$70^{\pm 0.2}$	$90^{\pm 0.2}$	11	Pin
C	24; 36	630	$46^{\pm 0.2}$	$56^{\pm 0.2}$	$70^{\pm 0.2}$	$90^{\pm 0.2}$	11	Screw

Table 6 – Interface dimensions

9.2.8.1 Earthing lug

Distribution Company (Country)	Cable section (mm^2)	Copper stocking section (mm^2)
Enel Distribuição Rio (Brazil) Enel Distribuição Ceará (Brazil) Enel Distribuição Goiás (Brazil) Enel Distribución Chile (Chile) Enel Distribución Colombia (Colombia)	≤ 240[a]	25
	400[a] and 630[a]	50
Edesur (Argentina)	50 (13.2 kV) 185 (33 kV)	25
	All other sections (13.2 kV)	50
Enel Distribuição São Paulo (Brazil) Enel Distribución Perú (Perù) Endesa Distribución Eléctrica (Spain) E-distributie Banat (Romania) E-distributie Dobrogea (Romania) E-distributie Muntenia (Romania) E-Distribuzione (Italy)	all sections[a]	25
NOTE: a: The copper stocking of the joint shall be compatible with both aluminum tape screen and copper wires screen of cables, except for: Edesur (Argentina).		

Table 8 – Earthing lug section

11 LIST OF COMPONENTS

The list of components included in this Global Standard is reported in the following tables for 12/20(24) kV and 18/30(36) kV rated voltages:

Distribution Company (Country)	**Type: GSCC006/1, GSCC006/2, GSCC006/4, GSCC006/5, GSCC006/7, GSCC006/9**					
Enel Distribuição Rio (Brazil) Enel Distribuição Ceará (Brazil) Enel Distribuição Goiás (Brazil)	-	-	T270485 c1	T270484 c1 T270483 d1	-	-
Enel Distribuição São Paulo (Brazil)	-		336961 a1 336963 b1 T270485 c1	T270484 c1 T270483 d1	T270481 d1	T270480 c1 T270479 d1
Enel Distribución Chile (Chile)	-	-	-	-	-	-
Enel Distribución Colombia (Colombia)	-	-	270164 a1	-	-	-
Enel Distribución Perú (Perù)	-	-	270166 a1	270157 c1 270165 d1	-	-
Edesur (Argentina)	-	0115-0366 a1 0115-0397 b1	0115-0417 a1 0115-0418 b1	0115-0365 c1	0115-0413 c1 0115-0414 c1 (*)	0115-0415 c1 0115-0416 c1 (**)
E-distributie Banat (Romania); E-distributie Dobrogea (Romania); E-distributie Muntenia (Romania); E-Distribuzione (Italy)	273175 a1	273254 c1 273270 d1	-	-	273275 d1	-
Characteristics of the cable						
Cable section (mm^2)	25	35 ÷ 50	70 ÷ 120	150 ÷ 185	240	400
Min/max diameter over insulation (mm)	17.7/19.3	14.9/21.8	17.6/26.6	22.3/28	26.1/32.2	31/37.5
Rated voltage of the cables U_0/U (U_m) (kV)	See Table					
(*): For Edesur country code, Cable section: 300 mm^2 and Min/max diameter over insulation: 28.5/37.5 (mm) (**): For Edesur country code, Cable section: 500 mm^2 and Min/max diameter over insulation: 34/42,5 (mm)						
a1: for GSCC006/1; a2: for GSCC006/2; b1: for GSCC006/4; b2: for GSCC006/5; c1: for GSCC006/7; d1: for GSCC006/9;						

Table 9 – Material codes for 12/20(24) kV separable connectors

Distribution Company (Country)	**Type: GSCC006/3, GSCC006/6, GSCC006/8, GSCC006/10**					
Enel Distribuição Rio (Brazil) Enel Distribuição Goiás (Brazil) Enel Distribuição Ceará (Brazil)	-	T270478 [a3] T270477 [b3]	T270476 [d2]	T270475 [d2]	-	T270474 [c2] T270473 [d2]
Enel Distribuição São Paulo (Brazil)	-	T270478 [a3] T270477 [b3] T270004 [c2]	T270006 [c2]	T270016 [c2]	-	-
Enel Distribución Chile (Chile)	-	-	270158 [a3] 270159 [b3] 270160 [c2] 270161 [d2]	270162 [d2]	270163 [d2]	-
Edesur (Argentine)	-	-	0115-0370 [c2]	-	-	-
Endesa Distribución Eléctrica (Spain)	-	-	-	-	-	-
E-distributie Banat (Romania); E-distributie Dobrogea (Romania); E-distributie Muntenia (Romania); E-Distribuzione (Italy)	-	-	-	-	-	-
Characteristics of the cable						
Cable section (mm^2)	35 ÷ 50	70 ÷ 120	150 ÷ 185	240	400	630
Min/max diameter over insulation (mm)	21/26.6	24/30	27.3/33	31.2/37.2	34.9/42.5	41.3/49.7
Rated voltage of the cables U_0/U (U_m) (kV)	See Table					
a3: for GSCC006/3 b3: for GSCC006/6 c2: for GSCC006/8 d2: for GSCC006/10						

Table 10 – Material codes for 18/30(36) kV separable connectors

12.2 TYPE TESTS

For each material code, type tests shall be carried out on a sample installed on cables with the maximum section indicated in Table 9 and Table , respectively for U_o/U (U_m) 12/20(24) kV and 18/30(36) kV (e.g. 270112 shall be tested on a 185 mm^2 – 12/20(24) kV cable and 270122 on a 185 mm^2 18/30(36) kV cable).
For E-Distribuzione, E-Distributie Banat, E-Distributie Dobrogea and E-Distributie Muntenia, type tests shall be carried out on both HPTE and XLPE insulated cables.

Type tests shall be carried out at the maximum rated voltage level prescribed for separable connector (i.e. 12/20(24) kV or 18/30(36) kV), except for type codes GSCC006/3, GSCC006/6 and GSCC006/8 (Enel Distribuição São Paulo).

For type codes GSCC006/3, GSCC006/6 and GSCC006/8 (Enel Distribuição São Paulo). Type tests shall be carried with the following special considerations:

Description	Test	Notes
Heating cycle voltage in air	Item N° 5 Table 7 HD 629-1	Test requirements for U_o/U (U_m) 20,8/36(42) kV
AC voltage dry	Item N° 13 Table 7 HD 629-1	

The lugs shall be tested both for their maximum and minimum section, according to IEC 61238-1, class A.

The Supplier shall declare the resistance to fire of the main insulating housing according to IEC 60695-11-10 or another equivalent standard.