Battery tester lineup

Application			Acceptance inspection of general-purpose, small cells installed in high-speed sorters	Fully automated production line testing of small cells for power motors or small packs of up to 60 V	Fully automated production line testing of large cells for xEVs or mid-sized packs of up of to 100 V	Fully automated production line testing of large packs for xEVs or large packs up of to 300 V
Model			3561, 3561-01	BT3561A Enhanced model of the 3561	BT3562A Successor model of the BT3562	BT3563A Successor model of the BT3563
Appearance				NEW	NEW	NEW
Measurement method			AC four-terminal method	AC four-terminal method	AC four-terminal method	AC four-terminal method
Measurement frequency			1 kHz ±0.2 Hz	1 kHz ±0.2 Hz	1 kHz ±0.2 Hz	1 kHz ±0.2 Hz
Measurement parameters	Resistance measurement ranges / Max. display, resolution, measurement current	3 mΩ	N/A	N/A	3.1000 mΩ, 0.1 μΩ, 100 mA	3.1000 mΩ, 0.1 μΩ, 100 mA
		30 mΩ	N/A	31.000 mΩ, 1 μΩ, 100 mA	31.000 mΩ, 1 μΩ, 100 mA	31.000 mΩ, 1 μΩ, 100 mA
		300 mΩ	310.00 mΩ, 10 μΩ, 10 mA	310.00 mΩ, 10 μΩ, 10 mA	310.00 mΩ, 10 μΩ, 10 mA	310.00 mΩ, 10 μΩ, 10 mA
		3 Ω	3.1000 Ω, 100 μΩ, 1 mA	3.1000 Ω, 100 μΩ, 1 mA	3.1000 Ω, 100 μΩ, 1 mA	3.1000 Ω, 100 μΩ, 1 mA
		30 Ω	N/A	31.000 Ω, 1 mΩ, 100 μA	31.000 Ω, 1 mΩ, 100 μA	31.000 Ω, 1 mΩ, 100 μA
		300 Ω	N/A	310.00 Ω, 10 mΩ, 10 μA	310.00 Ω, 10 mΩ, 10 μA	310.00 Ω, 10 mΩ, 10 μA
		3 kΩ	N/A	3.1000 kΩ, 100 mΩ, 10 μA	3.1000 kΩ, 100 mΩ, 10 μA	3.1000 kΩ, 100 mΩ, 10 μA
	Basic accuracy	3 mΩ range	N/A	N/A	±0.5% rdg. ±10 dgt.	±0.5% rdg. ±10 dgt.
		30 mΩ range or more	±0.5% rdg. ±5 dgt.	±0.5% rdg. ±5 dgt.	±0.5% rdg. ±5 dgt.	±0.5% rdg. ±5 dgt.
	Voltage measurement ranges / Max. display, resolution	6 V	N/A	6.00000 V, 10 μV	6.00000 V, 10 μV	6.00000 V, 10 μV
		20 V	19.9999 V, 100 μV	N/A	N/A	N/A
		60 V	N/A	60.0000 V, 100 μV	60.0000 V, 100 μV	60.0000 V, 100 μV
		100 V	N/A	N/A	100.000 V, 1 mV	N/A
		300 V	N/A	N/A	N/A	300.000 V, 1 mV
		1000 V	N/A	N/A	N/A	N/A
	Basic accuracy		±0.01% rdg. ±3 dgt. *1	±0.01% rdg. ±3 dgt.	±0.01% rdg. ±3 dgt.	±0.01% rdg. ±3 dgt.
Response time *2			3 ms	10 ms	10 ms	10 ms
Sampling period *3 EX.FAST, FAST, MEDIUM, SLOW		Ω or V	4 ms, 12 ms, 35 ms, 150 ms	4 ms, 12 ms, 35 ms, 150 ms	4 ms, 12 ms, 35 ms, 150 ms	4 ms, 12 ms, 35 ms, 150 ms
		ΩV	7 ms, 23 ms, 69 ms, 252 ms	8 ms, 24 ms, 70 ms, 253 ms	8 ms, 24 ms, 70 ms, 253 ms	8 ms, 24 ms, 70 ms, 253 ms
Allowable total line resistance *2 *4 (within assured conditions) Ranges: 3 mΩ, 30 mΩ, 300 mΩ, 3 Ω		SENSE line	N/A, N/A, 20 Ω, 20 Ω	N/A, 4 Ω, 30 Ω, 30 Ω	4 Ω, 4 Ω, 30 Ω, 30 Ω	4 Ω, 4 Ω, 30 Ω, 30 Ω
		SOURCE line	N/A, N/A, 20 Ω, 20 Ω	N/A, 4 Ω, 20 Ω, 40 Ω	4 Ω, 4 Ω, 20 Ω, 40 Ω	4 Ω, 4 Ω, 20 Ω, 40 Ω
Allowable total line resistance *2 *4 (error detection) Ranges: 3 mΩ, 30 mΩ, 300 mΩ, 3 Ω		SENSE line	N/A, N/A, 20 Ω, 20 Ω	N/A, 6 Ω, 30 Ω, 30 Ω	6 Ω, 6 Ω, 30 Ω, 30 Ω	6 Ω, 6 Ω, 30 Ω, 30 Ω
		SOURCE line	N/A, N/A, 20 Ω, 20 Ω	N/A, 6 Ω, 20 Ω, 200 Ω	6 Ω, 6 Ω, 20 Ω, 200 Ω	6 Ω, 6 Ω, 20 Ω, 200 Ω
Open terminal voltage Ranges: 30 mΩ or less, 300 mΩ, 3 Ω or more			N/A, 7 V, 7 V peak	25 V, 7 V, 4 V peak	25 V, 7 V, 4 V peak	25 V, 7 V, 4 V peak
Interface	LAN (TCP/IP, 10-BASE-T/100-BASE-TX)		N/A	✔	✔	✔
	RS-232C *5 (Max. 38.4 kbps)		✔ (9.6 kbps fixed)	✔	✔	✔
	USB		N/A	N/A	N/A	N/A
	GP-IB		✔ (3561-01 only)	N/A	N/A	N/A
	EXT. I/O (37-pin handler interface)		✔	✔	✔	✔
	Analog output (DC 0 V to 3.1 V)		N/A	✔	✔	✔
Function	Contact check		✔	✔	✔	✔
	Zero adjustment (±1000 counts)		✔	✔	✔	✔
	Pulse mesurement		✔	✔	✔	✔
	Comparator		Hi/IN/Lo	Hi/IN/Lo	Hi/IN/Lo	Hi/IN/Lo
	Statistical calculations		Max. 30,000	Max. 30,000	Max. 30,000	Max. 30,000
	Delay		✔	✔	✔	✔
	Average		2 to 16 times	2 to 16 times	2 to 16 times	2 to 16 times
	Panel saving/loading		126	126	126	126
	Memory storage		400	400	400	400
	LabVIEW® driver *6		N/A	✔	✔	✔
Applicable standards			Safety: EN61010 EMC: EN61326 Class A	Safety: EN61010 EMC: EN61326 Class A	Safety: EN61010 EMC: EN61326 Class A	Safety: EN61010 EMC: EN61326 Class A
Effect of radiated radio-frequency electromagnetic field (10 V/m) *7			Resistant	Resistant	Resistant	Resistant
Effect of conducted radio-frequency electromagnetic field 0.15 MHz to 80 MHz, 80% AM		10 V	N/A	Resistant	Resistant	Resistant
		3 V	Resistant	Resistant	Resistant	Resistant
CE			✔	✔	✔	✔
CSA *8			N/A	Certification in progress	Certification in progress	Certification in progress

Application			Fully automated production line testing of large packs for xEVs or large packs up of to 1000 V	Model with GP-IB	To be discontinued in mid-2021
Model			BT3564	BT3562-01 BT3563-01	BT3562 BT3563
Appearance			Custom specifications for fuel cells are available		
Measurement method			AC four-terminal method	AC four-terminal method	AC four-terminal method
Measurement frequency			1 kHz ±0.2 Hz	1 kHz ±0.2 Hz	1 kHz ±0.2 Hz
Measurement parameters	Resistance measurement ranges / Max. display, resolution, measurement current	3 mΩ	3.1000 mΩ, 0.1 μΩ, 100 mA	3.1000 mΩ, 0.1 μΩ, 100 mA	3.1000 mΩ, 0.1 μΩ, 100 mA
		30 mΩ	31.000 mΩ, 1 μΩ, 100 mA	31.000 mΩ, 1 μΩ, 100 mA	31.000 mΩ, 1 μΩ, 100 mA
		300 mΩ	310.00 mΩ, 10 μΩ, 10 mA	310.00 mΩ, 10 μΩ, 10 mA	310.00 mΩ, 10 μΩ, 10 mA
		3 Ω	3.1000 Ω, 100 μΩ, 1 mA	3.1000 Ω, 100 μΩ, 1 mA	3.1000 Ω, 100 μΩ, 1 mA
		30 Ω	31.000 Ω, 1 mΩ, 100 μA	31.000 Ω, 1 mΩ, 100 μA	31.000 Ω, 1 mΩ, 100 μA
		300 Ω	310.00 Ω, 10 mΩ, 10 μA	310.00 Ω, 10 mΩ, 10 μA	310.00 Ω, 10 mΩ, 10 μA
		3 kΩ	3.1000 kΩ, 100 mΩ, 10 μA	3.1000 kΩ, 100 mΩ, 10 μA	3.1000 kΩ, 100 mΩ, 10 μA
	Basic accuracy	3 mΩ range	±0.5% rdg. ±10 dgt. *9	±0.5% rdg. ±10 dgt.	±0.5% rdg. ±10 dgt.
		30 mΩ range or more	±0.5% rdg. ±5 dgt. *9	±0.5% rdg. ±5 dgt.	±0.5% rdg. ±5 dgt.
	Voltage measurement ranges / Max. display, resolution	6 V	N/A	6.00000 V, 10 μV	6.00000 V, 10 μV
		20 V	9.99999 V, 100 μV	N/A	N/A
		60 V	N/A	60.0000 V, 100 μV	60.0000 V, 100 μV
		100 V	99.9999 V, 100 μV	N/A	N/A
		300 V	N/A	BT3536-01 only: 300.000 V, 1 mv	BT3536 only: 300.000 V, 1 mv
		1000 V	1100.00 V, 1 mV *10	N/A	N/A
	Basic accuracy		±0.01% rdg. ±3 dgt. *9	±0.01% rdg. ±3 dgt.	±0.01% rdg. ±3 dgt.
Response time *2			700 ms	10 ms	10 ms
Sampling period *3 EX.FAST, FAST, MEDIUM, SLOW		Ω or V	N/A, 12 ms, 35 ms, 253 ms	4 ms, 12 ms, 35 ms, 150 ms	4 ms, 12 ms, 35 ms, 150 ms
		ΩV	N/A, 28 ms, 74 ms, 359 ms	8 ms, 24 ms, 70 ms, 253 ms	8 ms, 24 ms, 70 ms, 253 ms
Allowable total line resistance *2 *4 (within assured conditions) Ranges: 3 mΩ, 30 mΩ, 300 mΩ, 3 Ω		SENSE line	2 Ω, 2 Ω, 20 Ω, 20 Ω	2 Ω, 2 Ω, 20 Ω, 20 Ω	2 Ω, 2 Ω, 20 Ω, 20 Ω
		SOURCE line	2 Ω, 2 Ω, 20 Ω, 20 Ω	2 Ω, 2 Ω, 20 Ω, 20 Ω	2 Ω, 2 Ω, 20 Ω, 20 Ω
Allowable total line resistance *2 *4 (error detection) Ranges: 3 mΩ, 30 mΩ, 300 mΩ, 3 Ω		SENSE line	2 Ω, 2 Ω, 20 Ω, 20 Ω	2 Ω, 2 Ω, 20 Ω, 20 Ω	2 Ω, 2 Ω, 20 Ω, 20 Ω
		SOURCE line	2 Ω, 2 Ω, 20 Ω, 200 Ω	2 Ω, 2 Ω, 20 Ω, 200 Ω	2 Ω, 2 Ω, 20 Ω, 200 Ω
Open terminal voltage Ranges: 30 mΩ or less, 300 mΩ, 3 Ω or more			25 V, 7 V, 4 V peak	25 V, 7 V, 4 V peak	25 V, 7 V, 4 V peak
Interface	LAN (TCP/IP, 10-BASE-T/100-BASE-TX)		N/A	N/A	N/A
	RS-232C *5 (Max. 38.4 kbps)		✔	✔	✔
	USB		N/A	N/A	N/A
	GP-IB		✔	✔	N/A
	EXT. I/O (37-pin handler interface)		✔	✔	✔
	Analog output (DC 0 V to 3.1 V)		✔	✔	✔
Function	Contact check		✔	✔	✔
	Zero adjustment (±1000 counts)		✔	✔	✔
	Pulse mesurement		✔	✔	✔
	Comparator		Hi/IN/Lo	Hi/IN/Lo	Hi/IN/Lo
	Statistical calculations		Max. 30,000	Max. 30,000	Max. 30,000
	Delay		✔	✔	✔
	Average		2 to 16 times	2 to 16 times	2 to 16 times
	Panel saving/loading		126	126	126
	Memory storage		400	400	400
	LabVIEW® driver *6		N/A	✔	✔
Applicable standards			Safety: EN61010 EMC: EN61326 Class A	Safety: EN61010 EMC: EN61326 Class A	Safety: EN61010 EMC: EN61326 Class A
Effect of radiated radio-frequency electromagnetic field (10 V/m) *7			Resistant	Resistant	Resistant
Effect of conducted radio-frequency electromagnetic field 0.15 MHz to 80 MHz, 80% AM		10 V	N/A	N/A	N/A
		3 V	Resistant	Resistant	Resistant
CE			✔	✔	✔
CSA *8			N/A	✔	✔

Difference between the 3561 and BT3561A

Difference between the 3561, BT3562, and BT3563; and BT3561A, BT3562A, and BT3563A

*1: rdg. (stands for *reading.*), dgt. (stands for *digits.*) *2: Typical value *3: When the power supply frequency is 60 Hz
*4: Total line resistance = (wiring resistance + contact resistance + DUT resistance) *5: Available as printer I/F
*6: LabVIEW® Driver is a registered trademark of National Instruments Corporation *7: Test conditions were 80 MHz to 1 GHz at 10 V/m and 1 GHz to 6 GHz at 3 V/m, all at 80% AM
*8: Canadian Standards Assosiation *9: Average function (average of 4 measurements) *10: 10 mV resolution when 1000.00 V or more