

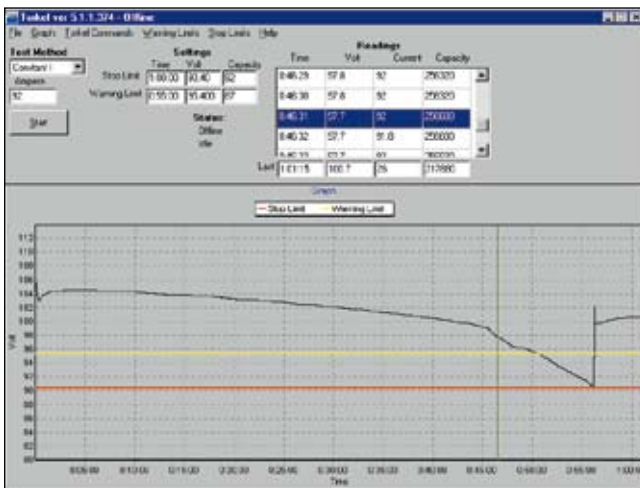
# Accessories

## Battery Testing



# Battery testing accessories

Item	Description	TORTEL 820	TORTEL 840/860	Art. No.
<b>Software</b>				
TORTEL Win	PC software <ul style="list-style-type: none"> <li>Shows the complete voltage curve</li> <li>Last recorded time, voltage, current and discharged capacity</li> <li>Scroll-window for all recorded values</li> <li>Remote control of TORTEL</li> <li>Report functions</li> </ul>	X	X	BS-8208X
<b>Extra loads</b>				
<b>TXL units</b>	These resistive extra loads do not perform any regulating functions. They are designed for use together with TORTEL Battery Load Units. Their purpose is to provide higher load currents for use in constant current or constant power tests. Together, TORTEL and the TXL Extra Loads form a system that can discharge batteries with currents of up to several kA. TXL Extra Loads are connected directly to the battery, and TORTEL measures the total current using a clamp-on ammeter. TXL Extra Loads are shut down automatically when TORTEL is stopped.			
TXL830	TXL830 is intended for 24 V systems. Complete with cable set GA-00554 and transport case GD-00054. A DC clamp-on ammeter must be used to enable TORTEL 820 to measure the total current.	X		BS-59093
TXL850	TXL850 is intended for 48 V systems. Complete with cable set GA-00554 and transport case GD-00054. A DC clamp-on ammeter must be used to enable TORTEL 850 to measure the total current.	X	X	BS-59095
TXL870	TXL870 is intended primarily for 125 and 240 V battery systems. Complete with cable set GA-00550 and transport case GD-00054. A DC clamp-on ammeter must be used to enable TORTEL 870 to measure the total current.		X	BS-59097
<b>Cable sets</b>				
Cable set for TXL830 and TXL850	2 x 3 m, 70 mm <sup>2</sup> , with cable lug. Max 100 V 270 A. Weight: 5.0 kg (11 lbs)	X	X	GA-00554
Extension cable set, 110 A	2 x 3 m, 25 mm <sup>2</sup> . Max 480 V. Weight: 3.0 kg (6.6 lbs)		X	GA-00552
Sensing lead set	Cable set for measuring voltage at battery terminals. 2 x 5 m (16.4 ft)	X	X	GA-00210
<b>Clamp-on ammeter</b>				
DC clamp-on ammeter, 200 A	To measure current in circuit outside TORTEL	X	X	XA-12792
DC clamp-on ammeter, 1000 A	To measure current in circuit outside TORTEL	X	X	XA-12790



TORTEL Win showing total voltage curve



TXL870

## Specifications TXL 830/850/870

Specifications are valid at nominal input voltage and an ambient temperature of +25°C, (77°F). Specifications are subject to change without notice.

Environment	
<i>Application field</i>	The instrument is intended for use in high-voltage substations and industrial environments.
<i>Temperature</i>	
<i>Operating</i>	0°C to +40°C (32°F to +104°F)
<i>Storage &amp; transport</i>	-40°C to +70°C (-40°F to +158°F)
<i>Humidity</i>	5% – 95% RH, non-condensing

CE-marking	
<i>Safety standards</i>	IEC 61010-1:2001 Incl. national dev. for US and CA. EN 61010-1:2001
<i>EMC standards</i>	EN 61326: 1997+A1:1998+A2:2001

General	
<i>Mains voltage</i>	100 – 240 V AC, 50/60 Hz
<i>Power consumption</i>	75 W (max)
<i>Protection</i>	Thermal cut-outs, automatic overload protection
<i>Dimensions</i>	
<i>Instrument</i>	210 x 353 x 600 mm (8.3" x 13.9" x 23.6")
<i>Transport case</i>	265 x 460 x 750 mm (10.4" x 18.1" x 29.5")
<i>Weight</i>	13 kg (28.7 lbs) 21.4 kg (47.2 lbs) with transport case
<i>Cable sets</i>	
<i>for TXL830/850</i>	2 x 3 m (9.8 ft), 70 mm <sup>2</sup> , 270 A, with cable lug. Max. 100 V. 5 kg (11 lbs)
<i>for TXL870</i>	2 x 3 m (9.8 ft), 25 mm <sup>2</sup> , 110 A, with cable clamp/lug. Max. 480 V. 3 kg (6.6 lbs)

Load section			
	<i>TXL830</i>	<i>TXL850</i>	<i>TXL870</i>
<b>Max. voltage (DC)</b>	28 V	56 V	140 V/ 280 V
<b>Max. current</b>	300 A	300 A	112 A at 140 V 56 A at 280 V
<b>Max. power</b>	8.3 kW	16.4 kW	15.8 kW

Internal resistance, 3-position selector			
Position 1	<i>TXL830</i>	<i>TXL850</i>	<i>TXL870</i>
<i>Current</i>	0.275 Ω	0.55 Ω	4.95 Ω
<i>100 A</i>	at 27.6 V (12 x 2.3 V)	at 55.2 V (24 x 2.3 V)	–
<i>78.5 A</i>	at 21.6 V (12 x 1.8 V)	at 43.2 V (24 x 1.8 V)	–
<i>50.1 A</i>	–	–	at 248.4 V (108 x 2.3 V)
<i>39.2 A</i>	–	–	at 194.4 V (108 x 1.8 V)
Position 2	<i>TXL830</i>	<i>TXL850</i>	<i>TXL870</i>
<i>Current</i>	0.138 Ω	0.275 Ω	2.48 Ω
<i>200 A</i>	at 27.6 V	at 55.2 V (24 x 2.3 V)	–
<i>156 A</i>	at 21.6 V	43.2 V (24 x 1.8 V)–	–
Position 3	<i>TXL830</i>	<i>TXL850</i>	<i>TXL870</i>
<i>Current</i>	0.092 Ω	0.184 Ω	1.24 Ω
<i>300 A</i>	at 27.6 V	at 55.2 V (24 x 2.3 V)	–
<i>235 A</i>	at 21.6 V	43.2 A (24 x 1.8 V)	–
<i>100 A</i>	–	–	at 124.2 V (54 x 2.3 V)

## TOR KEL/TXL -systems examples

<b>Max. constant current (A)</b>	<b>Number of TOR KEL-units</b>	<b>Number of TXL-units</b>
<b>TOR KEL 820 + TXL830, 12 V battery (6 cells)<sup>1)</sup></b>		
234	1	1
571	1	4
918	2	6
<b>TOR KEL 820 + TXL830, 24 V battery (12 cells)<sup>1)</sup></b>		
495	1	1
1170	1	4
1890	2	6
<b>TOR KEL 820 + TXL850, 48 V battery (24 cells)<sup>1)</sup></b>		
499	1	1
1189	1	4
1918	2	6
<b>TOR KEL 840/860 + TXL830, 24 V battery (12 cells)<sup>1)</sup></b>		
263	1	1
670	2	2
1005	3	3
<b>TOR KEL 840/860 + TXL850, 48 V battery (24 cells)<sup>1)</sup></b>		
264	1	1
909	2	3
<b>TOR KEL 840/860 + TXL870, 110 V battery (54 cells)<sup>1)</sup></b>		
188	1	1
532	2	4
845	2	8
<b>TOR KEL 840/860 + TXL870, 120 V battery (60 cells)<sup>2)</sup></b>		
194	1	1
557	2	4
895	2	8
<b>TOR KEL 840/860 + TXL870, 220 V battery (108 cells)<sup>1)</sup></b>		
94	1	1
266	2	4
423	2	8

1) Discharge from 2.15 V to 1.8 V per cell

2) Discharge from 2.15 to 1.75 V per cell

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