

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	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)
With ≥ 2.5V at input	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	1.75~357W	1.75~357W	1.75~357W	1.75~357W	
Resolution	0.5W	0.15W	1.25W	1.75W	1.75W	1.75W	1.75W	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	0.875~71.4A	0.875~71.4A	0.875~71.4A	0.875~71.4A	0.875~71.4A	
Resolution	0.05A	0.0125A	0.1A	0.175A	0.175A	0.175A	0.175A	0.175A	0.175A	
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	1~81.6V	1~81.6V	1~81.6V	1~81.6V	1~81.6V	2.5~510V
Resolution	0.2V	0.2V	0.2V	0.2V	0.2V	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°C		≅ 85°C			≅ 85°C		≅ 85°C		≅ 85°C
Rated Power Protection										
Value	110W	33W	275W	385W	385W	385W	385W	385W	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)									