NOTE: The Stakeholder comments with visibility "None" are not included in this consultation report.

	Type of comments
E	Editorial
Т	Technical
~	Conservation

					G	General		N	Noted Refused
id	lang	company	file	section	type	text proposal	comment	synergrid answer	acceptance code
301	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	section	G		De wijze waarop feedback kan gegeven worden op de verschillende documenten volgens de voorgestelde wijze blijkt tijdrovend. Een kwalitatieve regelgeving lijkt me voor alle partijen een meerwaarde. Eén of meerdere fysieke meetings om de technische aspecten te behandelen met alle geïnteresseerde stakeholders lijkt ons een efficiëntere en transparante manier van dialoog.	Noted. A clarification can be given after publication of the final version of the C2/113-x documents	N
302	nl	Company A	C2-113-3 Ed2-DPC - Technical File.pdf	1.2	Т	Loadbreakswitches are not mentioned here	Graag wil ik verwijzen naar de bijgevoegde PDF	The following text has been added after Line 98 : - Switch	Р
202		C		2	6			The symbol for a switch has been added in Table 3 in §4.5.3 of document C2/113-4	
303	ni	Company G	C2-113-3 Ed2-DPC - Technical File.pdf	3	G		Lines JbJ, 162 and Jb4: 1) How is the distinction made between FU K with scheme KKNx "connected to the loop" and FU K with scheme KKNx "downstream the general protection", taking into account that requirements C2/113-3 (and -4) are different depending on the location of this FU K in the Client installation? 2) How is the distinction made between FU D with scheme DxTx "for the general protection" and FU D with scheme DxTx "downstream the general protection", taking into account that requirements C2/113-3 (and -4) are different according to the location of this FU D in the Client installation? 3) Referring to 2) above, the question also arises for FU T with scheme TxTx?	Ine FU codes mentioned in Lines 161, 162, 164 have been reviewed as follows: * FU K intended to be connected to the distribution loop: KKNx * General protection: TxGx instead of TxTx / DxGx instead of DxTx * FU downstream the general protection / FU M: KKUx, TKUx, DxUx Text in Line 24 of the document title (Lines 22 -24) has been adapted as follows: Ratings and specific test specifications for HV switchgear, intended for use in installations connected to the HV distribution grid loop of a Belgian DSO Text in Lines 236, 250, 254, 255, 273, 274, 279, 286, 288, 350 has been adapted as follows: () KKNx () Text in Line 402 has been adapted as follows: KKNx connected to the loop Text in Line 236 has been adapted as follows: TxGx, DKNx, DxGx	
								Text in Note 4 has been adapted as follows: DxGx Text in Lines 255, 265, 274, 275, 280, 287, 288, 289, 350 has been adapted as follows: DKNx Text in Line 261 has been adapted as follows: DKNx & DxGx	
304	nl	Company G	C2-113-3 Ed2-DPC - Technical File.pdf	3	E		Lines 155 & 156: Reference of the assessment guide = C2/113-3 XLS shall be mentioned in this sentence.	The text in Lines 155-156 has been adapted as follows: The Applicant shall download the applicable assessment guide <u>C2/113-3 (Excel file)</u> from the website of Synergrid (www.synergrid.be).	Р
305	nl	Company G	C2-113-3 Ed2-DPC - Technical File.pdf C2-113-3 Ed2-DPC -	3	G	Line 225: verwijzing voetnoot 1 moet wss 3 zijn	Lines 160-165: It is preferable to replace the text with a summary table indicating the chapters or paragraphs of document C2/113-3 that apply to the UF(s) concerned.	The text in Line 166 has been completed as follows: The specific test specifications are described in chapter 5 of this document <u>and summarized in Table 1 below</u> . <u>The folder</u> <u>codes (B, C, D, E,) are in accordance with the codes used in the assessment guide C2/113-3</u> . The text below has been added before Line 167 : Chapter 6 is applicable for billing metering functions and contains additional and derogating requirements with reference to chapter 5. Addition of Table 1 after Line 171 , summarizing the ratings and specific test specifications for the FUS Consequently, the number of the following table and references made to the table(s) of concern have been adapted as follows: Lines 215, 217: Table 2 Lines 364, 374: Table 3 The footnote reference mentioned in line 225 has been corrected:	Ρ
306		Company C	Technical File.pdf	4.2	E	Line 225: verwijzing voetnoot 1 moet wss 3 zijn		12 ³	A
307	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	4.2	Т	Lijn 224: Waarom bij GIS geen 17.5kV zoals bij AIS. Toestellen komen op zelfde net te staan. Gezien de specifieke eisen mbt schakelproeven en boogvlamproeven kan men onmogelijk spreken van een internationaal model.		The rated voltage Ur = 17,5kV has been added to "Possible rated voltage GIS (Ur)" on line 224 The tables for rated voltages Ur AIS and Ur GIS have been merged into one single table.	A
308	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	4.2	Т	Lijn 233: Kan de Uct, DC test vervangen worden door een 60kV 50Hz test?		Yes, the 1 minute power frequence voltage withstand test across the isolating distance with Ud = 60kV/50Hz - 1 min is acceptable for Uct, DC provided a technical justification is included in the homologation file C2/113-3 as described in §2	N
309	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	4.2	T	Lijn 235+236: IrBB 630A: Actueel worden toestellen met IrBB 800A gebruikt. Waarom wordt deze mogelijkheid niet weerhouden? Kloop gelimiteerd tot 630A. Dient er geen alternatief voorzien te worden voor de huidige 800A FU's? Een 1250A alternatief zal hoogstwaarschijnlijk leiden tot een afmetingen en bijgevolg een retrofit uitsluiten. DxT: 400A. Wordt de mogelijkheid niet geboden om een DxT 250A met interface A op de markt te plaatsen?		Regarding the comment for Lines 235 and 236: The listed ratings are the <u>minimum</u> required values as stated in line 227. HV-switchgear with Ir/Ir,bb = 1250A is not covered by this specification. Regarding the comment DxT: 400A as mentioned in the table <i>"Rated current of the FU (Ir)"</i> on Line 236: It shall be possible to connect power installations up to and including SMVA to the distribution loop. For 10 kV grids, this corresponds to Ir = $5*10^3/V3*10 = 290A$. The first higher value for Ir from the IEC is 315A. Therefore, the value Ir = 315A will be retained as the minimum rating for FU D used as general protection. There is no requirement in terms of Ir for FU D used as an individual transformer protection function. A FU D 250A with connection interface type A can only be used for individual transformer protection. Footnote 4 on the bottom of page 10 has been adapted as follows: ⁴ <i>The use of FU DxGx with Ir = 315 A applies for networks with Us ≥ 10kV. Other minimum values of Ir can be required for networks with Us < 10kV. Those values are described in C2/113-5, DSO specific requirements. <u>Note</u>: The FU code DxTx for the General protection mentioned in Line 162 has been reviewed as follows: [*] General protection: TxGx instead of TxTx / <u>DxGx instead of DxTx</u></i>	N

	Acceptance code
A	Accepted
Р	Partially accepted
N	Noted

NOTE: The Stakeholder comments with visibility "None" are not included in this consultation report.

- E T G
- **Type of comments** Editorial Technical General

id	lang	company	file	section	type	text proposal	comment	synergrid answer
310	nl	Company C	C2-113-3 Ed2-DPC -	4.2	E		Voetnoten 3 en 4 zijn niet gegeven.	The footnote 4 in line 306 has been corrected as follo
			Technical File.pdf					: 2kA, x ⁸ ms
								° with arc mitigation system in service, duration of the
								The footnote 3 in line 307 has been corrected as follo
								* Busbar compartment ⁹
								⁹ either in the specific busbar compartment (comprisin
								extension component out of the gas filled compartme
311	nl	Company C	C2-113-3 Ed2-DPC -	4.2	G	Lijn 313: 5/5, 10/5, 15/5, 20/5, 25/5, 50/5, 125/5, 250/5, 500/5	De dagdagelijkse realiteit direct opnemen in nieuwe document en aantal aanvullende spec per	Metering CTs with ratio 5/5, 10/5, 15/5, 20/5 A conce
			Technical File.pdf				DNB reduceren.	5.
312	nl	Company C	C2-113-3 Ed2-DPC -	4.2	т		Lijn 329: Thermal design op rating plate vereist of als info bij homologatie?	The rated thermal limiting burden shall be mentioned
			Technical File.pdf					, , , , , , , , , , , , , , , , , , ,
313	nl	Company B	C2-113-3 Ed2-DPC -	4.2	E	line 306: note "4" should be "7" instead of "4"		The footnote 4 in line 306 has been corrected as follo
			Technical File.pdf			line 307: note "3" should be "6" instead of "3";		: 2kA, x ⁸ ms
								° with arc mitigation system in service, duration of the
								The footnote 3 in line 307 has been corrected as follo
								* Busbar compartment ⁹
								⁹ either in the specific busbar compartment (comprisin
								extension component out of the gas filled compartme
314	fr	Company D	C2-113-3 Ed2-DPC -	4.2	т	Line 297: IAC AFL 20kA-1s seems to be the new minimum requirements for HV compartment.		The prescription C2/112 is currently under revision. The
			Technical File.pdf			This is not correspond with the new C2-112, the minimum IAC requirement still 16kA-1s		will be required.
315	nl	Company F	C2-113-3 Ed2-DPC -	4.2	т	het woord loop verwijderen of een kolom toevoegen met de Ir van een FU-K die niet in de lus	Lijn 236: Welke nominale stroomwaarde moet aangenomen worden voor de K die niet in de	No, the rated current of the FUs installed donwstream
		. ,	Technical File.pdf			zit	lus zit?	of the DSU's installation. The rated current of those FU
316	nl	Company F	C2-113-3 Ed2-DPC -	4.2	E	voorstel FU-K, FU-D	Lijn 255: De notitie hier met Fus vind ik verwarrend	Text in Line 255 has been adapted as follows:
			Technical File.pdf			of: Fus: K & D		FU KKNx, FU DKNx
								Note: The FU codes mentioned in Line 255 refer to FU
317	nl	Company F	C2-113-3 Ed2-DPC -	4.2	E		Lijn 261: zelfde opmerking als voor line 255	Text in Line 261 has been adapted as follows:
			Technical File.pdf					FU DKNx, FU DxGx
								Note: The FU codes mentioned in Line 261 refer to FU
								* General protection: DxGx instead of DxT(x)
318	nl	Company F	C2-113-3 Ed2-DPC -	4.2	E	Voorstel; enkel FUs gebruiken als er meerdere cellen zijn	Lijn 273: Hier staat FU K terwijl er op lijn 275 enkel een D betrokken is en daar staat Fus?	The following rule has been applied:
240		C	Technical File.pdf	1.2	-		L''s 274 self-te second to a la secolta 255	The wording "FU" precedes each mentioned code
319	ni	Company F	C2-113-3 E02-DPC -	4.2	E		Lijn 274: zeitde opmerking als voor line 255	I EXT IN LINE 274 has been adapted as follows:
			reenneur ne.pu					
								Note: The FU codes mentioned in Line 274 refer to FU
320	nl	Company F	C2-113-3 Ed2-DPC -	4.2	E		Lijn 275: zie opmerking lijn 273	Text in Line 275 has been adapted as follows:
			Technical File.pdf					FUDKNX
								Note: The FU code mentioned in Line 275 refers to FU
321	nl	Company F	C2-113-3 Ed2-DPC -	4.2	E		Lijn 276: zie lijn 273	Text in Line 276 has been adapted as follows:
			Technical File.pdf					FU DxGx
								Noto: The Ell code mentioned in Line 276 refers to Ell
								been reviewed:
								* General protection: DxGx instead of DxT(x)
322	nl	Company F	C2-113-3 Ed2-DPC -	4.2	E		Lijn 288: zelfde opmerking als voor line 255	Text in Line 288 has been adapted as follows:
			Technical File.pdf					FU KKNX, FU DKNX
								Note: The FU codes mentioned in Line 288 refer to FU
323	nl	Company F	C2-113-3 Ed2-DPC -	4.2	E		Lijn 289: zelfde opmerking als voor line 255	Text in Line 289 has been adapted as follows:
			Technical File.pdf					FU DKNx, FU DxGx
								Note: The Ell codes mentioned in Line 290 refer to Ell
								which the following codes have been reviewed:
								* General protection: Dx G x instead of Dx T (x)
324	fr	Company D	C2-113-3 Ed2-DPC -	5	Т		Line 330: The F&H codes for circuit breaker have been deleted. Is this classification no longer	Yes, this classification is no longer applicable
			Technical File.pdf				applicable?	
325	nl	Company A	CZ-113-3 Ed2-DPC -	5. 2.1	T	For Air GIS we recommend always to do a PD test, as air has different properties then SF6 gas	Le ook bijgevoegde PDF	Indeed, a partial discharge test is mandatory for AIS and Eor GIS, a partial discharge type test is not required
								Text in Line 346 has been removed and replaced by th
								A partial discharge <u>routine</u> test in accordance with the
								measured for a phase-to-ground voltage of 1.1 Ur (on
								earthed following procedure A) is the limit taken into

A P N R	Acceptance code Accepted Partially accepted Noted Refused
	acceptance code
vs:	P
arc fault determined by the characteristics of the arc mitigation system	
vs:	
g a screened solid insulated busbar system) or the lateral busbar nt	
n a DSO specific requirement and therefore will be mentioned in C2/113-	R
on the VT rating plate	Р
vs:	Р
arc fault determined by the characteristics of the arc mitigation system	
vs:	
g a screened solid insulated busbar system) or the lateral busbar nt	
e new C2/112 will refer to C2/113-3 in which IAC ratings AFL 20kA, 1s	Ν
the general protection will no longer specified by Synergrid as it is part is the DSI I's responsibility.	R
	Р
codes KKNx and DKNx mentioned in Lines 161 and 163	Р
codes DKNx and DxGx. See FU codes mentioned in Lines 163 and 162 for	
	Р
	Р
codes KKNx and DKNx mentioned in Lines 161 and 163	
	Р
code DKNx mentioned in Line 163	
	Р
code DxGx mentioned in Line 162 for which the following code have	
	Р
codes KKNx and DKNx mentioned in Lines 161 and 163	
	Р
codes DKNx and DxGx. See FU codes mentioned in Lines 163 and 162 for	
	N
d GIS.	Р
e following:	

he standard EN 62271-200, clause 8.101 is acceptable. A PD level of 20 pC ne phase under voltage and the others connected with the frame and , account.

	E
	Т

					E T G	Type of comments Editorial Technical General		A P N R	Acceptance code Accepted Partially accepted Noted Refused
id	lang	company	file	section	type	text proposal	comment	synergrid answer	acceptance code
326	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	5. 2.1	T	Lijn 338: The partial discharge test shall be performed on each individual functional unit. The test shall additionally be performed on an assembly containing at least 2 FU's and all elements as required during normal service (closing plates,) in order to take the busbars and dead ends into account.	Lijn 338: Enkel een zeer duidelijk geschreven eis kan tot vlotte en uniforme afhandeling van de homologatie leiden voor beide partijen. Lijn 342+346: Een GIS toestel die per definitie meer ingegoten componenten bevat dan een AIS wordt niet onderworpen aan een PD test. Op welke technische wijze is dit onderbouwd?	Text in line 338 has been completed as follows: The test shall cover all possible configurations (all FUs subject to homologation, busbar extension elements, busbar end connectors) 	P
						Lijn 339: Routine test volgens Hfd 8 of type test volgens 7.2.10? // Annex B ipv BB "clause 7.2.10 and annex B" Lijn 342: A PD level of 100pC measured Lijn 346: A PD level of 100 pC measured for a phase-to-ground voltage of 1.1 Ur (one phase under voltage and the others connected with the frame and earthed following procedure A) is the limit taken into account.	Lijn 342: Limiet van 1000pC. Tikfout of symbolische waarde? Een design met een PD van 1000pC tijdens een type test kan weinig vertrouwen inboezemen om de beoogde levensduur te garanderen.	Text in Line 346 has been removed and replaced by the following: For GIS, a partial discharge type test is not required. A partial discharge routine test in accordance with the standard EN 62271-200, clause 8.101 is acceptable. A PD level of 20 pC measured for a phase-to-ground voltage of 1.1 Ur (one phase under voltage and the others connected with the frame and earthed following procedure A) is the limit taken into account. Limit of PD level for AIS taken into account as per text in Line 342: The lifetime expectation of AIS is not concidered for homologation. Therefore, a PD level of 1000pC for a phase-to-ground voltage of 1.1 Ur (one phase under voltage and the others connected with the frame and earthed following procedure A) is considered as an acceptable value. Lower PD levels may be required by the Client or within the DSO's frame agreement.	
327	fr	Company D	C2-113-3 Ed2-DPC - Technical File.pdf	5. 2.1	Т	Line 342: Is the new PD level limit 10 times higher than the older (100pC), is it correct?		Limit of PD level for AIS taken into account as per text in Line 342 : The lifetime expectation of AIS is not concidered for homologation. Therefore, a PD level of 1000pC for a phase-to-ground voltage of 1.1 Ur (one phase under voltage and the others connected with the frame and earthed following procedure A) is considered as an acceptable value. Lower PD levels may be required by the Client or within the DSO's frame agreement.	N
328	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	5. 3	т	Lijn 361:, this system shall not be triggered off. This condition shall be confirmed in the test report together with a resistance measurement between supply cable and ground in open position of all switches. Synergrid requires to include an after test photo which shows the presence of the arc mitigation system in the tested FU.	Lijn 361: Enkel een zeer duidelijk geschreven eis kan tot vlotte en uniforme afhandeling van de homologatie leiden voor beide partijen.	A declaration is acceptable. It is the switchgear manufacturer's responsibility to confirm that the active arc mitigation system of a AA20 switchgear has not operated. Type test reports issued by a ISO 17025 certified test lab does not oblige to document this condition check.	R
329	nl	Company C	C2-113-3 Ed2-DPC - Technical File ndf	5.4	E		Lijn 375: Leesbaarheid beperkt van de figuur en groene tekstvelden	The contrast of the text blocs has been improved: light blue instead of green background color.	А
330	nl	Company G	C2-113-3 Ed2-DPC - Technical File.pdf	5.4	E		Lijn 375: The header of the upper figure needs to be corrected: "AA1x & AA20" instead of "AA10, AA15 & AA20"	The text for the figure at the top of page 16 (Line 375)has been adapted as follows: <i>IP requirements for switchgear of categories</i> AA1x/AA20 <i>with non-accessible rear side</i> 	Ρ
								The following text has been added underneath the figure at the top of page 16 (Line 375): Figure 1: required IP degrees for switchgear of category AA1x and AA20 with non-accessible rear side The following text has been added underneath the figure at the bottom of page 16 (Line 375): Figure 2: required IP degrees for switchgear of category AA3x	
331	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	5. 5	Т	Instead of line 381-385: The tightness test is performed after a mechanical operation (C-O) of all switching devices within the 0.5 hours preceding placing in the oven. The FU under test, being equipped with its operating mechanism and auxiliary accessories, should be placed as in normal service condition (open ESW, closed LBS and CB, spring charged if any).	Algemeen: Om mogelijke discussie, betreffende paragraaf 7.8.1 van IEC 62271-1 "unless the leakage rate is independent of the position of the main contacts" uit te sluiten is het raadzaam om een CO manoeuvre op alle schakelorganen max. 30min voorafgaand aan het sluiten van het incubatievolume uit te voeren. Ook het plaatsen van de verschillende schakelorganen in service positie (veer gewapend, LBS +VCB gesloten) zal deze aanvullende test een reëler beeld geven. Lijn 381-385: Meerwaarde? Gedurende de test kan geen onderscheid gemaakt worden tussen de origines van de lek. Of is het de opzet van Synergrid dat na het afronden van de test bijkomend onderzoek gedaan wordt? Dit laatste is in de praktijk geen evidentie voor beperkte lekken.	The aim is to comply with the IEC standards without specifying extra requirements. The following text has been added after line 380 : It is the switchgear manufacturer's responsibility to declare that the leakage rate is independent of the position of the main contacts. The aim is to take into account the different types of leakage. The following text has been added after line 381-385 : It is the switchgear manufacturer's responsibility to determine the duration of incubation at 40°C. This duration shall be sufficient to cover all possible leakages. A footnote 12 has been added in the text in Line 377 with reference to Chapter 2 of C2/113-7 to clarify that a component containing active parts of the 3 phases in a single volume and included in the metallic enclosure is considered as an HV compartment: The tightness test shall be performed in every sealed pressure gas-filled compartment ¹² with application of ¹² See Chapter 2 of C2/113-7	Ρ
332	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	5. 5	Т		Lijn 376: Tracer gas niet eenduidig in standaard beschreven. Suggestie van SF6 in SF6 vrije apparatuur is vrij ironisch en technisch niet relevant rekening houdende met de atoomstraal.	It is the switchgear manufacturer's responsibility to determine the type of tracer gas to be used for the tightness test.	Ν
333	nl	Company B	C2-113-3 Ed2-DPC - Technical File.odf	5. 6	E	line 391 as per manufacturer standard handles	handles are specific to each and every equipment and can be different from other products of the market	The text in Line 391 has been adapted as follows: with the manufacturer standard handles	A
334	nl	Company C	C2-113-3 Ed2-DPC - Technical File.ndf	5. 7	G		Lijn 394-395: Testrapport in ISO17025 lab sluit inspectie synergrid gedurende C2/113-4 uit?	Yes	N
335	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	5. 9	Т	LIJN 435+468+488+517+550+587+620+654+687+753+775: - Internal arc fault test IAC A FL (or A FLR) IAe = 2kA, tAe = 1s with single phase ignition and with both other phases energized according to IEC 62271-200. The single phase ignition should be chosen so that it is as close as possible to the indicators (Front and lateral side)	LIJN 435+468+488+517+550+587+620+654+687+753+775: Aangezien dat initiatie zo dicht mogelijk bij de indicatoren dient plaats te vinden om wordt case te beproeven.	The requirements for the arc initiation shall be in accordance with A.5.2 of the standard IEC 62271-200	R
336	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	5. 9.2	Т	Lijn 426: - on an open simulated test floor having. Between each FU a gas exhaust section of max. 0.04m ² is present.	Lijn 426: Open testvloer = oneindig groot buffervolume kabelkelder. Geen limitatie of informatieplicht m.b.t. doorvoersectie van de FU naar de gesimuleerde kabelkelder waardoor het getypetest product onderworpen is aan een lagere drukopbouw dan mocht eenzelfde fout zich voordien in een reële installatie.	Indeed, the volume under the simulated test floor according §5.9.2.1 is not limited. The cross section of the opening of the gas exhaust duct underneath the burst disk(s) - which communicates with the volume beneath the simulated testfloor - is specified by the switchgear design. The demonstration of the pressure withstand is determined in §5.9.2.4.	R
337	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	5. 9.2	Т	Lijn 445: A second internal arc test shall be performed in addition to test 1 if the cables compartment communicates with the gas evacuation path in case of an internal arc in the gas-filled compartment:	Lijn 445-456: Andere benadering voor meerfasige fout in kabelcompartiment AA10 tov andere categorieën. Fout of zit hier een technische redenering achter?	The text in Line 445 has been adapted as follows: if the cables compartment communicates with the gas evacuation path in case of an internal arc in the gas-filled compartment	A

ntar	ice	rode

A Accepted	
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E T

Type of comments Editorial Technical

					G	General		N	Noted Refused
- id	lang	leamnanu	file	castion	tuno	taut menagal	commont		accontanco codo
Id	lang	company	file	section	туре	text proposal	comment	synergrid answer	acceptance code
338	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	5. 9.2	т	Lijn 478-484: These elements shall be tested together with the switchgear, for one configuration, with gas evacuation downwards in a volume < 6 m ³ , gas outlet between 0,04m ² and 0,12 m ² , with measurement of the overpressure in the elements. The used gas outlet section and its position with regards to the burst disc need to be verified in the test report and will be published in the C2/117 together with the minimum buffer volume. This type of switchgear can only be installed if both criteria are met. The overpressure and the withstand of the elements for other configurations can be assessed by simulations.	Lijn 478-484: Verwijzing op lijn 426 dat hier minstens voor 1 setup aan voldoen dient te worden. Deze gegevens ook publiceren in C2/117 zodat de testcondities in realiteit worden nageleefd (beschikbaar buffervolume en uitlaatsectie op zelfde positie tov breekplaat)	The assignent of the requested AAxx category (-ies) is done in the pre-classification step. The technical evidence shall be submitted by the Applicant. The Applicant shall submit a test report for the most onerous configuration, allowing to determine the overpressure withstand of other configurations by means of simulations. The installation conditions shall be clarified by the Applicant in the pre-classification step. The Applicant shall demonstrate that the tested and simulated configurations are representative with regard to the installation conditions documented in the Applicant's installation manual. The used gas outlet section, its position with regard to the burst disc(s) and minimum buffer volume will not be published in the list C2/117.	R
339	nl	Company B	C2-113-3 Ed2-DPC - Technical File.pdf	5. 9.2	E	seperated with a distance > 12,5mm	higher than 12,5 mm and not lower (and same in all the chapters speaking of busbar for AA1X and AA20) (sectie 5.9.3-5.9.6)	A risk for an internal arc fault also exists with screened solid insulated lateral busbar extension components in ambient air between 2 adjacent sealed pressure gas-filled compartments with distance < 12,5 mm. Therefore, the internal arc test is required.	R
340	fr	Company D	C2-113-3 Ed2-DPC -	5. 9.2.4	Т		Line 478: Shall we redo the demonstration of the pressure withstand for the metering panel	The comment is not relevant to the public consultation of the present document.	R
			Technical File.pdf				cable-cable with the new SF6-free RMU ?		
341	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	5. 9.3	т	LUN 508: - on an closed simulated test floor over the whole depth of the switchgear Lijn 538: b) or downwards with a volume representing the smallest raising base frame. This buffervolume or larger will be required for each installation.	Lijn 508: AA11 is venting out naar boven, waarom mogelijkheid laten tot alternatieve gasuitblaas? Lijn 538: Indien een bijkomend volume toegestaan wordt voor de test moet deze verplicht bij elke installatie aanwezig zijn.	Answer on comment Line 508: The test arrangement is not an alternative for the gas exhaust. The switchgear shall be placed on an open simulated test floor over the whole depth of the switchgear in order to check that the design of the switchgear alone ensures that all hot gases are evacuated in the switching room. (Comment refused: R) The text in Line 538 has been adapted as follows: b) or downwards with a volume representing the smallest raising base frame through the raising base frame with the smallest volume when it is part of the ga s evacuation path. The requirement of the presence of such a raising base frame is covered by §9.4 of C2/113-4. (Comment accepted in principle: P)	Ρ
342	fr	Company D	C2-113-3 Ed2-DPC - Technical File.pdf	5. 9.3	Т		Line 498: In the case of AA10 RMU with AA10BL baseframe, is it sufficient to prove the pressure resistance to IAC of the baseframe separately from the RMU or we have to redo completely an IAC test with the RMU- baseframe combination? Please clarify.	The comment is not relevant to the public consultation of the present document.	R
343	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	5. 9.4	Т	LIJN 578: - on an closed simulated test floor over the whole depth of the switchgear	Lijn 578: AA13 is met afzonderlijke schouw, waarom mogelijkheid laten tot alternatieve gasuitblaas?	The test arrangement is not an alternative for the gas exhaust. The switchgear shall be placed on an open simulated test floor over the whole depth of the switchgear in order to check that the design of the switchgear alone ensures that all hot gases are evacuated outside the switching room.	R
344	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	5. 9.6	т	LIJN 728: IAC B FL or BFLR 20 kA 1s, x ms (duration of the fault is 1s) with 3-phases ignition according to IEC 62271-200	Lijn 728: Aangezien breekschijf niet mag openen waarom geen katoen type B?	The Synergrid requirement is IAC AFL or AFLR as the Client installations are to be installed in an Exclusive area of the Electrical Service (NL: Exclusive Ruimte van de Elektrische Dienst, F: Lieu exclusif du Service Electrique)	R
345	fr	Company D	C2-113-3 Ed2-DPC - Technical File.pdf	5. 9.6.2	Т	Line 743: What happens to the materiel and to the local if the arc suppressor does not operate ? No IAC test with arc mitigation system not in service required ?		During an internal arc type test with arc ignition in the gas filled compartment, the arc mitigation system shall operate in order to avoid external phenomena as required for switchgear of category AA20. An internal arc type test for AA20 switchgear with the arc mitigation system not in service is not required.	N
346	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	5.11.2	G		Lijn 885: 8% (5%relay+3%CT). Hoe komt men aan dit onderscheid en is dit per definitie relevant? Gedurende de test kan men enkel met zekerheid de totale afwijking in kaart brengen.	Indeed, the detail about the accuracy of the relay (5%) + CT (3%) is not relevany and will be removed.	Ρ
347	nl	Company C	C2-113-3 Ed2-DPC - Technical File.pdf	5.11.2	Т		Lijn 893+894: Wat is de logica tussen I0=60A en de hoogte ratio van TI voor een autonoom relais? Of een relais wel of niet gevoed wordt, I en I0 worden steeds procentueel benaderd tov de CT ratio. Waarom wordt in deze test een absolute waarde vooropgesteld?	The settings (Io>, to>) to be used for the protection chain test are determined by Synergrid, independent from the ratio of the protection CTs.	Ν
348	nl	Company F	C2-113-3 Ed2-DPC - Technical File.pdf	6.2	Т	Lijn 955: Voeg het woord 'only' toe tussen 'with' en 'the busbar system'	Lijn 995: moet hier niet de nadruk gelegd worden op het feit dat het gascompartiment enkel de busbar mag bevatten? Opmerking: Wat hier beschreven wordt als een AA10 meetcel komt niet overeen met wat in de C2/113-7 staat (zie opmerkingen bij doc C2/113-7)	The text in line 955 has been adapted as follows: A pressure withstand test for the gas-filled compartment is only applicable for a billing metering function of category AA10 with only the busbar system in the gas-filled compartment, i.e. FU M with code MBB, MBK or MKB	A
349	nl	Company B	C2-113-3 Ed2-DPC - Technical File pdf	Table	G	NA	Folder G, H, I, T,U and V are not menitoned anymore in this document Will they be added later or will they not be asked anymore by the DSO's	Folders G, H, I, J, T, U and V have been permenantly removed from the Assessment Guide C2/113-3. Hence, there are no Synergrid requirements regarding these folders	N
350	fr	Company E	C2-113-3 Ed2-DPC - Technical File.pdf	Title	G	Lignes 23-24: intended for use in <u>a Client installation</u> to be connected to the public HV distribution grid of a Belgian DSO	Contrairement à la version précédente en particulier, voire, en général, la prescription prévoit des contraintes qui ne seraient mises à charge que des URD et non des GRD : L'homologation des appareillages de coupure HT destinés à être utilisés dans <u>une installation</u> <u>de client</u> raccordée au réseau public de distribution HT d'un GRD belge. Pourriez-vous nous expliquer la raison de cette distinction ?	The C2/113-x specifications and the homologation apply to HV switchgear intended for use in any installation connected to the public HV electricity distribution network, whether it belongs to a DSO or a DSO. The requirements of Synergrid C2/113-x specifications are intended to ensure the safety of DSO staff working in the distribution station, the continuity of the power supply to the grid and the possibility of connecting the installation to the grid. The HV switchgear intended for DSOs distribution station is the subject of a supplementary technical specification to meet the more stringent requirements of DSOs (asset management, operating constraints, etc.), but this supplementary specification clearly indicates that the Synergrid homologation is a prerequisite. The text in Line 23 of the title of document C2/113-3 (Technical File) has been adapted as follows: HV switchgear intended for use in <u>a-Client</u> <u>an installation</u> <u>to-be</u> connected to the public HV distribution network of a Belgian DSO. The text in Line 89 of §1.1 "Object" has been adapted as follows: for <u>a-Client</u> an installation to be connected	P
351	nl	Company B	C2-113-3 Ed2-DPC - Ratings and tests - Assessment Guide.xlsx	0	G	NA	Folder G, H, I, J,T,U and V are not menitoned an more in this document. Will they be added later are will they not be asked anymore by the DSO's	Folders G, H, I, J, T, U and V have been permenantly removed from the Assessment Guide C2/113-3. Hence, there are no Synergrid requirements regarding these folders.	Ν
352	nl	Company G	C2-113-3 Ed2-DPC - Ratings and tests - Assessment Guide.xlsx	B.1	Т		With reference to §8.4.3 of document C2/113-4 Ed2-DPC: The HV switching device of every FU <u>ensuring the isolating distance</u> in open position shall be padlockable in this position. In our understanding, every FU = including FU K, T, DxT, P installed downstream the Gen. Protection Comment with regard to Assessment Guide C2/113-3, item B.1 - test for Ud/Up accross the isolating distance: The background color of column O is grey, which means that the Applicant is not requested to submit a test report for Ud/Up related to the FUs of concern = FU K, T, DxT, P installed downstream the Gen. Protection. Is this correct?	The Applicant is requested submit a test report for Ud/Up to related to the FUs of concern, installed downstream the General Protection. The background color for item B.1 in column O has been changed from grey to salmon color The text for item B.1 in column E in has been adapted as follows: <i>Power-frequency voltage withstand tests (Ud)</i> <i>Lightnig impulse voltage withstand tests (Up)</i> <i>Ud & Up</i> : - phase-to-earth & between phases (only requested for FUs KKNx, TxGx, DxGx, DKNx) - accross the isolating distance (also requested for FUs KKUx, TKUx, DKUx, P) Refer to Technical file C2/113-3 § 4.2	P

Acce	ptan	ce co	ode

	Acceptance coue	
Α	Accepted	
Р	Partially accepted	

r	raitially	accep
N	Noted	

NOTE: The Stakeholder comments with visibility "None" are not included in this consultation report.

	Type of comments
E	Editorial
Т	Technical
G	General

								R	Refused
id	lang	company	file	section	type	text proposal	comment	synergrid answer	acceptance code
<u>id</u> 35	lang	company G	file C2-113-3 Ed2-DPC - Ratings and tests - Assessment Guide.xlsx	section Kolom titels	type T	text proposal Line 6 and Line 12	comment Lines 6 and 12: 1) How is the distinction made between FU K with scheme KKNx "connected to the loop" and FU K with scheme KKNx "downstream the general protection", taking into account that requirements C2/113-3 (and -4) are different depending on the location of this FU K in the Client installation? 2) How is the distinction made between FU D with scheme DxTx "for the general protection" and FU D with scheme DxTx "downstream the general protection", taking into account that requirements C2/113-3 (and -4) are different according to the location of this FU D in the Client installation? 3) Referring to 2) above, the question also arises for FU T with scheme TxTx?	synergrid answer The FU codes mentioned in Lines 161, 162, 164 have been reviewed as follows: * FU K intended to be connected to the distribution loop: KKNx * General protection: TxGx instead of TxTx / DxGs instead of DxTx * FU downstream the general protection / FU M: KKUx, TKUx, DxUx Text in Line 20 of the document title (Lines 18 -20) has been adapted as follows: Ratings and tests for HV switchgear, intended for use in installations connected to the HV distribution grid loop of a Belgian DSO Text in Lines 6, 12 of column J as been adapted as follows: KKNx Text in Lines 6, 12 of column K has been adapted as follows: TxGx Text in Lines 6, 12 of column L has been adapted as follows: DxGx Text in Lines 6, 12 of column M has been adapted as follows: DxGx Text in Lines 6, 12 of column M has been adapted as follows: DKNx Text in Lines 6, 12 of column M has been adapted as follows: DKNx Text in Lines 6, 12 of column O has been adapted as follows: DKNx	p
35	4 fr	Company E	C2-113-3 Ed2-DPC - Ratings and tests - Assessment Guide.xlsx	Title	G	Lignes 19-20: intended for use in <u>a Client installation</u> to be connected to the public HV distribution grid of a Belgian DSO	Contrairement à la version précédente en particulier, voire, en général, la prescription prévoit des contraintes qui ne seraient mises à charge que des URD et non des GRD : L'homologation des appareillages de coupure HT destinés à être utilisés dans <u>une installation</u> <u>de client</u> raccordée au réseau public de distribution HT d'un GRD belge. Pourriez-vous nous expliquer la raison de cette distinction ?	INDIE: Synergria document 22/119 FU Coding Will be reviewed accordingly. The C2/113-x specifications and the homologation apply to HV switchgear intended for use in any installation connected to the public HV electricity distribution network, whether it belongs to a DSO or a DSO. The requirements of Synergrid C2/113-x specifications are intended to ensure the safety of DSO staff working in the distribution station, the continuity of the power supply to the grid and the possibility of connecting the installation to the grid. The HV switchgear intended for DSOs distribution station is the subject of a supplementary technical specification to meet the more stringent requirements of DSOs (asset management, operating constraints, etc.), but this supplementary specification clearly indicates that the Synergrid homologation is a prerequisite. The text in Line 19 of the title on the sheet "cover page" of document C2/113-3 (Assessment Guide) has been adapted as follows: HV switchgear intended for use in <u>a-Client an</u> installation to the public HV distribution network of a Belgian DSO	P

- Acceptance code A Accepted P Partially accepted N Noted

NOTE: The Stakeholder comments with visibility "None" are not included in this consultation report.

Type of comments Editorial Technical General E T G

id	lang	company	file	section	type	text proposal	comment	synergrid answer
401	fr	Company D	C2-113-4 Ed2-DPC - Common requirements.pdf	1.	G		The chapter didactic panels has been deleted. Is the didactic panels no longer required?	Yes, didactic panels are no longer required. Instead, a
402	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	2.	G		Lines 128, 129 en 131: 1) How is the distinction made between FU K with scheme KKNx "connected to the loop" and FU K with scheme KKNx "downstream the general protection", taking into account that requirements C2/113-4 (and -3) are different depending on the location of this FU K in the Client installation? 2) How is the distinction made between FU D with scheme DxTx "for the general protection" and FU D with scheme DxTx "downstream the general protection", taking into account that requirements C2/113-4 (and -3) are different according to the location of this FU D in the Client installation? 3) Referring to 2) above, the question also arises for FU T with scheme TxTx?	The FU codes mentioned in Lines 128, 129, 131 have been review * FU K connected to the loop: KKNx * General protection: TxGx instead of TxTx / DxGx instead of DxT: * FU downstream the general protection / FU M: KKUx, TKUx, DK Text in Line 25 of the document title (Lines 23 -25) has been adap Specific design and construction requirement for HV switchgear, I DSO Text in Lines 372, 377, 731, 735, 974, 996 has been adapted as fol KKNx connected to the loop Text in Lines 608, 652, 675, 843 has been adapted as follows: KKNx intended to be connected to the loop Text in Line 633 has been adapted as follows: For FU KKNx, Text in Line 634 has been adapted as follows: KKNx to be connected to the loop Text in Line 694 has been adapted as follows: KKNx to be connected to the loop Text in Line 694 has been adapted as follows: KKNx, Text in Line 694 has been adapted as follows: KKNx, Text in Line 694 has been adapted as follows: DxGx used as general protection Text in Line 670 has been adapted as follows: DxGx, TxGx Text in Line 676, 844 has been adapted as follows: DxGx used as general protection
403	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	2.	G		Lines 133-137: It is preferable to add a summary table indicating the chapters or paragraphs of document C2/113-4 that apply to the UF(s) concerned.	The text in lines 133-137 has been eletted: The text in lines 133-137 has been deleted: The following chapters mention whether the requirers - Chapter 4 opplies to all FUs used in substations acce - Chapter 5, 7, 8 and 10 lists the specific FUs for which - Chapter 11 applies to all possible variants of FUs for
404	nl	Company A	C2-113-4 Ed2-DPC - Common requirements.pdf	4.5.3	Т	Kindly add the loadbreakswitch and look to this as a switching functionality	Zie de bijgevoegde PDF	The symbol for the (load-break) switch has been adde Such a switching functionality is only accepted for FU
405	nl	Company A	C2-113-4 Ed2-DPC - Common requirements.pdf	4.6	Т	In case of atmospheric pressure, a manometer is not required.	Zie ook de bijgevoegde PDF	A status indicator to check dielectric withstand ability up to the manufacturer to determine if a manometer
406	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	4.6.5	Т	Add the following as a bullet below line 277: Circuit-breakers with fast auto-reclosing (DKNx) shall be equipped with a mechanical operations counter.	Please specify that circuit-breakers with fast auto-reclosing (DKNx) shall be equipped with a mechanical operations counter.	The following text has been added after line 277 : Circuit-breakers with fast auto-reclosing (DKNx) shall
407	nl	Company C	C2-113-4 Ed2-DPC - Common requirements.pdf	4.7.5	т		Line 341: Ook niet toegestaan op cellen na de lus	Motorised FU K installed downstream the general pro local electrical operation for these FU K is at the conv
408	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	4.8.1	Т	Modify text in Lines 348 and 349 as follows: (in accordance with clause 6.11 of the standard NBN EN 62271-200).	Line 348: Reference to clause 5.10 of IEC 62271-200 Ed3 is not correct as the nameplate concerns clasue 6.11	The text in lines 348-349 has been adapted as follows (in accordance with clause 6.11 of the standard NB
409		Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	4.8.2	E	Modify the text in line 357: with minimum dimensions of height (H) x width (W) = 40x150 mm.	Line 357: "HxL" isn't a clear description	The text in line 357 has been adapted as follows: with minimum dimensions of height (H) x width (W
410	nl	Company F	C2-113-4 Ed2-DPC - Common requirements.pdf	4.8.4	т		Lijn 364: Een FCI mag verticaal gemonteerd worden volgens de tekst. Is dat toegelaten?	No, the FCI shall be mounted horizontally as the cut- specified in §9.5 (line 829)
411	nl	Company B	C2-113-4 Ed2-DPC - Common requirements pdf	5.	G	372 The VDIS is mandatory for FU KKNx connected to the loop and FU DKNx	Is there any requirment for the other FU's ? (T, M, P and Dxt) for the different DSO's	No, the VDIS requirements are only requested for FU the loop and FU DKNx

Acce	ptanc	e code

- Acceptance code A Accepted P Partially accepted N Noted

R	Refused
	acceptance code
quick user guide shall be put available. See §11.3.2	Ν
ed as follows:	Р
Jx	
and as follows	
ted as follows: Itended for use in installations connected to the HV distribution grid loop of a Belgian	
ows:	
	P
ents apply to all FUs or FUs in particular:	F
ssible for operators of the DSO	
the requirements apply	
which the homologation has been requested	
arizing the specific design and construction requirements for the FUs	
eferences made to the table(s) of concern have been adapted as follows:	
K installed downstream the general protection.	A
af she inculating modium in the one filled comparison at is previously 16 in	N
of the insulating medium in the gas-filled compartment is required. It is is is suitable to fulfill this function.	N
be equipped with a mechanical operations counter.	А
tection are not operated by the DSO but by the DSU. The presence of ence of the DSU.	N
N EN 62271-200) .	A
= 40x150 mm.	А
ut for the FCI shall be Width x Height = $92^{+0.8/-0}$ mm x $45^{+0.6/-0}$ mm as	Ν
which are operated by the DSO agent, these are FU KKNx connected to	Ν

NOTE: The Stakeholder comments with visibility "None" are not included in this consultation report.

E T G

Type of comments Editorial Technical General

								R	R Refused
id	lang	company	file	section	type	text proposal	comment	synergrid answer	acceptance code
412		Company D	C2-113-4 Ed2-DPC - Common requirements.pdf	5.	G		Is the VDS not mandatory for the metering panel ?	Yes, it is not mandatory for billing FU M. The VDIS requirements are only requested for FU which are operated by the DSO agent, these are FU KKNx connected to the loop and FU DKNx	N
413	nl	Company C	C2-113-4 Ed2-DPC - Common requirements.pdf	5.	Т	Line 372: The VDIS is mandatory for FU KKNx connected to the loop and FU DKNx, FU T and FU M.	Line 372: Ook FU T en FU M?	VDIS is not mandatory for FU T and billing FU M. The VDIS requirements are only requested for FU which are operated by the DSO agent, these are FU KKNx connected to the loop and FU DKNx	R
414	nl	Company F	C2-113-4 Ed2-DPC - Common requirements.pdf	5.	Т	Lijn 377: Uit deze zin kan ook begrepen worden dat in de VDIS in het klantengedeelte dezelfde moet zijn als in de luscellen. Is dat de juiste interpretatie?	Aangezien een andere VDIS in het klantengedeelte geen risico met zich meebrengt voor de DNO-mederwerkers noch voor de continuiteit van het net mag de VDIS in het klantengedeelte verschillend zijn met deze in het DNB-gedeelte. Voorstel: The same VDIS must be used in de DSOs part of the installation (all elements before the FU-M)	Indeed, the VDIS requirements are only applicable for FU which are operated by the DSO agent, these are FU KKNx connected to the loop and FU DKNx. The text in line 377 has been adapted as follows: The same type of VDIS shall be used for the FU KKNx connected to the loop and <u>for</u> FU DKNx <u>used as DSO feeder</u> in one same installation.	Р
415	nl	Company C	C2-113-4 Ed2-DPC - Common requirements.pdf	6.1	Т	Line 406: All modification on the FU should be done by the manufacturer or its deligate under instruction of the manufacturer.	Line 406: Wie is verantwoordelijk bij verhoging van contractueel vermogen?	This case is out of the scope of homologation	R
416	fr	Company D	C2-113-4 Ed2-DPC - Common requirements.pdf	6.2	Т		Line 408: There is no written requirement about the inspection window for the metering panel. Is this an oversight or is it no longer necessary? Line 437-439: Is this requirement not applicable to other FUs too? Line 444: none of the DSOs use 0,5A fuses. Fluvius uses 4 A fuses and the rest use cylindrical link.	Line 408: The requirement for inspection window(s) for the billing metering function FU M has been deleted. Line 437-439: This requirement is only applicable for FU M. The text in Line 444 has been adapted as follows: Either a LV fuse with rating 0,5 A or a cylindrical link (conductor) for each phase, depending on the DSO specific requirements mentioned in document C2/113-5	P
417	nl	Company C	C2-113-4 Ed2-DPC - Common requirements.pdf	6.2.1	Т	Line 427: remove	Line 427: Is er overdracht van verantwoordelijkheid omdat TI/TP's zichtbaar zijn? Mocht zich een bekabelingsfout voordoen is dit de verantwoordelijkheid van de fabrikant. Zijn er in het verleden ernstige problemen op het net geweest met gasgeïsoleerde meetcellen? Er wordt gepushd voor GIS maar ten laste van de klant geniet AIS de voorkeur? Een TP blijft een product met verhoogd risico en kan niet veiliger zitten dan in een deftig ontworpen kuip met metalen scheiding tussen de fasen. Volgens de voorschriften kan Synergrid is dergelijk design de enige meetcel die echt aan de AA10 omschrijving voldoet.	No, there is no transfer of responsibility. The manufacturer remains responsible. The DSO's metering department requires that CTs and VTs shall be in any circumstances accessible.	R
418	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	6.2.1	Т	Add the following requirement after line 462: It shall not be possible to remove those plates from the adjacent HV compartments or FUs.	Line 462: In principle, it shall not be possible to remove the IP2X seggregation plates from the outside for the HV compartment without opening the respective front door(s) or front cover(s) of this compartment (see requirement described in lines 418-419)	The following text has been added after line 462: It shall not be possible to remove those plates from the adjacent HV compartments or FUs.	A
419	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	6.2.1	т	Add the following requirement after line 465: It shall not be possible to remove those plates from the adjacent HV compartments or FUs.	Line 465: In principle, it shall not be possible to remove the IP2X partitions from the outside for the HV compartment without opening the respective front door(s) or front cover(s) of this compartment (see requirement described in lines 418-419)	The following text has been added after line 465 : It shall not be possible to remove those plates from the adjacent HV compartments or FUs.	A
420	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	6.2.3	Т	Text in line 498 to be corrected as follows: The colour code of the wiring from the secondary terminals of the VT to the LV terminal block 4 - poles fuse-switch in the LV compartment is	The LV wiring from secondary terminals of the VTs are connected to a 4-poles fuse-switch, not a LV terminal block.	The text in Line 498 has been adapted as follows: The colour code of the wiring from the secondary terminals of the VT to the <u>LV terminal block 4-poles fuse-switch</u> in the LV compartment is	A
421	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	6.2.3	Т	Modify the text in lines 508-509: The colour code of the wiring from the secondary terminals of the VT to the 4-poles fuse- switch in the LV compartment	Line 508: The text does not correpond to the schematic diagrams given in Figures 9 and 10.	The text in lines 508-509 has been adapted as follows: The colour code of the wiring from the secondary terminals of the VT to the LV terminal block <u>4-poles fuse-switch</u> in the LV compartment	A
422	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	6.2.4	Т	Add the following text after line 519: , considering the rated values specified in C2/113-3 §4.2	Line 519: The rated values for the metering CTs specified in C2/113-3 §4.2 shall be considered	The following text has been added after line 519: , considering the rated values specified in C2/113-3 §4.2	A
423	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	6.2.4	Т	Add the following text after line 520: , considering the rated values specified in C2/113-3 §4.2	Line 520: The rated values for the metering VTs specified in C2/113-3 §4.2 shall be considered	The following text has been added after line 520: , considering the roted values specified in C2/113-3 §4.2	A
424	nl	Company C	C2-113-4 Ed2-DPC - Common requirements.pdf	7.2	Т		Line 588: ontbreekt info. Zin niet compleet	Line 588 shall be read in conjunction with line 565 "The cable compartment of FUs KKNx and DKNx shall contain:" • For FU DKNx, the space to mount the current transformers (CTs) of the overcurrent protection relay.	R
425	nl	Company C	C2-113-4 Ed2-DPC - Common requirements.pdf	7.2	Т		Line 598: TI enkel toegestaan boven kabelklem?	It is also acceptable to install the CTs below the cable clamps, provided that the CTs are supported within the cable compartment. The aim of the figures of chapter 7 is to illustrate the required space for cable connection depending if the current sensor (FU KKNx) or CT (FU DKNx) is located above or below the cable clamps.	N

Accep	ota	nce	code	

A .	Accepted
>	Partially accenter

P Partially accepted

IN	Noted

	Type of comments
E	Editorial
Т	Technical
G	General

								R	Refused
id	lang	company	file	section	type	text proposal	comment	synergrid answer	acceptance code
426	nl	Company G	C2-113-4 Ed2-DPC - Common	7.2	Т	-	Line 555: Please check the minimum required height for the connectors in the cable compartment of FU	The min. required height mentioned in line 555 has been reviewed and the text in lines 555-557 has been adapted as follows. Also reference of figure 12 has been corrected and is now Fig. 11:	P
			requirements.pdf				KKNx belonging to HV switchgear of category AA1x/AA20 has been changed from 375 mm (C2/113-4 Ed. 08-2018) to 305 mm	For FU KKNx, the minimum required height available between the centre of the outer cone and the top of the cable fixation clamp in the cable compartment is 425 mm, that is 375 mm for the HV cables connectors + 50 mm for the current sensors of the FCI as shown on the left in Fig 11. A minimum required available height of 375 mm for only the HV cables connectors is also allowed at the condition that a 2nd minimum required available height of 100 mm for the current sensors of the FCI is available between the underside of the cable clamps and the bottom of the cables compartment, as shown on the right in Fig 11, and that the material of the cable clamps is insulating.	
								 The text in lines 574 -576 has been adapted as follows: For FU KKNx, the space to mount the current sensors of fault current indicators (FCI) <u>which</u> <u>This space</u> This space shall be present on every phase, below the cable connectors. 	
								The text in lines 577-584 has been adapted as follows: The current sensors can be either mounted above the cable clamps according to the left of Fig 11 or below the cable clamps according to the right of Fig 11. In any case, they shall always be mounted above the bottom of the switchgear.	
								The min. required height for the arrangements shown in Figure 11 on Line 611 have been adapted as follows further to this comment: - arrangement shown left: 355 mm -> 425 mm	
								- arrangement shown right: 305 mm -> 375mm	
427	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	7.2	Т	-	Line 598 (Figure 13): Distinguish the arrangement of the cable compartment for FU DKNx of categories AA1x/AA20 with CTs mounted on the cables and CTs mounted on the bushings and confirm he minimum required height for the connectors for the latter.	The text in lines 556-557 has been adapted as follows. The reference of figure 13 has been corrected and is now Fig. 12. The arrangement for CTs mounted on the bushings has been added in Figure 12 (right): <u>This height</u> is measured, <u>as shown</u> on the left <u>in Figure 12 below, when the CTs</u> are mounted around the cables above the cable clamps. <u>If the CTs are mounted on the bushings, this height is measured between the centre of the outer cone and</u>	Р
								<u>the top of the cable fixation clamps, as shown on the right in Fig. 12 below</u> . The following text has been added after line 587 : The CTs shall be either on the bushings or on the cables.	
428	nl	Company G	C2-113-4 Ed2-DPC - Common	7.2	Т	The holes for the cables in the cable clamps shall be aligned with the vertical part of the elbow connectors.	Line 573: Specify that holes for the cables in the cable clamps shall be aligned with the vertical part of	The following text has been added after line 573 : The holes for the cables in the cable clamps shall be aligned with the vertical part of the elbow connectors.	A
429	nl	Company G	C2-113-4 Ed2-DPC -	72	G	Modify the text in line 552-553	In our opinion, the sentence in lines 552-553 needs to be improved, emphasising that the	The following sentence has been added before Lines 552-553:	Α
		sompany o	Common			The interface for cable connection of switchgear of category AA1x/AAA20 shall be suitable for	interface for cable connection of switchgear of category AA1x/AAA20 shall be suitable for cable	The cables to be connected to this category of switchgear have terminations made of screened insulated elbow plug	
			requirements.pdf	'	1	cable terminations made of screened insulated elbow plug connectors.	terminations made of screened insulated elbow plug connectors.	connectors.	
430	nl	Company C	C2-113-4 Ed2-DPC - Common	7.3	Т		Line 601: 35mm totale lengte of vrije nuttige lengte		N
	<u> </u>		requirements.pdf	<u> </u>	<u> </u>			The total length shall be minimum 35mm	
431	nl	Company C	C2-113-4 Ed2-DPC - Common	7.3	Т		Line 603: Waarom is dubbele kabelconnectie uitgesloten? Kan als mogelijk toch naast enkele bestaan?	The text will be adapted as follows: Only a ne cable lug shall be mounted per connection flag. If more than one cable lug is mounted per connection flag, only side	Р
			requirements.pdf	<u> </u>				by side connection is allowed.	
432	nl	Company C	C2-113-4 Ed2-DPC - Common requirements.pdf	7.3	Т		Line 609: maat 355mm komt niet overeen met <u>rechtse</u> figuur 14	The text in lines 609-611 has been adapted as follows: For FU KKNx, the minimum required height available between the centre of the hole in the connection flag and the top of the cable fixation clamp in the cable compartment is 500 mm, that is 450 mm for the HV cables terminations + 50 mm for the	Р
								current sensors of the FCI as shown on the left in Fig 14. A minimum required available height of <u>450 mm</u> for only the HV cables terminations is also allowed at the condition that a 2nd minimum required available height of 100 mm for the current sensors of the FCI is available between the underside of the cable clamps and the upper side of the bottom plates of the cables	
								compartment, as shown on the <u>right in Fig 14</u> , and that the cable clamps are made of insulating material. The text in lines 633-635 has been adapted as follows:	
								For FU KKNx, the space to mount the current sensors of fault current indicators (FCI). which <u>This space</u> shall be shall be present on every phase, below the cable terminations.	
								The text in lines 636-642 has been adapted as follows: The current sensors can be mounted either above the cable clamps as shown on the left of Fig. 14 or below the cable clamps according to the right of Fig. 14. In any case, they shall always be mounted above the bottom plate of the switchgear.	
								The min. required height for the arrangement shown right in Figure 14 on Line 645 has been adapted as follows further to this comment: 370 mm -> 450 mm	
433	nl	Company C	C2-113-4 Ed2-DPC -	7.3	Т	+	Line 629: Of de aardingskabel al dan niet lang genoeg is, is afhankeliik van de kunde van de	Noted	N
			Common		· ·		installateur, niet de fabrikant. Als men schakelmaterieel met Ur = 24kV eist en een eindsluiting		
			requirements.pdf	1 '	1		12kV monteert met minimaal verlies aan kabel is het de verantwoordelijkheid van de		
	1			1 '	í.	1	voorschrijver.	1	1

Acceptance coo	de
Accepted	

	Acceptance code	
Α	Accepted	
Р	Partially accepted	
N	Notod	

Ν	Noted

NOTE: The Stakeholder comments with visibility "None" are not included in this consultation report.

- **Type of comments** Editorial Technical General E T

					6	ociciai		R	Refused
id	lang	company	file	section	type	text proposal	comment	synergrid answer	acceptance code
434	ni	Company C	C2-113-4 Ed2-DPC - Common requirements.pdf	7.3	Т		Line 639: maat 405mm komt niet overeen met <u>linkse</u> figuur 14	The text in lines 609-611 has been adapted as follows: For FU KKNx, the minimum required height available between the centre of the hole in the connection flag and the top of the cable fixation clamp in the cable compartment is <u>500 mm</u> , that is 450 mm for the HV cables terminations + 50 mm for the current sensors of the FCI as shown on the <u>left in Fig 14</u> . A minimum required available height of 450 mm for only the HV cables terminations is also allowed at the condition that a 2nd minimum required available height of 100 mm for the current sensors of the FCI is available between the underside of the cable clamps and the upper side of the bottom plates of the cables compartment, as shown on the right in Fig 14, and that the cable clamps are made of insulating material. The text in lines 633-635 has been adapted as follows: For FU KKNx, the space to mount the current sensors of fault current indicators (FCI). which <u>This space</u> shall be shall be present on every phase, below the cable terminations. The text in lines 636-642 has been adapted as follows: The current sensors can be mounted either above the cable clamps as shown on the left of Fig. 14 or below the cable clamps according to the right of Fig. 14. In any case, they shall always be mounted above the bottom plate of the switchgear. The min. required height for the arrangement shown left in Figure 14 on Line 645 has been adapted as follows further to this comment: 420 mm -> 500 mm	A
435	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	7.3	E		Clarify the meaning of easy connection regarding the offset shown in Figure 13	The text in lines 622-623 has been adapted as follows: The bottom plates and the cable fixation clamps are designed in order to allow easy connection of HV cables with cross- section varying from 150 mm ² to 400 mm ² equipped with cable connection lug with an offset equal to 25 mm as shown in Figure 13 below. The following text has been added after line 623 : The cable entries in the bottom plate and the holes for the cables in the cable clamps shall be vertically aligned with the connection flags plus an offset of 25 mm corresponding to the distance between the contact surface and the axis of the barrel of the cable lug as shown in Figure 13 below.	P
436	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	7.3	E	Modify the text in line 600-602: The interface for cable connection of switchgear of category AA3x shall be suitable for cable terminations with field distribution in ambient air.	In our opinion, the sentence in lines 600-602 needs to be improved, emphasising that the interface for cable connection of switchgear of category AA3x shall be suitable for cable terminations with field distribution in ambient air.	b) the cable by as shown in Figure 15 below. The text in lines 600-603 has been adapted as follows: All cables are terminated with cable terminations with cable lug. <u>The cables to be connected to this category of switchgear</u> have terminations with field repartition in ambient air and with a cable lug. <u>using</u> . The interface for cable connection shall be a connection flaa, fitted with a fixed (prisonner) screw bolt or stud size M12, with a minimum length 35 mm They shall be <u>delivered</u> and with a conical spring washer according to DIN 6796, <u>a</u> plain washer and a nut <u>M12</u> .	Р
437	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	7.3	Т	If this where the case, modify the line 608: The FUs KKNx intended to be connected to the distribution loop and DKNx shall have a minimum width of 500 mm.	Line 608: Please clarify if the minimum width of 500mm also applies for FU DKNx belonging to a switchgear of category AA3x.	The minimum width of 500mm also applies for FU DKNx. The text in lines 600-603 has been adapted as follows: <i>The FUs KKNx</i> intended to be connected to the distribution loop and DKNx shall have a minimum width of 500 mm. <u>Note</u> : FU code KKNx is now only applicable for FU K intended to be connected to the distribution loop. Hence, the wording "intended to be connected to the distribution loop."	Р
438	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	7.3	T		Line 639: The min. required height of 405 mm with the current sensors (FSI) placed above the cable clamps does not correspond to the dimension given in figure 14 (left)	The text in lines 609-611 has been adapted as follows: For FU KKNx, the minimum required height available between the centre of the hole in the connection flag and the top of the cable fixation clamp in the cable compartment is <u>500 mm</u> , that is 450 mm for the HV cables terminations + 50 mm for the current sensors of the FCI as shown on the <u>left in Fig 14</u> . A minimum required available height of 450 mm for only the HV cables terminations is also allowed at the condition that a 2nd minimum required available height of 100 mm for the current sensors of the FCI is available between the underside of the cable clamps and the upper side of the bottom plates of the cables compartment, as shown on the right in Fig 14, and that the cable clamps are made of insulating material. The text in lines 633-635 has been adapted as follows: For FU KKNx, the space to mount the current sensors of fault current indicators (FCI). which <u>This space</u> shall be shall be present on every phase, below the cable terminations. The text in lines 636-642 has been adapted as follows: The current sensors can be mounted either above the cable clamps as shown on the left of Fig. 14 or below the cable clamps according to the right of Fig. 14. In any case, they shall always be mounted above the bottom plate of the switchgear. The min. required height for the arrangement shown left in Figure 14 on Line 645 has been adapted as follows further to this comment: 420 mm -> 500 mm	P
439	nl	Company G	C2-113-4 Ed2-DPC - Common requirements.pdf	7.3	Т		Line 645: Please specify the (inner) diameter and installation requirements for the sheath protecting the cables (fibers) from the current sensor (FCI) depicted in Figure 14	The following text has been added after line 644: A sheath with inner diameter > 28 mm for routing and protecting the connection cables from the current sensors to the FCI shall be installed on the internal wall of the cable compartment. This sheath shall be: - correctly fixed on the internal wall - running to the area where the current sensors will be installed - routed in such a way that it is running outside the zone of electrical influence from HV active parts	Р
440	fr	Company D	C2-113-4 Ed2-DPC - Common requirements.pdf	8.3	E		Line 697-698: something seems missing in this sentence.	Indeed, the sentence is incomplete. The text in lines 697-698 has been completed as follows: For FUS DxNx and Dx <u>G</u> x used as general protection in which the circuit-breaker is part of the earthing of the circuit downstream this FU, its control circuit shall automatically prevent its tripping under the action of the protection, as long as the earthing-switch is closed. Note: FU code DxGx is now only applicable for the FU used as genereal protection. Hence, FU code DxTx has been changed into DxGx and the wording "used as general protection" has been deleted.	P

Accepta	nce	code

	Acceptance code
А	Accepted
Ρ	Partially accepted

Ν	Noted	

NOTE: The Stakeholder comments with visibility "None" are not included in this consultation report.

- Type of comments Editorial Technical G General

ic	lang	company	file	section	type	text proposal	comment	synerarid answer
		Company		Section	type		Lie 607. Deer de litte envellente	
44		Company F	C2-113-4 Ed2-DPC -	8.3	E		Lijn 697: Deze zin lijkt onvolledig.	Indeed, the sentence is incomplete.
			Common					The text in lines 697-698 has been completed as follows:
			requirements.pdf					For FUS DXNX and DX <u>G</u> x used as general protection in which the circuit-breaker i
								downstream this FU, its control circuit shall automatically prevent its tripping und
								earthing-switch is closed.
								Note:
								EU code DxGx is now only applicable for the EU used as genereal protection. Hence
								and the wording "used as general protection" has been deleted
- 44		C		0.0.0			1	Test is Lines Cop Top has been deleted.
44	2 11	Company G	C2-113-4 E02-DPC -	8.3.2				l ext in Lines 699-700 has been deleted:
			Common				Is the circuit-breaker function type DKN8 applicable for HV switchgear, intended for use in an	For FU type UKN8, an interlock shall prevent to close and open the earthing switch
			requirements.pdf				installation to be connected to the public HV distribution grid, specifically the distribution loop	, The following sentence has been added before Line 701:
							of a Belgian DSO?	For FU type DKN9 with sequential operations of the circuit-breaker and of the east
								close and open the earthing switch when the circuit breaker is opened.
44	3 nl	Company G	C2-113-4 Ed2-DPC -	843	т		Could you confirm the range (min and max value) of the inner diameter and curvature for both	The text in lines 743-746 has been adapted as follows:
		,,	Common				nadlocks and multi-locks used by the Belgian DSO?	The design of the hosting system for the external locking device intended to lock t
			requirements adf				padiocks and match locks asca by the beight boot	the meter switch chall be suitable for the following ovternal locking devices:
			requirements.put					the motor switch shull be suitable for the following external locking devices.
								- A padlock with a handle with a diameter between 4 mm and 8 mm and a inner r
								mm
								- A multilock with with tongs with a thickness between 5 mm and 10 mm in lockin
								between 10 mm and 25 mm
								- A nylon wire with a minimum diameter of 4 mm
								The mechanical operation / the change of position of the motor-switch shall not k
								one of the above-mentionned external locking device is set in the bosting system
44	1 2	Company C	C2 112 / Ed2 DDC	0.1	т		Place clarify if there is any requirement for the presence of a local indication indicat	
44	4 ni	Company G	C2-113-4 Ed2-DPC -	9.1			Please clarity if there is any requirement for the presence of a local indication, indicating if the	res, see 94.0.5
			Common				arc suppression device has operated or not.	The following text has been added after line 753:
			requirements.pdf					For every FU fitted with an arc suppression device, a local indication on the man-r
								§4.6.5), indicating if the arc suppression device has operated or not.
44	5 nl	Company F	C2-113-4 Ed2-DPC -	9.2	Т	Voorstel: If the pressurized gas in the sealed compartment has an insulating function, than it	Lijn 756: Er wordt uitgegaan van het feit dat in toekomstige installaties het gas altijd een	Yes, the gas is in a gas filled compartment of AA1x/AA20 switchgear is always use
			Common			must be possible to check its dielectric withstand.	isolerende functie zal hebben. Maar zal dit zo zijn?	also used for current interruption, the dielectric withstand capability of the gas sh
			requirements ndf					
14	6 pl	Company G		0.2	т		A vacuum interruptor is considered as a coaled pressure system as per Note 1 to entry of the	It is not allowed to use a vacuum interruptor to onsure the disconnecting function
	· '''	Company G	Common	5.2				The fellowing to the base added ofter line 700
			Common					The following text has been added after fille 755.
			requirements.pdf				Please confirm if it is allowed to use a vacuum interrupter to ensure the disconnecting function	Sealed pressure systems ensuring the disconnecting function (isolating distance) s
								part of the system, allowing to check the insulation capacity.
44	7 nl	Company G	C2-113-4 Ed2-DPC -	10.2	G		Please specify the required operating levers/handles needed for operation, special actions,	The following text has been added after line 848:
			Common					A list must be present with all the handles and accessories needed for operation,
			requirements.pdf					installation. Examples of such accessories are:
			· · ·					- Accessories for cable testing
								Specific tools for performing switching operations or cable installations
								- specific tools for performing switching operations of cable installations,
	_							I ne list must contain the manufacturer, model and order number for each access
44	3 nl	Company C	C2-113-4 Ed2-DPC -	10.5.3	Т	Lijn 928:impulses of 300ms and more.	Lijn 928: puls 20ms is te kort om betrouwbare prioriteit open te maken.	Not accepted, a minimum duration for opening and closing pulse of 20 ms is consi
			Common					
			requirements.pdf					
44	9	Company G	C2-113-4 Ed2-DPC -	11.1	G		Please specify at what time the installation and operating instructions (covering the range of al	The following text has been added after line 949:
			Common				possible variants of FUs for which the homologation has been requested) shall become	The installation and operating instructions of the execution of the switchgear and
			requirements ndf				available	submitted during the homologation procedure
45		Company E		11 2 1	6	cton do zin na 'requiremente'	Liin 979: Do zin dio on doza liin bagint spreakt van 'nangle'. Norgans anders wordt er over	Taxt in Lines 979 990 has been adapted as follows:
43	´ '''		Common	11.3.1	^L		namels according to dit con fourtio?	The Delaien Coneral Degulation for Electrical Installations (ADEL/DC/E) when were'
							Paners Reshroketti is all sett toaffet	nie beigiun Generul Regulution for Electrical Installations (AREI/RGIE) also mentio
		-	requirements.pdf					uuriiriistrutive requirements. that will not be included in these panels.
45	1 nl	Company F	C2-113-4 Ed2-DPC -	11.3.1	E	VB1: These 7 requirements are:	Lijn 980: Kan dit niet anders geformuleerd worden?	Text in line 980 has been adapted as follows:
			Common			VB2: The 5 golden rules plus the 2 administratif ones are:		The 5 golden rules plus the 2 accompanying rules are:
			requirements.pdf					
45	2 nl	Company F	C2-113-4 Ed2-DPC -	11.3.2	Т		Lijn 990: deze zin is onbegrijpelijk.	Text in lines 990-991 has been adapted as follows:
			Common				Lijn 990: Waar vindt men de ' safety and the performance required by the Synergrid	The manufacturer shall provide the operating instructions as a quick user auide #
			requirements.pdf				prescriptions'?	performances required by the Synergrid prescriptions.
15	3 nl	Company F	C2-113-4 Ed2-DPC -	11 2 2	F		Liin 1005: Is dit correct Engels? "The manufacturer shall nut available!	Text in line 1005 has been adapted as follows:
	· ···	company	Common	11.5.2	-			The manufacturer shall make queilable
			roquiron ante a 16					Ine manajactarer shan make avanable
		-	requirements.par	7241				
45	4 tr	Company E	C2-113-4 Ed2-DPC -	Title	G	Lignes 24-25: intended for use in <u>a Client installation</u> to be connected to the public HV	Contrairement à la version précédente en particulier, voire, en général, la prescription prévoit	The C2/113-x specifications and the homologation apply to HV switchgear intende
			Common			distribution grid of a Belgian DSO	des contraintes qui ne seraient mises à charge que des URD et non des GRD :	public HV electricity distribution network, whether it belongs to a DSO or a DSO.
			requirements.pdf				L'homologation des appareillages de coupure HT destinés à être utilisés dans <u>une installation</u>	The requirements of Synergrid C2/113-x specifications are intended to ensure the
1							de client raccordée au réseau public de distribution HT d'un GRD belge.	distribution station, the continuity of the power supply to the grid and the possibil
							Pourriez-vous nous expliquer la raison de cette distinction ?	The HV switchgear intended for DSOs distribution station is the subject of a supply
								more stringent requirements of DSOs (asset management, operating constraints
								clearly indicates that the Synergrid homologation is a prerequisite
								areary manages that the synergina noniologation is a prerequisite.
1								The text is Line 24 35 of the title of desument C2/442. A has been advected as
1								The text in Line 24-25 of the title of document C2/113-4 has been adapted as follo
								HV switchgear intended for use in <u>a Client</u> an installation to be connected to
								a Belgian DSO
								The text in Line 124 of §1 "Object and scope" has been adapted as follows:
1								for <u>a Client</u> an installation to be connected to the public HV distribution grid
			1					

Published: 27/02/2024

Р

Ρ

Р

R

Р

Р

	Acceptance code
А	Accepted
P	Partially accepted
N	Noted
R	Refused
	acceptance code
	Р
hich the circuit-breaker is part of the earthing of the circuit	
prevent its tripping under the action of the protection, as long as the	

as genereal protection. Hence, FU code DxTx has been changed into DxGx en deleted.

and open the earthing switch when the circuit breaker is closed. 701: circuit-breaker and of the earthing-switch, an interlock shall prevent to breaker is opened. king device intended to lock the mechanical operation and the position of external locking devices: 4 mm and 8 mm and a inner radius of curvature between 10 mm and 15 en 5 mm and 10 mm in locking position and an inner radius of curvature f the motor-switch shall not be possible and cannot be forced when the

local indication on the man-machine interface shall be present (see operated or not. A20 switchgear is always used for insulation purposes. Even if the gas is stand capability of the gas shall be such that it withstands TRV. re the disconnecting function. function (isolating distance) shall be equipped with an indicator, integral apacity. sories needed for operation, maintenance or interventions in the

r cable installations,	
rder number for each accessory.	
losing pulse of 20 ms is considered.	R
cution of the switchgear and FUs presented to the homologation shall be	Р
tions (AREI/RGIE) also mentions these five rules expanded with two d in these panels	Р
:	Р
tions as a quick user guide in order to guarantee both the safety and the . 	Ρ
	А

bly to HV switchgear intended for use in any installation connected to the belongs to a DSO or a DSO. s are intended to ensure the safety of DSO staff working in the y to the grid and the possibility of connecting the installation to the grid. ion is the subject of a supplementary technical specification to meet the nent, operating constraints, etc.), but this supplementary specification prerequisite.	Ρ
-4 has been adapted as follows: <u>allation</u> to be connected to the public HV distribution network <u>loop</u> of	

en adapted as follows: e public HV distribution grid loop of a Belgian DSO

	Type of comments
E	Editorial
Т	Technical
G	General

id	lang	company	file	section	type	text proposal	comment	synergrid answer	acceptance code
501	. nl	Company B	C2-113-5 Ed2-DPC - DSO specific requirements.pdf	5.	Т		Line 110 : for an FU-D Horstmann Wega 2 is used On wich purpose, if this is for the DSO who has to provide the auxilary voltage ?	The text is corrected to : "The brand and model of the VDIS installed by the switchgear manufacturer in the functional units connected to the distribution grid are sometimes imposed by Fluvius. For DSO use a Horstmann Wega 1 or Horstmann Wega 2 is used. For client installations, if three or more FU-K are connected to the distribution grid, a Horstmann Wega 1 is imposed" It is the client responsability to provide the auxiliary voltage.	Ρ
502	! nl	Company C	C2-113-5 Ed2-DPC - DSO specific requirements.pdf	5.	T	Lijn 110: and for an FU-D, acting as general protection, Wega 2 is used.	Lijn 110: betreffende FU beperkt deze eis zich waarschijnlijk tot de algemene beveiliging en niet alle afgaande velden. Lijn 111: Waarom staat het de klant niet vrij om spanningsdetectie uit te voeren op zijn eigen cellen? Interne scada?? Lijn 112+113: Hoe ziet Fluvius een automatische wederinschakeling functioneren met en een verbod op gebruik WEGA 2 op de luscellen en verbod alternatieve spanningsdetectie?	The text is corrected to : "The brand and model of the VDIS installed by the switchgear manufacturer in the functional units connected to the distribution grid are sometimes imposed by Fluvius. For DSO use a Horstmann Wega 1 or Horstmann Wega 2 is used. For client installations, if three or more FU-K are connected to the distribution grid, a Horstmann Wega 1 is imposed " It is the client responsability to provide the auxiliary voltage. No, the contacts of the VDIS can be used if the client provides an auxiliary voltage. The testing points of the VDIS shall not be used for this purpose. They shall be availiable for the DSO at all time. Text will be changed to : "DSU specific components that use a signal of the VDIS as input shall not be connected to testing points of the VDIS installed on a FU connected to the distribution grid."	Р
503	i nl	Company C	C2-113-5 Ed2-DPC - DSO specific requirements.pdf	6.	Т	Lijn 118: must be present on a non removable and in service accessible element of the HV billing	Lijn 118: Op de buitenzijde van de FU M is doorgaans onvoldoende ruimte om de duplicaten te voorzien op niet verwijderbare elementen. Indien deze goed leesbaar in het LS compartiment worden bevestigd zijn deze kenmerken beschermd van vocht en UV + steeds bevestigd aan niet verwijderbare elementen van de FU.	Not accepted, the duplicates of the rating plates of CT's and VT's shall be present on the outside, but they can be on a removable part.	R
504	nl	Company C	C2-113-5 Ed2-DPC - DSO specific requirements.pdf	7.1	т		Line 145: Is het voor fluvius enkel toegestaan de TI's aan de bovenzijde van de kabelklem te bevestigen? Eveneens voor klantencabines?	No, The drawings are only present to illustrate the dimensions mentioned in the text. The solutions will be evaluated during homologation.	N
505	i nl	Company C	C2-113-5 Ed2-DPC - DSO specific requirements.pdf	7.2	Т	Line 149: Remove	Line 145: Er is geen enkele technische reden gecommuniceerd waarom, als enige DNB, de faseafstand expliciet dimensioneert. Zowel de kabels, FSI en andere toebehoren kunnen perfect gemonteerd worden op kleinere afstanden.	For the connection of 400 mm ² a minimim distance of 95 mm is necessary between the connectors. This requirements is re- used from previously consulted additions requirements of Fluvius.	R
506	i nl	Company C	C2-113-5 Ed2-DPC - DSO specific requirements.pdf	12.1	Т	Line 262-263: For installation for DSU, it is the responsibility of the installer/maintenance personal to investigate together with the DSU the compatibility of the chosen fuse with the combined load break switch.	Line 262-263: De verantwoordelijkheid van de fabrikant stopt na het opmaken van de lijst. De werkelijke toepassing is voor de fabrikant niet bekend, dit is de taak van de installateur en eindklant.	Correct, Text will be adapted to : "It is the responsibility of the manufacturer to investigate the compatibility of the fuse with the combined load break switch."	A
507	' nl	Company B	C2-113-5 Ed2-DPC - DSO specific requirements.pdf	12.2	Т	277 Characteristics for the CTs in FU's DKNx connected to the grid	In AIS we often use standard CT's with secundary winding of 5A	Noted, obligation of 1A is removed	A
508	8 nl	Company C	C2-113-5 Ed2-DPC - DSO specific requirements.pdf	12.2	Т		Line 282: Om welke reden dient de TI <u>></u> 100/1A te zijn?	A client with a consumption of 2 MVA must install an relay with auxiliary supply. 2 MVA gives 80 A on primary side (on 15 kV grid). The CT is chosen one rating higher, so minimum 100 A	N
509	fr	Company E	C2-113-5 Ed2-DPC - DSO specific requirements.pdf	Title	G	Lignes 24-25: intended for use in <u>a Client installation</u> to be connected to the public HV distribution grid of a Belgian DSO	Contrairement à la version précédente en particulier, voire, en général, la prescription prévoit des contraintes qui ne seraient mises à charge que des URD et non des GRD : L'homologation des appareillages de coupure HT destinés à être utilisés dans <u>une installation</u> <u>de client</u> raccordée au réseau public de distribution HT d'un GRD belge. Pourriez-vous nous expliquer la raison de cette distinction ?	see Synergrid answer C2-113-3 Ed2-DPC - Technical File 1) Lines 24-25 on cover page of document to be modified as follows: HV switchgear intended for use in <u>an installation</u> connected to the public HV distribution grid <u>loop</u> of a Belgian DSO 2) Line 46 in Chapter 1 "Introduction" to be adapted: for <u>an installation</u> to be connected to the public HV distribution grid <u>loop</u> of concern.	P

	A	Acceptance code Accepted
	Ρ	Partially accepted
	Ν	Noted
	R	Refused
		acceptance of
	Т	Р
hgear manufacturer in the functional units connected to the distribution		

Е T G

Type of comments Editorial Technical General

id	lang	company	file	section	type	text proposal	comment	synergrid answer
701	l nl	Company A	C2-113-7 Ed2-DPC - IA withstand and associated AA categories.pdf	3	Т	Delete the word "pressurized" as also GIS with atmospheric pressure is one of the technologies, see Cired paper 894	Zie ook bijgevoegde PDF. Wij leveren dit concept al vanaf 2002 naar DSO's binnen en buiten Europa. Intussen meer dan 200000 panelen geleverd.	With reference to definition 3.6.6.3 of IEC 62271-1 Ed. as a sealed pressure system provided that no further g
702	? fr	Company D	C2-113-7 Ed2-DPC - IA withstand and associated AA categories.pdf	3.2	Т	The gas expension baseframes is now not allowed for AA10 installation. How is an AA10 material on a baseframe with "Rear-up" gas evacuation (AA10-BL baseframe) considered? Is it considered as a AA11 installation ?		Yes, the assigned AA category for this switchgear will l
703	3 nl	Company C	C2-113-7 Ed2-DPC - IA withstand and associated AA categories.pdf	3.5	T	LIJN 158: - It is equipped with an energy absorber, reducing the overpressure by minimum 65%. This shall be demonstrated through an internal arc fault test with measurement of the overpressure in the first expansion volume before the energy absorber and a second measurement in the chimney after the energy absorber.	Lijnen 157-173: Op welke kwantificeerbare wijze kan een onderscheid gemaakt worden tussen een AA11 een AA15 opstelling? Aan welke criteria dient men te voldoen om een sokkel van een absorptiesokkel te onderscheiden?	The manufacturer shall describe the presence energy requested by the manufacturer. The efficiency of the o switchgear manufacturer.
704	l nl	Company C	C2-113-7 Ed2-DPC - IA withstand and associated AA categories.pdf	3.6	Т	Lijn 186: regardless of the position of any switch without any exception and assumption.	Lijn 186: De specificaties nu dermate duidelijk opstellen zodat elke constructeur deze dient te respecteren.	The aim of this requirement is to mitigate an internal a proposal "without any exception and assumption" has
705	5 nl	Company C	C2-113-7 Ed2-DPC - IA withstand and associated AA categories.pdf	3.7	G		Lijn 201-202: Wat wordt hiermee exact beoogd?	Metering functions of category AA10 with codification ambient air insulated HV metering compartiment. The category.
706	i nl	Company F	C2-113-7 Ed2-DPC - IA withstand and associated AA categories.pdf	3.7	Т	Lijn 196: in een FU-M zijn er niet-geïsoleerde onderdelen die zich in lucht bevinden. Dit is in strijd met wat er staat in § 3,1: all unscreened active parts shall be inclosed in a sealed pressurised gasfilled compartment		The first criterium mentionned under \$3.1 will be modifi Switching devices and all unscreened active HV-parts s with a pressure relief device, except for the fuse caniste
707	nl	Company F	C2-113-7 Ed2-DPC - IA withstand and associated AA categories.pdf	4.1	G		Lijn 209: Betekent dit dat schakelapparatuur met vaste isolatie is aanvaard?	Metal enclosed switchgear comprising unscreened, so category AA3x.

Accepta	nce	code

- A Accepted

P N R	Partially accepted Noted Refused
	acceptance code
2: A compartment filled with a gas at atmospheric pressure is considered as processing is required during its expected operating duration	R
e AA11.	N
absorber system, allowing Synergrid to assign the AA15 category nergy absorber system shall be demonstrated case by case by the	R
rc fault on the busbar side of an extensible unit. Hence, the text no added value.	R
MKB, MBK and MBB can comprise HV compartment(s) other than the se compartments shall comply with the requirements of the AA10	Ν
ed as follows, so that reference to \$3.1 can be maintained: hall be enclosed in a sealed pressurised gas-filled compartment equipped rs and the HV metering compartiment.	Р
id insulated HV parts in ambient air are considered to belong to the	N