

PEL-2000B Specifications

The specifications apply when the PEL-2000B is powered on for at least 30 minutes under +20°C~+30°C.



PEL-2004B with 4 modules



PEL-2002B with 2 modules



PEL-2004B rare panel with GPIB (option)



PEL-2002B rare panel with GPIB (option)

PEL-2020B / PEL-2030B / PEL-2040B / PEL-2041B

	PEL-2020B(100Wx2)		PEL-2030B(250W/30W)			PEL-2040B		PEL-2041B	
CHANNEL	L/R	L/R	Left	Right	Right	one channel	one channel	one channel	one channel
RANGE	LOW	HIGH	N/A	LOW	HIGH	LOW	HIGH	LOW	HIGH
POWER	100W	100W	30W	250W	250W	350W		350W	
CURRENT	0~2A	0~20A	0~5A	0~4A	0~40A	0~7A	0~70A	0~1A	0~10A
VOLTAGE	0~80V		0~80V			0~80V		0~500V	
MIN.OPERATING VOLTAGE(dc)(Typ.)	0.4V at 2A	0.8V at 20A	0.8V at 5A	0.4V at 4A	0.8V at 40A	0.4V at 7A	0.8V at 70A	1V at 1A	2V at 10A
	0.2V at 1A	0.4V at 10A	0.4V at 2.5A	0.2V at 2A	0.4V at 20A	0.2V at 3.5A	0.4V at 35A	0.5V at 0.5A	1V at 5A
STATIC MODE									
CONSTANT CURRENT MODE									
Operating Range	0~2A	0~20A	0~5A	0~4A	0~40A	0~7A	0~70A	0~1A	0~10A
Setting Range	0~2.04A	0~20.4A	0~5.1A	0~4.08A	0~40.8A	0~7.14A	0~71.4A	0~1.02A	0~10.2A
Resolution	0.1mA	1mA	0.125mA	0.1mA	1mA	0.2mA	2mA	0.05mA	0.5mA
Accuracy	±(0.1%set + 0.1%F.S.*1)	±(0.1%set + 0.2%F.S.)	±(0.1%set + 0.1%F.S)	±(0.1%set + 0.1%F.S.*1)	±(0.1%set + 0.2%F.S)	±(0.1%set + 0.1%F.S.*1)	±(0.1%set + 0.2%F.S)	±(0.1%set + 0.1%F.S.*1)	±(0.1%set + 0.2%F.S)
CONSTANT RESISTANCE MODE									
Operating Range	0.075Ω~300Ω(100W/16V)		0.3Ω~1.2kΩ(30W/16V)		0.0375Ω~150Ω(250W/16V)		0.025Ω~100Ω(350W/16V)		1.25Ω~5kΩ(350W/125V)
	3.75Ω~15kΩ(100W/80V)		15Ω~60kΩ(30W/80V)		1.875Ω~7.5kΩ(250W/80V)		1.25Ω~5kΩ(350W/80V)		50Ω~200kΩ(350W/500V)
Setting Range	0.075Ω~300Ω(100W/16V)		0.3Ω~1.2kΩ(30W/16V)		0.0375Ω~150Ω(250W/16V)		0.025Ω~100Ω(350W/16V)		1.25Ω~5kΩ(350W/125V)
	3.75Ω~15kΩ(100W/80V)		15Ω~60kΩ(30W/80V)		1.875Ω~7.5kΩ(250W/80V)		1.25Ω~5kΩ(350W/80V)		50Ω~200kΩ(350W/500V)
Resolution*1	0.333mS(100W/16V)		83.333μS(30W/16V)		0.666mS(250W/16V)		1mS(350W/16V)		20μS(350W/125V)
	6.667μS(100W/80V)		1.666μS(30W/80V)		13.333μS(250W/80V)		20μS(350W/80V)		0.5μS(350W/500V)
Accuracy*2 With ≥ 2.5V at input	300Ω : ±(0.2%set + 0.1S)		1.2kΩ : ±(0.2%set + 0.1S)		150Ω : ±(0.2%set + 0.1S)		100Ω : ±(0.2%set + 0.1S)		5kΩ : ±(0.2%set + 0.02S)
	15kΩ : ±(0.1%set + 0.01S)		60kΩ : ±(0.1%set + 0.01S)		7.5kΩ : ±(0.1%set + 0.01S)		5kΩ : ±(0.1%set + 0.01S)		200kΩ : ±(0.1%set + 0.005S)

NOTE : *1 : S (siemens) is the unit of conductance, equal to one reciprocal ohm.
*2 : Accuracy must be calculated in conductivity units.

CONSTANT VOLTAGE + CONSTANT CURRENT MODE											
	Operating Range	1~80V	1~16V	1~80V	1~16V	1~80V	1~16V	1~80V	1~16V	2.5~500V	2.5~125V
	Setting Range	0~81.6V	0~16.32V	0~81.6V	0~16.32V	0~81.6V	0~16.32V	0~81.6V	0~16.32V	0~510V	0~127.5V
	Resolution	2mV	0.4mV	2mV	0.4mV	2mV	0.4mV	2mV	0.4mV	10mV	2.5mV
	Accuracy	±(0.05%set + 0.1%F.S.)		±(0.05%set + 0.1%F.S.)		±(0.05%set + 0.1%F.S.)		±(0.05%set + 0.1%F.S.)		±(0.05%set + 0.1%F.S.)	
	Current Setting Range	0~2.04A	0~20.4A	0~5.1A		0~4.08A	0~40.8A	0~7.14A	0~71.4A	0~1.02A	0~10.2A
	Resolution	0.1mA	1mA	0.125mA		0.1mA	1mA	0.2mA	2mA	0.05mA	0.5mA
	Accuracy	±(0.1%set + 0.1%F.S.*1)	±(0.1%set + 0.2%F.S.)	±(0.1%set + 0.2%F.S.)		±(0.1%set + 0.1%F.S.*1)	±(0.1%set + 0.2%F.S.)	±(0.1%set + 0.1%F.S.*1)	±(0.1%set + 0.2%F.S.)	±(0.1%set + 0.1%F.S.*1)	±(0.1%set + 0.2%F.S.)
CONSTANT POWER MODE + CONSTANT CURRENT MODE											
	Operating Range	1~10W	1~100W	1~30W		1~25W	1~250W	1~35W	1~350W	1~35W	1~350W
	Setting Range	0~10.2W	0~102W	0~30.6W		0~25.5W	0~255W	0~35.7W	0~357W	0~35.7W	0~357W
	Resolution	1mW	10mW	1mW		1mW	10mW	1mW	10mW	1mW	10mW
	Accuracy	±(0.5%set + 0.5%F.S.*1)	±(0.5%set + 0.5%F.S.)	±(0.5%set + 0.5%F.S.)		±(0.5%set + 0.5%F.S.*1)		±(0.5%set + 0.5%F.S.*1)	±(0.5%set + 0.5%F.S.)	±(0.5%set + 0.2%F.S.*1)	±(0.5%set + 0.5%F.S.)
	Current Setting Range	0~2.04A	0~20.4A	0~5.1A		0~4.08A	0~40.8A	0~7.14A	0~71.4A	0~1.02A	0~10.2A
	Resolution	0.1mA	1mA	0.125mA		0.1mA	1mA	0.2mA	2mA	0.05mA	0.5mA
	Accuracy	±(0.1%set + 0.1%F.S.*1)	±(0.1%set + 0.2%F.S.)	±(0.1%set + 0.2%F.S.)		±(0.1%set + 0.1%F.S.*1)	±(0.1%set + 0.2%F.S.)	±(0.1%set + 0.1%F.S.*1)	±(0.1%set + 0.2%F.S.)	±(0.1%set + 0.1%F.S.*1)	±(0.1%set + 0.2%F.S.)
NOTE : *1 : F.S. = Full scale of H Range											
DYNAMIC MODE											
	T1&T2	0.025ms ~ 10ms / Res : 1μs		0.025ms ~ 10ms / Res : 1μs			0.025ms ~ 10ms / Res : 1μs		0.025ms ~ 10ms / Res : 1μs		
		10ms ~ 30s / Res : 1ms		10ms ~ 30s / Res : 1ms			10ms ~ 30s / Res : 1ms		10ms ~ 30s / Res : 1ms		
	Accuracy	1μs / 1ms ± 100ppm		1μs / 1ms ± 100ppm			1μs / 1ms ± 100ppm		1μs / 1ms ± 100ppm		
CONSTANT CURRENT MODE											
	Slew Rate	0.32 ~ 80mA/μs	3.2 ~ 800mA/μs	0.8 ~ 200mA/μs		0.64 ~ 160mA/μs	6.4 ~ 1600mA/μs	0.001 ~ 0.28A/μs	0.01 ~ 2.8A/μs	0.16 ~ 40mA/μs	1.6 ~ 400mA/μs
	Slew Rate Resolution	0.32mA/μs	3.2mA/μs	0.8mA/μs		0.64mA/μs	6.4mA/μs	0.001A/μs	0.01A/μs	0.16mA/μs	1.6mA/μs
	Slew Rate Accuracy of setting	±(10% + 15μs)	±(10% + 15μs)	±(10% + 15μs)		±(10% + 15μs)	±(10% + 15μs)	±(10% + 15μs)	±(10% + 15μs)	±(10% + 15μs)	±(10% + 15μs)
	Current Setting Range	0~2.04A	0~20.4A	0~5.1A		0~4.08A	0~40.8A	0~7.14A	0~71.4A	0~1.02A	0~10.2A
	Current Resolution	0.1mA	1mA	0.125mA		0.1mA	1mA	0.2mA	2mA	0.05mA	0.5mA
	Current Accuracy	±0.4% F.S.		±0.4% F.S.			±0.4% F.S.		±0.4% F.S.		
	CONSTANT RESISTANCE MODE										
	Slew Rate	3.2 ~ 800mA/μs		0.8 ~ 200mA/μs		6.4 ~ 1600mA/μs		0.01 ~ 2.8A/μs		1.6 ~ 400mA/μs	
	Slew Rate Resolution	3.2mA/μs		0.8mA/μs		6.4mA/μs		0.01A/μs		1.6mA/μs	
	Slew Rate Accuracy of setting	±(10% + 50μs)		±(10% + 50μs)			±(10% + 50μs)		±(10% + 50μs)		
	Resistance Setting Range	0.075Ω~300Ω(100W/16V)		0.3Ω~1.2kΩ(30W/16V)		0.0375Ω~150Ω(250W/16V)		0.025Ω~100Ω(350W/16V)		1.25Ω~5kΩ(350W/125V)	
		3.75Ω~15kΩ(100W/80V)		15Ω~60kΩ(30W/80V)		1.875Ω~7.5kΩ(250W/80V)		1.25Ω~5kΩ(350W/80V)		50Ω~200kΩ(350W/500V)	
	Resistance Resolution	0.333mS(100W/16V)		83.333μS(30W/16V)		0.666mS(250W/16V)		1mS(350W/16V)		20μS(350W/125V)	
		6.667μS(100W/80V)		1.666μS(30W/80V)		13.333μS(250W/80V)		20 μS(350W/80V)		0.5μS(350W/500V)	
	Resistance Accuracy	300Ω : ±(0.5%set + 0.1S)		1.2kΩ : ±(0.5%set + 0.1S)		150Ω : ±(0.5%set + 0.1S)		100Ω : ±(0.5%set + 0.1S)		5kΩ : ±(0.5%set + 0.02S)	
		15kΩ: ±(0.5%set + 0.01S)		60kΩ: ±(0.5%set + 0.01S)		7.5kΩ: ±(0.5%set + 0.01S)		5kΩ: ±(0.5%set + 0.01S)		200kΩ: ±(0.5%set + 0.005S)	
MEASUREMENT											
VOLTAGE READBACK											

	Range	0~16V	0~80V	0~16V	0~80V	0~16V	0~80V	0~16V	0~80V	0~125V	0~500V
	Resolution	0.32mV	1.6mV	0.32mV	1.6mV	0.32mV	1.6mV	0.32mV	1.6mV	2.5mV	10mV
	Accuracy	±(0.025%set + 0.025% F.S.)		±(0.025%set + 0.025% F.S.)				±(0.025%set + 0.025% F.S.)		±(0.025%set + 0.025% F.S.)	
CURRENT READBACK											
	Range	0~2A	0~20A	0~5A		0~4A	0~40A	0~7A	0~70A	0~1A	0~10A
	Resolution	0.04mA	0.4mA	0.1mA		0.08mA	0.8mA	0.14mA	1.4mA	0.02mA	0.2mA
	Accuracy	±(0.05%set + 0.05% F.S. ^{*2})		±(0.05%set + 0.05% F.S. ^{*2})				±(0.05%set + 0.05% F.S. ^{*2})		±(0.05%set + 0.05% F.S. ^{*2})	
POWER READBACK											
	Range	0~10W	0~100W	0~30W		0~25W	0~250W	0~35W	0~350W	0~35W	0~350W
	Accuracy	±(0.1%set + 0.1% F.S. ^{*1})		±(0.1%set + 0.1% F.S. ^{*1})		±(0.1%set + 0.1% F.S. ^{*1})		±(0.1%set + 0.1% F.S. ^{*1})		±(0.1%set + 0.1% F.S. ^{*1})	
NOTE : *1 : Power F.S. = Vrange F.S. x Irange F.S. *2 : F.S. = Full scale of H Range											
PROTECTIVE											
Over Power Protection											
	Range	1~102W		0.9~30.6W		1.25~255W		1.75~357W		1.75~357W	
	Resolution	0.5W		0.15W		1.25W		1.75W		1.75W	
	Accuracy	±(2%set + 0.25%F.S)		±(2%set + 0.25%F.S)		±(2%set + 0.25%F.S)		±(2%set + 0.25%F.S)		±(2%set + 0.25%F.S)	
Over Current Protection											
	Range	0.25~20.4A		0.0625~5.1A		0.5~40.8A		0.875~71.4A		0.125~10.2A	
	Resolution	0.05A		0.0125A		0.1A		0.175A		0.025A	
	Accuracy	±(2%set + 0.25%F.S)		±(2%set + 0.25%F.S)		±(2%set + 0.25%F.S)		±(2%set + 0.25%F.S)		±(2%set + 0.25%F.S)	
Over Voltage Protection											
	Range	1~81.6V		1~81.6V		1~81.6V		1~81.6V		2.5~510V	
	Resolution	0.2V		0.2V		0.2V		0.2V		1.25V	
	Accuracy	±(2%set + 0.25%F.S)		±(2%set + 0.25%F.S)		±(2%set + 0.25%F.S)		±(2%set + 0.25%F.S)		±(2%set + 0.25%F.S)	
	Over Temperature Protection	≒ 85℃		≒ 85℃				≒ 85℃		≒ 85℃	
Rated Power Protection											
	Value	110W		33W		275W		385W		385W	
	Accuracy	±5%set		±5%set		±5%set		±5%set		±5%set	
GENERAL											
SHORT CIRCUIT											
	Current(CC)	≒ 2.2/2A	≒ 22/20A	≒ 5.5/5A		≒ 4.4/4A	≒ 44/40A	≒ 7.7/7A	≒ 77/70A	≒ 1.1/1A	≒ 11/10A
	Voltage(CV)	≒ 0V	≒ 0V	≒ 0V		≒ 0V	≒ 0V	≒ 0V	≒ 0V	≒ 0V	≒ 0V
	Resistance(CR)	≒ 3.75Ω	≒ 0.075Ω	≒ 15Ω	≒ 0.3Ω	≒ 1.875Ω	≒ 0.0375Ω	≒ 1.25Ω	≒ 0.025Ω	≒ 50Ω	≒ 1.25Ω
INPUT RESISTANCE (LOAD OFF)		500kΩ(Typical)									
POWER SOURCE		100-120Vac/ 200-240Vac (90-132Vac/ 180-250Vac), 47~63Hz									
WEIGHT		Approx. 3.8kg									
DIMENSIONS & WEIGHT(PEL-2002B)		272(W) X 200(H) X 581(D) mm; Approx. 17.1kg(Full modules)									
DIMENSIONS & WEIGHT(PEL-2004B)		435(W) X 200(H) X 581(D) mm; Approx. 28.4kg(Full modules)									