

Specifications TORKEL 820

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

Environment

Application field The instrument is intended for use in high-voltage substations and industrial environments.

Temperature

Operating 0°C to +40°C (32°F to +104°F)

Storage & transport -40°C to +70°C (-40°F to +158°F)

Humidity 5% – 95% RH, non-condensing

CE-marking

LVD 2006/95/EC

EMC 2004/108/EC

General

Mains voltage 100 – 240 V AC, 50/60 Hz

Power consumption 150 W (max)

Protection Thermal cut-outs, automatic overload protection

Dimensions

Instrument 210 x 353 x 700 mm
(8.3" x 13.9" x 27.6")

Transport case 265 x 460 x 750 mm
(10.4" x 18.1" x 29.5")

Weight 22.3 kg (49.2 lbs)
40.4 kg (89.1 lbs) with accessories and transport case

Display

LCD

Available languages English, French, German, Spanish, Swedish

Measurement section

Current measurement

Display range 0.0 – 2999 A

Basic inaccuracy ±(0.5% of reading +0.2 A)

Resolution 0.1 A

Internal current measurement

Range 0 – 270 A

Input for clamp-on ammeter

Range 0 – 1 V

mV/A-ratio Software settable, 0.3 to 19.9 mV/A

Input impedance >1 MΩ

Voltage measurement

Display range 0.0 – 60 V

Basic inaccuracy ±(0.5% of reading +0.1 V)

Resolution 0.1 V

Time measurement

Basic inaccuracy ±0.1% of reading ±1 digit

Load section

Battery voltage 10 – 60 V DC

Max. current 270 A

Max. power 15 kW

Load patterns Constant current, constant power, constant resistance, current or power profile
0-270.0 A (2999.9 A) ¹⁾

Current setting 0-15.00 kW (299.99 kW) ¹⁾

Resistance setting 0.1-2999.8 Ω

Battery voltage range 2 ranges, selected automatically at start of test

Stabilization (For internal current measurement) ±(0.5% of reading + 0.5 A)

	Battery voltage	Highest permissible current	Resistor element (Nominal values)
Range 1	10 – 27.6 V	270 A	0.069 Ω
Range 2	10 – 55.2 V	270 A	0.138 Ω

¹⁾ Maximum value for a system with more than one load unit

Inputs, maximal values

EXTERNAL CURRENT MEASUREMENT 1 V DC, 300 V DC to ground. Current shunt should be connected to the negative side of the battery

EXTERNAL CURRENT START/STOP

Closing/opening contact
Closing and then opening the contact will start/stop Torkel. It is not possible to keep the contacts in closed position.

Delay until start 200 – 300 ms

Stop delay 100 – 200 ms

Battery 60 V DC, 500 V DC to ground

VOLTAGE SENSE 60 V DC, 500 V DC to ground

SERIAL < 15 V

ALARM 250 V DC 0.28 A

28 V DC 8 A

250 V AC 8 A

Outputs, maximal values

START/STOP 5 V, 6 mA

TXL Relay contact

SERIAL < 15 V

ALARM Relay contact

Discharging capacity, examples

12 V battery (6 cells) ²⁾

Final voltage	Constant current	Constant power
1.80 V/cell (10.8 V)	0 – 121 A	0 – 1.31 kW
1.75 V/cell (10.5 V)	0 – 117 A	0 – 1.23 kW
1.67 V/cell (10.0 V)	0 – 110 A	0 – 1.10 kW

24 V battery (12 cells) ²⁾

1.80 V/cell (21.6 V)	0 – 270 A	0 – 5.8 kW
1.75 V/cell (21.0 V)	0 – 266 A	0 – 5.59 kW
1.60 V/cell (19.2 V)	0 – 241 A	0 – 4.63 kW

48 V battery (24 cells) ²⁾

1.80 V/cell (43.2 V)	0 – 270 A	0 – 11.6 kW
1.75 V/cell (42.0 V)	0 – 270 A	0 – 11.3 kW
1.60 V/cell (38.4 V)	0 – 259 A	0 – 9.9 kW

²⁾ 2.15 V per cell when test starts