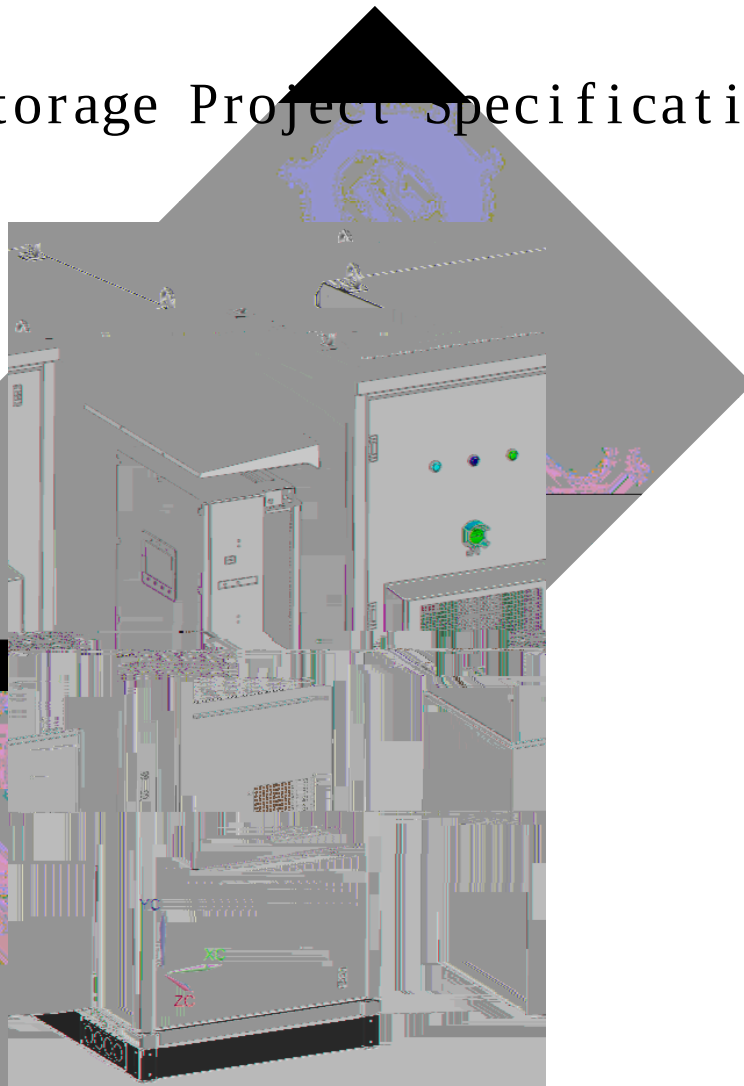




Spec.No. '
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Ver' A1
Date' 2025-03-17

TGPRO New Energy Technology Co., Ltd

Energy Storage Project Specification



TG-eBank120F2



Factory address' No. 16, Hengxing Road, Liaobu Town, Dongguan City, Guangdong Province

History of specification

[illegible]

1 à Scope of application documents/ 1

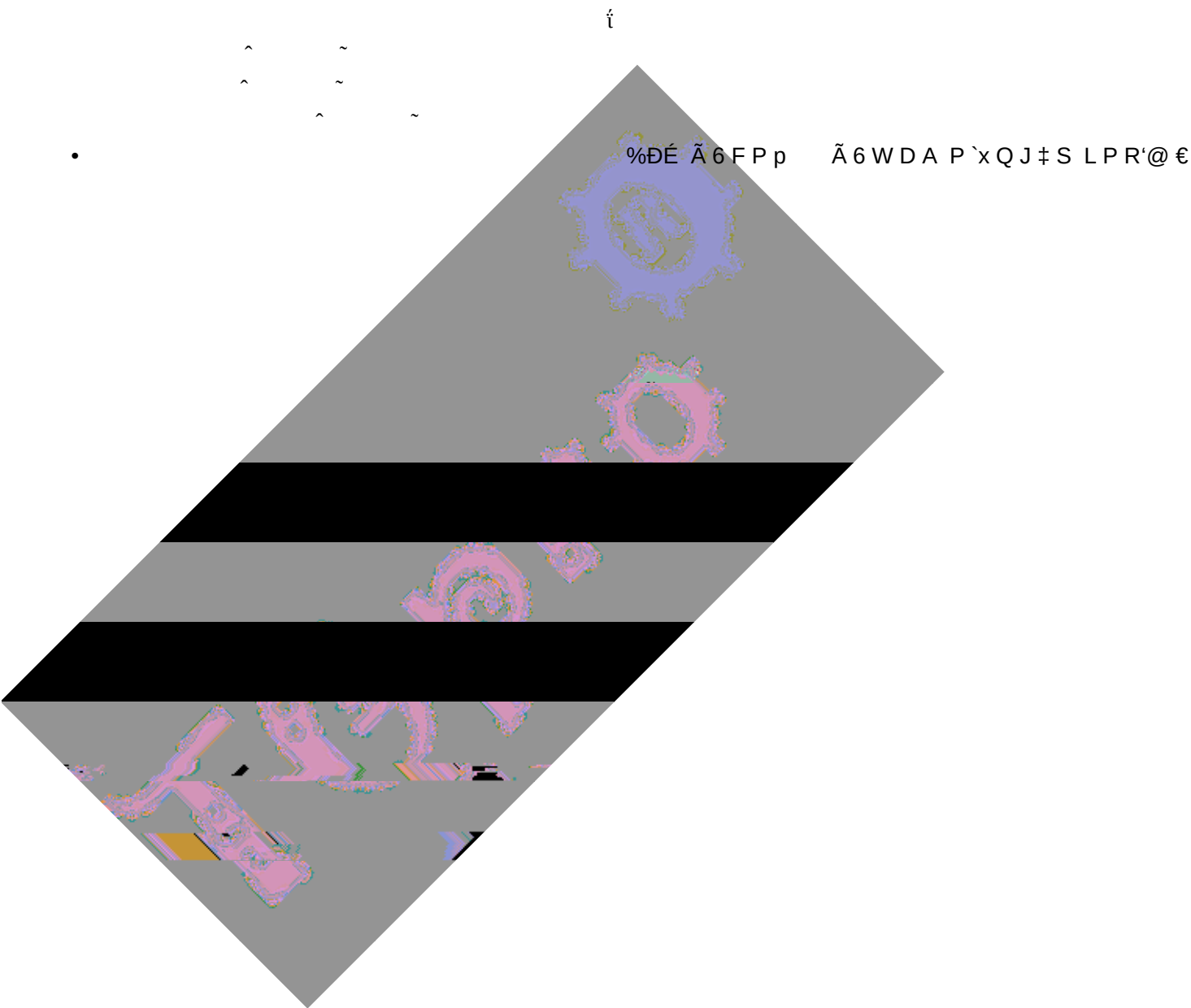
2 à The Specification Amendment/ 1

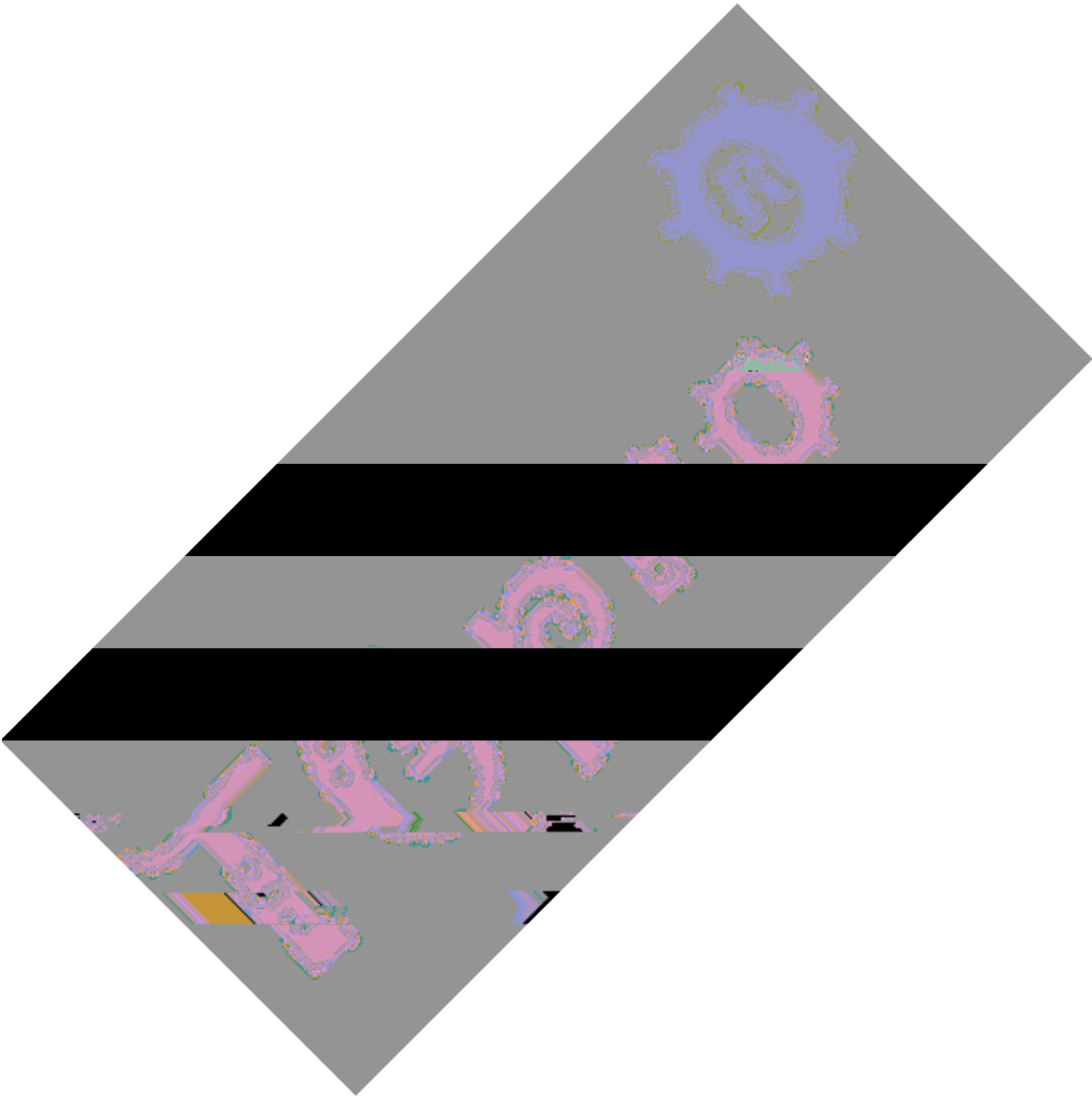
3 à Product or Cell testing conditions/ 1

4 à Standard / 1

4.1 Reference Standard/ 1

4.2 Measuring Instrument and Apparatus/ 1



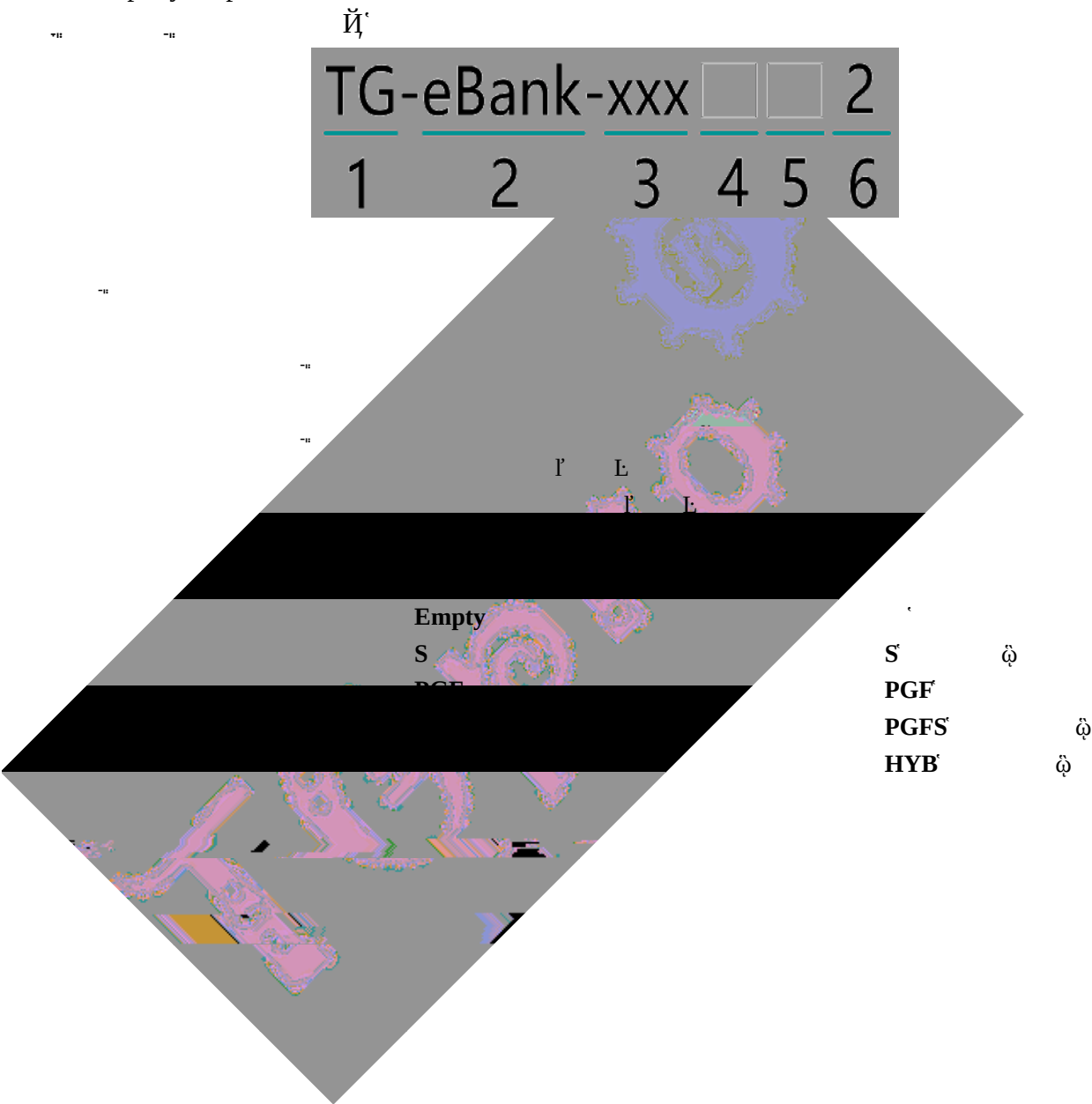


4.3 Testing Conditions (Unless Specially Requirements)

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5 Model Description

Our company's product model definition rules are as follows:



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Order	Test Item	Test Method	Test Conditions
3	Internal Impedance	$\leq 0.18\text{m}\Omega$	Under $20 \pm 5^\circ\text{C}$ Environment Temperature Frequency of Fully Charge(1KHz) , Use Impedance test machine to test $20 \pm 5^\circ\text{C}$ $\sim 1\text{kHz}$
4	Standard charge	157A	Constant Current $0.5C_5$ Constant Voltage cut-off
5	Rapid Charge	157A	Constant Current $1C_5$ Constant Voltage cut-off
6	Standard Charge Cut-off Voltage	3.6V	3.6V 0.02C5A
7	Standard Discharge Cut-off Voltage	3.6V	Voltage of the battery when the Charge

6.3 Specification for Single Cluster Battery Management System

1~ :BMS is designed for high-voltage energy storage series lithium batteries
BMS

2~ ' The BMS have all functions which are :
BMS

.1 overcharge detection function

.2 over discharge detection function

.3 over current detection function

.4 short detection function

.5 Temperature detection function

.6 balance function

.7 communicate function

.8 Alarm function

.9 Total

.10 Storage history function

Items	Details	General Parameter
Cell overcharge Protection	Overcharge detection voltage	$3.65 \pm 0.025V$
	Overcharge detection delay time	Typical:1.0s
	Overcharge release voltage	$3.4 \pm 0.05V$
Cell over-discharge protection	Over-discharge detection voltage	$2.7 \pm 0.5V$
	Over-discharge detection delay time	Typical:1.0s
	Over-discharge release voltage	$3.1 \pm 0.1V$ or charge release
Over-current Protection	discharge Over-current protection current1 1	162A
	discharge Over-current detection delay time 1 1	1S
		167A
	discharge Over-current detection delay time 2 2	$\leq 200m \pm 50ms$
		162A
	Protection condition	Load short
	Detection delay time	$\leq 30ms$
Temperature(T) protection ^ T	Protection release condition	Charging release
	Charge high T protection T	55 ± 3
	Charge high T recover T	47 ± 4
	Discharge high T protection T	60 ± 3
	Discharge high T recover T	50 ± 4
	Charge low T protection T	0 ± 3

	Charge low T recover T	5 ± 4
	Discharge low T protection T	-20 ± 3
	Discharge low T recover T	-10 ± 4
Balance	Balance threshold voltage	3.4V
Communication	It has CAN and RS485 ,RS232 standard communication interface, it real-time monitoring the capacity of battery bank, the voltage, current,environment temperature, and charging/discharging current, RS485,RS232,Baud rate:9600Kb/S,CAN common Baud rate:500K/S, í CAN RS485 à RS232 à à à RS485 à RS232 ' 9600Kb/S CAN ' 500K/S	
Alarm	It has over-temperature, over charge, under-voltage, over-current, short circuit alarm Function. í à à à à Á	

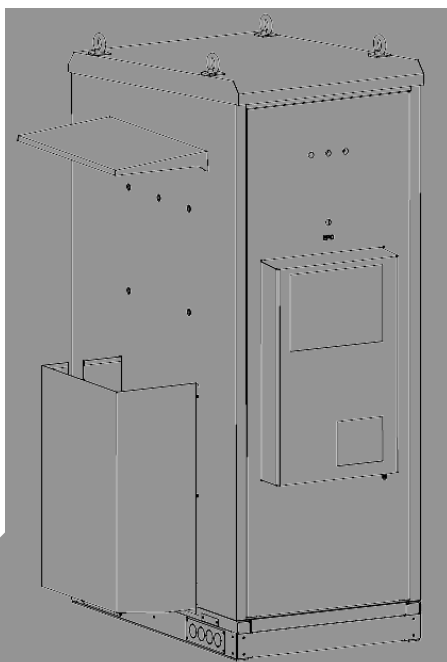
6.8 System schematic diagram



7 Appearance and structural dimensions

The surface of the battery pack should have no obvious scratches, burrs and mechanical scratches, and the exposed metal terminals should be free of oxidation and rust.

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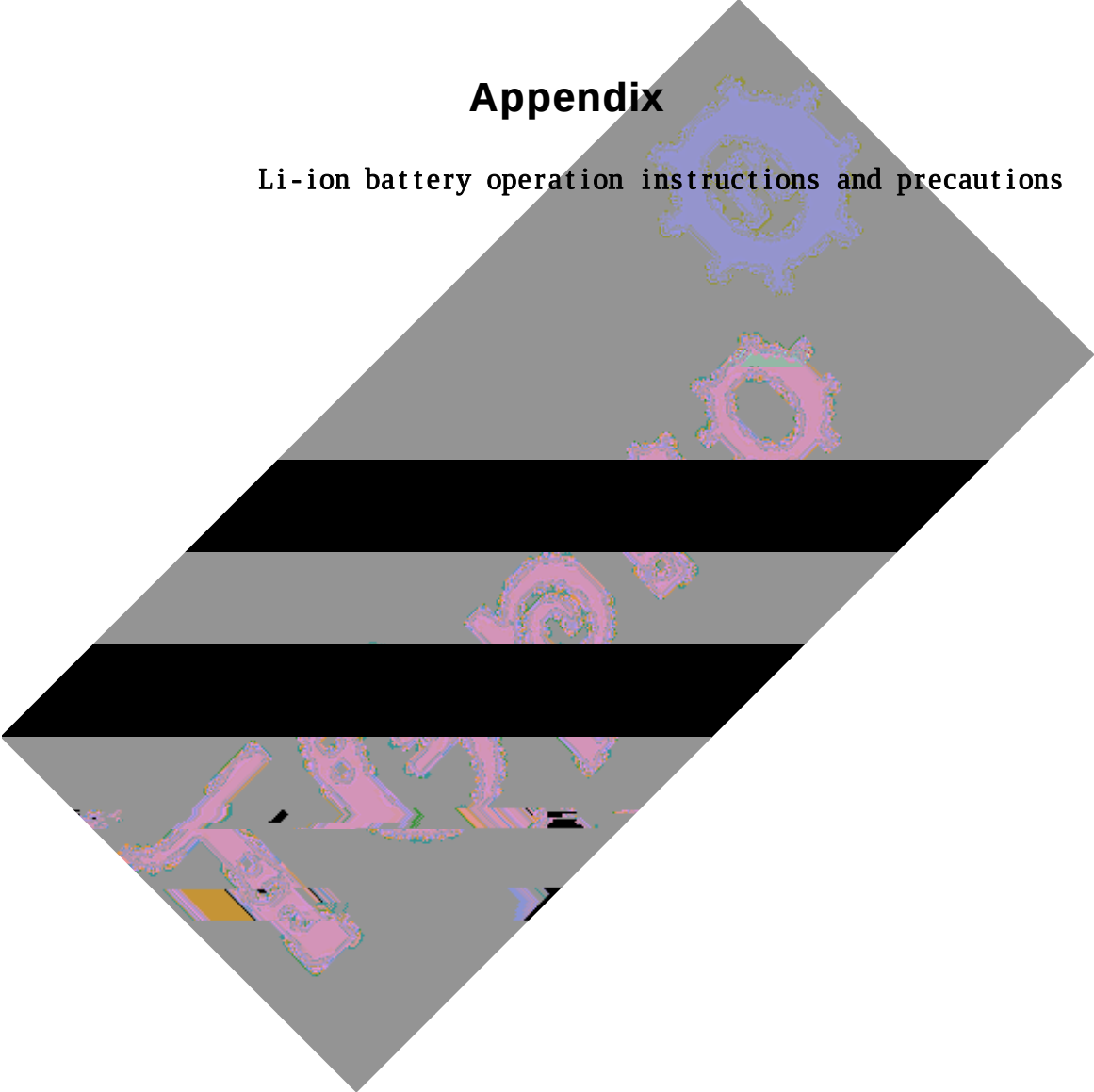
8 Storage and Others

If stored for a long time(don ’ t used,exceed three months), the cell and pack should be stored in drying and cooling place. The PACK is to be stored in a condition that the temperature of 23 ± 2 and the humidity Of 45%- 75%. Long-term use of unused batteries to recharge every 3 months~ Ensure that the battery voltage is within the above range~

~ ^ , 3 ~ ä Â PACK 23 ± 2 45%- 75%
Ï Â 3 ~

Appendix

Li-ion battery operation instructions and precautions



Caution!

Do not use or store the battery where is exposed to extremely hot, such as under window of a car in direct sunlight in a hot day. Otherwise, the battery may be overheated. This can also reduce battery performance and/or shorten service life Cause personal injury

If the electrolyte enters the eyes after the battery leaks, do not wipe it, rinse with clean water, and seek medical help immediately.

Danger!

Do not immerse the battery in water or allow it to get wet.

Do not use or store the battery near sources of heat such as a fire or heater.

Do not use any chargers other than those recommended by TGPRO.

Do not reverse the positive(+) and negative(-) terminals.

Do not connect the battery directly to wall outlets or car cigarette-lighter sockets.

Do not put the

Do not short-circuit the battery by connecting wires or other metal objects to the positive(+) and negative(-) terminals.

Do not use sharp object, break it open with a hammer,

Do not strike, throw or subject the battery to sever physical shock.

Do not directly solder the battery terminals.

Do not attempt to disassemble or modify the battery in any way.

- Do not place the battery in a microwave oven or pressurized container.
- Do not use the battery in combination with primary batteries(such as dry-cell batteries) or batteries of different capacity, type or brand.
- Do not use the battery if it gives off an odor, generates heat, becomes discolored or deformed, or appears abnormal in any way. If the battery is in use or being recharged, remove it from the device or charger immediately and discontinue use.

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