

Battery Replacement Guide LIST

2026.05.28

No.	Application	Product Name	Model
AB-001	Data Logger Readout Indicator	Smart Logger	ACE-200A
			ACE-200B
AB-002		VW readout unit	ACE-800
AB-003		VW data recorder	ACE-1000
AB-004		VW mini data loggers	ACE-1100
AB-005		VW mini loggers	ACE-1104
AB-006		VW Display logger	ACE-1100D
AB-007		FSG Readout unit	ACE-600A
		MEMS Readout unit	ACE-1500
AB-008		MEMS Mini Logger	ACE-900
AB-009	Pneumatic readout unit	ACE-2500	
AB-010	Water level meter	4650	
AB-011	Inclinometer	Digital vertical inclinometer system	5481
AB-012		Portable digital tiltmeter	5411
AB-013		Pendulum system	8100M
AB-014	In-situ testing equipment	Rock borehole pressuremeter	GJ-75D
		Borehole pressuremeter	PMT-75D
AB-015		Borehole share tester	BST-75D
AB-016	LoRa	Smart LoRa System	LoRa Module
AB-017		LoRa tilt & crackmeter	TCL

Battery Replacement Guide

Model	ADL-200A, ADL-200B	No.	AB-001
Battery specifications	LITHIUM / SB-AA02 / 3.6V	Date.	2026.05.26

1. As shown in the following photo, loosen the four M3 bolts on the top and bottom sides using a phillips screwdriver to remove the TOP CASE.



2. Replace the SB-AA02 battery on the right.



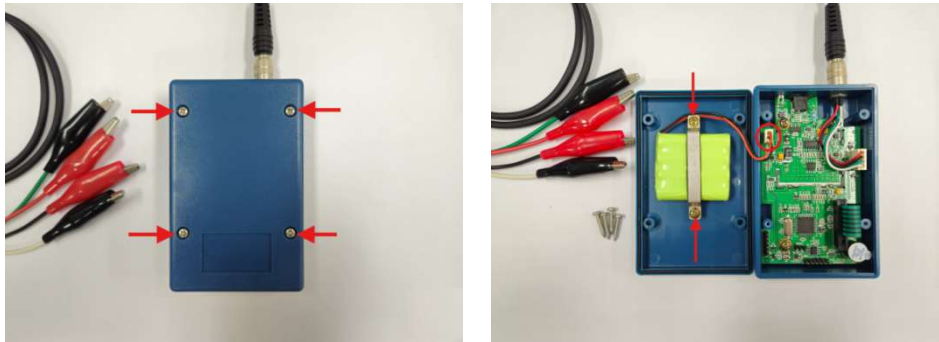
3. Cover the TOP CASE and re-tighten the four bolts to complete the process.

Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

Battery Replacement Guide

Model	ACE-800	No.	AB-002
Battery specifications	NI-MH / AAA*4EA / 4.8V	Date.	2026.05.26

1. As shown in the following photo, using a small phillips screwdriver to loosen the four bolts on the bottom of the product to open the BACK CASE and disconnect the battery cable from the board. Then, loosen the bolts on the BATTERY HOLDER and remove the battery.



2. After replacing the NI-MH PACK battery, secure the battery with the BATTERY HOLDER and connect the connector. When connecting, ensure that the red (+) side of the connector faces upward.



3. Cover the BACK CASE again and tighten the bolts sufficiently so that the O-ring is pressed down to complete the process.

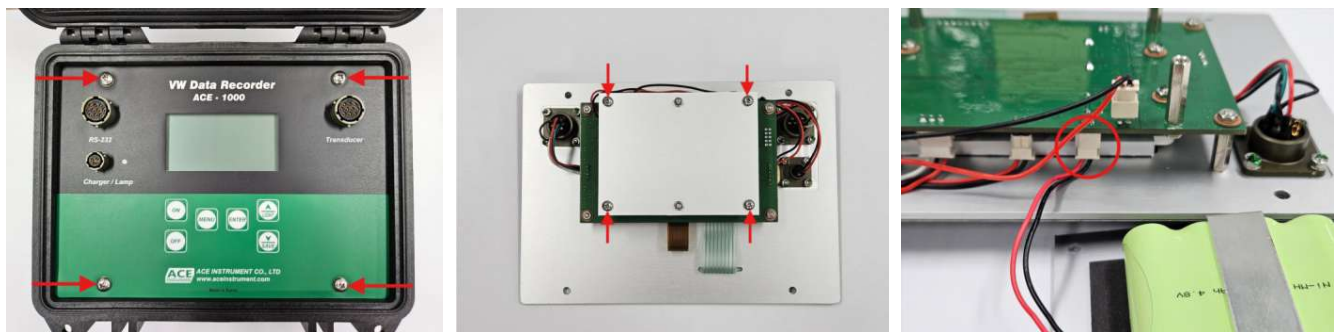
Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

Battery Replacement Guide

Model	ACE-1000	No.	AB-003
Battery specifications	NI-MH / AA*4EA / 4.8V	Date.	2026.05.27

1. Loosen the four M4 bolts on the top of the product using a phillips screwdriver to separate the AL panel and the board ASS'Y.

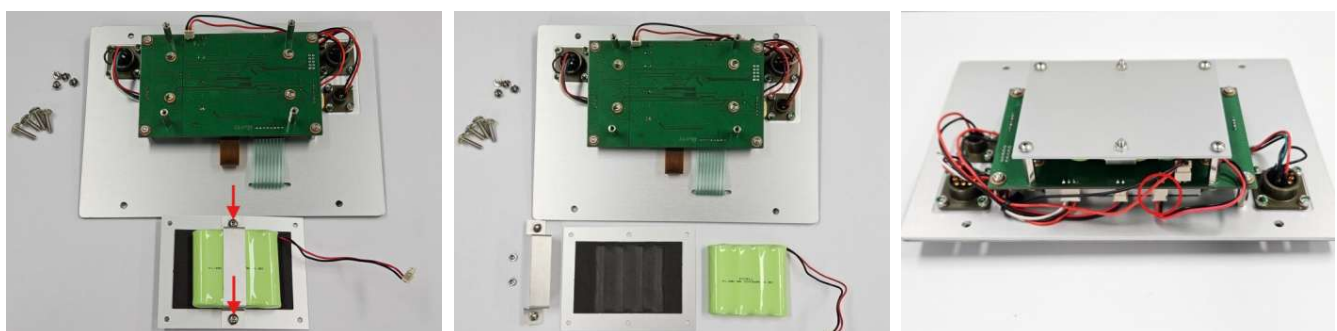
With the unit flipped over, loosen the four M3 bolts to remove the BATTERY PLATE and disconnect the battery connector from the PCB board.



2. Loosen the two bolts using a phillips screwdriver and a wrench and remove the BATTERY HOLDER.

After replacing the NI-MH PACK battery, secure the battery again using the BATTERY HOLDER.

Reconnect the battery connector to the PCB board in the reverse order of disassembly and reassemble the BATTERY PLATE.



4. Reassemble into the ABS hard case to complete the process. When reassembling, tighten the bolts sufficiently so that the O-ring is compressed.

Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

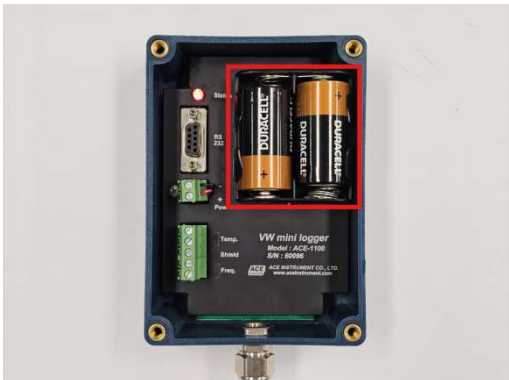
Battery Replacement Guide

Model	ACE-1100	No.	AB-004
Battery specifications	ALKALINE / C-SIZE*2EA / 3.0V	Date.	2026.05.27

1. As shown in the following photo, loosen the four M5 bolts on the top of the product using a 4mm hex wrench to separate the TOP CASE.



2. After replacing the two alkaline C-size batteries, reassemble the TOP CASE to complete the process. When reassembling, tighten the bolts sufficiently so that the O-rings are compressed.



Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

Battery Replacement Guide

Model	ACE-1104	No.	AB-005
Battery specifications	ALKALINE / D-SIZE*2EA / 3.0V	Date.	2026.05.27

1. As shown in the following photo, loosen the four plastic bolts using a phillips screwdriver to remove the TOP CASE.



2. After replacing the two alkaline D-size batteries, reassemble the TOP CASE to complete the process. When reassembling, tighten sufficiently so that the O-rings are compressed.



Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

Battery Replacement Guide

Model	ACE-1100D	No.	AB-006
Battery specifications	ALKALINE / D-SIZE*2EA / 3.0V	Date.	2026.05.27

1. As shown in the following photo, loosen the four plastic bolts using a phillips screwdriver to remove the TOP CASE.



2. After replacing the two alkaline D-size batteries, reassemble the TOP CASE to complete the process. When reassembling, tighten sufficiently so that the O-rings are compressed.



Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

Battery Replacement Guide

Model	ACE-600A, ACE-1500	No.	AB-007
Battery specifications	NI-MH / 3/4A*6EA / 7.2V	Date.	2026.05.27

1. Loosen the four M4 bolts on the product using a phillips screwdriver to separate the AL panel and the board ASS'Y.

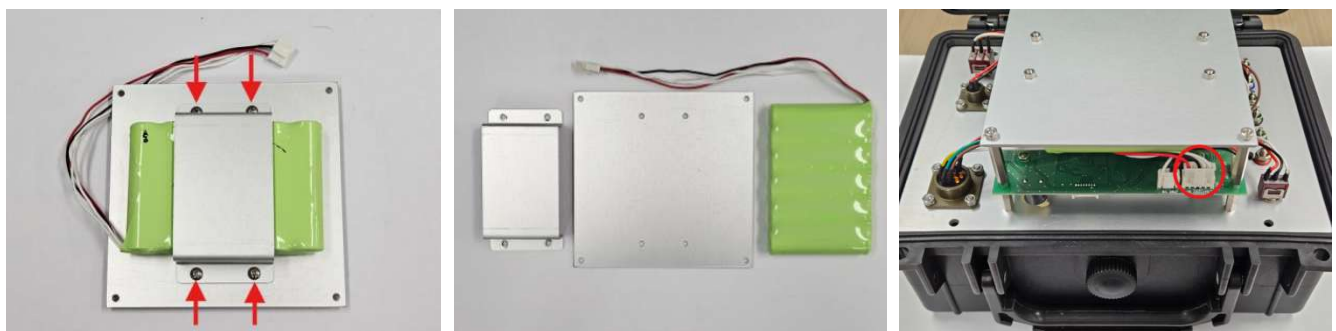
With the unit flipped over, loosen the four M3 nuts using a wrench to remove the BATTERY PLATE and disconnect the battery connector from the PCB board.



2. Remove the BATTERY HOLDER using a phillips screwdriver and a wrench.

After replacing the NI-MH PACK battery, secure the battery again using the BATTERY HOLDER.

Reconnect the battery connector to the PCB board in the reverse order of disassembly and reassemble the BATTERY PLATE.



3. Reassemble into the ABS hard case to complete the process. When reassembling, tighten the bolts sufficiently so that the O-ring is compressed.

Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

Battery Replacement Guide

Model	ACE-900	No.	AB-008
Battery specifications	ALKALINE / C-SIZE*4EA / 6V	Date.	2026.05.29

1. As shown in the following photo, loosen the four plastic bolts using a phillips screwdriver to remove the TOP CASE.



2. After replacing the four alkaline C-SIZE batteries, reassemble the TOP CASE to complete the process. When reassembling, tighten the bolts sufficiently so that the O-rings are compressed.



Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

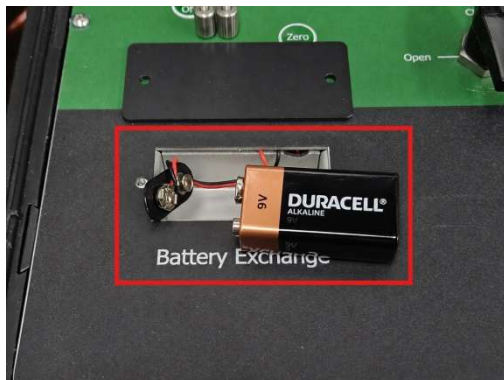
Battery Replacement Guide

Model	ACE-2500	No.	AB-009
Battery specifications	ALKALINE / SQUARE(PP3) / 9V	Date.	2026.05.27

1. As shown in the following photo, turn the knurling knob on the Battery Exchange to remove the COVER.



2. After replacing the 9V alkaline square battery, reassemble the COVER to complete the process.



Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

Battery Replacement Guide

Model	4650	No.	AB-010
Battery specifications	ALKALINE / SQUARE(PP3) / 9V	Date.	2026.05.28

1. Separate the AL panel and the board ASS'Y by turning the two knurling knobs as shown in the following photo.



2. Push the anti-slip O-ring across the battery to one side and remove the 9V square alkaline battery.



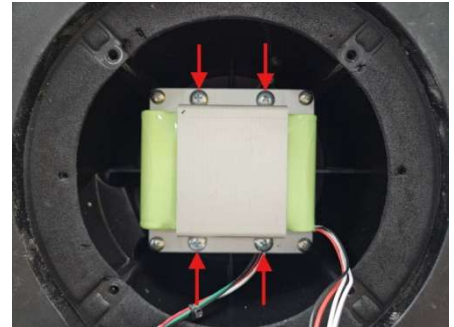
3. Replace the battery and position the anti-slip O-ring in the center of the battery.
Cover the AL panel and secure it sufficiently with the knurling knobs to complete the process.

Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

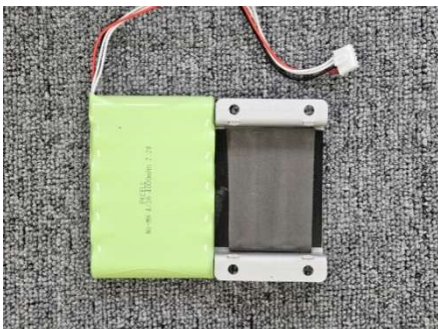
Battery Replacement Guide

Model	5481 Series	No.	AB-011
Battery specifications	NI-MH / 3/4A*6EA / 7.2V	Date.	2026.05.28

1. Loosen the four bolts using a phillips screwdriver on the front panel to separate the panel and board, and disconnect the connector connecting the PCB board to the battery. Loosen the M5 bolts inside the drum to separate the BATTERY HOLDER and the battery.



2. After replacing the NI-MH PACK battery, reattach the battery and BATTERY HOLDER to the AL panel and connect the battery connector to the PCB board.



3. Cover the panel and complete the process by tightening the bolts sufficiently to ensure there are no defects in waterproofing during reassembly.

Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

Battery Replacement Guide

Model	5411	No.	AB-012
Battery specifications	LI-POLYMER / DTP603048 / 7.2V	Date.	2026.05.29

1. As shown in the photo, loosen the bolts using a 3mm hex wrench to remove one FRAME BAR.
(Since the wrench bolts are tightened with Loctite applied to the threads, you must sufficiently heat the area around the wrench bolt to loosen them.)

Loose the six bottom wrench bolts to remove the SENSOR CASE.



2. At this point, be careful not to damage the cables connected to the SENSOR CASE; open it slowly, remove the battery, and disconnect the LI-POLYMER battery connected via the pin connector. You must connect the replacement battery by matching the colors to the pin connector polarity.

(Battery Red : +7.4V -> Red, Battery Black : GND -> Blue)

After connecting the cables, slide the battery into the very bottom of the board and tidy up the cables.



3. Carefully cover the SENSOR CASE to avoid damaging the cables, then apply Loctite to the bolts on the FRAME BAR and tighten them securely to complete the assembly.

Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

Battery Replacement Guide

Model	8100M	No.	AB-013
Battery specifications	NI-MH / 3/4A*6EA / 7.2V	Date.	2026.05.28

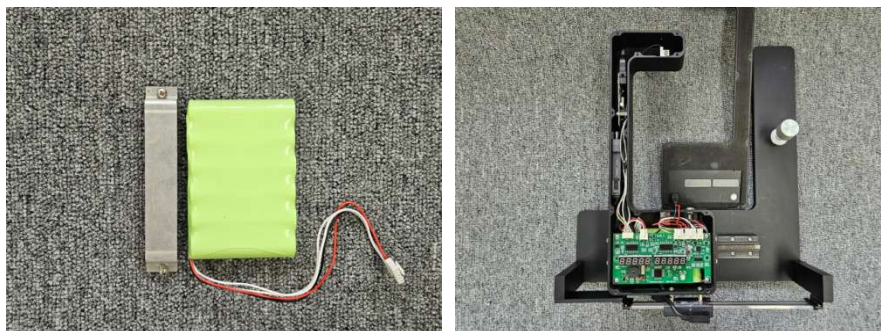
1. Loosen the 11 M3 bolts using a small screwdriver on the front of the product to remove the COVER, and disconnect the connector connecting the PCB and the battery.

Loose the 4 bolts securing the PCB to remove it, and loosen the 2 bolts on the BATTERY HOLDER to detach the battery.

(Be careful not to twist or break the connected cables when removing the PCB board.)



2. Replace the NI-MH PACK battery and secure the battery to the bottom surface using the BATTERY HOLDER. Reconnect the battery connector to the PCB in the reverse order of disassembly, and re-secure the PCB.



3. Tighten the M3 bolts to reassemble the COVER and complete the process.

When reassembling, tighten all 11 bolts with the same force to ensure the product does not tilt.

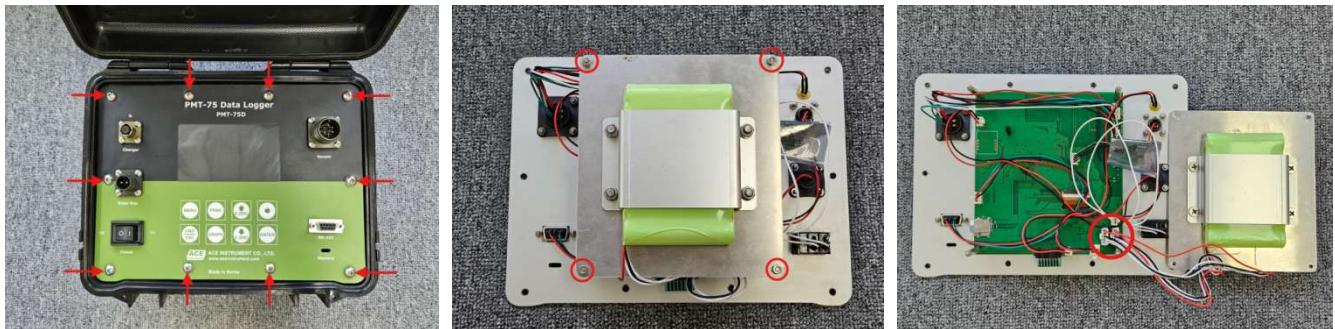
Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

Battery Replacement Guide

Model	GJ-75D, PMT-75D	No.	AB-014
Battery specifications	NI-MH / 3/4A*6EA * 2PACK / 7.2V	Date.	2026.05.28

1. Loosen the 10 M4 bolts on the front using a phillips screwdriver to separate the AL panel and the board ASS'Y.

With the unit flipped over, loosen the 4 M3 nuts using a wrench to remove the BATTERY PLATE and disconnect the two battery connectors from the PCB board.



2. Separate the BATTERY HOLDER and battery using a phillips screwdriver and a wrench.

Replace the two NI-MH PACK batteries and secure them again with the BATTERY HOLDER.

Connect the two battery connectors to the PCB board and assemble the BATTERY PLATE onto the PCB board.



3. Reassemble the AL panel and board ASS'Y into the ABS hard case to complete the process.

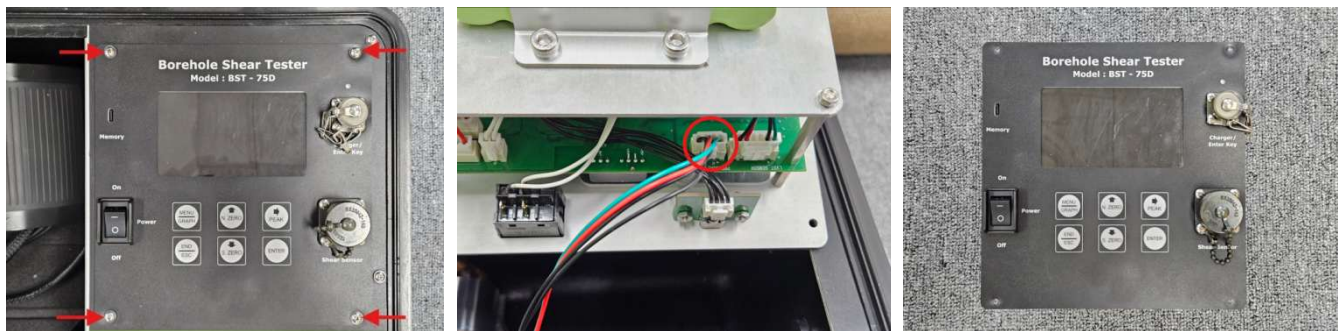
When reassembling, tighten the bolts sufficiently so that the O-rings are compressed.

Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

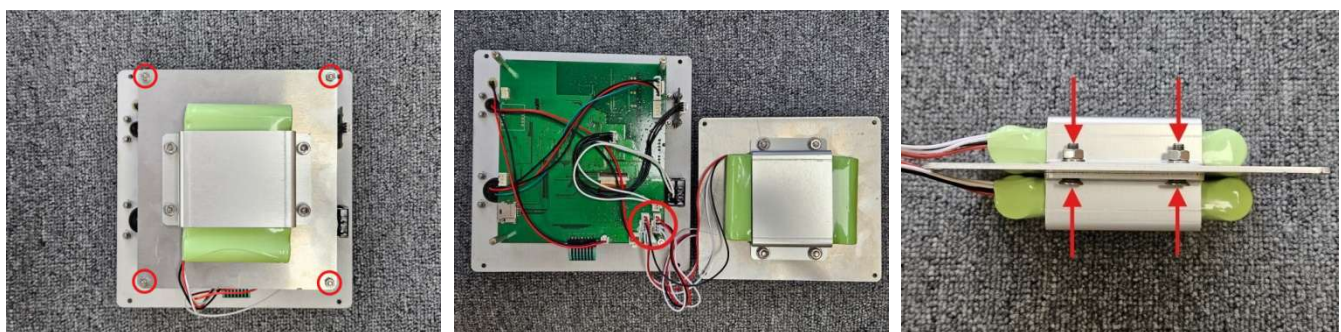
Battery Replacement Guide

Model	BST-75D	No.	AB-015
Battery specifications	NI-MH / 3/4A*6EA * 2PACK / 7.2V	Date.	2026.05.28

1. Loosen the four M3 bolts using a small screwdriver on the front right side of the product to separate the sensor unit and the logger part of the equipment.
Disconnect the cable connector connecting the equipment and the logger, and completely remove the logger from the CASE.



2. With the separated logger upside down, loosen the four M3 nuts using a wrench to detach the BATTERY PLATE, and disconnect the two battery connectors from the PCB board.
Separate the BATTERY HOLDER and battery using a phillips screwdriver and a wrench.
Replace the two NI-MH PACK batteries and secure them again with the BATTERY HOLDER.
Connect the two battery connectors to the PCB board and assemble the BATTERY PLATE onto the PCB board.



3. Reconnect the equipment's sensor connector to the logger, assemble the logger part onto the equipment, and complete the process.

Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

Battery Replacement Guide

Model	AL4, VL4, ML1	No.	AB-016
Battery specifications	LITHIUM / XL205F(D-SIZE) / 3.6V	Date.	2026.05.28

1. Loosen the four M5 bolts using a 4mm hex wrench to remove the TOP CASE.



2. After replacing the 3.6V high-capacity D-SIZE LITHIUM battery, reassemble the TOP CASE to complete the process.

When reassembling, tighten the bolts sufficiently so that the O-rings are compressed.



Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.

Battery Replacement Guide

Model	TCL	No.	AB-017
Battery specifications	LITHIUM / XL205F(D-SIZE) / 3.6V	Date.	2026.05.28

1. Loosen the four top bolts using a phillips screwdriver to remove the COVER.



2. After replacing the 3.6V high-capacity D-SIZE LITHIUM battery, reassemble the COVER to complete the process.

When reassembling, tighten the bolts sufficiently so that the O-ring is compressed.



Caution: Take care not to scratch or damage the enclosure when disassembling or reassembling the product.