

Laboratory Power Supplies

XT Series

60 Watt Linear Benchtop / System Supply

Voltage Range: 0-7 VDC to 0-250 VDC

Current Range: 0-6 A to 0-0.25 A

Very low noise and ripple
Excellent line/load regulation
Fast transient response
Constant voltage or constant current mode
Front and rear outputs standard
LabWindows® and LabVIEW® drivers
Remote sense
CE, CSA approvals



The XT Series provides 60 watts of programmable linear DC power in a quarter-rack package.

A proven product, the XT is the smart choice for both benchtop and system applications where up to 60 watts of programmable, clean DC power is required. Internal analog, GPIB (IEEE 488), and RS-232 interface options make the XT a preferred source for system development and test. This series is available in singles, duals, triples and quads in a single package for benchtop use.

For systems applications, multiple units can also be rack mounted in one to four unit configurations for up to four independent 60 watt outputs. Further, the 60 watt XT can be combined in max-and-match rack combinations with the 300 watt HPD Series or 500W XPD Series units. XT can also be combined in a rack with 300W HPD or 500W XPD.

General Specifications (Specifications are subject to change without notice.)

Operational AC Input Voltage	Standard: 110/220/230/240 VAC $\pm 10\%$, 47-63 Hz Optional: 115 VAC $\pm 10\%$, 57-63 Hz;
AC Input Current	Single Unit: 1.2 A, Dual Unit: 2.4 A, Triple Unit: 3.6 A, Quad Unit: 4.8 A, at 115 VAC
Voltage Mode Transient Response	Time $< 100 \mu\text{s}$ recovery to 0.05% band, $\pm 50\%$ load change in the range of 25% to 100% of the rated load
Operating Ambient Temperature	0 to 30° C for full rated output. Above 30° C, derate output linearly to zero at 70° C.
Storage Temperature Range	-55 to 85° C
Humidity Range	0 to 80% RH, non-condensing
Front Panel Voltage and Current Control	10-turn voltage and 1-turn current potentiometers (10-turn current optional)
Front Panel Voltage Control Resolution	0.02% of maximum voltage
AC Input Connector Type	IEC 320 connector
Weight (one unit)	Approximately 3.5kg
Approvals	CE-marked units meet standards: EN55011 (Group 1 Class A) 1991, EN61000-6-3 and EN61000-6-1, (IEC 1010-1:1990), CSA certified

Analog Programming (With optional APG interface installed.)

Remote On/Off and Interlock	2-20 V signal or TTL-compatible input, selectable logic
Remote Analog Programming Option	0-10 VDC for 0-100% or rated voltage or current $\pm 0.1\%$, 0-10 k $\frac{1}{2}$ for 0-100% of rated voltage or current $\pm 0.1\%$
Remote Monitoring	0-10 VDC for 0-100% of rated voltage or current $\pm 0.1\%$
Over Voltage Protection Trip Range	3 V to full output +10%
Tracking Accuracy	$\pm 1\%$ for series operation

Contact Zentron-Elektrik for complete product specifications.

Electrical Specifications¹ (Specifications are subject to change without notice.)

Model	XT 7-6	XT 15-4	XT 20-3	XT 30-2	XT 60-1	XT 120-0.5	XT 250-0.25
Output Ratings:							
Output Voltage	0-7 V	0-15 V	0-20 V	0-30 V	0-60 V	0-120 V	0-250 V
Output Current	0-6 A	0-4 A	0-3 A	0-2 A	0-1 A	0-0.5 A	0-0.25 A
Output Power	42 W	60 W	60 W	60 W	60 W	60 W	60 W
Line Regulation:²							
Voltage (0.01% of Vmax + 2 mV)	2.7 mV	3.5 mV	4 mV	5 mV	8 mV	14 mV	27 mV
Current (0.01% of Imax + 250 µA)	0.85 mA	0.65 mA	0.55 mA	0.45 mA	0.35 mA	0.3 mA	0.275 mA
Load Regulation:³							
Voltage (0.01% of Vmax + 2 mV)	2.7 mV	3.5 mV	4 mV	5 mV	8 mV	14 mV	27 mV
Current (0.01% of Imax + 250 µA)	0.85 mA	0.65 mA	0.55 mA	0.45 mA	0.35 mA	0.3 mA	0.275 mA
Output Noise & Ripple (20 Hz-20 MHz):							
Voltage	<1 mVrms	<1 mVrms	<1 mVrms	<1 mVrms	<1 mVrms	<1 mVrms	<5 mVrms
Current	<2 mArms	<2 mArms	<2 mArms	<2 mArms	<2 mArms	<2 mArms	<1 mArms
Meter Accuracy:							
Voltage (1% of Vmax + 1 count)	0.08 V	0.25 V	0.3 V	0.4 V	0.7 V	2.2 V	3.5 V
Current (1% of Imax + 1 count)	0.07 A	0.05 A	0.04 A	0.03 A	0.02 A	0.006 A	0.003 A
Drift (8 hours):⁴							
Voltage (0.02% of Vmax)	1.4 mV	3 mV	4 mV	6 mV	12 mV	24 mV	50 mV
Current (0.03% of Imax)	1.8 mA	1.2 mA	0.9 mA	0.6 mA	0.3 mA	0.15 mA	0.075 mA
Temperature Coefficient:⁵							
Voltage (0.015% of Vmax/°C)	1.05 mV	2.25 mV	3 mV	4.5 mV	9 mV	18 mV	37.5 mV
Current (0.02% of Imax/°C)	1.2 mA	0.8 mA	0.6 mA	0.4 mA	0.2 mA	0.1 mA	0.05 mA

¹ Specifications indicate typical performance at 25° C ± 5° C, nominal line input of 115 VAC.

² For input voltage variation over the AC input voltage range, with constant rated load.

³ For 0-100% load variation, with constant nominal line voltage.

⁴ Maximum drift over 8 hours with constant line, load, and temperature, after 30-minute warm-up.

⁵ Change in output per °C change in ambient temperature, with constant line and load.

XT 60 W Options

GPIB-XT	GPIB Interface card (16-bit) GPIB - Multichannel
RS-232-XT	RS-232 Interface card (16-bit)
APG-XT	Analog programming interface card
M1 110	110 VAC Input (50/60 Hz)
M2 220	220 VAC Input (50/60 Hz)
M3 230	230 VAC Input (50/60 Hz)
M4 240	240 VAC Input (50/60 Hz)
M11	10-turn current potentiometer
M13A	Locking knobs for front panel controls
M43	Switch Selectable Input 110 VAC or 220 VAC
RM-XHS	19-inch rack mount kit for up to four XT, XPD or HPD power supplies

Contact Zentro-Elektrik for custom voltage and current combinations, dual configurations, and other options.