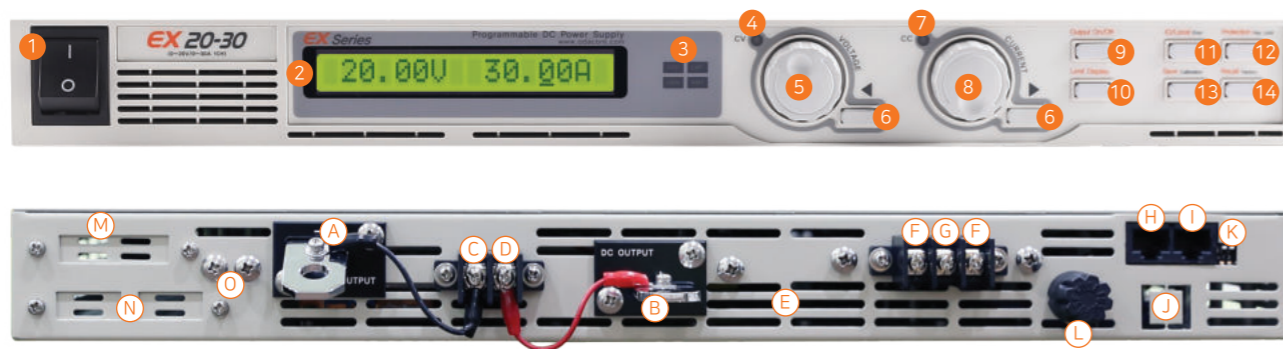


# EX Series

## Switching Type Programmable DC Power Supply

### 19inch Rack Standard & Benchtop type

EX Series is a switching type programmable DC Power supply. It is high-performance and high-efficiency with RS232C, RS485, USB, TCP/IP(option) interface based on SCPI (Standard Commands for Programmable Instruments) protocol. The combination of bench-top and system features in these power supplies provides various solutions for your design and test requirements in the industrial fields, R&D institute center and education fields.



- |                           |                              |                                     |  |
|---------------------------|------------------------------|-------------------------------------|--|
| 1 Main Power              | 8 Current Control Encoder    | A - Output bus bars                 | H RS-232C Interface Port                 |
| 2 LCD Display             | 9 Output On/Off Key          | B + Output bus bars                 | I RS-485 Interface Port                  |
| 3 Status Indicate Lamp    | 10 Limit Display Key         | C - Voltage Sensing Input connector | J TCP/IP Port(option)                    |
| 4 CV Lamp                 | 11 IO/Local Key              | D + Voltage Sensing Input connector | K RS485 TERMINAL                         |
| 5 Voltage Control Encoder | 12 Protection & Key Lock Key | E Ventilation Slit                  | L AC Input Fuse                          |
| 6 Left/Right Cursor Key   | 13 Store & Calibration Key   | F AC Power Input Connector          | M Ex Series Option Port                  |
| 7 CC Lamp                 | 14 Recall & Factory Key      | G Earth Ground                      | N Analog Input & Output Calibration Port |
|                           |                              |                                     | O Earth Ground Connection Screw          |



#### SLIM TYPE

EX Series is space-efficient product which support up to 2.5kW with size of 19inch X 1U. User can experience innovative size and light weight compared to linear DC power supplies.



#### PROTECTION

OVP, OCP mode protects DUT by cutting output off in case over voltage or over current flow during use. It can be safely used even when the user is careless or for long time testing. Also, It provides limit function such as OVL, UVL, UCL and etc to prevent user's setting mistake.



#### DUAL CONTROL ENCODER

Dual Encoder for voltage and current respectively allow user to make the desired settings faster than single control encoder. It is designed to be easy to use even for the first time users, so it can be used widely.



#### MEMORY STORE & RECALL

User can save or recall setting voltage, current and operating states. Even if you are not a professional engineer, you can recall the memory that you have saved. user can easily use it for production, product inspection and reliability test etc.

### Standard Features

- 4-Digit Display Resolution
- 16×1 Big-Character Type LCD Display
- Adjustment Encoder for voltage and current setting
- CV/CC Mode
- Remote Voltage-Sensing(Voltage drop compensation)
- OVP, OCP Protection Mode
- UVL(Under Voltage Lock), OVL(Over Voltage Lock), UCL(Under Current Lock), OCL(Over Current Lock)
- Calibration Function(Manual and PC)
- Panel Lock Function
- Memory Save & Recall Function(Up to 10 operation states)
- Output ON/ OFF Function
- 11 diverse Factory Modes(User memory clear, Last state, Calibration- Restore etc)
- RS-232C, RS485, Communication(TCP/IP is optional)
- Single phase, AC Input 220VAC ±10% and 3 phase AC Input

### Options

- RJ45 to RS232C cable
- RS-232C cable
- RS-485 cable
- TCP/IP communication
- Output ON/OFF signal control
- Analog Programming(Vout & Iout voltage programming) & Monitoring (Output Voltage & Current Monitoring) by 0~5V or 0~10V, Isolated type
- AC Power Cord(Other type)
- AC Input 380V or 400V±10%, 3-phase 4-wire system(R,S,T,N,G), 50~60Hz
- AC Input 200V or 220V±10%, 3-phase 3-wire system(R,S,T,G), 50~60Hz

### Accessories

- AC Power Cord(Type F)
- Operating Manual(QR Code)
- Demo software program(QR Code)
- Rack mount Bracket

### Line-Up and Specification

	1U Size(600~2.5kW)				2U Size(3.75~5kW)				4U Size(6~10kW)			
20V	30A	60A	90A	-	120A	180A	240A	-	300A	360A	420A	480A
30V	20A	40A	60A	80A	120A	160A	-	-	200A	240A	280A	320A
50V	12A	24A	36A	48A	72A	96A	-	-	120A	144A	168A	192A
60V	10A	20A	30A	40A	60A	80A	-	-	100A	120A	140A	160A
80V	7.5A	15A	22.5A	30A	45A	60A	-	-	75A	90A	105A	120A
100V	6A	12A	18A	24A	36A	48A	-	-	60A	72A	84A	96A
150V	4A	8A	12A	16A	24A	32A	-	-	40A	48A	56A	64A
200V	3A	6A	9A	12A	18A	24A	-	-	30A	36A	42A	48A
300V	2A	4A	6A	8A	12A	16A	-	-	20A	24A	28A	32A
600V	1A	2A	-	-	3A	4A	6A	8A	10A	12A	14A	16A

© Please contact us about un-listed capacity(or more than 10kW, EX Series supports to be customized up to 100kW)

# 1U Size (600W~2.5kW)

Dimension: 19inch wide(426mm) Standard, 1U height(44mm)



## Line-Up and Specification

Models in bold with\* mark are CE certified.

SPEC MODEL	Output Rating (@0°C~40°C)		Line & Load Regulation (%0.1+offset)	Programming Accuracy @25°C(@0.1+offset)		Readback Accuracy @25°C(@0.1+offset)		Ripple & Noise (@20Mhz) RMS Value	Display Resolution		Weight	Efficiency (Typical) %
	V	A		V	A	V	A		V	A		
<b>1U Size (426mm(W)*44mm(H)) : 600W ~ 2.5kW</b>												
EX20-30*	0~21	0~31.5	≤0.1%	30mV	95mA	20mV	63mA	10mV	0.01	0.01	6.25Kg	80
EX20-60*	0~21	0~63	≤0.1%	30mV	189mA	20mV	126mA	10mV	0.01	0.01	7.5Kg	80
EX20-90*	0~21	0~94.5	≤0.1%	30mV	284mA	20mV	189mA	10mV	0.01	0.01	8.75Kg	80
EX30-20*	0~31.5	0~21	≤0.1%	45mV	63mA	30mV	42mA	10mV	0.01	0.01	6.25Kg	82
EX30-40*	0~31.5	0~42	≤0.1%	45mV	126mA	30mV	84mA	10mV	0.01	0.01	7.5Kg	82
EX30-60*	0~31.5	0~63	≤0.1%	45mV	189mA	30mV	126mA	10mV	0.01	0.01	8.75Kg	82
EX30-80*	0~31.5	0~84	≤0.1%	45mV	252mA	30mV	168mA	10mV	0.01	0.01	10Kg	82
EX50-12*	0~52.5	0~12.6	≤0.1%	75mV	38mA	50mV	25mA	10mV	0.01	0.01	6.25Kg	85
EX50-24*	0~52.5	0~25.2	≤0.1%	75mV	76mA	50mV	50mA	10mV	0.01	0.01	7.5Kg	83
EX50-36*	0~52.5	0~37.8	≤0.1%	75mV	113mA	50mV	76mA	10mV	0.01	0.01	8.75Kg	83
EX50-48*	0~52.5	0~50.4	≤0.1%	75mV	151mA	50mV	101mA	10mV	0.01	0.01	10Kg	83
EX60-10	0~63	0~10.5	≤0.1%	90mV	32mA	60mV	21mA	10mV	0.01	0.01	6.25Kg	85
EX60-20	0~63	0~21	≤0.1%	90mV	63mA	60mV	42mA	10mV	0.01	0.01	7.5Kg	85
EX60-30	0~63	0~31.5	≤0.1%	90mV	95mA	60mV	63mA	10mV	0.01	0.01	8.75Kg	85
EX60-40	0~63	0~42	≤0.1%	90mV	126mA	60mV	84mA	10mV	0.01	0.01	10Kg	85
EX80-7.5	0~84	0~7.875	≤0.1%	120mV	24mA	80mV	16mA	10mV	0.01	0.001	6.25Kg	85
EX80-15	0~84	0~15.7	≤0.1%	120mV	47mA	80mV	32mA	10mV	0.01	0.01	7.5Kg	85
EX80-22.5	0~84	0~23.6	≤0.1%	120mV	71mA	80mV	47mA	10mV	0.01	0.01	8.75Kg	85
EX80-30	0~84	0~31.5	≤0.1%	120mV	95mA	80mV	63mA	10mV	0.01	0.01	10Kg	85
EX100-6	0~105	0~6.3	≤0.1%	150mV	19mA	100mV	13mA	10mV	0.1	0.001	6.25Kg	85
EX100-12	0~105	0~12.6	≤0.1%	150mV	38mA	100mV	25mA	10mV	0.1	0.01	7.5Kg	85
EX100-18	0~105	0~18.9	≤0.1%	150mV	57mA	100mV	38mA	10mV	0.1	0.01	8.75Kg	85
EX100-24	0~105	0~25.2	≤0.1%	150mV	76mA	100mV	50mA	10mV	0.1	0.01	10Kg	85
EX150-4	0~157.5	0~4.2	≤0.1%	225mV	13mA	150mV	8mA	15mV	0.1	0.001	6.25Kg	85
EX150-8	0~157.5	0~8.4	≤0.1%	225mV	25mA	150mV	17mA	15mV	0.1	0.001	7.5Kg	85
EX150-12	0~157.5	0~12.6	≤0.1%	225mV	38mA	150mV	25mA	15mV	0.1	0.01	8.75Kg	85
EX150-16	0~157.5	0~16.8	≤0.1%	225mV	50mA	150mV	34mA	15mV	0.1	0.01	10Kg	85
EX200-3	0~210	0~3.15	≤0.1%	300mV	9mA	200mV	6mA	15mV	0.1	0.001	6.25Kg	85
EX200-6	0~210	0~6.3	≤0.1%	300mV	19mA	200mV	13mA	15mV	0.1	0.001	7.5Kg	85
EX200-9	0~210	0~9.45	≤0.1%	300mV	28mA	200mV	19mA	15mV	0.1	0.001	8.75Kg	85
EX200-12	0~210	0~12.6	≤0.1%	300mV	38mA	200mV	25mA	15mV	0.1	0.01	10Kg	85
EX300-2*	0~315	0~2.1	≤0.1%	450mV	6mA	300mV	4mA	25mV	0.1	0.001	6.25Kg	85
EX300-4*	0~315	0~4.2	≤0.1%	450mV	13mA	300mV	8mA	25mV	0.1	0.001	7.5Kg	85
EX300-6*	0~315	0~6.3	≤0.1%	450mV	19mA	300mV	13mA	25mV	0.1	0.001	8.75Kg	85
EX300-8*	0~315	0~8.4	≤0.1%	450mV	25mA	300mV	17mA	25mV	0.1	0.001	10Kg	85
EX600-1	0~630	0~1.05	≤0.1%	900mV	3mA	600mV	2mA	60mV	0.1	0.001	8.75Kg	85
EX600-2	0~630	0~2.1	≤0.1%	900mV	6mA	600mV	4mA	60mV	0.1	0.001	8.75Kg	85

© Please contact us about un-listed capacity(or more than 10kW, EX Series supports to be customized up to 100kW)

# 2U Size (3.75kW~5kW)

Dimension: 19inch wide(426mm) Standard, 2U height(88mm)



## Line-Up and Specification

Models in bold with\* mark are CE certified.

SPEC MODEL	Output Rating (@0°C~40°C)		Line & Load Regulation (%0.1+offset)	Programming Accuracy @25°C(@0.1+offset)		Readback Accuracy @25°C(@0.1+offset)		Ripple & Noise (@20Mhz) RMS Value	Display Resolution		Weight	Efficiency (Typical) %
	V	A		V	A	V	A		V	A		
<b>2U Size (426mm(W)*88mm(H)) 3.75kW ~ 5kW</b>												
EX20-120*	0~21	0~126	≤0.1%	30mV	378mA	20mV	252mA	15mV	0.01	0.1	13Kg	80
EX20-180	0~21	0~189	≤0.1%	30mV	567mA	20mV	378mA	15mV	0.01	0.1	15.5Kg	80
EX20-240	0~21	0~252	≤0.1%	30mV	756mA	20mV	504mA	15mV	0.01	0.1	18Kg	80
EX30-120*	0~31.5	0~126	≤0.1%	45mV	378mA	30mV	252mA	15mV	0.01	0.1	15.5Kg	82
EX30-160*	0~31.5	0~168	≤0.1%	45mV	504mA	30mV	336mA	15mV	0.01	0.1	18Kg	82
EX50-72	0~52.5	0~75.6	≤0.1%	75mV	227mA	50mV	151mA	15mV	0.01	0.01	15.5Kg	85
EX50-96	0~52.5	0~100.8	≤0.1%	75mV	302mA	50mV	202mA	15mV	0.01	0.01	18Kg	85
EX60-60	0~63	0~63	≤0.1%	90mV	189mA	60mV	126mA	15mV	0.01	0.01	15.5Kg	85
EX60-80	0~63	0~84	≤0.1%	90mV	252mA	60mV	168mA	15mV	0.01	0.01	18Kg	85
EX80-45	0~84	0~47.25	≤0.1%	120mV	142mA	80mV	95mA	15mV	0.01	0.01	15.5Kg	85
EX80-60	0~84	0~63	≤0.1%	120mV	189mA	80mV	126mA	15mV	0.01	0.01	18Kg	85
EX100-36	0~105	0~36	≤0.1%	150mV	113mA	100mV	76mA	15mV	0.1	0.01	15.5Kg	85
EX100-48	0~105	0~50.4	≤0.1%	150mV	151mA	100mV	101mA	15mV	0.1	0.01	18Kg	85
EX150-24	0~157.5	0~25.2	≤0.1%	225mV	76mA	150mV	50mA	15mV	0.1	0.01	15.5Kg	85
EX150-32	0~157.5	0~33.6	≤0.1%	225mV	101mA	150mV	67mA	15mV	0.1	0.01	18Kg	85
EX200-18	0~210	0~18.9	≤0.1%	300mV	57mA	200mV	38mA	30mV	0.1	0.01	15Kg	85
EX200-24	0~210	0~25.2	≤0.1%	300mV	76mA	200mV	50mA	30mV	0.1	0.01	18Kg	85
EX300-12	0~315	0~12.6	≤0.1%	450mV	38mA	300mV	25mA	50mV	0.1	0.01	15Kg	85
EX300-16	0~315	0~16.8	≤0.1%	450mV	50mA	300mV	34mA	50mV	0.1	0.01	18Kg	85
EX600-3	0~630	0~3.15	≤0.1%	900mV	9mA	600mV	6mA	120mV	0.1	0.001	15Kg	85
EX600-4	0~630	0~4.2	≤0.1%	900mV	13mA	600mV	8mA	120mV	0.1	0.001	15Kg	85
EX600-6	0~630	0~6.3	≤0.1%	900mV	19mA	600mV	13mA	120mV	0.1	0.001	18Kg	85
EX600-8	0~630	0~8.4	≤0.1%	900mV	25mA	600mV	17mA	120mV	0.1	0.001	18Kg	85

© Please contact us about un-listed capacity(or more than 10kW, EX Series supports to be customized up to 100kW)

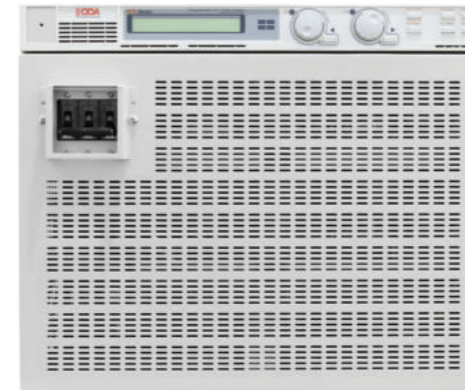
# 4U Size (6kW~10kW)

Dimension: 19inch wide(426mm) Standard, 4U height(176mm)



# EX Series - High Capacity

In case of 10kW~100kW, EX Series still support it by custom order



8U Size	
Dimension	426mm(W) x 352mm(H) x 550mm(D)

## Line-Up and Specification

SPEC MODEL	Output Rating (@0°C~40°C)		Line & Load Regulation (%0.1+offset)	Programming Accuracy @25°C(@0.1+offset)		Readback Accuracy @25°C(@0.1+offset)		Ripple & Noise (@20MHz) RMS Value	Display Resolution		Weight	Efficiency (Typical) %
	V	A		V	A	V	A		V	A		
<b>4U Size (426mm(W)*176mm(H)) : 6kW ~ 10kW</b>												
EX20-300	0~21	0~315	≤0.1%	30mV	945mA	20mV	630mA	30mV	0.01	0.1	26.5Kg	80
EX20-360	0~21	0~378	≤0.1%	30mV	1134mA	20mV	756mA	30mV	0.01	0.1	29Kg	80
EX20-420	0~21	0~441	≤0.1%	30mV	1323mA	20mV	882mA	30mV	0.01	0.1	31.5Kg	80
EX20-480	0~21	0~504	≤0.1%	30mV	1512mA	20mV	1008mA	30mV	0.01	0.1	34Kg	80
EX30-200	0~31.5	0~210	≤0.1%	45mV	630mA	30mV	420mA	30mV	0.01	0.1	26.5Kg	83
EX30-240	0~31.5	0~252	≤0.1%	45mV	756mA	30mV	504mA	30mV	0.01	0.1	29Kg	83
EX30-280	0~31.5	0~294	≤0.1%	45mV	882mA	30mV	588mA	30mV	0.01	0.1	31.5Kg	83
EX30-320	0~31.5	0~336	≤0.1%	45mV	1008mA	30mV	672mA	30mV	0.01	0.1	34Kg	83
EX50-120	0~52.5	0~126	≤0.1%	75mV	378mA	50mV	252mA	30mV	0.01	0.1	26.5Kg	85
EX50-144	0~52.5	0~151.2	≤0.1%	75mV	454mA	50mV	302mA	30mV	0.01	0.1	29Kg	85
EX50-168	0~52.5	0~176.4	≤0.1%	75mV	529mA	50mV	353mA	30mV	0.01	0.1	31.5Kg	85
EX50-192	0~52.5	0~201.6	≤0.1%	75mV	605mA	50mV	403mA	30mV	0.01	0.1	34Kg	85
EX60-100	0~63	0~105	≤0.1%	90mV	315mA	60mV	210mA	30mV	0.01	0.1	26.5Kg	85
EX60-120	0~63	0~126	≤0.1%	90mV	378mA	60mV	252mA	30mV	0.01	0.1	29Kg	85
EX60-140	0~63	0~147	≤0.1%	90mV	441mA	60mV	294mA	30mV	0.01	0.1	31.5Kg	85
EX60-160	0~63	0~168	≤0.1%	90mV	504mA	60mV	336mA	30mV	0.01	0.1	34Kg	85
EX80-75	0~84	0~78.75	≤0.1%	120mV	236mA	80mV	158mA	30mV	0.01	0.01	26.5Kg	85
EX80-90	0~84	0~94.5	≤0.1%	120mV	284mA	80mV	189mA	30mV	0.01	0.01	29Kg	85
EX80-105	0~84	0~110.25	≤0.1%	120mV	331mA	80mV	221mA	30mV	0.01	0.1	31.5Kg	85
EX80-120	0~84	0~126	≤0.1%	120mV	378mA	80mV	252mA	30mV	0.01	0.1	34Kg	85
EX100-60	0~105	0~63	≤0.1%	150mV	189mA	100mV	126mA	40mV	0.1	0.01	26.5Kg	85
EX100-72	0~105	0~75.6	≤0.1%	150mV	227mA	100mV	151mA	40mV	0.1	0.01	29Kg	85
EX100-84	0~105	0~88.2	≤0.1%	150mV	265mA	100mV	176mA	40mV	0.1	0.01	31.5Kg	85
EX100-96	0~105	0~100.8	≤0.1%	150mV	302mA	100mV	202mA	40mV	0.1	0.01	34Kg	85
EX150-40	0~157.5	0~42	≤0.1%	225mV	126mA	150mV	84mA	50mV	0.1	0.01	26.5Kg	85
EX150-48	0~157.5	0~50.4	≤0.1%	225mV	151mA	150mV	101mA	50mV	0.1	0.01	29Kg	85
EX150-56	0~157.5	0~58.8	≤0.1%	225mV	176mA	150mV	118mA	50mV	0.1	0.01	31.5Kg	85
EX150-64	0~157.5	0~67.2	≤0.1%	225mV	202mA	150mV	134mA	50mV	0.1	0.01	34Kg	85
EX200-30	0~210	0~31.5	≤0.1%	300mV	95mA	200mV	63mA	60mV	0.1	0.01	26.5Kg	85
EX200-36	0~210	0~37.8	≤0.1%	300mV	113mA	200mV	76mA	60mV	0.1	0.01	29Kg	85
EX200-42	0~210	0~44.1	≤0.1%	300mV	132mA	200mV	88mA	60mV	0.1	0.01	31.5Kg	85
EX200-48	0~210	0~50.4	≤0.1%	300mV	151mA	200mV	101mA	60mV	0.1	0.01	34Kg	85
EX300-20	0~315	0~21	≤0.1%	450mV	63mA	300mV	42mA	100mV	0.1	0.01	26.5Kg	85
EX300-24	0~315	0~25.2	≤0.1%	450mV	76mA	300mV	50mA	100mV	0.1	0.01	29Kg	85
EX300-28	0~315	0~29.4	≤0.1%	450mV	88mA	300mV	59mA	100mV	0.1	0.01	31.5Kg	85
EX300-32	0~315	0~33.6	≤0.1%	450mV	101mA	300mV	67mA	100mV	0.1	0.01	34Kg	85
EX600-10	0~630	0~10.5	≤0.1%	900mV	32mA	600mV	21mA	240mV	0.1	0.01	31Kg	85
EX600-12	0~630	0~12.6	≤0.1%	900mV	38mA	600mV	25mA	240mV	0.1	0.01	31Kg	85
EX600-14	0~630	0~14.7	≤0.1%	900mV	44mA	600mV	29mA	240mV	0.1	0.01	31.5Kg	85
EX600-16	0~630	0~16.8	≤0.1%	900mV	50mA	600mV	34mA	240mV	0.1	0.01	31.5Kg	85

© Please contact us about un-listed capacity(for more than 10kW, EX Series supports to be customized up to 100kW)



Rack Mount	
Dimension	600mm(W) x 800mm~2000mm(H) x 900mm(D)