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TESTLA
Elektrik Laboratuvarları Tic. Ltd. Şti.

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AB-0386-T

1902.05.01/00

10.05.2019

TEST REPORT

Client Name/Address	GMS Pano Elektrik Sanayi ve Ticaret A.Ş. Beylikdüzü O.S.B. Bakır ve Piriç San. Sit. Leylak Cad. No:4 Beylikdüzü / İSTANBUL		
Name and Identity of Test Item	DT4000 TEST PANEL		
Order No.	1902.05	Sample Acceptance Date	08.05.2019
Num. Of Pages of The Report	6 + 5 pages of annexes 11 pages in total	Test Date(s)	09.05.2019
Test Standard(s)	IEC TR 61641:2014: 2014-09-09 Enclosed low-voltage switchgear and controlgear assemblies - Guide for testing under conditions of arcing due to internal fault		
Test Result(s)	POSITIVE / Details are given on the following pages which are part of this report.		
Remarks			
The test results relate only to the items tested. Tests marked (#) in this test report are not included in the TÜRKAK accreditation schedule for this laboratory. TESTLA Elektrik Laboratuvarları accredited by TÜRKAK under registration number AB-0386-T for IEC ISO/IEC 17025:2012 as test laboratory. Turkish Accreditation Agency (TÜRKAK) is a signatory to the European co-operation for Accreditation (EA) Multilateral Agreement (MLA) and to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) for the recognition of test reports. The test and/or measurement results, the uncertainties (if applicable) with confidence probability and test methods are given on the following pages which are part of this report.			
Seal	Report Date	Person in Charge of Test	Laboratory Manager
	10.05.2019	 Mehmet ŞUMNU	 Caner EREN

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1. Participants of Tests

Sequence No.	Name, Last Name	Position	Company
1.	Caner Eren	Head of Laboratory	TESTLA
2.	Mehmet Şumnu	Laboratory Chief / Test Personnel	
3.	Mehmet Kalyoncu	Test Personnel	
4.	Selçuk Aygün	Prepared By	

2. Performed Test

Sequence No.	Test name	Test standard	Result
1.	Arc fault tests	IEC TR 61641	P

The test details are given in the following pages (Chapter 5).

3. General Ambient Conditions

Ambient temperature (°C)	Ambient Humidity (RH%)	Atmospheric pressure (mbar)
19,6	45	1003

Laboratory Indoor ambient conditions are climatically controlled and registered. Special ambient conditions are specified separately in relevant test.

4. Rated Values of Test Item

Brand	GMS PANO
Type/Model	DT4000 TEST PANEL
Arc fault test	65 kA / 115 ms
Indicator class of arc fault test	Unrestricted access (ordinary persons)

Photograph of the test sample



5. Test Results

Explanations on the presentation and reporting of results.

This report applies only to samples for which tests have been carried out.

Tests marked in this test report (#) are not within the scope of accreditation obtained from TÜRKAK.

Since the test sample was provided by the customer, the contribution resulting from sampling was not included in the measurement uncertainty. The test sample was tested as received.

In line with customer requests,

Tests according to IEC TR 61641 standard was shown as follows in the table in the column of the test standard, as "IEC TR 61641"

IEC TR 61641			
Clause	Required-Requirement	Measured-Observed	Result

In this table,

1. Column: **Clause**

The clause number of the standard specified in the top line. (The clauses of the test standard cited to the other standards are specified under the Requirement-Necessity section-column)

2. Column: **Required -Requirement**

Structural requirements-conditions-guidelines for the described tests to determine the suitability of the sample described in the relevant standard clause and the property defined in the relevant standard clause of this sample.

3. Column: **Measured-Observed**

The results of measurements and observations (if any, are made in the NOTES section of this section and / or in the last-bottom section of the relevant test page, if the customer requests, technical or other reasons are omitted)

4. Column: **Result**

Display of decisions in Possible Tests Results:

— Non-applicable for the sample	:	NA	(Not Apply)
— Sample meets the requirements	:	P	(Pass) (if any) *
— Sample does not meet the requirements	:	F	(Fail) (if any) *
— Given information and topics	:	--	Out of Assessment

It is signed as above.

(*) Situations in which the "passed" / "failed" evaluation can not be made with regard to the tests made:

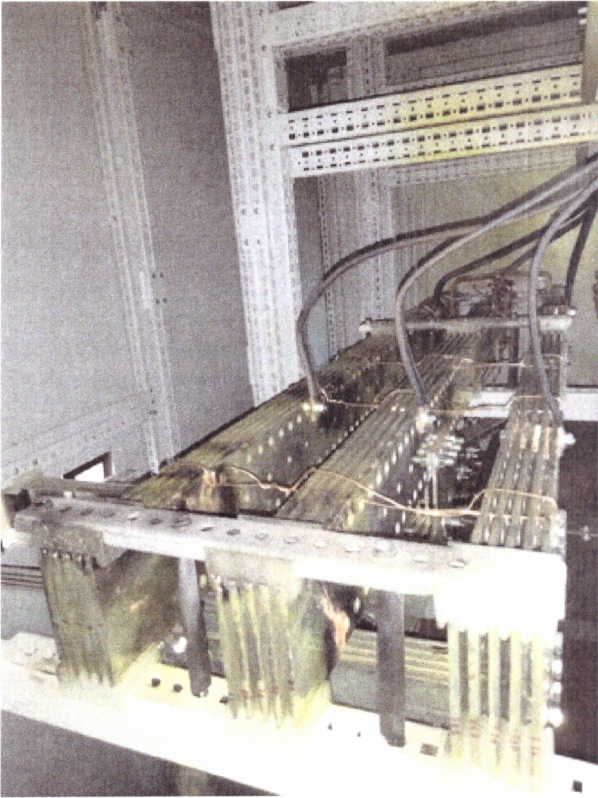
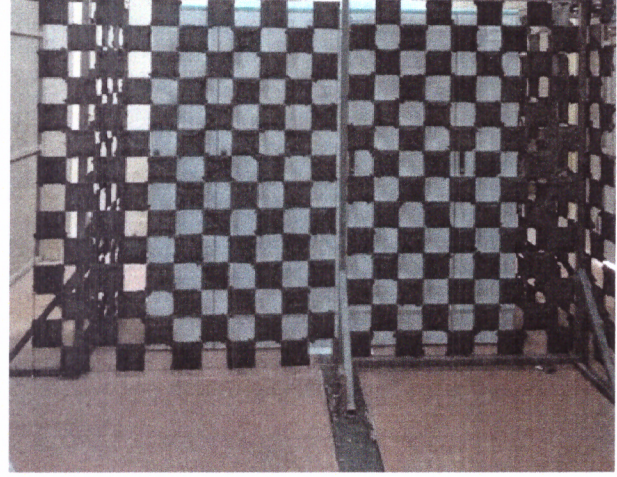
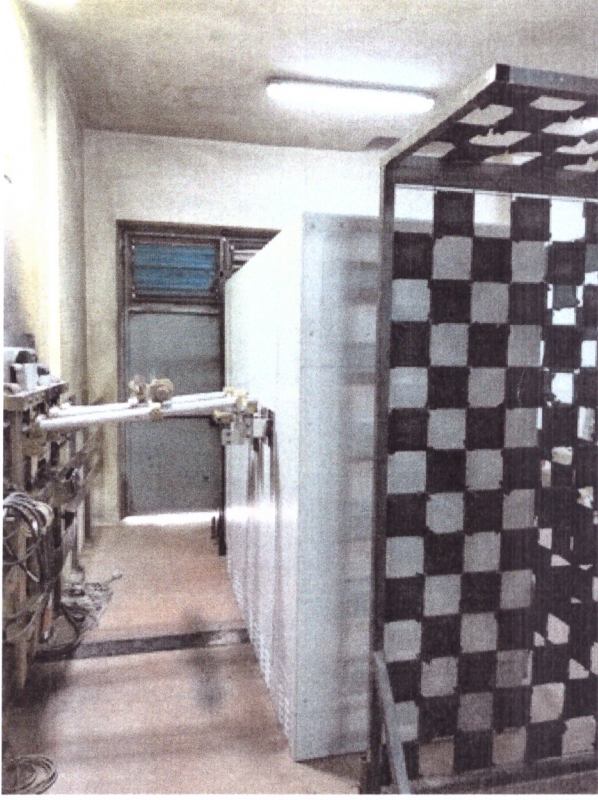
- Deviations, additions and removals from standards (to affect to the results positively) related with customer request or other situations.
- The possibility that the numerical results obtained from the sample in the tests are positive / negative when the measurement uncertainties of the relevant test-device participate in the calculation (In such cases the measurement uncertainty values of the relevant tests are specified in the report)
- Absence of declaration values (necessary for evaluation of the suitability of the results) of the samples in relation to the experiments performed.
- By the nature of the Test being undertaken there is no limit or criterion for assessing compliance (the relevant test-product standard or the customer's pre-determined) of the results obtained to be positive or negative.



TESLAB www.testla.com.tr		TESTLA Elektrik Laboratuvarları Tic. Ltd. Şti. Test Report		Accreditation No AB-0386-T	Report No 1902.05.01/00	Report Date 10.05.2019													
IEC TR 61641																			
Clause	Required-Requirement			Measured-Observed		Result													
	IEC TR 61641 Arc fault tests																		
	The sample was tested by fixing it to the ground as in the normal operating installation position.					--													
	The indicators are made of black creton fabric of 40 g / m2 for unlimited access (ordinary persons) according to IEC TR 61641 8.6.4.1, in a plane parallel to each side of the sample, at a height of 2 m from the floor and perpendicular to a distance of 300 mm. is placed.					--													
	The arc event was carried out by means of a copper wire with a diameter of 1.5 mm2 according to Table 1 of IEC TR 61641 8.6.2.					--													
	IEC TR 61641 Clause 8.6.2 Table 1																		
	<table><tr><td>Test Current (RMS) (kA)</td><td>Wire size (mm²)</td></tr><tr><td>I ≤ 25</td><td>0,75</td></tr><tr><td>25 < I ≤ 40</td><td>1,0</td></tr><tr><td>I > 40</td><td>1,5</td></tr></table>					Test Current (RMS) (kA)	Wire size (mm²)	I ≤ 25	0,75	25 < I ≤ 40	1,0	I > 40	1,5	--					
Test Current (RMS) (kA)	Wire size (mm²)																		
I ≤ 25	0,75																		
25 < I ≤ 40	1,0																		
I > 40	1,5																		
	Test parameters																		
	<table><tr><td rowspan="2">Sample Name and Description</td><td colspan="4">Test Parameters</td></tr><tr><td>Test Current (kA) RMS / Peak</td><td>Test Voltage (V)</td><td>Test Frequency (Hz)</td><td>Test Duration (ms)</td></tr><tr><td>DT4000 TEST PANEL</td><td>65 / 143</td><td>420</td><td>50</td><td>115</td></tr></table>					Sample Name and Description	Test Parameters				Test Current (kA) RMS / Peak	Test Voltage (V)	Test Frequency (Hz)	Test Duration (ms)	DT4000 TEST PANEL	65 / 143	420	50	115
Sample Name and Description	Test Parameters																		
	Test Current (kA) RMS / Peak	Test Voltage (V)	Test Frequency (Hz)	Test Duration (ms)															
DT4000 TEST PANEL	65 / 143	420	50	115															
	IEC TR 61641 Clause 8.7 Assessment of the test																		
	Correctly secured doors and covers do not open and remain effectively in place and provide a minimum level of protection in accordance with the requirements of IP1X of IEC 60529. Deformations are accepted. Some breakage of a limited number of fastenings and hinges is acceptable.			The doors and covers did not open. The sample meets the IP1X requirement.		P													
	No parts of the assembly are ejected which have a mass of more than 60 g except those which are dislodged and fall between the assembly and the indicators;			Yes		P													
	Arcing does not cause holes to develop in the external parts of the enclosure below 2 m, at the sides declared to be accessible as a result of burning;			Yes		P													
	The indicators do not ignite			Yes		P													
	The protective circuit for accessible part of the enclosure is still effective in accordance with IEC 61439-2.			Yes		P													
Notes:																			
Elektrik Laboratuvarları																			



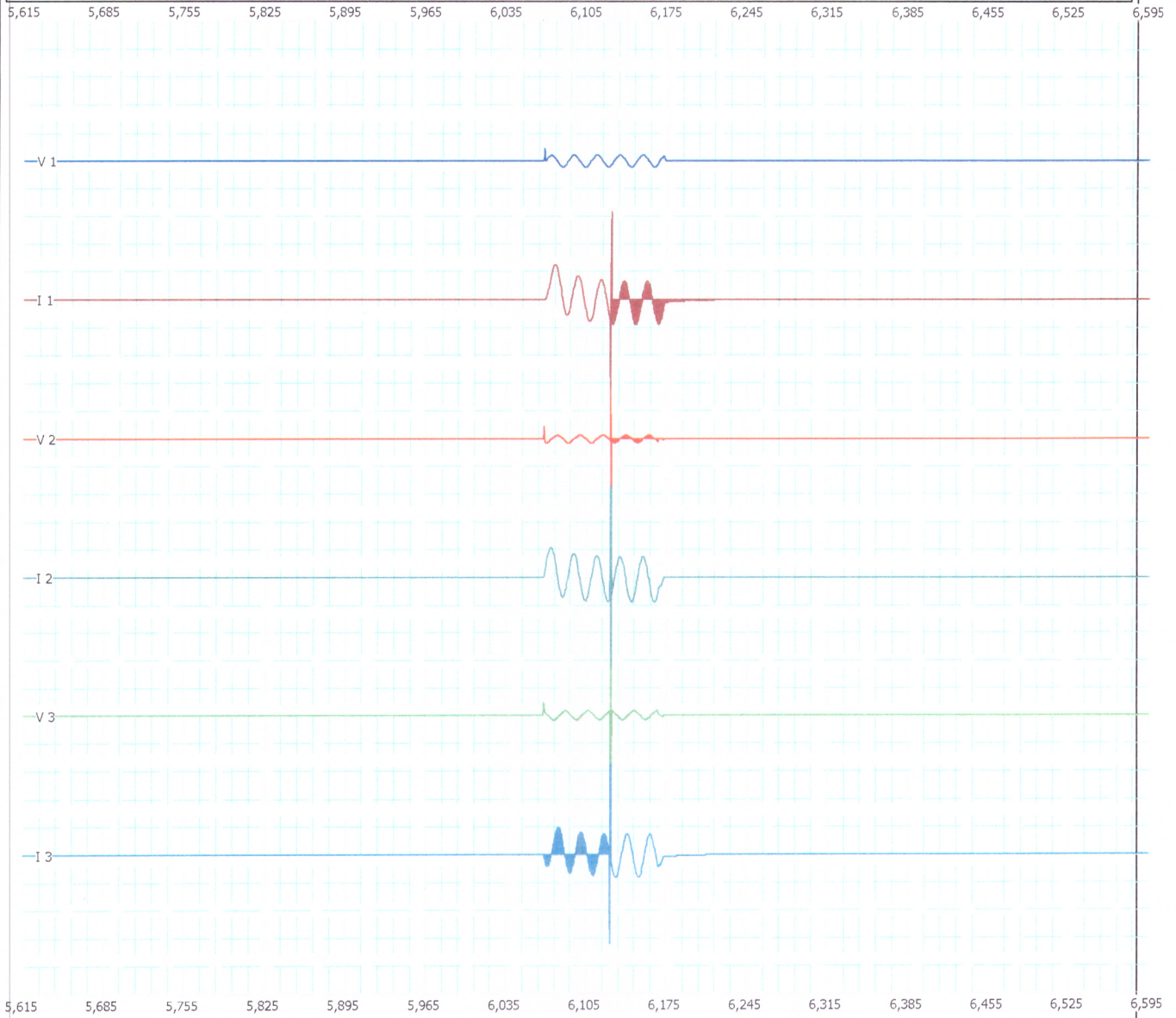
6. Test Assembly and Test Item Photographs



7. List of Annexes

- 4 pages of technical documentation.
- 1 page oscillogram.





V 1	V 2	V 3	I 1	I 2	I 3
34,642 V	36,542 V	43,680 V	66.696,332 A	67.208,122 A	65.186,169 A
Cos Phi 1	Cos Phi 2	Cos Phi 3	I1 time	I2 time	I3 time
0,196	0,189	0,181	116 msec	115 msec	116 msec
I1 Peak	I2 Peak	I3 Peak	I1 Joul	I2 Joul	I3 Joul
148.044,729 A	118.336,548 A	110.611,384 A	516,014 kA ² sn	496,862 kA ² sn	492,911 kA ² sn

Osc. No : 1902.05-22122

Test Date : 09.05.2019

Company : GMS Pano Elektrik San. ve Tic. A.Ş.

Test Current : 65 kA

Test Maneuvers : Main busbar 115 ms Arc fault test

Tip/Model : DT4000 TEST PANEL

Sample No : 1902.05.02





4.d

5.2

2150x2300x1000mm

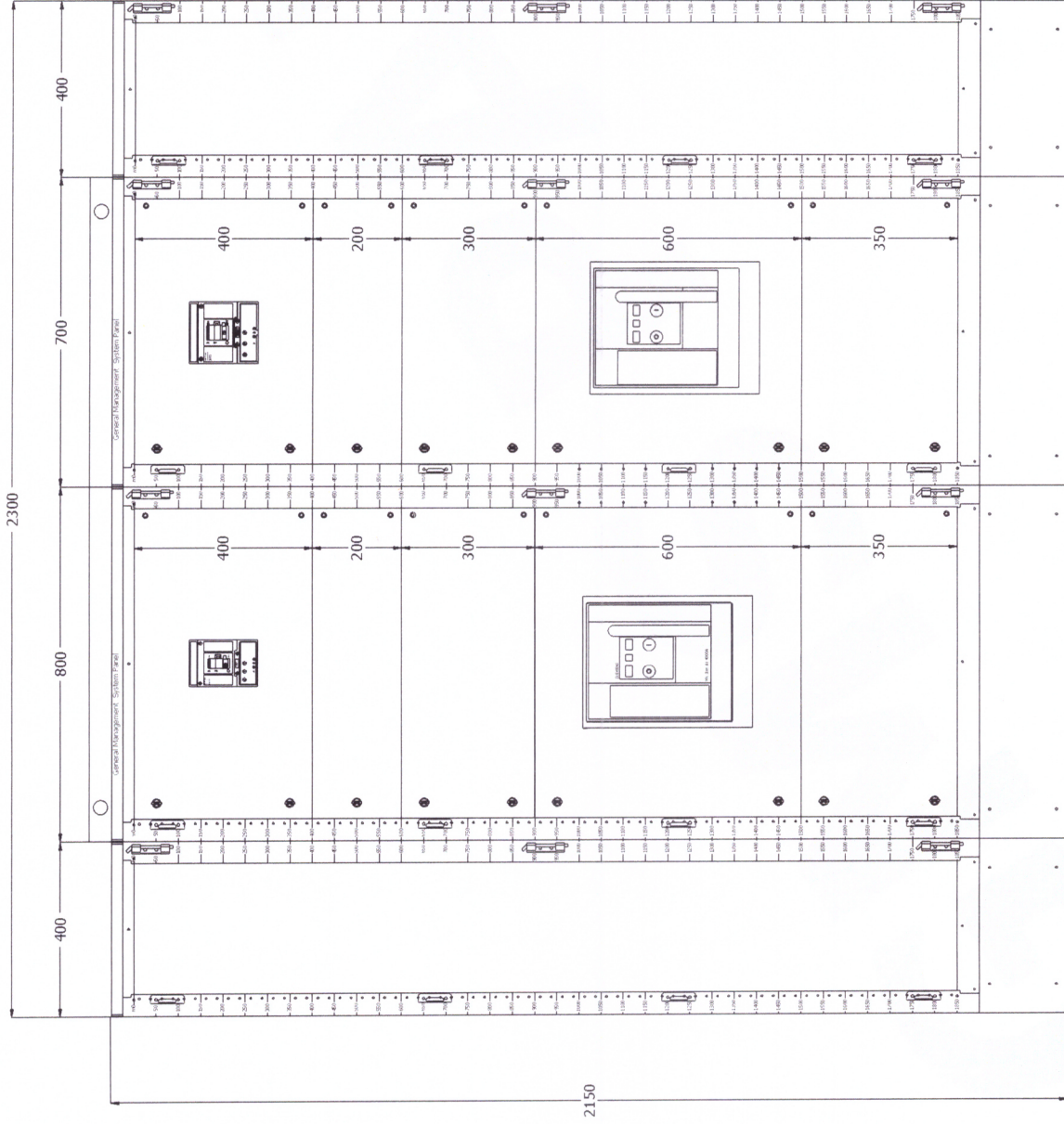
DIKILI TIP PANO

GİRİŞ VE ÇIKIŞLAR

ŞALT MALZEME	SIEMENS
--------------	---------

RAL 7035 / 31 / 01

Bu resimdeki bilgiler GMS PANO ELEKTRİK SANAYİ VE TİCARET A.Ş.'nin malidir. Yazılı izin olmadan gogabıtlamaz ve kullanılamaz. Bu resime göre imal edilen parça GMS PANO ELEKTRİK SANAYİ VE TİCARET A.Ş.'nin izni olmaksızın üçüncü kişilere gösterilemez ve açıklanamaz. Çizimlerdeki tüm cihazlar ağır pozisyonunda, gekmececeli cihazlar gekmece disında, yayılı mekanizmalar boşa ve güç kaynakları devre dışı olarak gösterilmiştir.



ÖRTÜ SACLI GÖRÜNÜŞ

PANO ÖLÇÜSÜ	2150x2300x1000mm
PANO TİPİ	DIKILI TIP PANO
GİRİŞ VE ÇIKIŞLAR	ALTITAN
ŞALT MALZEME	SIEMENS
SAC RENĞİ / TP / FORM	RAL 7035 / 31 / 01

DIVITI T TIP DANO	
DANO TIRI	
IIIIIIIIONNTYNOCSZYXCTZ	OCCOZOONAY I

GİRİS VE ÇIKIŞI AR

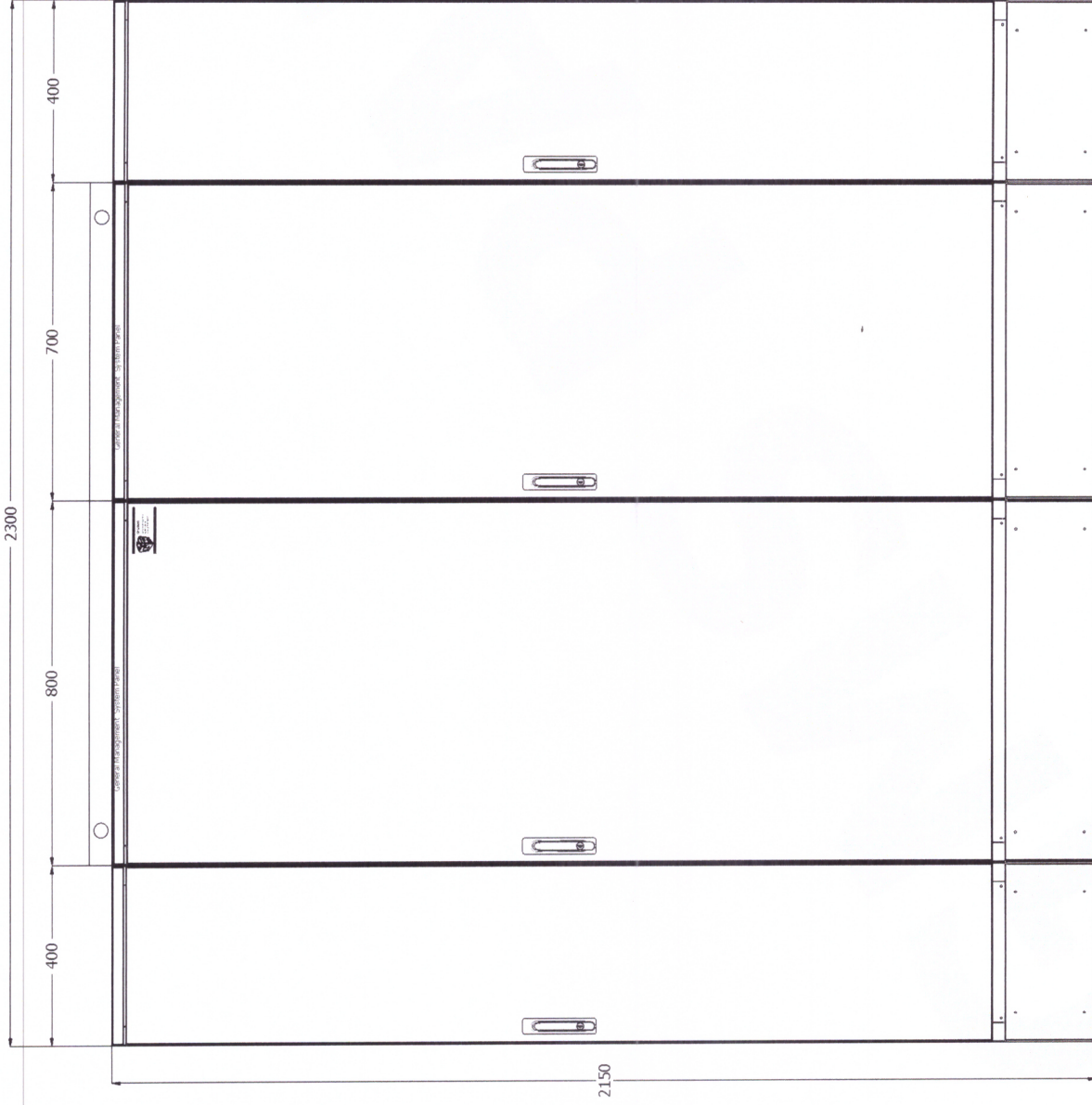
SALT MALZEME	SIEMENS
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SAC RENG / IP / FORM	RAL 7035 / 31 / 01
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 GMS PANO ELEKTRİK SAN. ve TİC. A.Ş. Yayınlanma Tarihi: 15.05.2012 Levhâk Kod. No : 4 Eleşk.000 - İSTANBUL Tel:0212 875 73 15 pbx / Faks:0212 876 73 14 www.gmspano.com	10.05.2019	10.05.2019	Müşteri İsmi	GMS PANO ELEKTRİK	Pano İsmi	DT4000 TEST PANEL Proje Numarası .18.083.GMS.0895.5.a.12
	SERCAN SİZER	FUAT BÖLÜKBAŞI	Proje İsmi	GMS TEST		
	Çizen	Kontrol	Sayfa Açıklaması	PANO GÖRÜLÜŞÜ	Sayfa	

Bu resimdeki bilgiler GMS PANO ELEKTRİK SANAYİ VE TİCARET A.Ş.'nin malidir. Yazılı izin olmadan çoğaltılamaz ve kullanılamaz. Bu resime göre imal edilen parça GMS PANO ELEKTRİK SANAYİ VE TİCARET A.Ş.'nin izni olmaksızın üçüncü kişilere gösterilemez ve açıklanamaz. Güzimlerdeki tüm cihazlar açık pozisyonunda, çekmeceli cihazlar çekmece dışında, yaylı mekanizmalar boşta, ve güç kaynakları devre dışı olarak gösterilmiştir.

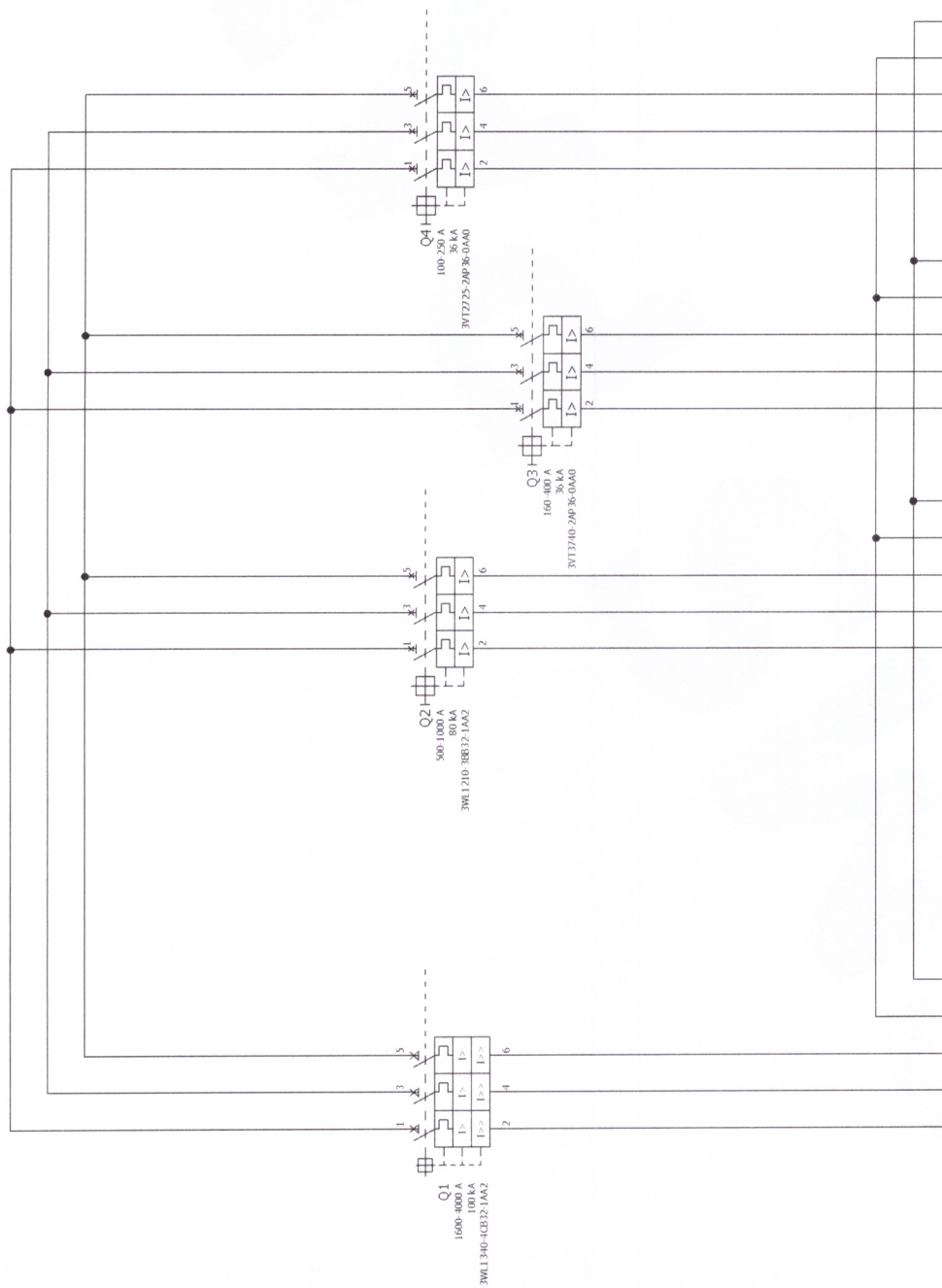


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PANO ÖLÇÜSÜ	2150x2300x1000mm
PANO TİPİ	DİKLİ TIP PANO
GİRİŞ VE ÇIKIŞLAR	ALTAN
SALT MALZEME	SIEMENS
SAC RENĞİ / İP / FORM	RAL 7035 / 31 / 01

DIŞ GÖRÜNÜŞ

 GMS PANO ELEKTRİK SAN. ve TİC. A.Ş. Teşvikiye Sok. No: 11 Beşiktaş / İSTANBUL Tel: 0212 875 79 15 Pbx / Faks: 0212 876 73 14 www.gmspanso.com	10.05.2019	10.05.2019	Müşteri İsmi	GMS PANO ELEKTRİK	Pano İsmi
	SERCAN SİZER	FUAT BOLUKBAŞI	Proje İsmi	GMS TEST	DT4000 TEST PANEL
	Çizen	Kontrol	Sayfa Açıklaması	PANO GÖRÜNÜŞÜ	Proje Numarası
					.18.083.GMS.0895 5.b 12

[illegible]

 GMS PANO ELEKTRİK SAN. ve TİC. A.Ş. Beşikdüzü ÖZELBakır ve Pliny San. Sit. Levlek Cad. No : 4 Beşikdüzü / İSTANBUL Tel:0212 876 73 15 Pbx / Faks:0212 876 73 14 www.gmspanso.com		10.05.2019	10.05.2019	Müşteri İsmi	GMS PANO ELEKTRİK	Pano İsmi
		SERCAN SİZER	FUAT BÖLÜKBAŞI	Proje İsmi	GMS TEST	DT4000 TEST PANEL
		Çizen	Kontrol	Sayfa Açıklaması	ŞEBEKE GİRİŞ VE FİDER ÇIKIŞLAR	Proje Numarası
						Sayfa
						.18.083.GMS.0895
						6 12