

## Series XMP

2,4 kW continuous, 2,6 kW intermittent  
power flexibility



- GPIB or RS-232 controlled
- 19" x 5 1/4" (3 U high) mainframe with controller to accommodate up to 8 modules
- 1/8, 2/8, and 3/8 width modules available ranging from 8 V to 160 V and 1.25 A to 80 A
- Individual module processor control
- Power envelope: 2.4 kW, 2.6 kW intermittent
- Power envelope monitoring and control
- Polarity and isolation relays
- Readback of voltage and current
- External synchronization
- Extensive DUT protection features
- Workpoint window warning
- Multichannel 10 store/recall locations
- 99 steps auto sequencing
- Software-based calibration
- Local panel and keyboard
- Low ripple and noise
- Power Factor Correction (PFC), wide range mains operation

The Modular Power System (XMP 2600) is a multiple-output programmable DC power supply system. The system is an ideal solution for ATE applications.

A 19" x 5 1/4" (3U high) mainframe, the XMP includes a controller and can be configured with a selection of up to eight modules. For added flexibility, modules of different power ratings can be combined within the same XMP mainframe. The system automatically reconfigures itself when new modules are installed.

The modules come in a variety of sizes and power ratings: 1/8 width, ranging from 160 W to 720 W; 2/8 width, ranging from 640 W to 1.6 kW; and 3/8 width high power modules ranging from 2.8 kW to 3.2 kW, limited by the XMP mainframe power envelope.

The XMP mainframe can be populated with modules having an overall power of several kW. Within the power envelope of the XMP mainframe, output power can be drawn from different modules at different times. No other single power system has this flexibility.

All XMP functions can be programmed through a GPIB (IEEE-488) or RS-232 interface, or manually commanded and monitored from the front panel for convenient hands-on operation. LabVIEW®, LabWindows/CVI®, TestPoint® and AtEasy® drivers are available for easy integration of these functions in a customized system. The XMP comes with a convenient virtual panel and tutorial software.

### General Specifications

AC Input	170 V-265 V	lin < 20 A nominal
	Nominal 120 V, Po < 1 kW	lin < 15 A nominal

\* Below the minimum specified input voltage range, consult factory for derating information.

Mains frequency	45 to 66 Hz
Power cord length	2 m
Power Factor Correction (PFC)	Power factor correction to meet EN61000-3-2 Current Harmonics and EN61000-3-3 Voltage Fluctuations (IEC555)
Inrush Current	Up to 100% of specified nominal current
Input Mains Protection	Circuit breaker switch on the front panel

### Environmental Conditions

Storage temperature	-20°C to 70°C
Operating temperature	0°C to 55°C (LCD to 50°C)
Derate output current/power	1% per °C from 30°C to 55°C

### Regulatory Approvals

European Standards:	Electromagnetic Emissions and Immunity - meets Council Directive 89/336/EEC
Electromagnetic Emissions:	EN61326: 1997 + A1: 1998 EN61000-3-2: 2000 EN61000-3-3: 1995
Electromagnetic Immunity:	EC61326: 1997 + A1: 1998

# Laborstromversorgungen

## Safety Agency Compliance

European Standards:	
Safety	Meets EN61010-1
American Standards:	
Electromagnetic Emissions	Meets FCC Class B
Safety	Meets UL61010-1

## Temperature Coefficient

Voltage Programming	0.01% per °C
Current Programming	0.02% per °C
Voltage Readback	0.01% per °C
Current Readback	0.02% per °C
Long Term Drift	Output change after 30 min. warm-up, over an interval of 8 hours under constant load, line and temperature conditions is 0.03%.
Remote Sensing	Up to 4 V can be dropped over the two load lines together (i.e. 1.5 V + 2.5 V). At 2.5 V a warning event will be generated, alerting over sense voltage drop condition, and at 4V the module will be shut down. The load lines drop subtracts from the voltage available for the load.
Output Programming Response Time	Rise and fall time with full resistive load (10 to 90% and 90 to 10%) is 30-640 mSec.
Isolation	Output terminals can be floated up to +/- 240 VDC from chassis ground

\* Data subject to change without notice.

Module Order Code	A1	B1	C1	D1	E1	A2	B2	C2	D2	E2
Module width	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8
<b>Output Ratings</b>										
Power	160 W	180 W	180 W	200 W	200 W	320 W	360 W	360 W	400 W	400 W
Voltage	8 V	18 V	36 V	80 V	160 V	8 V	18 V	36 V	80 V	160 V
Current	20 A	10 A	5 A	2.5 A	1.25 A	40 A	20 A	10 A	5 A	2.5 A
<b>Programming Accuracy</b>										
Voltage (0.03% of Vmax)	3 mV	7 mV	12 mV	26 mV	60 mV	5 mV	10 mV	15 mV	30 mV	65 mV
OVP (2% of Vmax)	90 mV	180 mV	340 mV	740 mV	980 mV	90 mV	181 mV	342 mV	744 mV	988 mV
Current (0.12% of Imax)	8 mA	4 mA	2 mA	1 mA	0.5 mA	24 mA	9 mA	5 mA	3 mA	2 mA
OCP (2% of Imax)	16mA	8 mA	4 mA	2 mA	1 mA	32 mA	16 mA	8 mA	4 mA	2 mA
<b>Average Programming Resolution</b>										
Voltage	2.5 mV	12 mV	15 mV	24 mV	122 mV	2.5 mV	12 mV	15 mV	24 mV	122 mV
OVP	2.5 mV	12 mV	15 mV	24 mV	122 mV	2.5 mV	12 mV	15 mV	24 mV	122 mV
Current	15 mA	12.5 mA	2.25 mA	1.63 mA	1.31 mA	20 mA	15 mA	12.5 mA	2.25 mA	1.63 mA
OCP	15 mA	12.5 mA	2.25 mA	1.63 mA	1.31 mA	20 mA	15 mA	12.5 mA	2.25 mA	1.63 mA
<b>Ripple and Noise (20 Hz to 20 MHz)</b>										
Rms	1.8 mV	2 mV	2.5 mV	7 mV	12 mV	2 mV	2.5 mV	4 mV	12 mV	25 mV
Peak-Peak	12 mV	14 mV	19 mV	42 mV	85 mV	13 mV	15 mV	25 mV	70 mV	150 mV
<b>Load Regulation</b>										
Constant voltage	1.5 mV	1.8 mV	2 mV	3 mV	6 mV	1.5 mV	2 mV	2.5 mV	4 mV	7 mV
Constant current	8 mA	4 mA	2 mA	1 mA	0.5 mA	18 mA	10 mA	6 mA	3 mA	2 mA
<b>Line Regulation</b>										
Constant voltage	2 mV	2.5 mV	3 mV	4 mV	6 mV	2.5 mV	3 mV	3.5 mV	5mV	7 mV
Constant current	8 mA	4 mA	2 mA	1 mA	0.5 mA	18 mA	10 mA	6 mA	3mA	2 mA
<b>Readback Accuracy</b>										
Voltage readback (0.03% of Vmax)	6 mV	12mV	23 mV	42 mV	85 mV	12 mV	24 mV	46 mV	90 mV	180 mV
Current readback (0.12% of Imax)	8 mA	4mA	2 mA	1 mA	0.5 mA	26 mA	9 mA	5 mA	3 mA	2 mA
<b>Average Readback Resolution</b>										
Voltage readback	2.5 mV	12mV	15 mV	24 mV	122 mV	2.5 mV	12 mV	15 mV	24 mV	122 mV
Current readback	15 mA	12.5mA	2.25 mA	1.63 mA	1.31 mA	20 mA	15 mA	12.5 mA	2.25 mA	1.63 mA
Transient response time (mSec) *(3)	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.9	< 0.9	< 0.9	< 0.9	< 0.9

Orderingcode

Channel: #1 #2 #3 #4 #5 #6 #7 #8

XMP XX VIY VIY VIY VIY VIY VIY VIY VIY F 0 1 1

Fixed Digits 01

Voltage option  
Y = Module with disconnect and polarity-locks

Current code (1 to 5)  
See table below for output-current codes

Front panel option:  
0 = Full front panel with keyboard  
2 = Slim expansion enclosure/Dark front panel which has only the switch and the indicator

MultiFrame Controller  
Power Storage Code:  
1 = 2.4kV Continuous, 2.5kV Insulated

Number of outputs per XMP  
multiFrame with controller:  
#1 = 1 Output  
#2 = 2 Outputs  
#3 = 3 Outputs  
#4 = 4 Outputs  
#5 = 5 Outputs  
#6 = 6 Outputs  
#7 = 1 Output  
#8 = 0 Outputs

Power Modules Table

V-Code	Current	100 mV/0.1s	100 mV/1s	100 mV/10s	200 mV/10s	300 mV/10s
0-0 V	A	25A	40 A	40 A	40 A	40 A
0-18 V	B	10A	20 A	40A	40 A	40 A
0-36 V	C	5A	10 A	20A	40 A	80 A (1*6)
0-80 V	D	2.5 A	5 A	5A	20 A	40 A (1*6)
0-160 V	E	1.25 A	2.5A	4.5 A	10 A	20 A (1*6)

\*1/6 - The maximum output power is limited by the multiFrame power envelope.

Accessories:

XMP TM	Operator's Manual (One Operator's Manual is included with the instrument)
XMP LCDN	One Output (load) connector (One connector already supplied with each module)
XMP SPB CBL	SPB cable (1 m)
XMP RR	Sliding rails for rack mounting
XMP NET CBL	Ethernet net communication cable (1.2 m)



A4	B3	C3	D3	E3	B4	C4	D4	E4	C5	D5	E5
2/8	1/8	1/8	1/8	1/8	2/8	2/8	2/8	2/8	3/8	3/8	3/8
640 W	720 W	720 W	720 W	720 W	1,440 W	1,440 W	1,600 W	1,600 W	*(4)	*(4)	*(4)
8 V	18 V	36 V	80 V	160 V	18 V	36 V	80 V	160 V	36 V	80V	160V
80 A	40 A	20 A	9 A	4.5 A	80 A	40 A	20 A	10 A	80 A	40A	20A
8 mV	12 mV	17 mV	34 mV	75 mV	16 mV	20 mV	38 mV	80 mV	25 mV	48 mV	98mV
98 mV	182 mV	344 mV	748 mV	996 mV	196 mV	375 mV	800 mV	1,100 mV	398 mV	874 mV	1,240mV
46 mA	28 mA	10 mA	4 mA	2 mA	58 mA	38 mA	15 mA	8 mA	178 mA	64 mA	29mA
74 mA	36 mA	18 mA	9 mA	5 mA	140 mA	40 mA	20 mA	10 mA	296 mA	128 mA	58mA
2.5 mV	12 mV	15 mV	24 mV	122 mV	12 mV	15 mV	24 mV	122 mV	15 mV	24 mV	122 mV
2.5 mV	12 mV	15 mV	24 mV	122 mV	12 mV	15 mV	24 mV	122 mV	15 mV	24 mV	122 mV
40 mA	20 mA	15 mA	3.25 mA	2.13 mA	40 mA	20 mA	15 mA	12.5 mA	40 mA	20 mA	15 mA
40 mA	20 mA	15 mA	3.25 mA	2.13 mA	40 mA	20 mA	15 mA	12.5 mA	40 mA	20 mA	15 mA
4 mV	5 mV	9 mV	23 mV	50 mV	12 mV	35 mV	80 mV	180 mV	88 mV	198 mV	446 mV
25 mV	30 mV	50 mV	125 mV	250 mV	68 mV	100 mV	250 mV	550 mV	210 mV	596 mV	1,330 mV
2.5 mV	2.5 mV	3 mV	5 mV	8 mV	3.5 mV	4 mV	6 mV	10 mV	6 mV	9 mV	14 mV
49 mA	24 mA	13 mA	8 mA	4 mA	69 mA	32 mA	18 mA	10 mA	76 mA	37mA	22 mA
3 mV	3.5 mV	4 mV	6 mV	8 mV	4 mV	5 mV	7 mV	9 mV	7.5 mV	11 mV	14 mV
49 mA	24 mA	13 mA	8 mA	4 mA	69 mA	32 mA	18 mA	10 mA	107 mA	59 mA	29 mA
25 mV	29 mV	55 mV	110 mV	200 mV	38 mV	66 mV	134 mV	240 mV	78 mV	146 mV	294 mV
40 mA	28 mA	10 mA	4 mA	2 mA	64 mA	39 mA	15 mA	8 mA	188 mA	67 mA	32 mA
2.5 mV	12 mV	15 mV	24 mV	122 mV	12 mV	15 mV	24 mV	122 mV	15 mV	24 mV	122 mV
40 mA	20 mA	15 mA	3.25 mA	2.13 mA	40 mA	20 mA	15 mA	12.5 mA	40 mA	20 mA	15 mA
< 1	< 1	< 1	< 1	< 1	< 2	< 2	< 2	< 2	< 4	< 4	< 4