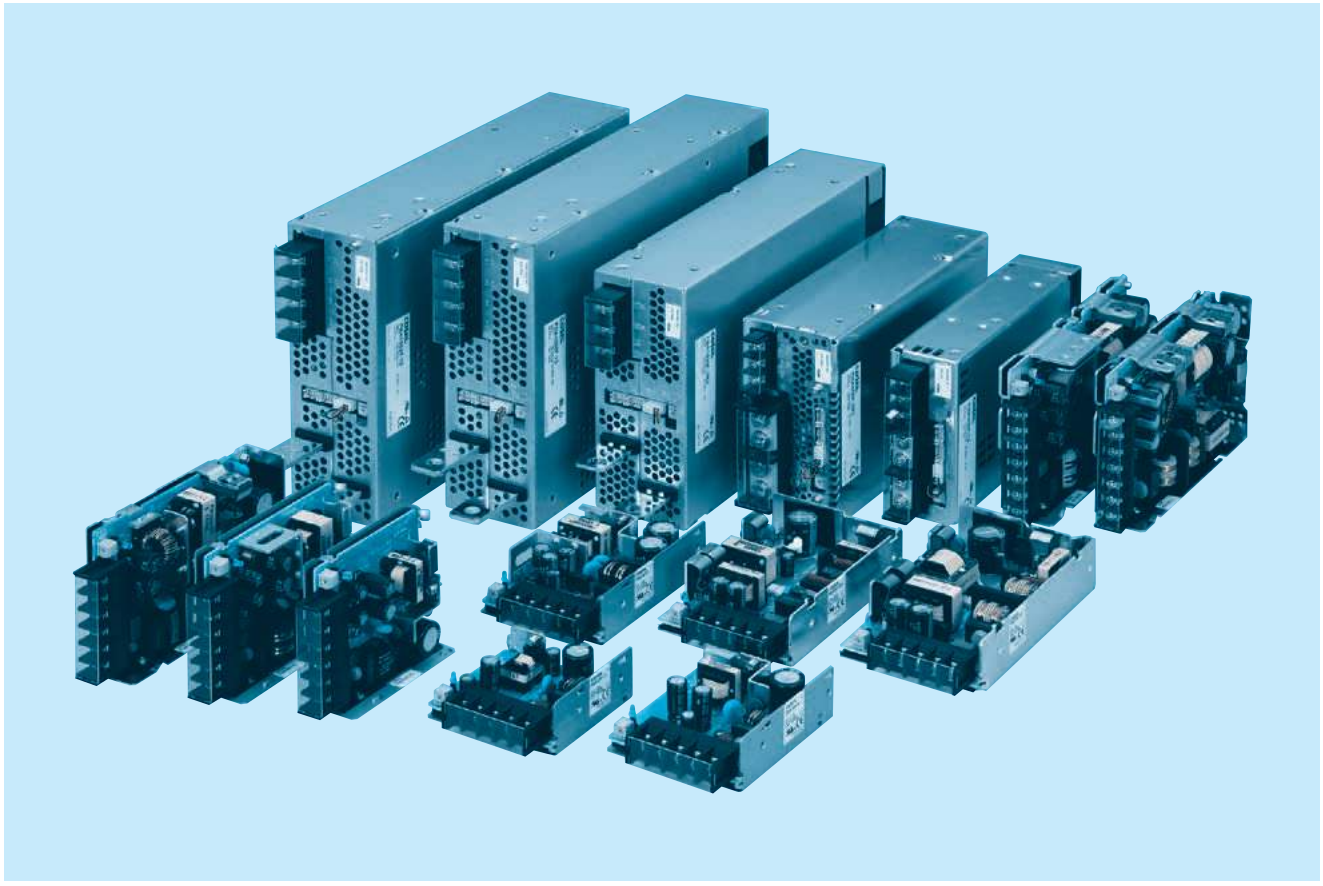
AC-DC Power Supplies Enclosed Type

Power Factor Correction | World wide | Safety Approvals | EMI | Inrush current limiting | OCP | OVP | Remote ON/OFF | Parallel Operation

PBA, PBW-series



Feature

Small-size & light weight
Harmonic attenuator (Complies with IEC61000-3-2) : except PBA1500T
Universal input (AC85 - 264V) : PBA1500T(AC170 - 264V 3φ)
Efficiency increased with synchronous rectification technology (PBA50F - 150F)
Variety of option (PBA10F - 150F, PBW15F - 50F)
Parallel operation and Parallel redandancy operation (PBA300F - 1500F, PBA1500T)
Fan alarm, Remote ON/OFF and other functions (PBA300F - 1500F, PBA1500T)

Safety agency approvals

UL60950-1, C-UL(CSA60950-1), EN62368-1
UL508 (PBA10F - 150F, -24, with cover)
Complies with DEN-AN

EMI

Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

5-year warranty (refer to Instruction Manual)

CE marking

Low Voltage Directive
RoHS Directive

UKCA marking

Electrical Equipment Safety Regulations
RoHS Regulations

EMS Compliance : EN61204-3, EN61000-6-2

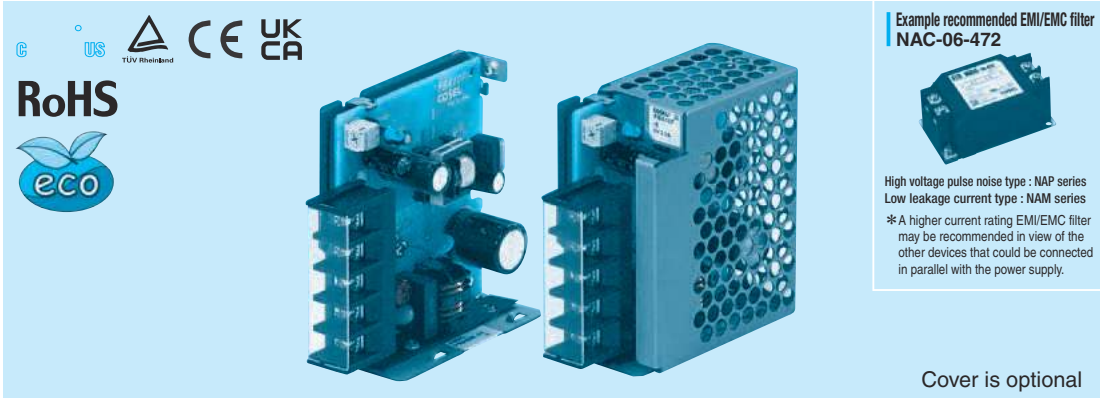
EN61000-4-2
EN61000-4-3
EN61000-4-4
EN61000-4-5
EN61000-4-6
EN61000-4-8
EN61000-4-11

COSEL AC-DC Power Supplies Enclosed Type

PBA10F

Ordering information

PB ① A ② 10 ③ F ④ -□ ⑤ -□ ⑧



Example recommended EMI/EMC filter
NAC-06-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

Cover is optional

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊5
C :with Coating
G :Low leakage current
E :Low leakage current and EMI class A
T :Vertical terminal block
J1 :VH (J.S.T.) connector type
N :with Cover (UL508 is acquired)
N1 :with DIN rail and Cover
V :Output voltage setting potentiometer externally

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

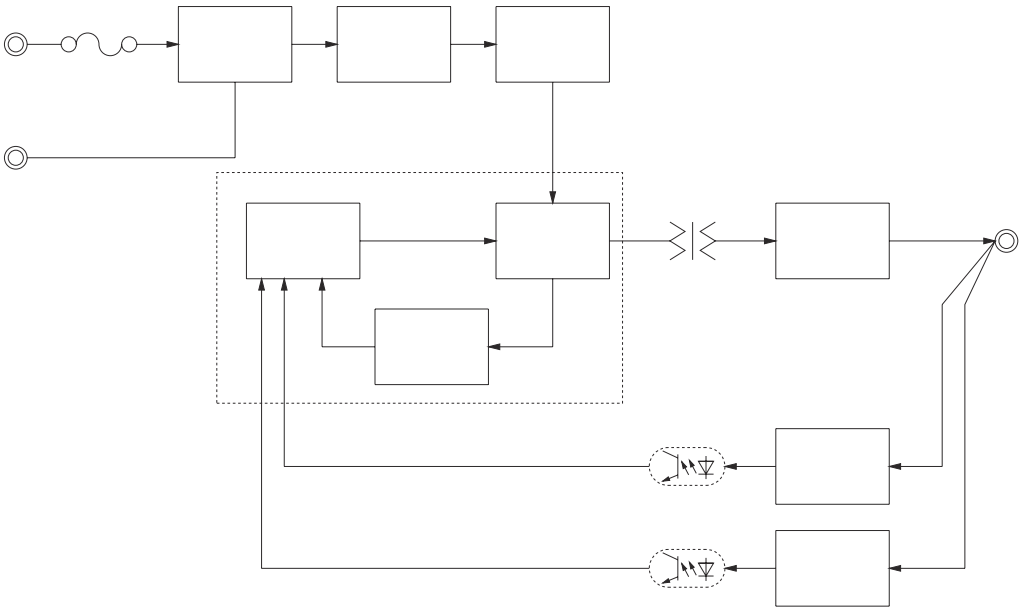
	10	10.8	12
	5V 2A	12V 0.9A	24V 0.5A

SPECIFICATIONS

	MODEL		PBA10F-5	PBA10F-12	PBA10F-24
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC110 - 370 (AC50 or DC70 Please refer to the instruction manual 1.1 Input voltage ＊3)		
	CURRENT[A]	ACIN 100V	0.30typ (Io=100%)		
		ACIN 200V	0.20typ (Io=100%)		
	FREQUENCY[Hz]		50/60 (47 - 440) or DC		
	EFFICIENCY[%]	ACIN 100V	74typ	76typ	77typ
		ACIN 200V	74typ	76typ	77typ
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%)		
		ACIN 200V	30typ (Io=100%)		
	LEAKAGE CURRENT[mA]		0.15/0.30max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1, DENAN)		
OUTPUT	VOLTAGE[V]		5	12	24
	CURRENT[A]		2	0.9	0.5
	LINE REGULATION[mV]	＊6	20max	48max	96max
	LOAD REGULATION[mV]	＊6	40max	100max	150max
	RIPPLE[mVp-p]	0 to +50℃ ＊1	80max	120max	120max
		-10 - 0℃ ＊1	140max	160max	160max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊1	120max	150max	150max
		-10 - 0℃ ＊1	160max	180max	180max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	240max
		-10 to +50℃	60max	150max	290max
	DRIFT[mV]	＊2	20max	48max	96max
	START-UP TIME[ms]		200typ(ACIN 100V, Io=100%) ＊Start-up time is 700ms typ for less than 1minute of applying input again from turning off the input voltage.		
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)		
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		4.50 - 5.50	10.0 - 13.2	19.2 - 27.0
	OUTPUT VOLTAGE SETTING[V]		5.00 - 5.15	12.00 - 12.48	24.00 - 24.96
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current and recovers automatically		
	OVERVOLTAGE PROTECTION[V]		5.75 - 7.00	15.0 - 18.0	30.0 - 37.0
	OPERATING INDICATION		LED (Green)		
	REMOTE ON/OFF		None		
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)		
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)		
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩmin (At Room Temperature)		
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max		
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max		
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis		
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis		
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN		
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B		
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 (Not built-in to active filter ＊4) ＊7		
OTHERS	CASE SIZE/WEIGHT		31×78×68mm [1.22×3.07×2.68 inches] (without terminal block) (W×H×D) / 150g max (with cover : 180g max)		
	COOLING METHOD		Convection		

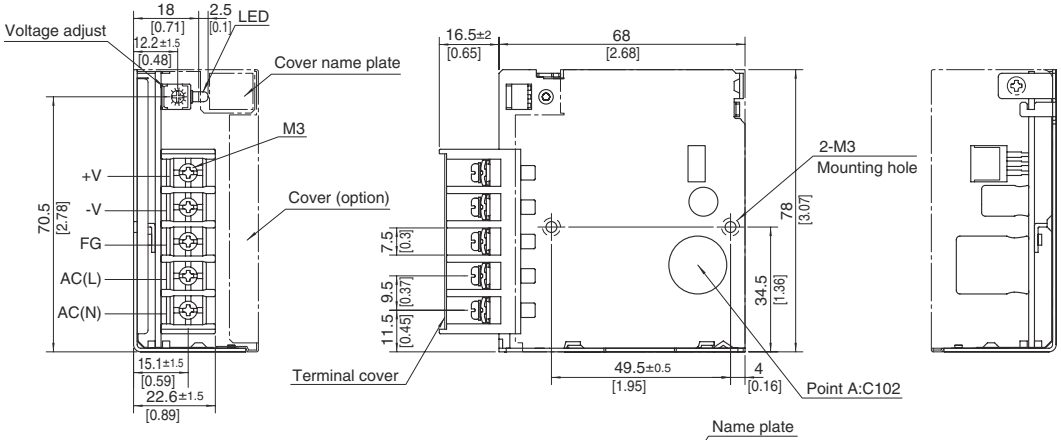
＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 Derating is required.
＊4 When two or more units are used,they may not comply with the harmonic attenuator. Please contact us for details.
＊5 Please contact us about safety approvals for the model with option.
＊6 Please contact us about dynamic load and input response.
＊7 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with cover.
＊ A sound may occur from power supply at peak loading.

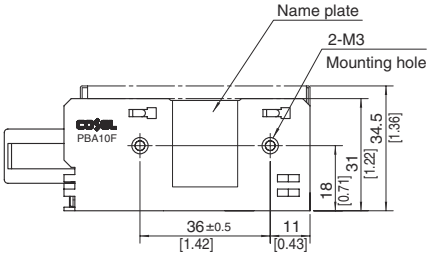
Block diagram



External view

※ External size of option T,J1,N1 and V is different from standard model and refer to 7 Option of instruction manual for details.





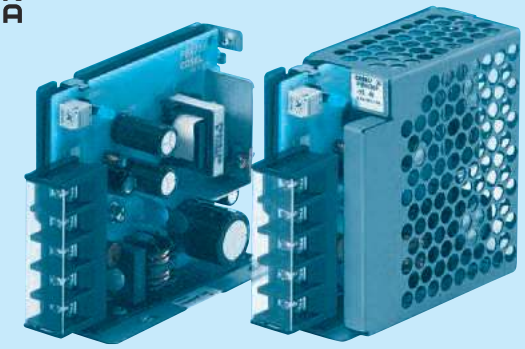
※ Tolerance : ±1 [±0.04]
※ Weight : 150g max (with cover : 180g max)
※ PCB Material/thickness : CEM3 / 1.6mm [0.06]
※ Chassis material : Hot-dip galvanized steel plate
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 0.6N • m(6.3kgf • cm)max
※ Screw tightening torque : M3 0.8N • m(8.5kgf • cm)max
※ Please connect safety ground to the unit in 2-M3 holes.

COSEL AC-DC Power Supplies Enclosed Type

PBA15F

Ordering information

PB	A	15	F	-□	-□
①	②	③	④	⑤	⑧



Example recommended EMI/EMC filter
NAC-06-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

Cover is optional

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊5
C :with Coating
G :Low leakage current
E :Low leakage current and EMI class A
T :Vertical terminal block
J1 :VH (J.S.T.) connector type
N :with Cover (UL508 is acquired [5V, 12V, 24V])
N1 :with DIN rail and Cover
V :Output voltage setting potentiometer externally

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

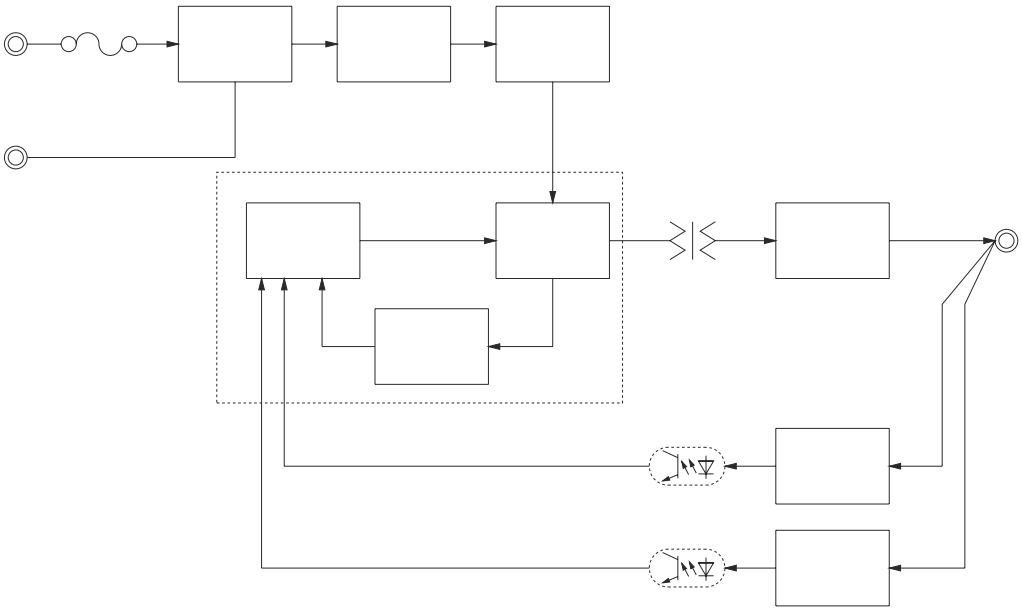
	9.9	15	15.3	15.6	15	16.8	16.8
	3.3V 3A	5V 3A	9V 1.7A	12V 1.3A	15V 1A	24V 0.7A	48V 0.35A

SPECIFICATIONS

	MODEL		PBA15F-3R3	PBA15F-5	PBA15F-9	PBA15F-12	PBA15F-15	PBA15F-24	PBA15F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC110 - 370 (AC50 or DC70 Please refer to the instruction manual 1.1 Input voltage ＊3)						
	CURRENT[A]	ACIN 100V	0.30typ (Io=100%)	0.4typ (Io=100%)					
		ACIN 200V	0.15typ (Io=100%)	0.2typ (Io=100%)					
	FREQUENCY[Hz]		50/60 (47 - 440) or DC						
	EFFICIENCY[%]	ACIN 100V	68typ	74typ	75typ	75typ	77typ	75typ	75typ
		ACIN 200V	68typ	75typ	77typ	78typ	80typ	78typ	78typ
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start)						
		ACIN 200V	30typ (Io=100%) (At cold start)						
	LEAKAGE CURRENT[mA]		0.15/0.30max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1,DENAN)						
OUTPUT	VOLTAGE[V]		3.3	5	9	12	15	24	48
	CURRENT[A]		3	3	1.7	1.3	1	0.7	0.35
	LINE REGULATION[mV]	＊6	20max	20max	36max	48max	60max	96max	192max
	LOAD REGULATION[mV]	＊6	40max	40max	100max	100max	120max	150max	240max
	RIPPLE[mVp-p]	0 to +50℃ ＊1	80max	80max	120max	120max	120max	120max	150max
		-10 - 0℃ ＊1	140max	140max	160max	160max	160max	160max	200max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊1	120max	120max	150max	150max	150max	150max	250max
		-10 - 0℃ ＊1	160max	160max	180max	180max	180max	180max	300max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	90max	120max	150max	240max	480max
		-10 to +50℃	60max	60max	120max	150max	180max	290max	600max
	DRIFT[mV]	＊2	20max	20max	36max	48max	60max	96max	192max
	START-UP TIME[ms]		200typ(ACIN 100V, Io=100%) ＊Start-up time is 700ms typ for less than 1minute of applying input again from turning off the input voltage.						
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)						
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.60	4.50 - 5.50	7.50 - 10.0	10.0 - 13.2	13.2 - 18.0	19.2 - 27.0	39.0 - 53.0
	OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40	5.00 - 5.15	9.00 - 9.36	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	48.00 - 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current and recovers automatically						
	OVERVOLTAGE PROTECTION[V]		4.00 - 5.25	5.75 - 7.00	11.5 - 14.0	15.0 - 18.0	20.0 - 25.0	30.0 - 37.0	58.0 - 65.0
	OPERATING INDICATION		LED (Green)						
	REMOTE ON/OFF		None						
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)						
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)						
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩmin (At Room Temperature)						
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max						
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max						
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis						
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis						
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN						
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B						
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 (Not built-in to active filter ＊4) ＊7						
OTHERS	CASE SIZE/WEIGHT		31×78×85mm [1.22×3.07×3.35 inches] (without terminal block) (W×H×D) / 200g max (with cover : 235g max)						
	COOLING METHOD		Convection						

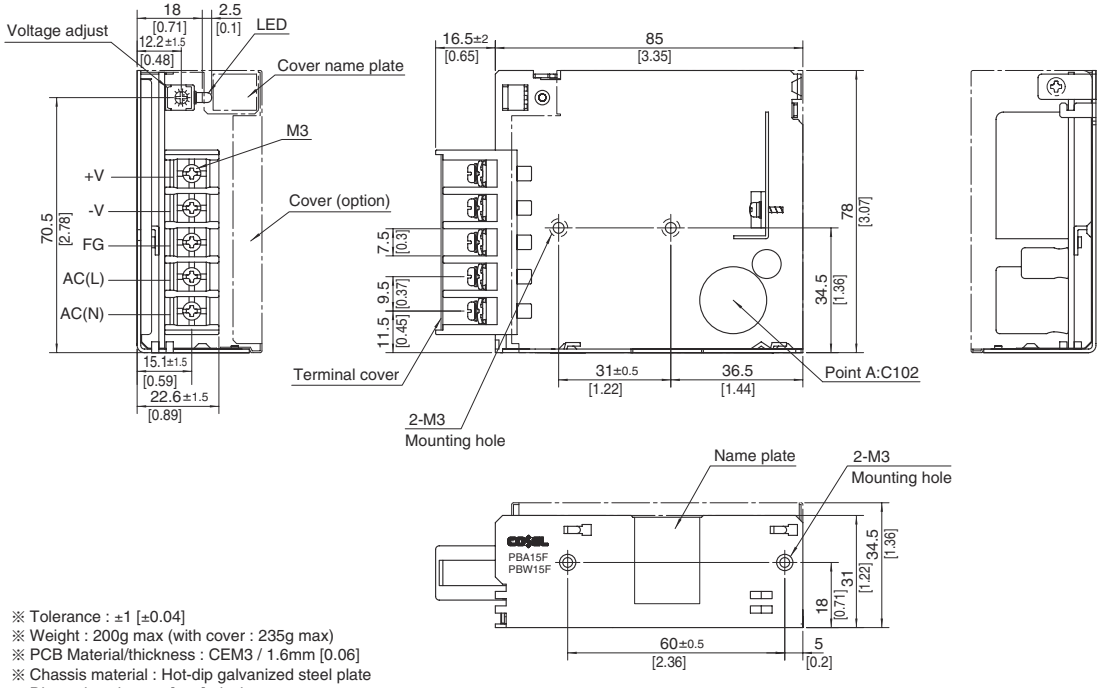
＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 Derating is required.
＊4 When two or more units are used,they may not comply with the harmonic attenuator. Please contact us for details.
＊5 Please contact us about safety approvals for the model with option.
＊6 Please contact us about dynamic load and input response.
＊7 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with cover.
＊ A sound may occur from power supply at peak loading.

Block diagram



External view

※ External size of option T,J1,N1 and V is different from standard model and refer to 7 Option of instruction manual for details.



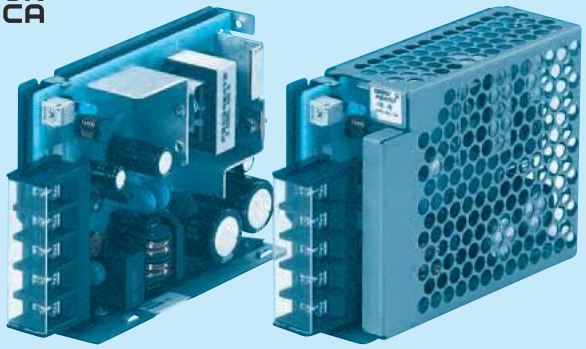
※ Tolerance : ±1 [±0.04]
※ Weight : 200g max (with cover : 235g max)
※ PCB Material/thickness : CEM3 / 1.6mm [0.06]
※ Chassis material : Hot-dip galvanized steel plate
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 0.6N • m(6.3kgf • cm)max
※ Screw tightening torque : M3 0.8N • m(8.5kgf • cm)max
※ Please connect safety ground to the unit in 2-M3 holes.

COSEL AC-DC Power Supplies Enclosed Type

PBA30F

Ordering information

PB	A	30	F	-□	-□
①	②	③	④	⑤	⑧



Example recommended EMI/EMC filter
NAC-06-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

Cover is optional

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊5
C :with Coating
G :Low leakage current
E :Low leakage current and EMI class A
T :Vertical terminal block
J1 :VH (J.S.T.) connector type
N :with Cover (UL508 is acquired [5V, 12V, 24V])
N1 :with DIN rail and Cover
V :Output voltage setting potentiometer externally

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

	19.8	30	30.6	30	30	31.2	31.2
	3.3V 6A	5V 6A	9V 3.4A	12V 2.5A	15V 2A	24V 1.3A	48V 0.65A

SPECIFICATIONS

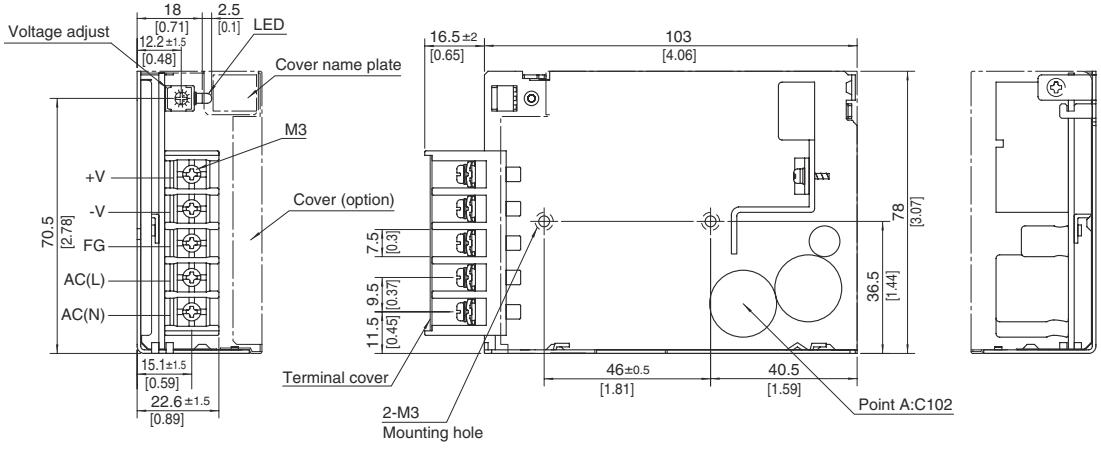
	MODEL		PBA30F-3R3	PBA30F-5	PBA30F-9	PBA30F-12	PBA30F-15	PBA30F-24	PBA30F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC110 - 370 (AC50 or DC70 Please refer to the instruction manual 1.1 Input voltage ＊3)						
	CURRENT[A]	ACIN 100V	0.50typ (Io=100%)	0.70typ (Io=100%)					
		ACIN 200V	0.30typ (Io=100%)	0.40typ (Io=100%)					
	FREQUENCY[Hz]		50/60 (47 - 440) or DC						
	EFFICIENCY[%]	ACIN 100V	68typ	74typ	75typ	76typ	78typ	78typ	79typ
		ACIN 200V	69typ	77typ	77typ	78typ	81typ	81typ	81typ
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start)						
		ACIN 200V	30typ (Io=100%) (At cold start)						
	LEAKAGE CURRENT[mA]		0.30/0.65max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1,DENAN)						
OUTPUT	VOLTAGE[V]		3.3	5	9	12	15	24	48
	CURRENT[A]		6	6	3.4	2.5	2	1.3	0.65
	LINE REGULATION[mV]	＊6	20max	20max	36max	48max	60max	96max	192max
	LOAD REGULATION[mV]	＊6	40max	40max	100max	100max	120max	150max	240max
	RIPPLE[mVp-p]	0 to +50℃ ＊1	80max	80max	120max	120max	120max	120max	150max
		-10 - 0℃ ＊1	140max	140max	160max	160max	160max	160max	200max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊1	120max	120max	150max	150max	150max	150max	250max
		-10 - 0℃ ＊1	160max	160max	180max	180max	180max	180max	300max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	90max	120max	150max	240max	480max
		-10 to +50℃	60max	60max	120max	150max	180max	290max	600max
	DRIFT[mV]	＊2	20max	20max	36max	48max	60max	96max	192max
	START-UP TIME[ms]		200typ(ACIN 100V, Io=100%) ＊Start-up time is 700ms typ for less than 1minute of applying input again from turning off the input voltage.						
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)						
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.60	4.50 - 5.50	7.50 - 10.0	10.0 - 13.2	13.2 - 18.0	19.2 - 27.0	39.0 - 53.0
	OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40	5.00 - 5.15	9.00 - 9.36	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	48.00 - 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current and recovers automatically						
	OVERVOLTAGE PROTECTION[V]		4.00 - 5.25	5.75 - 7.00	11.5 - 14.0	15.0 - 18.0	20.0 - 25.0	30.0 - 37.0	58.0 - 65.0
	OPERATING INDICATION		LED (Green)						
	REMOTE ON/OFF		None						
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)						
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)						
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩmin (At Room Temperature)						
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max						
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max						
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis						
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis						
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN						
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B						
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 (Not built-in to active filter ＊4) ＊7						
OTHERS	CASE SIZE/WEIGHT		31×78×103mm [1.22×3.07×4.06 inches] (without terminal block) (W×H×D) / 270g max (with cover : 310g max)						
	COOLING METHOD		Convection						

＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 Derating is required.
＊4 When two or more units are used,they may not comply with the harmonic attenuator. Please contact us for details.
＊5 Please contact us about safety approvals for the model with option.
＊6 Please contact us about dynamic load and input response.
＊7 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with cover.
＊ A sound may occur from power supply at peak loading.

Block diagram

External view

※ External size of option T,J1,N1 and V is different from standard model and refer to 7 Option of instruction manual for details.



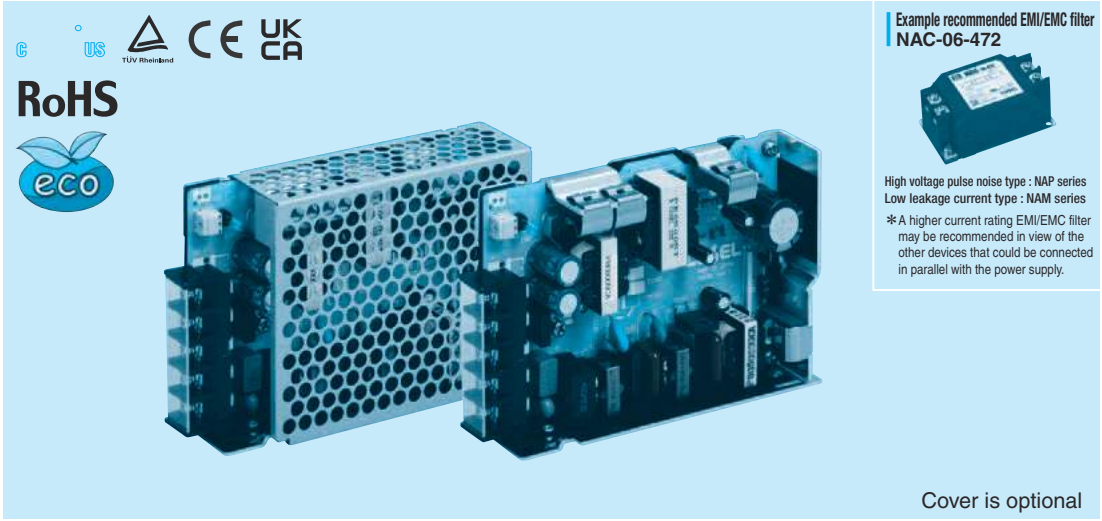
※ Tolerance : ±1 [±0.04]
※ Weight : 270g max (with cover : 310g max)
※ PCB Material/thickness : CEM3 / 1.6mm [0.06]
※ Chassis material : Hot-dip galvanized steel plate
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 0.6N • m(6.3kgf • cm)max
※ Screw tightening torque : M3 0.8N • m(8.5kgf • cm)max
※ Please connect safety ground to the unit in 2-M3 holes.

COSEL AC-DC Power Supplies Enclosed Type

PBA50F

Ordering information

PB	A	50	F	-5	-□
①	②	③	④	⑤	⑥



Example recommended EMI/EMC filter
NAC-06-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊5
C :with Coating
G :Low leakage current (0.15mA max / ACIN 240V)
E :Low leakage current and EMI class A (0.5mA max / ACIN 240V)
T :Vertical terminal block
J1 :VH (J.S.T.) connector type
R :with Remote ON/OFF
N :with Cover (Only 24V UL508 is acquired)
N1 :with DIN rail and Cover
V :Output voltage setting potentiometer externally

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

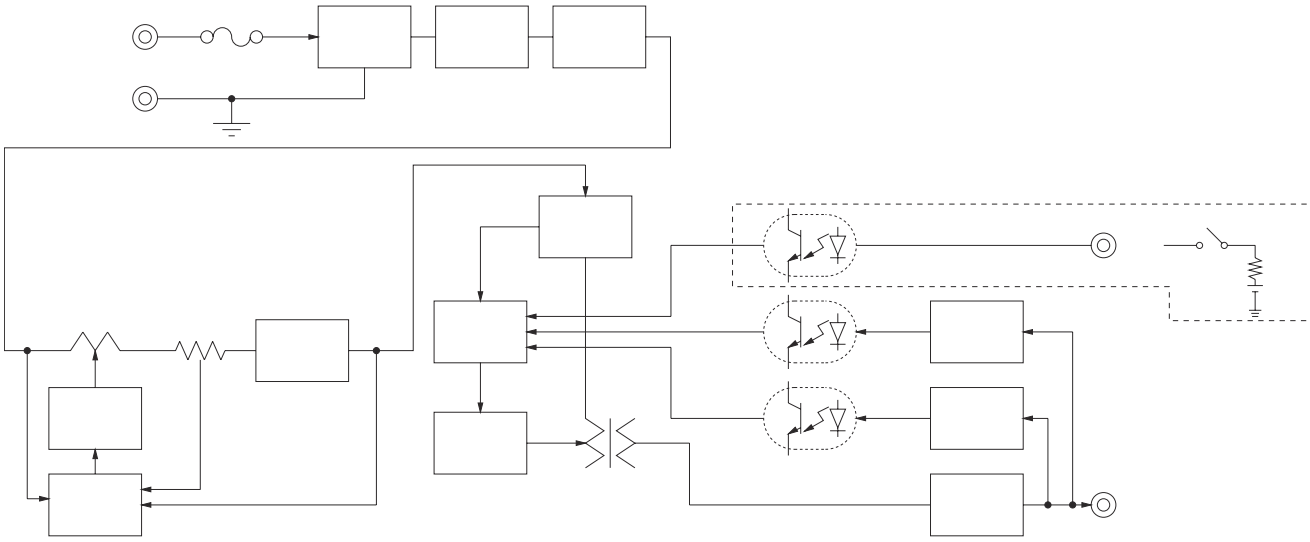
	33	50	50.4	51.6	52.5	52.8	50.4	52.8
	3.3V 10A	5V 10A	9V 5.6A	12V 4.3A	15V 3.5A	24V 2.2A	36V 1.4A	48V 1.1A

SPECIFICATIONS

	MODEL		PBA50F-3R3	PBA50F-5	PBA50F-9	PBA50F-12	PBA50F-15	PBA50F-24	PBA50F-36	PBA50F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC120 - 370 (AC50 or DC70 Please refer to the instruction manual 1.1 Input voltage ＊4)							
	CURRENT[A]	ACIN 100V	0.5typ	0.7typ						
		ACIN 200V	0.3typ	0.4typ						
	FREQUENCY[Hz]		50/60 (47 - 63)							
	EFFICIENCY[%]	ACIN 100V	75typ	80typ	79typ	80typ	81typ	82typ	83typ	83typ
		ACIN 200V	76typ	82typ	81typ	82typ	83typ	84typ	85typ	85typ
	POWER FACTOR(Io=100%)	ACIN 100V	0.98typ	0.99typ						
		ACIN 200V	0.87typ	0.93typ						
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start)							
		ACIN 200V	30typ (Io=100%) (At cold start)							
	LEAKAGE CURRENT[mA]		0.4/0.75max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1,DENAN)							
OUTPUT	VOLTAGE[V]		3.3	5	9	12	15	24	36	48
	CURRENT[A]		10	10	5.6	4.3	3.5	2.2	1.4	1.1
	LINE REGULATION[mV]		20max	20max	36max	48max	60max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	100max	100max	120max	150max	240max	240max
	RIPPLE[mVp-p]	0 to +50℃ ＊1	80max	80max	120max	120max	120max	120max	150max	150max
		-10 - 0℃ ＊1	140max	140max	160max	160max	160max	160max	200max	200max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊1	120max	120max	150max	150max	150max	150max	250max	250max
		-10 - 0℃ ＊1	160max	160max	180max	180max	180max	180max	300max	300max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	90max	120max	150max	240max	360max	480max
		-10 to +50℃	60max	60max	120max	150max	180max	290max	450max	600max
	DRIFT[mV] ＊2		20max	20max	36max	48max	60max	96max	144max	192max
	START-UP TIME[ms]		350typ(ACIN 100V, Io=100%)							
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.63	4.00 - 5.50	7.50 - 10.0	10.0 - 13.2	13.2 - 18.0	19.2 - 27.0	28.8 - 39.6	39.0 - 53.0
	OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40	5.00 - 5.15	9.00 - 9.36	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	35.00 - 37.44	48.00 - 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current and recovers automatically							
	OVERVOLTAGE PROTECTION[V]		4.00 - 5.25	5.75 - 7.00	11.5 - 14.0	15.0 - 18.0	20.0 - 25.0	30.0 - 37.0	43.0 - 50.0	58.0 - 65.0
	OPERATING INDICATION		LED (Green)							
	REMOTE ON/OFF		Optional (Required external power source)							
ISOLATION	INPUT-OUTPUT · RC ＊3		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT · RC-FG ＊3		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max							
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max							
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis							
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN							
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B							
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ＊6							
OTHERS	CASE SIZE/WEIGHT		31×82×120mm [1.22×3.23×4.72 inches] (without terminal block) (W×H×D) / 280g max (with cover : 325g max)							
	COOLING METHOD		Convection							

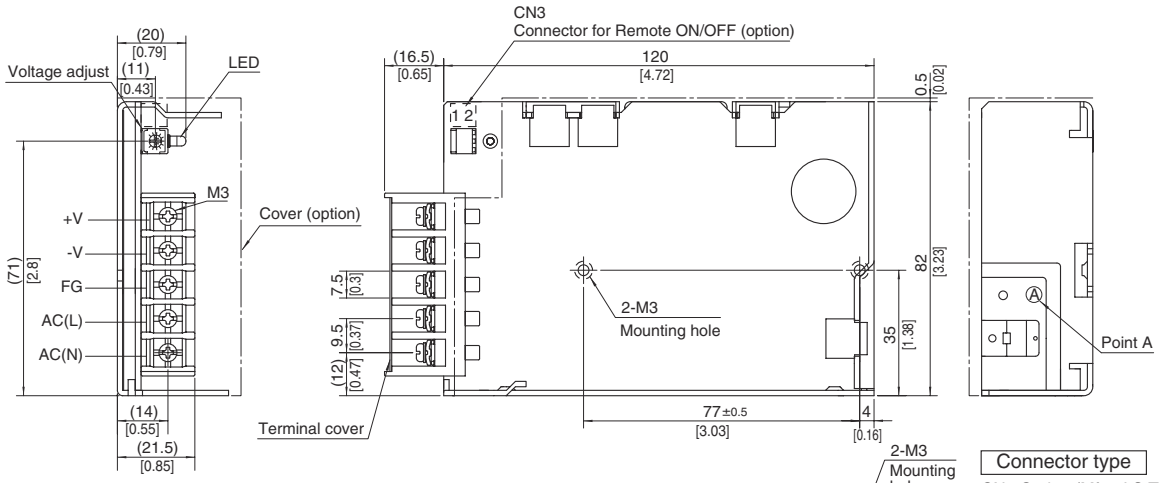
＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 Applicable when Remote ON/OFF(optional) is added. RC is insulated with input, output and FG.
＊4 Derating is required.
＊5 Please contact us about safety approvals for the model with option.
＊6 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with cover.
＊ A sound may occur from power supply at peak loading.

Block diagram



External view

※ External size of option T,J1,R,N1 and V is different from standard model and refer to 7 Option of instruction manual for details.



※ Tolerance : ±1 [±0.04]
※ Weight : 280g max (with cover : 325g max)
※ PCB Material/thickness : CEM3 / 1.6mm [0.06]
※ Chassis material : Aluminum
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 0.49N • m(5kgf • cm)max
※ Screw tightening torque : M3 0.8N • m(8.5kgf • cm)max
※ Please connect safety ground to the unit in 2-M3 holes.

Connector type

CN3 Option (Mfr : J.S.T.)

Pin No.	Contents
1	RC(+)
2	RC(-)

Barrier strip type

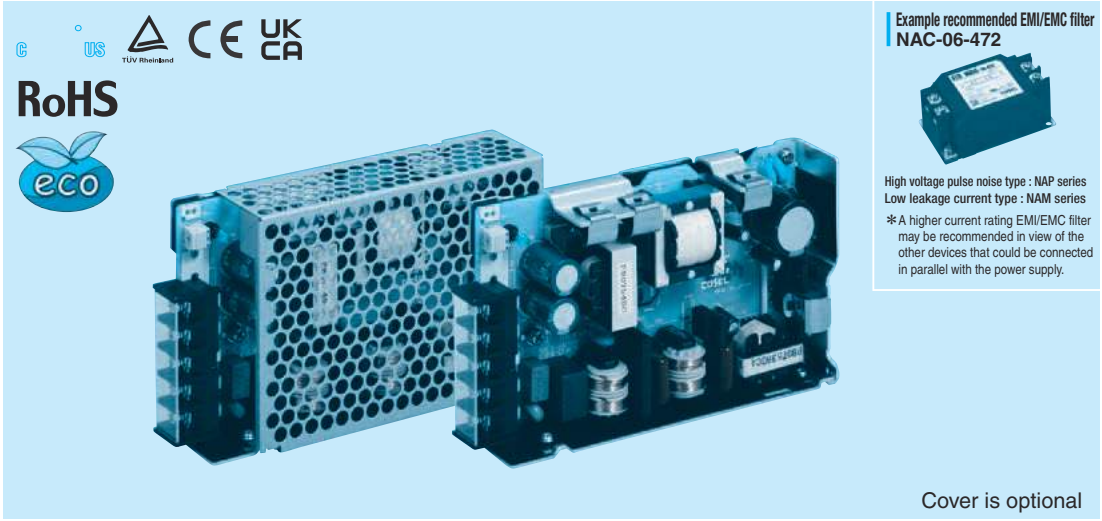
Model B2B-XH-A
Mating Connector (Terminal)
XHP-2
(BXH-001T-P0.6
or SXH-001T-P0.6)

COSEL **AC-DC Power Supplies Enclosed Type**

PBA75F

Ordering information

PB	A	75	F	-5	-□
①	②	③	④	⑤	⑥



Example recommended EMI/EMC filter
NAC-06-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊5
C :with Coating
G :Low leakage current (0.15mA max / ACIN 240V)
E :Low leakage current and EMI class A (0.5mA max / ACIN 240V)
T :Vertical terminal block
J1 :VH (J.S.T.) connector type
R :with Remote ON/OFF
N :with Cover (Only 24V UL508 is acquired)
N1 :with DIN rail and Cover
V :Output voltage setting potentiometer externally

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

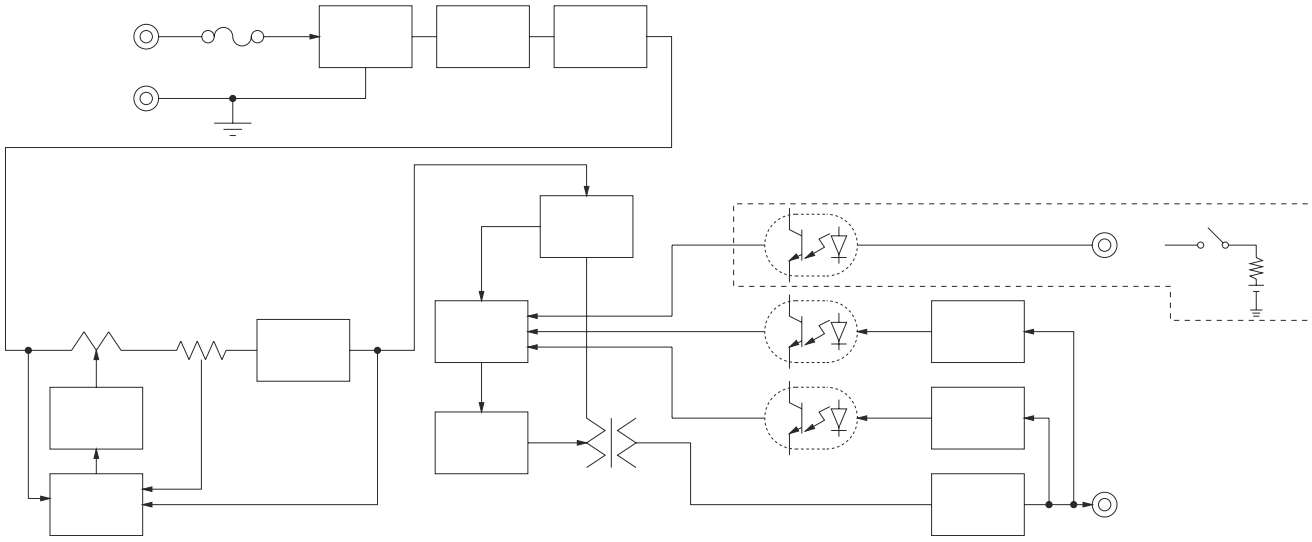
	49.5	75	75.6	75.6	75	76.8	75.6	76.8
	3.3V 15A	5V 15A	9V 8.4A	12V 6.3A	15V 5A	24V 3.2A	36V 2.1A	48V 1.6A

SPECIFICATIONS

	MODEL		PBA75F-3R3	PBA75F-5	PBA75F-9	PBA75F-12	PBA75F-15	PBA75F-24	PBA75F-36	PBA75F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC120 - 370 (AC50 or DC70 Please refer to the instruction manual 1.1 Input voltage ＊4)							
	CURRENT[A]	ACIN 100V	0.7typ	1.0typ						
		ACIN 200V	0.4typ	0.5typ						
	FREQUENCY[Hz]		50/60 (47 - 63)							
	EFFICIENCY[%]	ACIN 100V	77typ	81typ	80typ	81typ	82typ	83typ	84typ	84typ
		ACIN 200V	78typ	83typ	82typ	83typ	84typ	85typ	86typ	86typ
	POWER FACTOR(Io=100%)	ACIN 100V	0.98typ	0.99typ						
		ACIN 200V	0.87typ	0.93typ						
	INRUSH CURRENT[A]	ACIN 100V	15typ (Io=100%) (At cold start)							
		ACIN 200V	30typ (Io=100%) (At cold start)							
	LEAKAGE CURRENT[mA]		0.4/0.75max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1,DENAN)							
OUTPUT	VOLTAGE[V]		3.3	5	9	12	15	24	36	48
	CURRENT[A]		15	15	8.4	6.3	5	3.2	2.1	1.6
	LINE REGULATION[mV]		20max	20max	36max	48max	60max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	100max	100max	120max	150max	240max	240max
	RIPPLE[mVp-p]	0 to +50℃ ＊1	80max	80max	120max	120max	120max	120max	150max	150max
		-10 - 0℃ ＊1	140max	140max	160max	160max	160max	160max	200max	200max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊1	120max	120max	150max	150max	150max	150max	250max	250max
		-10 - 0℃ ＊1	160max	160max	180max	180max	180max	180max	300max	300max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	90max	120max	150max	240max	360max	480max
		-10 to +50℃	60max	60max	120max	150max	180max	290max	450max	600max
	DRIFT[mV]	＊2	20max	20max	36max	48max	60max	96max	144max	192max
	START-UP TIME[ms]		350typ(ACIN 100V, Io=100%)							
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.63	4.00 - 5.50	7.50 - 10.0	10.0 - 13.2	13.2 - 18.0	19.2 - 27.0	28.8 - 39.6	39.0 - 53.0
	OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40	5.00 - 5.15	9.00 - 9.36	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	36.00 - 37.44	48.00 - 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current and recovers automatically							
	OVERVOLTAGE PROTECTION[V]		4.00 - 5.25	5.75 - 7.00	11.5 - 14.0	15.0 - 18.0	20.0 - 25.0	30.0 - 37.0	43.0 - 50.0	58.0 - 65.0
	OPERATING INDICATION		LED (Green)							
	REMOTE ON/OFF		Optional (Required external power source)							
ISOLATION	INPUT-OUTPUT · RC	＊3	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT · RC-FG	＊3	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max							
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max							
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis							
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN							
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B							
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ＊6							
OTHERS	CASE SIZE/WEIGHT		32×82×135mm [1.26×3.23×5.31 inches] (without terminal block) (W×H×D) / 350g max (with cover : 400g max)							
	COOLING METHOD		Convection							

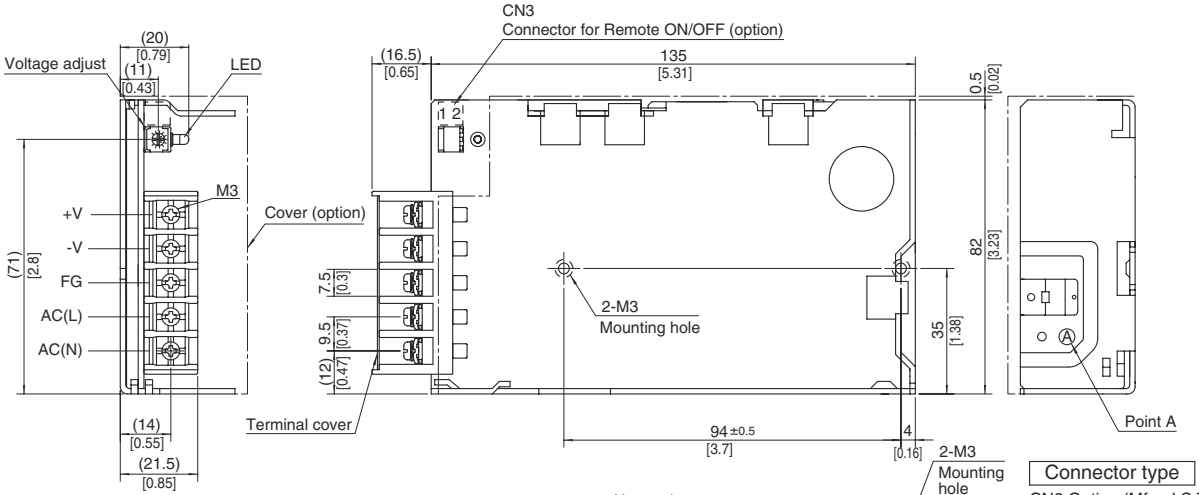
＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 Applicable when Remote ON/OFF(optional) is added. RC is insulated with input, output and FG.
＊4 Derating is required.
＊5 Please contact us about safety approvals for the model with option.
＊6 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with cover.
＊ A sound may occur from power supply at peak loading.

Block diagram



External view

※ External size of option T,J1,R,N1 and V is different from standard model and refer to 7 Option of instruction manual for details.



Connector type

CN3 Option (Mfr : J.S.T.)

Pin No.	Contents
1	RC(+)
2	RC(-)

Barrier strip type

Model B2B-XH-A
Mating Connector (Terminal)
XHP-2
(BXH-001T-P0.6 or SXH-001T-P0.6)

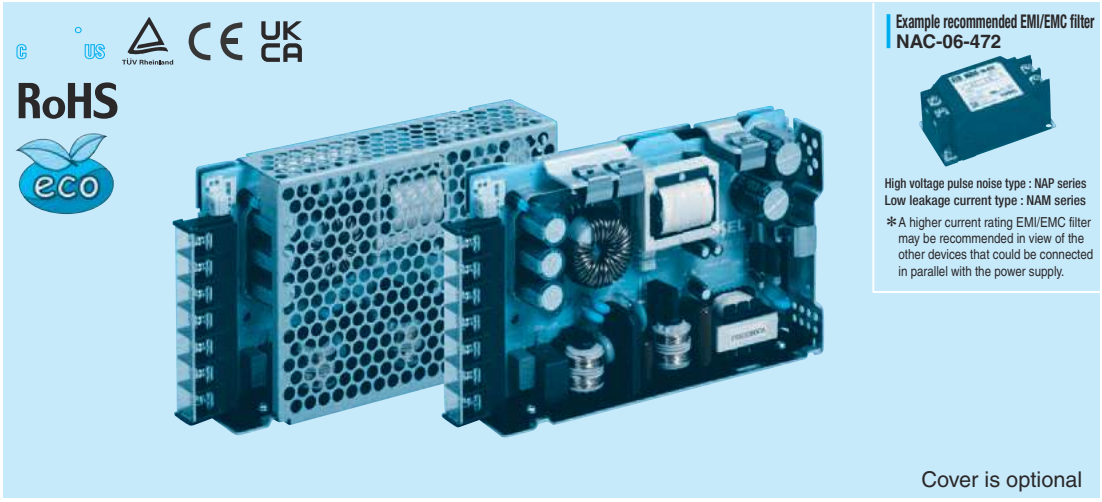
※ Tolerance : ±1 [±0.04]
※ Weight : 350g max (with cover : 400g max)
※ PCB Material/thickness : CEM3 / 1.6mm [0.06]
※ Chassis material : Aluminum
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 0.49N • m(5kgf • cm)max
※ Screw tightening torque : M3 0.8N • m(8.5kgf • cm)max
※ Please connect safety ground to the unit in 2-M3 holes.

COSEL **AC-DC Power Supplies Enclosed Type**

PBA100F

Ordering information

PB	A	100	F	-5	-□
①	②	③	④	⑤	⑥



Cover is optional

Example recommended EMI/EMC filter
NAC-06-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊5
C :with Coating
G :Low leakage current (0.15mA max / ACIN 240V)
E :Low leakage current and EMI class A (0.5mA max / ACIN 240V)
T :Vertical terminal block
J1 :VH (J.S.T.) connector type (Only -12,-15,-24,-36,-48)
R :with Remote ON/OFF
N :with Cover (Only 24V UL508 is acquired)
N1 :with DIN rail and Cover
V :Output voltage setting potentiometer externally

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

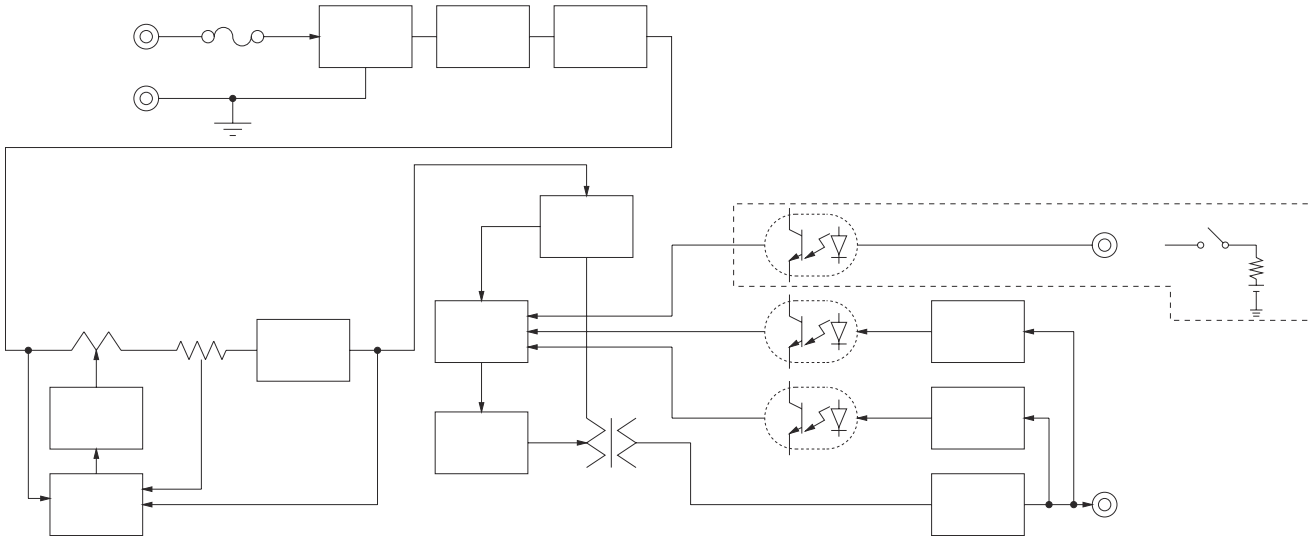
	66	100	94.5	102	105	108	100.8	100.8
	3.3V 20A	5V 20A	9V 10.5A	12V 8.5A	15V 7A	24V 4.5A	36V 2.8A	48V 2.1A

SPECIFICATIONS

	MODEL		PBA100F-3R3	PBA100F-5	PBA100F-9	PBA100F-12	PBA100F-15	PBA100F-24	PBA100F-36	PBA100F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC120 - 370 (AC50 or DC70 Please refer to the instruction manual 1.1 Input voltage ＊4)							
	CURRENT[A]	ACIN 100V	0.9typ	1.3typ						
		ACIN 200V	0.5typ	0.7typ						
	FREQUENCY[Hz]		50/60 (47 - 63)							
	EFFICIENCY[%]	ACIN 100V	77typ	82typ	80typ	81typ	83typ	84typ	84typ	84typ
		ACIN 200V	79typ	84typ	82typ	83typ	86typ	86typ	86typ	86typ
	POWER FACTOR(Io=100%)	ACIN 100V	0.98typ	0.99typ						
		ACIN 200V	0.87typ	0.93typ						
	INRUSH CURRENT[A]	ACIN 100V	20typ (Io=100%) (At cold start)							
		ACIN 200V	40typ (Io=100%) (At cold start)							
	LEAKAGE CURRENT[mA]		0.4/0.75max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1, DENAN)							
OUTPUT	VOLTAGE[V]		3.3	5	9	12	15	24	36	48
	CURRENT[A]		20	20	10.5	8.5	7	4.5	2.8	2.1
	LINE REGULATION[mV]		20max	20max	36max	48max	60max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	100max	100max	120max	150max	240max	240max
	RIPPLE[mVp-p]	0 to +50℃ ＊1	80max	80max	120max	120max	120max	120max	150max	150max
		-10 - 0℃ ＊1	140max	140max	160max	160max	160max	160max	200max	200max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊1	120max	120max	150max	150max	150max	150max	250max	250max
		-10 - 0℃ ＊1	160max	160max	180max	180max	180max	180max	300max	300max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	90max	120max	150max	240max	360max	480max
		-10 to +50℃	60max	60max	120max	150max	180max	290max	450max	600max
	DRIFT[mV]	＊2	20max	20max	36max	48max	60max	96max	144max	192max
	START-UP TIME[ms]		350typ(ACIN 100V, Io=100%)							
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.63	4.00 - 5.50	7.50 - 10.0	10.0 - 13.2	13.2 - 18.0	19.2 - 27.0	28.8 - 39.6	39.0 - 53.0
	OUTPUT VOLTAGE SETTING[V]		3.20 - 3.40	5.00 - 5.15	9.00 - 9.36	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	36.00 - 37.44	48.00 - 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current and recovers automatically							
	OVERVOLTAGE PROTECTION[V]		4.00 - 5.25	5.75 - 7.00	11.5 - 14.0	15.0 - 18.0	20.0 - 25.0	30.0 - 37.0	43.0 - 50.0	58.0 - 65.0
	OPERATING INDICATION		LED (Green)							
	REMOTE SENSING		Optional (Only -3R3, -5 Option -K)							
	REMOTE ON/OFF		Optional (Required external power source)							
ISOLATION	INPUT-OUTPUT · RC	＊3	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT · RC-FG	＊3	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max							
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max							
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis							
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN							
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B							
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ＊6							
OTHERS	CASE SIZE/WEIGHT		32×93×147mm [1.26×3.66×5.79 inches] (without terminal block) (W×H×D) / 440g max (with cover : 500g max)							
	COOLING METHOD		Convection							

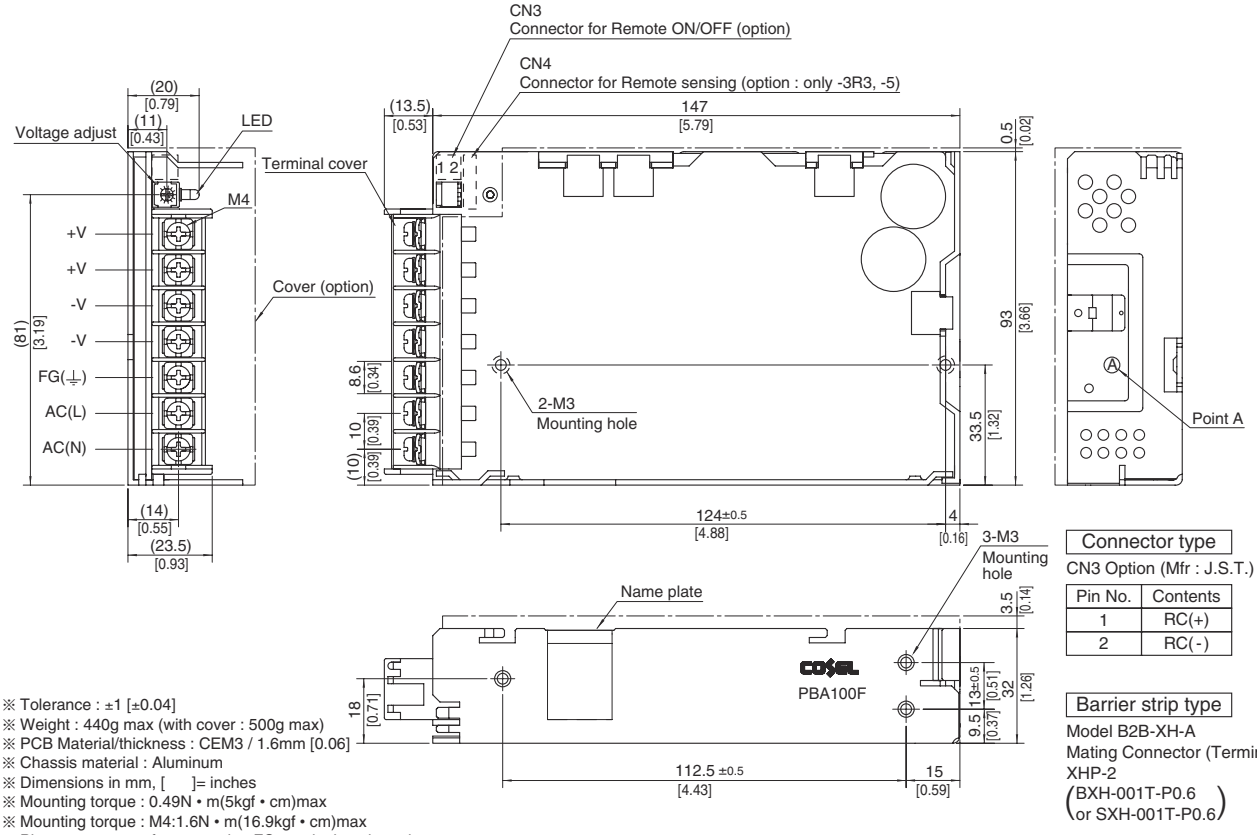
＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 Applicable when Remote ON/OFF(optional) is added. RC is insulated with input, output and FG.
＊4 Derating is required.
＊5 Please contact us about safety approvals for the model with option.
＊6 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with cover.
＊ A sound may occur from power supply at peak loading.

Block diagram



External view

※ External size of option T,J1,R,N1,V and K is different from standard model and refer to 7 Option of instruction manual for details.



Connector type

CN3 Option (Mfr : J.S.T.)

Pin No.	Contents
1	RC(+)
2	RC(-)

Barrier strip type

Model B2B-XH-A
Mating Connector (Terminal)
XHP-2
(BXH-001T-P0.6
or SXH-001T-P0.6)

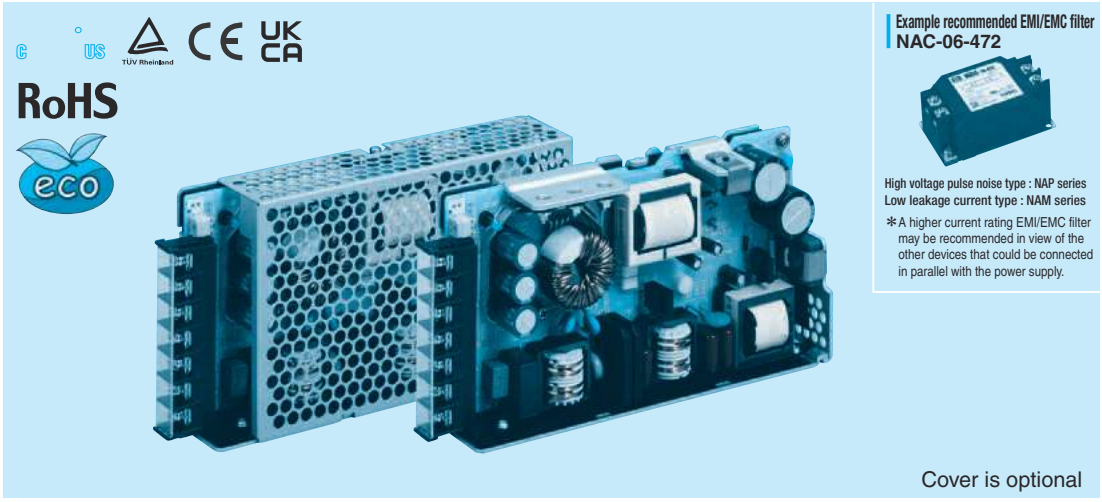
※ Tolerance : ±1 [±0.04]
※ Weight : 440g max (with cover : 500g max)
※ PCB Material/thickness : CEM3 / 1.6mm [0.06]
※ Chassis material : Aluminum
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 0.49N • m(5kgf • cm)max
※ Mounting torque : M4:1.6N • m(16.9kgf • cm)max
※ Please connect safety ground to FG terminal on the unit.

COSEL AC-DC Power Supplies Enclosed Type

PBA150F

Ordering information

PB	A	150	F	-5	-□
①	②	③	④	⑤	⑥



Example recommended EMI/EMC filter
NAC-06-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊5
C :with Coating
G :Low leakage current (0.15mA max / ACIN 240V)
E :Low leakage current and EMI class A (0.5mA max / ACIN 240V)
T :Vertical terminal block
J1 :VH (J.S.T.) connector type (Only -12,-15,-24,-36,-48)
R :with Remote ON/OFF
N :with Cover (Only 24V UL508 is acquired)
N1 :with DIN rail and Cover
V :Output voltage setting potentiometer externally

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

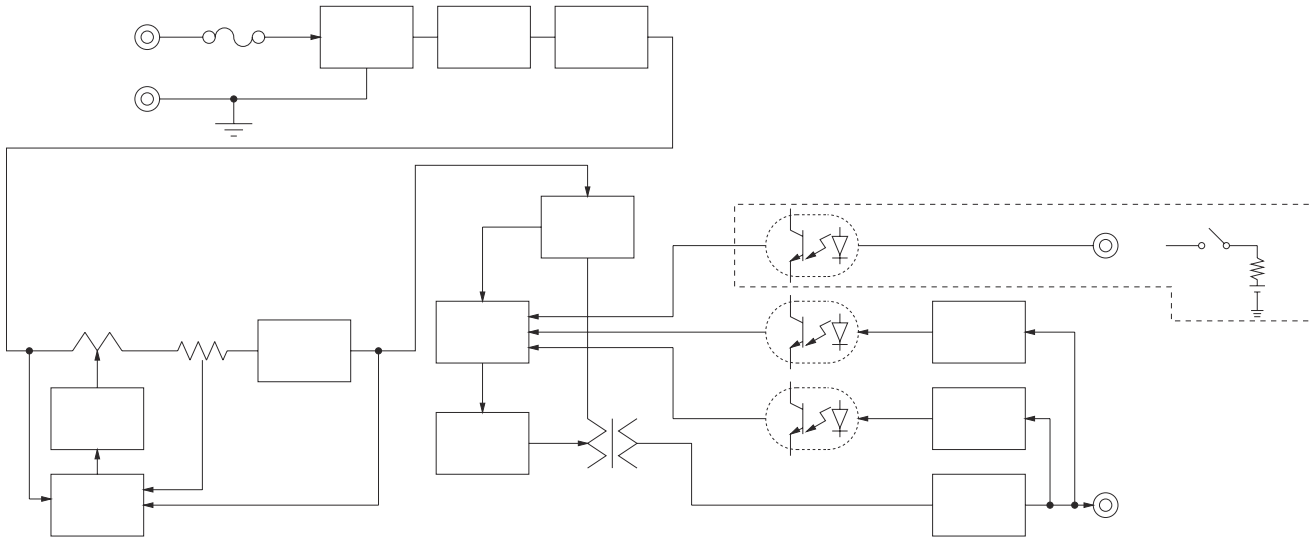
	99	150	150.3	156	150	156	154.8	158.4
	3.3V 30A	5V 30A	9V 16.7A	12V 13A	15V 10A	24V 6.5A	36V 4.3A	48V 3.3A

SPECIFICATIONS

	MODEL		PBA150F-3R3	PBA150F-5	PBA150F-9	PBA150F-12	PBA150F-15	PBA150F-24	PBA150F-36	PBA150F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC120 - 370 (AC50 or DC70 Please refer to the instruction manual 1.1 Input voltage ＊4)							
	CURRENT[A]	ACIN 100V	1.3typ	2.0typ						
		ACIN 200V	0.7typ	1.0typ						
	FREQUENCY[Hz]		50/60 (47 - 63)							
	EFFICIENCY[%]	ACIN 100V	80typ	83typ	82typ	83typ	84typ	85typ	85typ	85typ
		ACIN 200V	82typ	86typ	85typ	86typ	87typ	88typ	88typ	88typ
	POWER FACTOR(Io=100%)	ACIN 100V	0.98typ	0.99typ						
		ACIN 200V	0.87typ	0.93typ						
	INRUSH CURRENT[A]	ACIN 100V	20typ (Io=100%) (At cold start)							
		ACIN 200V	40typ (Io=100%) (At cold start)							
	LEAKAGE CURRENT[mA]		0.4/0.75max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1,DENAN)							
OUTPUT	VOLTAGE[V]		3.3	5	9	12	15	24	36	48
	CURRENT[A]		30	30	16.7	13	10	6.5	4.3	3.3
	LINE REGULATION[mV]		20max	20max	36max	48max	60max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	100max	100max	120max	150max	240max	240max
	RIPPLE[mVp-p]	0 to +50℃ ＊1	80max	80max	120max	120max	120max	120max	150max	150max
		-10 - 0℃ ＊1	140max	140max	160max	160max	160max	160max	200max	200max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊1	120max	120max	150max	150max	150max	150max	250max	250max
		-10 - 0℃ ＊1	160max	160max	180max	180max	180max	180max	300max	300max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	50max	90max	120max	150max	240max	360max	480max
		-10 to +50℃	60max	60max	120max	150max	180max	290max	450max	600max
	DRIFT[mV]	＊2	20max	20max	36max	48max	60max	96max	144max	192max
	START-UP TIME[ms]		350typ(ACIN 100V, Io=100%)							
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.85 - 3.63	4.00 - 5.50	7.50 - 10.0	10.0 - 13.2	13.2 - 18.0	19.2 - 27.0	28.8 - 39.6	39.0 - 53.0
	OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40	5.00 - 5.15	9.00 - 9.36	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	36.00 - 37.44	48.00 - 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current and recovers automatically							
	OVERVOLTAGE PROTECTION[V]		4.00 - 5.25	5.75 - 7.00	11.5 - 14.0	15.0 - 18.0	20.0 - 25.0	30.0 - 37.0	43.0 - 50.0	58.0 - 65.0
	OPERATING INDICATION		LED (Green)							
	REMOTE SENSING		Optional (Only -3R3, -5 Option -K)							
	REMOTE ON/OFF		Optional (Required external power source)							
ISOLATION	INPUT-OUTPUT · RC	＊3	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT · RC-FG	＊3	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max							
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max							
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis							
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN							
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B							
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ＊6							
OTHERS	CASE SIZE/WEIGHT		34×93×168mm [1.34×3.66×6.61 inches] (without terminal block) (W×H×D) / 560g max (with cover : 630g max)							
	COOLING METHOD		Convection							

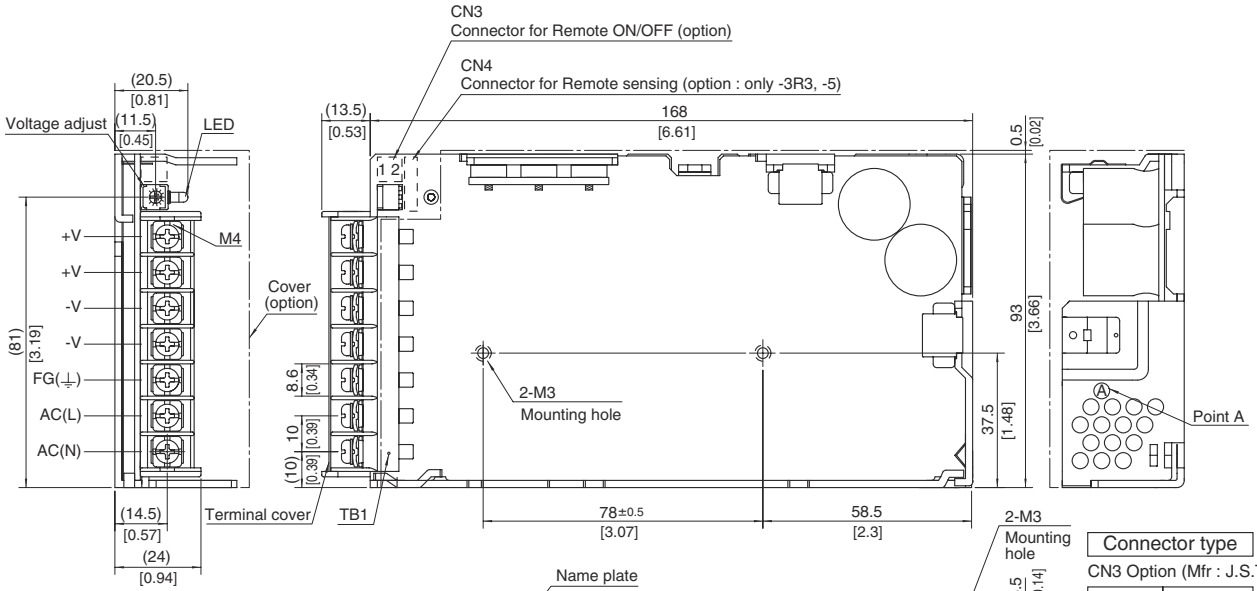
＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 Applicable when Remote ON/OFF(optional) is added. RC is insulated with input, output and FG.
＊4 Derating is required.
＊5 Please contact us about safety approvals for the model with option.
＊6 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with cover.
＊ A sound may occur from power supply at peak loading.

Block diagram



External view

※ External size of option T,J1,R,N1,V and K is different from standard model and refer to 7 Option of instruction manual for details.



Connector type

CN3 Option (Mfr : J.S.T.)

Pin No.	Contents
1	RC(+)
2	RC(-)

Barrier strip type

Model B2B-XH-A
Mating Connector (Terminal)
XHP-2
(BXH-001T-P0.6
or SXH-001T-P0.6)

※ Tolerance : ±1 [±0.04]
※ Weight : 560g max (with cover : 630g max)
※ PCB Material/thickness : CEM3 / 1.6mm [0.06]
※ Chassis material : Aluminum
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 0.49N • m(5kgf • cm)max
※ Mounting torque : M4:1.6N • m(16.9kgf • cm)max
※ Keep drawing current per pin below 20A for TB1.
※ Please connect safety ground to FG terminal on the unit.

COSEL AC-DC Power Supplies Enclosed Type

PBA300F

Ordering information

PB	A	300	F	-5	-□
①	②	③	④	⑤	⑧

Example recommended EMI/EMC filter
NAC-06-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

∗A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ∗5
C :with Coating
G :Low leakage current
U :Operation stop voltage is set at a lower value
F3 :Reverse air exhaust type
F4 :Low speed fan
N1 :with DIN rail

Refer to instruction manual 7.1.

∗Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

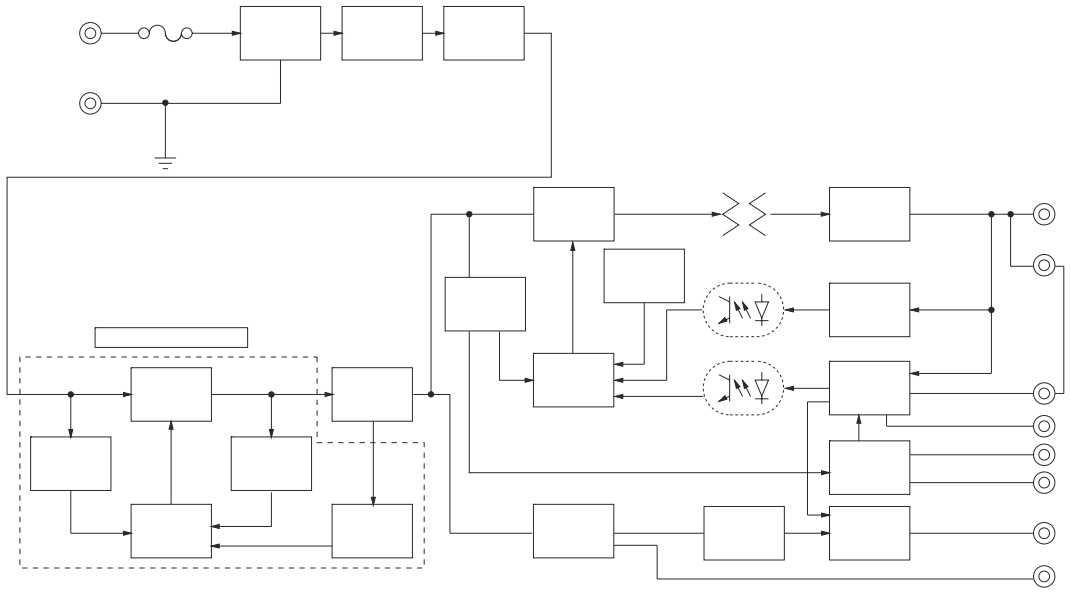
		198	300	300	324	330	336	324	336
		3.3V 60A	5V 60A	7.5V 40A	12V 27A	15V 22A	24V 14A	36V 9A	48V 7A
	∗3	3.3V 60A	5V 60A	7.5V 40A	12V 27A	15V 22A	24V 14(16.5)A	36V 9A	48V 7A

SPECIFICATIONS

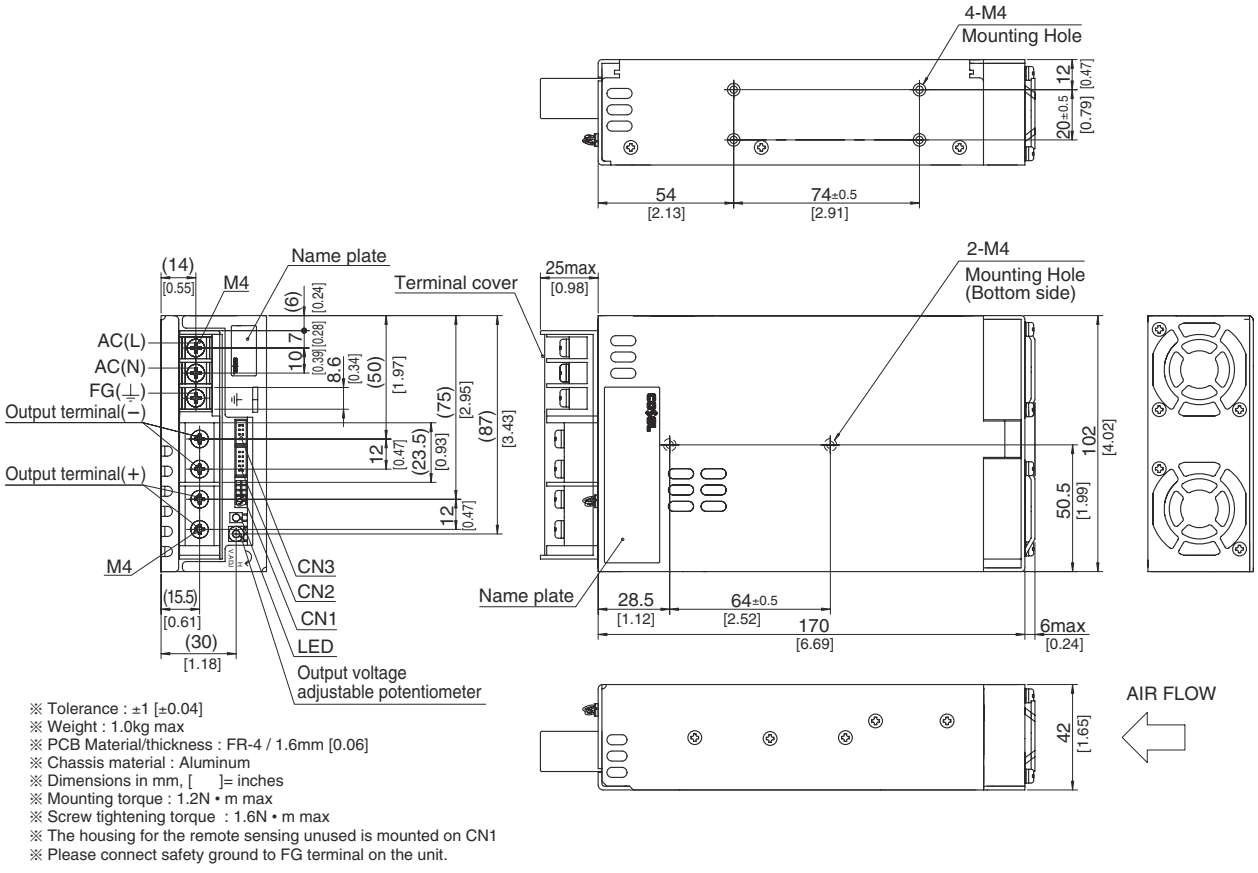
	MODEL		PBA300F-3R3	PBA300F-5	PBA300F-7R5	PBA300F-12	PBA300F-15	PBA300F-24	PBA300F-36	PBA300F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC120 - 350 (AC50 or DC70 Please refer to the instruction manual 7. option ∗4)							
	CURRENT[A]	ACIN 100V	3typ	4.1typ						
		ACIN 200V	1.6typ	2typ						
	FREQUENCY[Hz]		50/60 (47 - 63)							
	EFFICIENCY[%]	ACIN 100V	68typ	74typ	76typ	78typ	78typ	79typ	81typ	79typ
		ACIN 200V	71typ	77typ	79typ	81typ	81typ	82typ	84typ	82typ
	POWER FACTOR	ACIN 100V	0.98typ (Io=100%)							
		ACIN 200V	0.95typ (Io=100%)							
	INRUSH CURRENT[A]	ACIN 100V	20/40typ (Io=100%) (Primary inrush current /Secondary inrush current) (More then 3 sec. to re-start)							
		ACIN 200V	40/40typ (Io=100%) (Primary inrush current /Secondary inrush current) (More then 3 sec. to re-start)							
	LEAKAGE CURRENT[mA]		0.45/0.75max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1,DENAN)							
OUTPUT	VOLTAGE[V]		3.3	5	7.5	12	15	24	36	48
	CURRENT[A]	ACIN 100V	60	60	40	27	22	14	9	7
		ACIN 200V ∗3	60	60	40	27	22	14(16.5)	9	7
	LINE REGULATION[mV]		20max	20max	36max	48max	60max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	60max	100max	120max	150max	150max	300max
	RIPPLE[mVp-p]	0 to +50℃ ∗1	80max	80max	120max	120max	120max	120max	150max	150max
		-20 - 0℃ ∗1	140max	140max	160max	160max	160max	160max	160max	400max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ∗1	120max	120max	150max	150max	150max	150max	200max	200max
		-20 - 0℃ ∗1	160max	160max	180max	180max	180max	180max	240max	500max
	TEMPERATURE REGULATION[mV]	0 to +50℃	40max	50max	75max	120max	150max	240max	360max	480max
		-20 to +50℃	60max	75max	120max	180max	180max	290max	440max	600max
	DRIFT[mV]	∗2	12max	20max	30max	48max	60max	96max	144max	192max
	START-UP TIME[ms]		300typ(ACIN 100/200V, Io=100%) ∗Start-up time is 500ms typ for less than 1minute of applying input again from turning off the input voltage.							
	HOLD-UP TIME[ms]		20typ (ACIN 100/200V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.64 - 3.96	3.96 - 6.00	5.25 - 8.25	8.25 - 13.20	10.50 - 16.50	16.50 - 26.40	25.20 - 39.60	38.40 - 56.00
	OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40	5.00 - 5.15	7.50 - 7.80	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	36.00 - 37.44	48.00 - 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current or 101% of peak current and recovers automatically							
	OVERVOLTAGE PROTECTION[V]		4.3 - 6.3	6.5 - 8.0	9.0 - 11.6	14.4 - 18.6	18.0 - 23.3	28.8 - 37.2	43.2 - 54.0	57.6 - 80.0
	OPERATING INDICATION		LED (Green)							
	REMOTE SENSING		Provided							
	REMOTE ON/OFF		Provided							
ISOLATION	INPUT-OUTPUT · RC		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	INPUT-FG		AC2.000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT · RC · AUX-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT-RC · AUX		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-20 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max							
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max							
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis							
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN							
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B							
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ∗6							
OTHERS	CASE SIZE/WEIGHT		102×42×170mm [4.02×1.65×6.69 inches] (without terminal block and screw) (W×H×D) /1.0kg max							
	COOLING METHOD		Forced cooling (internal fan)							

∗1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
∗2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
∗3 () means peak current. Peak loading for 10s. And Duty 35% max, refer to Instruction manual in detail.
∗4 Derating is required.Consult us for details.
∗5 Please contact us about safety approvals for the model with option.
∗6 Please contact us about class C.
∗ A sound may occur from power supply at pulse loading.

Block diagram



External view



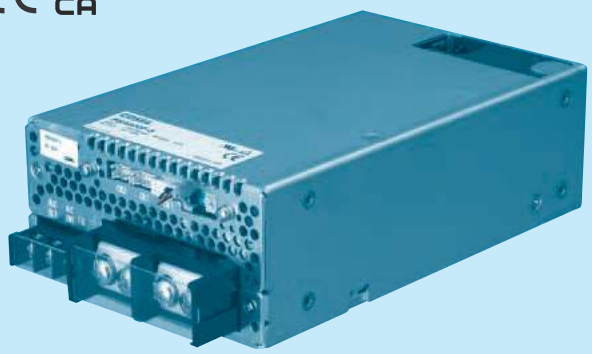
※ Tolerance : ±1 [±0.04]
※ Weight : 1.0kg max
※ PCB Material/thickness : FR-4 / 1.6mm [0.06]
※ Chassis material : Aluminum
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 1.2N • m max
※ Screw tightening torque : 1.6N • m max
※ The housing for the remote sensing unused is mounted on CN1
※ Please connect safety ground to FG terminal on the unit.

COSEL AC-DC Power Supplies Enclosed Type

PBA600F

Ordering information

PB	A	600	F	-5	-□
①	②	③	④	⑤	⑧



Example recommended EMI/EMC filter
NAC-16-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊6
C :with Coating
G :Low leakage current
U :Operation stop voltage is set at a lower value
F1 :With Long-Life fan
F3 :Reverse air exhaust type
F4 :Low speed fan

Refer to instruction manual 7.1.

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

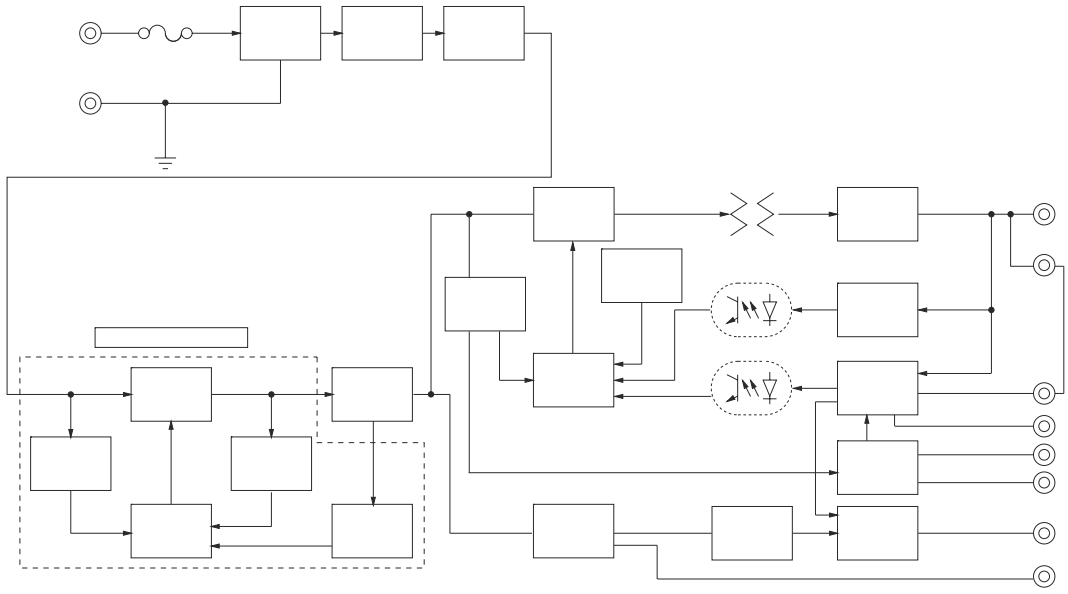
		396	600	600	636	648	648	648	624
		3.3V 120A	5V 120A	7.5V 80A	12V 53A	15V 43A	24V 27A	36V 18A	48V 13A
	＊3	3.3V 120A	5V 120A	7.5V 80A	12V 53A	15V 43A	24V 27(31)A	36V 18A	48V 13A

SPECIFICATIONS

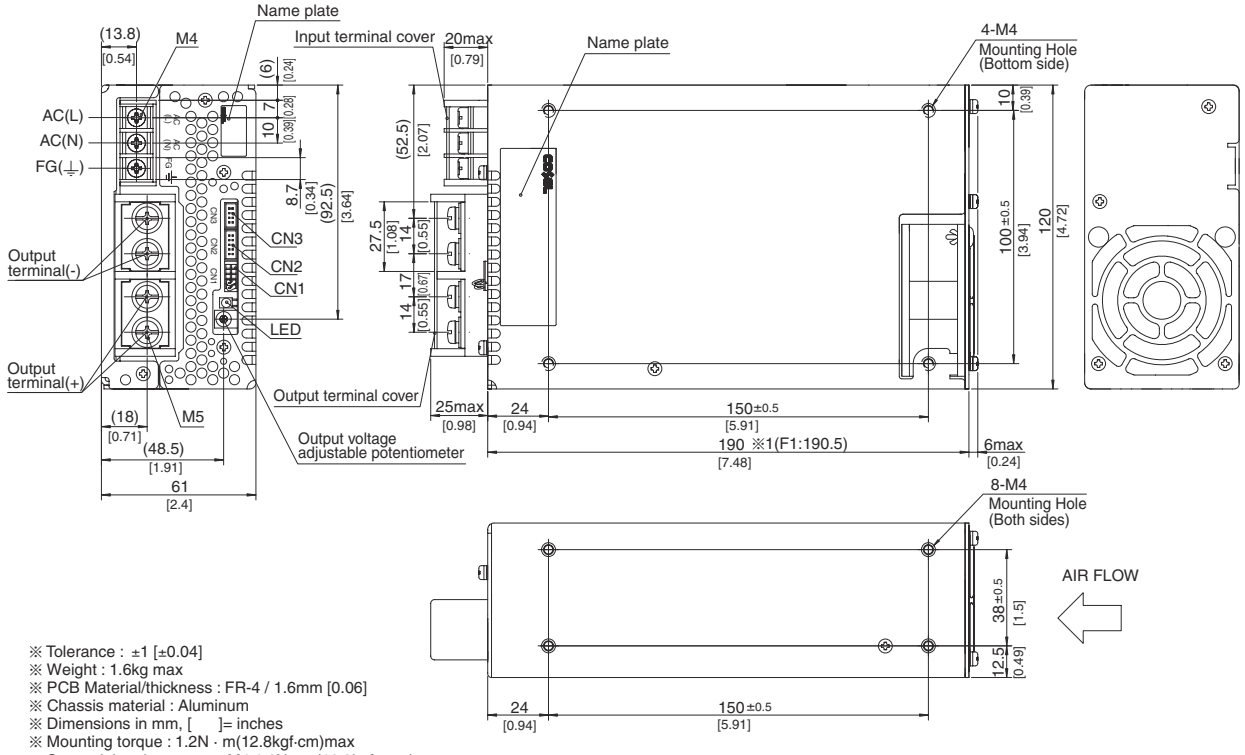
	MODEL		PBA600F-3R3	PBA600F-5	PBA600F-7R5	PBA600F-12	PBA600F-15	PBA600F-24	PBA600F-36	PBA600F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC120 - 350 (AC50 or DC70 Please refer to the instruction manual 7. option ＊5)							
	CURRENT[A]	ACIN 100V	5.8typ	8.2typ						
		ACIN 200V	3typ	4.1typ						
	FREQUENCY[Hz]		50/60 (47 - 63)							
	EFFICIENCY[%]	ACIN 100V	70typ	75typ	76typ	79typ	79typ	81typ	82typ	81typ
		ACIN 200V	72typ	77typ	79typ	82typ	82typ	84typ	84typ	83typ
	POWER FACTOR	ACIN 100V	0.98typ (Io=100%)							
		ACIN 200V	0.95typ (Io=100%)							
	INRUSH CURRENT[A]	ACIN 100V	20/40typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 3 sec. to re-start)							
		ACIN 200V	40/40typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 3 sec. to re-start)							
	LEAKAGE CURRENT[mA]		0.45/0.75max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1, DENAN)							
OUTPUT	VOLTAGE[V]		3.3	5	7.5	12	15	24	36	48
	CURRENT[A]	ACIN 100V	120	120	80	53	43	27	18	13
		ACIN 200V ＊3	120	120	80	53	43	27(31)	18	13
	LINE REGULATION[mV]		20max	20max	36max	48max	60max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	60max	100max	120max	150max	150max	300max
	RIPPLE[mVp-p]	0 to +50℃ ＊1	80max	80max	120max	120max	120max	120max	150max	150max
		-20 - 0℃ ＊1	140max	140max	160max	160max	160max	160max	160max	400max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊1	120max	120max	150max	150max	150max	150max	200max	200max
		-20 - 0℃ ＊1	160max	160max	180max	180max	180max	180max	240max	500max
	TEMPERATURE REGULATION[mV]	0 to +50℃	40max	50max	75max	120max	150max	240max	360max	480max
		-20 to +50℃	60max	75max	120max	180max	180max	290max	440max	600max
	DRIFT[mV] ＊2		12max	20max	30max	48max	60max	96max	144max	192max
	START-UP TIME[ms]		400typ(ACIN 100/200V, Io=100%) ＊Start-up time is 500ms typ for less than 1minute of applying input again from turning off the input voltage.							
	HOLD-UP TIME[ms]		20typ (ACIN 100/200V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.64 - 3.96	3.96 - 6.00	5.25 - 8.25	8.25 - 13.20	10.50 - 16.50	16.50 - 26.40	25.20 - 39.60	38.40 - 56.00
	OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40	5.00 - 5.15	7.50 - 7.80	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	36.00 - 37.44	48.00 - 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current or 101% of peak current and recovers automatically							
	OVERVOLTAGE PROTECTION[V] ＊4		Vo+0.66 - 1.32	Vo+1.0 - 2.0	Vo+1.5 - 3.0	Vo+2.4 - 4.8	Vo+3.0 - 6.0	Vo+4.8 - 9.6	Vo+7.2 - 14.4	Vo+4.8 - 12.0
	OPERATING INDICATION		LED (Green)							
	REMOTE SENSING		Provided							
	REMOTE ON/OFF		Provided							
ISOLATION	INPUT-OUTPUT · RC		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT · RC · AUX-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT-RC · AUX		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-20 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max							
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max							
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis							
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN							
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B							
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ＊7							
OTHERS	CASE SIZE/WEIGHT		120×61×190mm [4.72×2.4×7.48 inches] (without terminal block and screw) (W×H×D) /1.6kg max							
	COOLING METHOD		Forced cooling (internal fan)							

＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 () means peak current. Peak loading for 10s. And Duty 35% max, refer to Instruction manual in detail.
＊4 Overvoltage protection circuit to follow to output voltage setting. Standard overvoltage protection circuit is please contact us for details.
＊5 Derating is required.Consult us for details.
＊6 Please contact us about safety approvals for the model with option.
＊7 Please contact us about class C.
＊ A sound may occur from power supply at pulse loading.

Block diagram



External view



※ Tolerance : ±1 [±0.04]
※ Weight : 1.6kg max
※ PCB Material/thickness : FR-4 / 1.6mm [0.06]
※ Chassis material : Aluminum
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 1.2N · m(12.8kgf·cm)max
※ Screw tightening torque : M4 1.6N • m(16.9kgf • cm)max
M5 2.5N • m(24.5kgf • cm)max
※ The housing for the remote sensing unused is mounted on CN1
※1 F1(Optional):190.5
※ Please connect safety ground to FG terminal on the unit.

COSEL AC-DC Power Supplies Enclosed Type

PBA1000F

Ordering information

PB	A	1000	F	-5	-□
①	②	③	④	⑤	⑥

Example recommended EMI/EMC filter
NAC-20-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊6
C :with Coating
G :Low leakage current
U :Operation stop voltage is set at a lower value
F1 :With Long-Life fan
F3 :Reverse air exhaust type
F4 :Low speed fan

Refer to instruction manual 7.1.

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

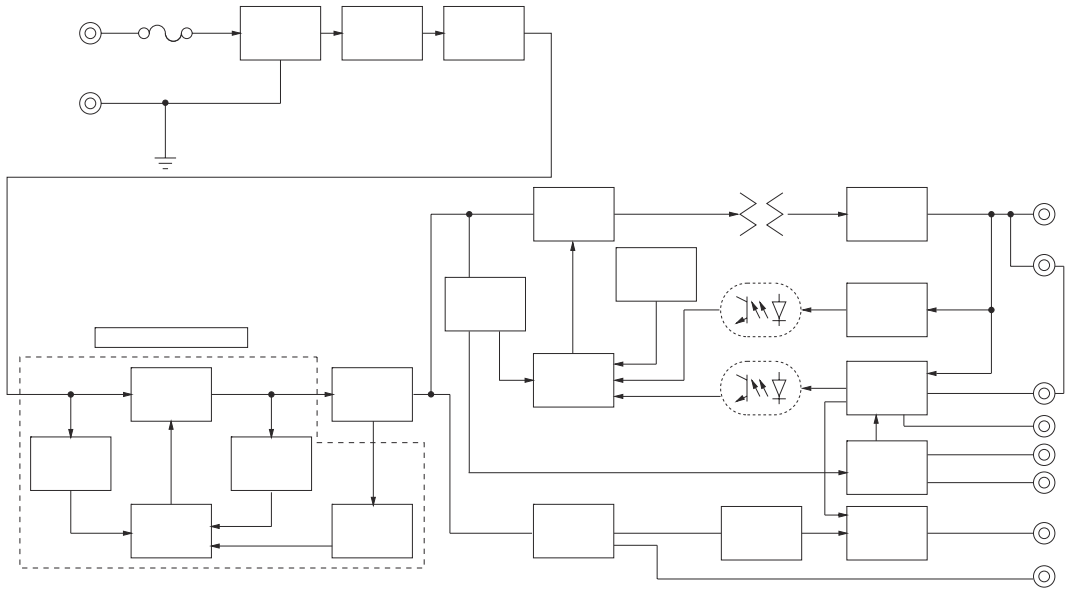
MODEL		PBA1000F-3R3	PBA1000F-5	PBA1000F-7R5	PBA1000F-12	PBA1000F-15	PBA1000F-24	PBA1000F-36	PBA1000F-48
MAX OUTPUT WATTAGE[W]		660	1000	1005	1056	1050	1056	1044	1056
DC OUTPUT	ACIN 100V	3.3V 200A	5V 200A	7.5V 134A	12V 88A	15V 70A	24V 44A	36V 29A	48V 22A
	ACIN 200V ＊3	3.3V 200A	5V 200A	7.5V 134A	12V 88A	15V 70A	24V 44(51)A	36V 29A	48V 22A

SPECIFICATIONS

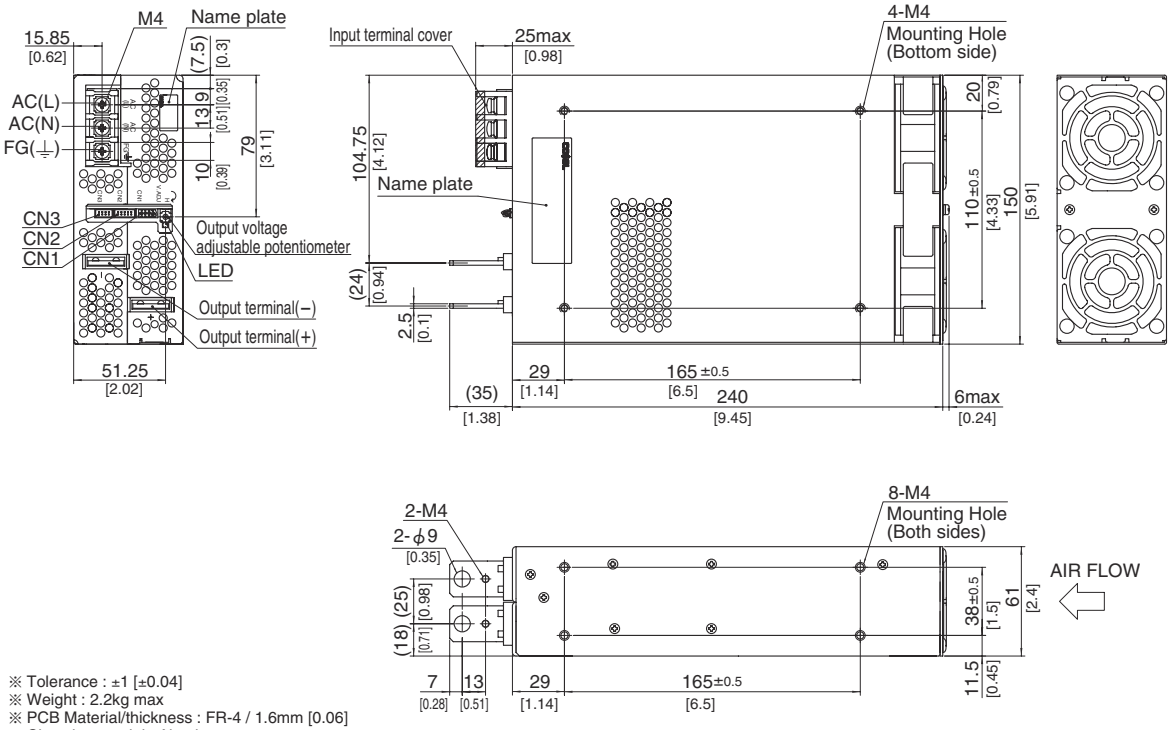
	MODEL		PBA1000F-3R3	PBA1000F-5	PBA1000F-7R5	PBA1000F-12	PBA1000F-15	PBA1000F-24	PBA1000F-36	PBA1000F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC120 - 350 (AC50 or DC70 Please refer to the instruction manual 7. option ＊5)							
	CURRENT[A]	ACIN 100V	9typ	13typ						
		ACIN 200V	5typ	7typ						
	FREQUENCY[Hz]		50/60 (47 - 63)							
	EFFICIENCY[%]	ACIN 100V	74typ	79typ	80typ	82typ	82typ	84typ	84typ	84typ
		ACIN 200V	76typ	81typ	83typ	84typ	84typ	86typ	86typ	86typ
	POWER FACTOR	ACIN 100V	0.98typ (Io=100%)							
		ACIN 200V	0.95typ (Io=100%)							
	INRUSH CURRENT[A]	ACIN 100V	20/40typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 10 sec. to re-start)							
		ACIN 200V	40/40typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 10 sec. to re-start)							
	LEAKAGE CURRENT[mA]		0.5/1.0max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1, DENAN)							
OUTPUT	VOLTAGE[V]		3.3	5	7.5	12	15	24	36	48
	CURRENT[A]	ACIN 100V	200	200	134	88	70	44	29	22
		ACIN 200V ＊3	200	200	134	88	70	44(51)	29	22
	LINE REGULATION[mV]		20max	20max	36max	48max	60max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	60max	100max	120max	150max	150max	300max
	RIPPLE[mVp-p]	0 to +50℃ ＊1	80max	80max	120max	120max	120max	120max	150max	150max
		-20 - 0℃ ＊1	140max	140max	160max	160max	160max	160max	160max	400max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊1	120max	120max	150max	150max	150max	150max	200max	200max
		-20 - 0℃ ＊1	160max	160max	180max	180max	180max	180max	240max	500max
	TEMPERATURE REGULATION[mV]	0 to +50℃	40max	50max	75max	120max	150max	240max	360max	480max
		-20 to +50℃	60max	75max	120max	180max	180max	290max	440max	600max
	DRIFT[mV] ＊2		12max	20max	30max	48max	60max	96max	144max	192max
	START-UP TIME[ms]		400typ(ACIN 100/200V, Io=100%) ＊Start-up time is 500ms typ for less than 1minute of applying input again from turning off the input voltage.							
	HOLD-UP TIME[ms]		20typ (ACIN 100/200V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.64 - 3.96	3.96 - 6.00	5.25 - 8.25	8.25 - 13.20	10.50 - 16.50	16.50 - 26.40	25.20 - 39.60	38.40 - 56.00
	OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40	5.00 - 5.15	7.50 - 7.80	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	36.00 - 37.44	48.00 - 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current or 101% of peak current and recovers automatically							
	OVERVOLTAGE PROTECTION[V] ＊4		Vo+0.66 - 1.32	Vo+1.0 - 2.0	Vo+1.5 - 3.0	Vo+2.4 - 4.8	Vo+3.0 - 6.0	Vo+4.8 - 9.6	Vo+7.2 - 14.4	Vo+4.8 - 12.0
	OPERATING INDICATION		LED (Green)							
	REMOTE SENSING		Provided							
	REMOTE ON/OFF		Provided							
ISOLATION	INPUT-OUTPUT · RC		AC3,000V 1minute, Cutoff current = 25mA, DC500V 50MΩmin (At Room Temperature)							
	INPUT-FG		AC2,000V 1minute, Cutoff current = 25mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT · RC · AUX-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT-RC · AUX		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-20 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max							
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max							
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis							
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN							
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B							
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ＊7							
OTHERS	CASE SIZE/WEIGHT		150×61×240mm [5.91×2.4×9.45 inches] (without terminal block and screw) (W×H×D) /2.2kg max							
	COOLING METHOD		Forced cooling (internal fan)							

＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
Ripple and ripple noise is measured on measuring board with capacitor of 22μF within 150mm from the output terminal.
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 () means peak current. Peak loading for 10s. And Duty 35% max, refer to Instruction manual in detail.
＊4 Overvoltage protection circuit to follow to output voltage setting. Standard overvoltage protection circuit is please contact us for details.
＊5 Derating is required.Consult us for details.
＊6 Please contact us about safety approvals for the model with option.
＊7 Please contact us about class C.
＊ A sound may occur from power supply at pulse loading.

Block diagram



External view



※ Tolerance : ±1 [±0.04]
※ Weight : 2.2kg max
※ PCB Material/thickness : FR-4 / 1.6mm [0.06]
※ Chassis material : Aluminum
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 1.2N • m(12.8kgf • cm)max
※ Screw tightening torque : 1.6N • m(16.9kgf • cm)max
※ The housing for the remote sensing unused is mounted on CN1
※ Please connect safety ground to FG terminal on the unit.

COSEL **AC-DC Power Supplies Enclosed Type**

PBA1500F

Ordering information

PB	A	1500	F	-5	-□
①	②	③	④	⑤	⑧

Example recommended EMI/EMC filter
NAC-20-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

∗A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Single output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ∗6
C :with Coating
G :Low leakage current
U :Operation stop voltage is set at a lower value
F1 :With Long-Life fan
F3 :Reverse air exhaust type
F4 :Low speed fan

Refer to instruction manual 7.1.

∗Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

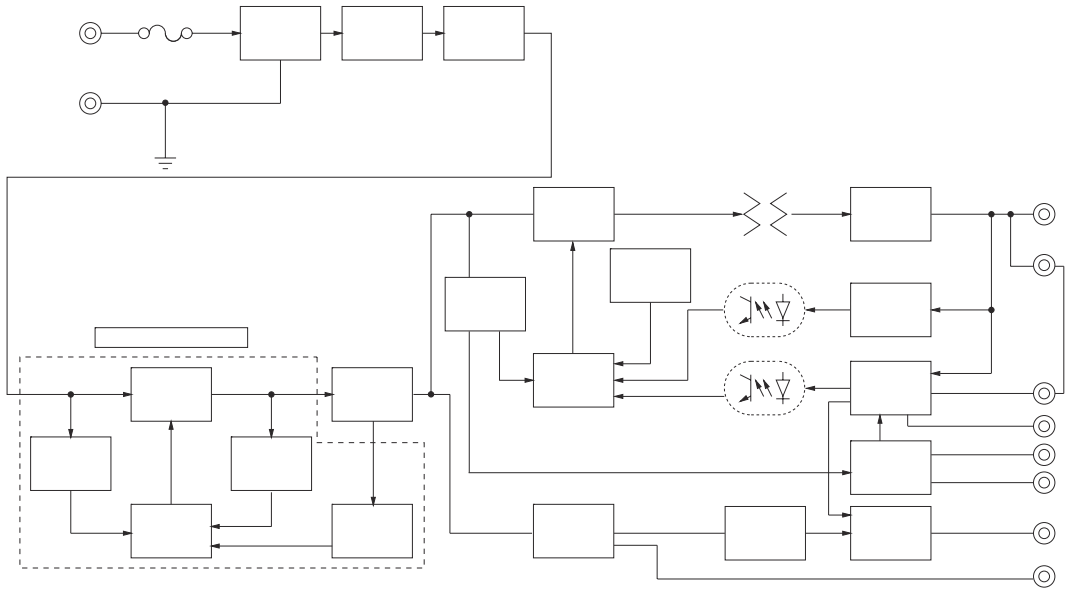
		990	1500	1500	1500	1500	1680	1692	1680
		3.3V 300A	5V 300A	7.5V 200A	12V 125A	15V 100A	24V 65A	36V 42A	48V 32A
	∗3	**3.3V 300A**	**5V 300A**	**7.5V 200A**	**12V 125A**	**15V 100A**	**24V 70(105)A**	**36V 47(70)A**	**48V 35A**

SPECIFICATIONS

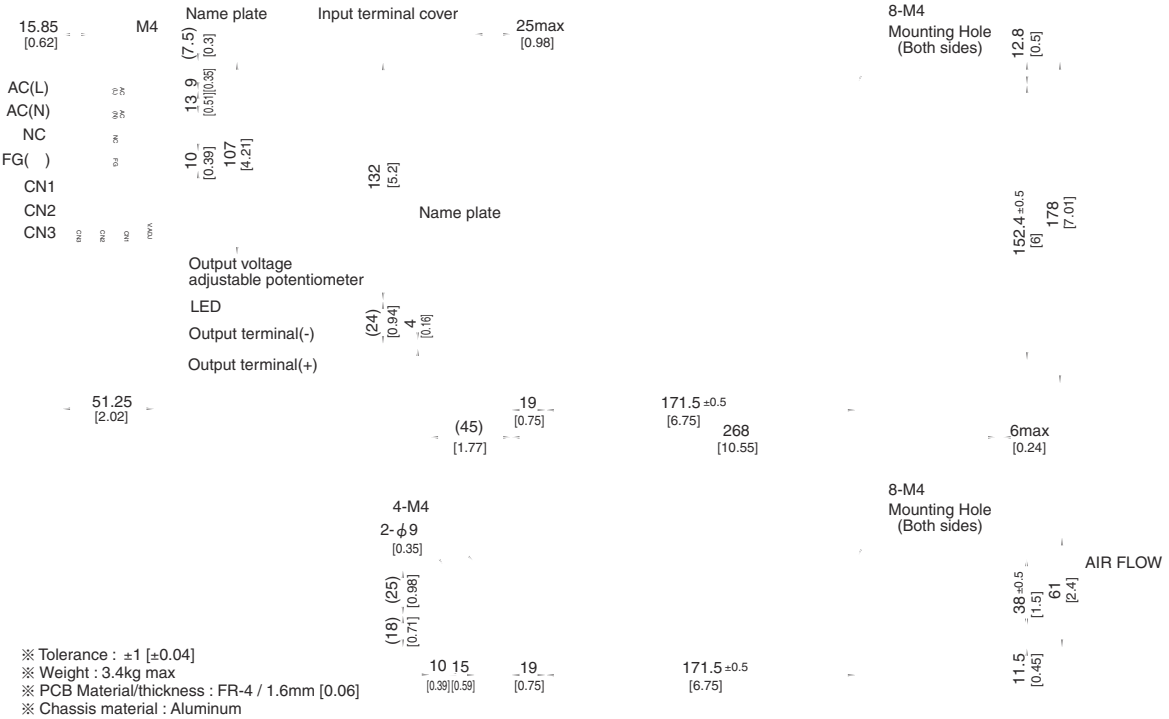
	MODEL		PBA1500F-3R3	PBA1500F-5	PBA1500F-7R5	PBA1500F-12	PBA1500F-15	PBA1500F-24	PBA1500F-36	PBA1500F-48
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC120 - 370 (AC50 or DC70 Please refer to the instruction manual 7. option ∗5)							
	CURRENT[A]	ACIN 100V	15typ	19typ						
		ACIN 200V	8typ	10typ						
	FREQUENCY[Hz]		50/60 (47 - 63)							
	EFFICIENCY[%]	ACIN 100V	72typ	77typ	81typ	81typ	83typ	84typ	84typ	84typ
		ACIN 200V	75typ	81typ	83typ	84typ	86typ	87typ	87typ	87typ
	POWER FACTOR	ACIN 100V	0.98typ (Io=100%)							
		ACIN 200V	0.95typ (Io=100%)							
	INRUSH CURRENT[A]	ACIN 100V	20/40typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 10 sec. to re-start)							
		ACIN 200V	40/40typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 10 sec. to re-start)							
	LEAKAGE CURRENT[mA]		0.9/1.5max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1, DENAN)							
OUTPUT	VOLTAGE[V]		3.3	5	7.5	12	15	24	36	48
	CURRENT[A]	ACIN 100V	300	300	200	125	100	65	42	32
		ACIN 200V ∗3	300	300	200	125	100	70(105)	47(70)	35
	LINE REGULATION[mV]		20max	20max	36max	48max	60max	96max	144max	192max
	LOAD REGULATION[mV]		40max	40max	60max	100max	120max	150max	150max	300max
	RIPPLE[mVp-p]	0 to +50℃ ∗1	80max	80max	120max	120max	120max	120max	150max	150max
		-20 - 0℃ ∗1	140max	140max	160max	160max	160max	160max	160max	400max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ∗1	120max	120max	150max	150max	150max	150max	200max	200max
		-20 - 0℃ ∗1	160max	160max	180max	180max	180max	180max	240max	500max
	TEMPERATURE REGULATION[mV]	0 to +50℃	40max	50max	75max	120max	150max	240max	360max	480max
		-20 to +50℃	60max	75max	120max	180max	180max	290max	440max	600max
	DRIFT[mV] ∗2		12max	20max	30max	48max	60max	96max	144max	192max
	START-UP TIME[ms]		600typ(ACIN 100/200V, Io=100%)							
	HOLD-UP TIME[ms]		20typ (ACIN 100/200V, Io=100%)							
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		2.64 - 3.96	3.96 - 6.00	5.25 - 8.25	8.25 - 13.20	10.50 - 16.50	16.50 - 26.40	25.20 - 39.60	38.40 - 56.00
	OUTPUT VOLTAGE SETTING[V]		3.30 - 3.40	5.00 - 5.15	7.50 - 7.80	12.00 - 12.48	15.00 - 15.60	24.00 - 24.96	36.00 - 37.44	48.00 - 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current or 101% of peak current and recovers automatically							
	OVERVOLTAGE PROTECTION[V] ∗4		Vo+0.66 - 1.32	Vo+1.0 - 2.0	Vo+1.5 - 3.0	Vo+2.4 - 4.8	Vo+3.0 - 6.0	Vo+4.8 - 9.6	Vo+7.2 - 14.4	Vo+4.8 - 12.0
	OPERATING INDICATION		LED (Green)							
	REMOTE SENSING		Provided							
	REMOTE ON/OFF		Provided							
ISOLATION	INPUT-OUTPUT · RC		AC3,000V 1minute, Cutoff current = 25mA, DC500V 50MΩmin (At Room Temperature)							
	INPUT-FG		AC2.000V 1minute, Cutoff current = 25mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT · RC · AUX-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
	OUTPUT-RC · AUX		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)							
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-20 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max							
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max							
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis							
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN							
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B, additional EMI/EMC Filter required for meeting class B							
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ∗7							
OTHERS	CASE SIZE/WEIGHT		178×61×268mm [7.01×2.4×10.55 inches] (without terminal block and screw) (W×H×D) /3.4kg max							
	COOLING METHOD		Forced cooling (internal fan)							

∗1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
Ripple and ripple noise is measured on measuring board with capacitor of 22μF within 150mm from the output terminal.
∗2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
∗3 () means peak current. Peak loading for 10s. And Duty 35% max, refer to Instruction manual in detail.
∗4 Overvoltage protection circuit to follow to output voltage setting. Standard overvoltage protection circuit is please contact us for details.
∗5 Derating is required.Consult us for details.
∗6 Please contact us about safety approvals for the model with option.
∗7 Please contact us about class C.
∗ A sound may occur from power supply at pulse loading.

Block diagram



External view



※ Tolerance : ±1 [±0.04]
※ Weight : 3.4kg max
※ PCB Material/thickness : FR-4 / 1.6mm [0.06]
※ Chassis material : Aluminum
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 1.2N • m(12.8kgf • cm)max
※ Screw tightening torque : 1.6N • m(16.9kgf • cm)max
※ The housing for the remote sensing unused is mounted on CN1
※ Please connect safety ground to FG terminal on the unit.

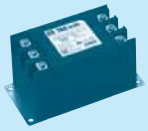
COSEL AC-DC Power Supplies Enclosed Type

PBA1500T

Ordering information

PB	A	1500	T	-5	-□
①	②	③	④	⑤	⑥

Example recommended EMI/EMC filter
TAC-10-683



＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Single output
③Output wattage
④Triple input phase
⑤Output voltage
⑥Optional ＊6
C :with Coating
G :Low leakage current
U :Operation stop voltage is set at a lower value
F1 :With Long-Life fan
F3 :Reverse air exhaust type
F4 :Low speed fan

Refer to instruction manual 7.1.

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

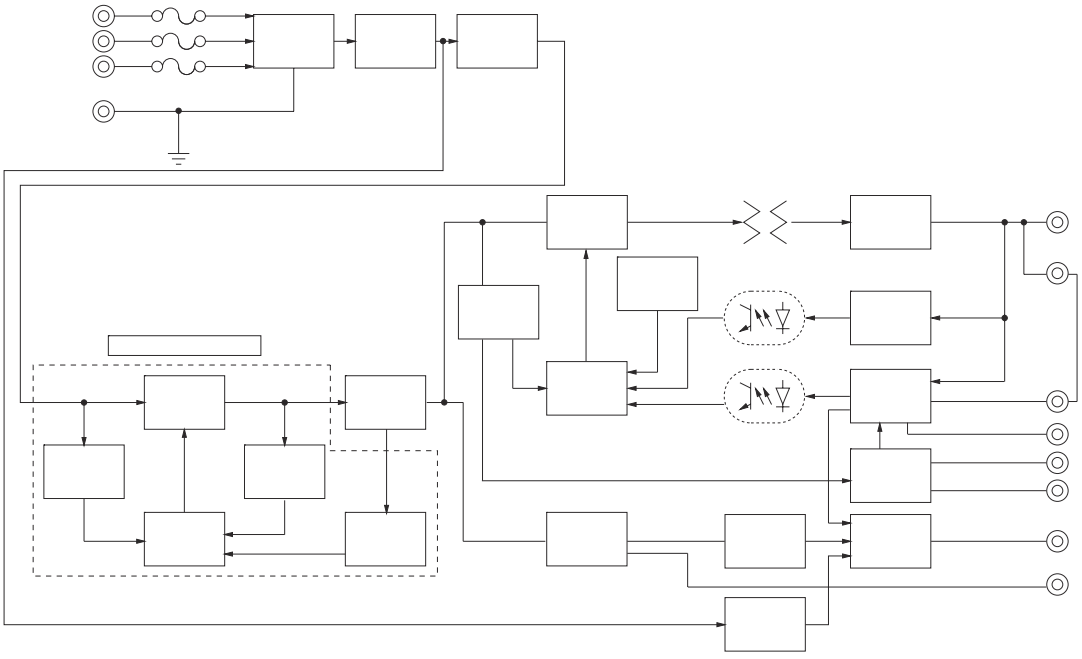
		1500	1500	1680	1680
	＊3	5V 300A	12V 125A	24V 70(105)A	48V 35A

SPECIFICATIONS

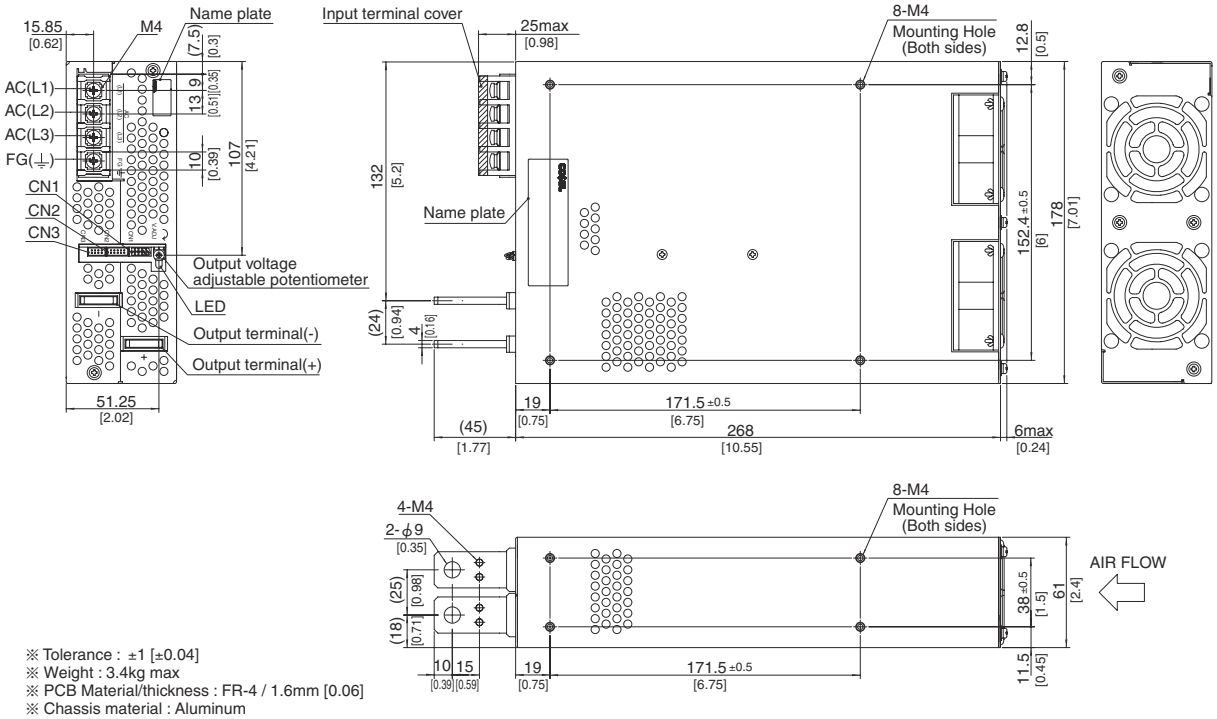
	MODEL		PBA1500T-5	PBA1500T-12	PBA1500T-24	PBA1500T-48
INPUT	VOLTAGE[V]		AC170 - 264 3φ (AC100 Please refer to the instruction manual 7. option ＊5)			
	CURRENT[A]	ACIN 200V	6typ			
	FREQUENCY[Hz]		50/60 (47 - 63)			
	EFFICIENCY[%]	ACIN 200V	81typ	84typ	87typ	87typ
	POWER FACTOR	ACIN 200V	0.95typ (Io=100%)			
	INRUSH CURRENT[A]	ACIN 200V	40/40typ (Io=100%) (Primary inrush current /Secondary inrush current) (More than 10 sec. to re-start)			
	LEAKAGE CURRENT[mA]		1.5max (ACIN 240V 60Hz, Io=100%, According to IEC62368-1, DENAN)			
OUTPUT	VOLTAGE[V]		5	12	24	48
	CURRENT[A]	ACIN 200V ＊3	300	125	70(105)	35
	LINE REGULATION[mV]		20max	48max	96max	192max
	LOAD REGULATION[mV]		40max	100max	150max	300max
	RIPPLE[mVp-p]	0 to +50℃ ＊1	80max	120max	120max	150max
		-20 - 0℃ ＊1	140max	160max	160max	400max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊1	120max	150max	150max	200max
		-20 - 0℃ ＊1	160max	180max	180max	500max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	240max	480max
		-20 to +50℃	75max	180max	290max	600max
	DRIFT[mV]	＊2	20max	48max	96max	192max
	START-UP TIME[ms]		300typ(ACIN 200V, Io=100%) ＊Start-up time is 500ms typ for less than 1 minute of applying input again from turning off the input voltage.			
	HOLD-UP TIME[ms]		20typ (ACIN 200V, Io=100%)			
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		3.96 - 6.00	8.25 - 13.20	16.50 - 26.40	38.40 - 56.00
	OUTPUT VOLTAGE SETTING[V]		5.00 - 5.15	12.00 - 12.48	24.00 - 24.96	48.00 - 49.92
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current or 101% of peak current and recovers automatically			
	OVERVOLTAGE PROTECTION[V]	＊4	Vo+1.0 - 2.0	Vo+2.4 - 4.8	Vo+4.8 - 9.6	Vo+2.0 - 12.0
	OPERATING INDICATION		LED (Green)			
	REMOTE SENSING		Provided			
	REMOTE ON/OFF		Provided			
ISOLATION	INPUT-OUTPUT · RC		AC3,000V 1minute, Cutoff current = 25mA, DC500V 50MΩmin (At Room Temperature)			
	INPUT-FG		AC2,000V 1minute, Cutoff current = 25mA, DC500V 50MΩmin (At Room Temperature)			
	OUTPUT · RC · AUX-FG		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)			
	OUTPUT-RC · AUX		AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩmin (At Room Temperature)			
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-20 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max			
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max			
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis			
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis			
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN			
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B, additional EMI/EMC Filter required for meeting class B			
OTHERS	CASE SIZE/WEIGHT		178×61×268mm [7.01×2.4×10.55 inches] (without terminal block and screw) (W×H×D) /3.4kg max			
	COOLING METHOD		Forced cooling (internal fan)			

＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN :RM101).
Ripple and ripple noise is measured on measuring board with capacitor of 22μF within 150mm from the output terminal.
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 () means peak current. Peak loading for 10s. And Duty 35% max, refer to Instruction manual in detail.
＊4 Overvoltage protection circuit to follow to output voltage setting. Standard overvoltage protection circuit is please contact us for details.
＊5 Derating is required.Consult us for details.
＊6 Please contact us about safety approvals for the model with option.
＊ A sound may occur from power supply at pulse loading.

Block diagram



External view



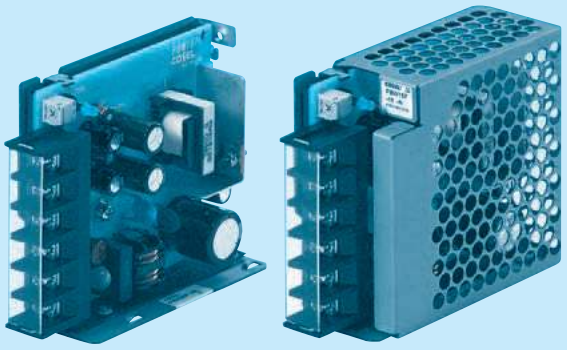
※ Tolerance : ±1 [±0.04]
※ Weight : 3.4kg max
※ PCB Material/thickness : FR-4 / 1.6mm [0.06]
※ Chassis material : Aluminum
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 1.2N • m(12.8kgf • cm)max
※ Screw tightening torque : 1.6N • m(16.9kgf • cm)max
※ The housing for the remote sensing unused is mounted on CN1
※ Please connect safety ground to unit in M4 holes.

COSEL **AC-DC Power Supplies Enclosed Type**

PBW15F

Ordering information

PB	W	15	F	-□	-□
①	②	③	④	⑤	⑧



Cover is optional

Example recommended EMI/EMC filter
NAC-06-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Dual output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊10
C :with Coating
G :Low leakage current
E :Low leakage current and EMI class A
T :Vertical terminal block
J1 :VH (J.S.T.) connector type
N :with Cover
N1 :with DIN rail
V :Output voltage setting potentiometer externally

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

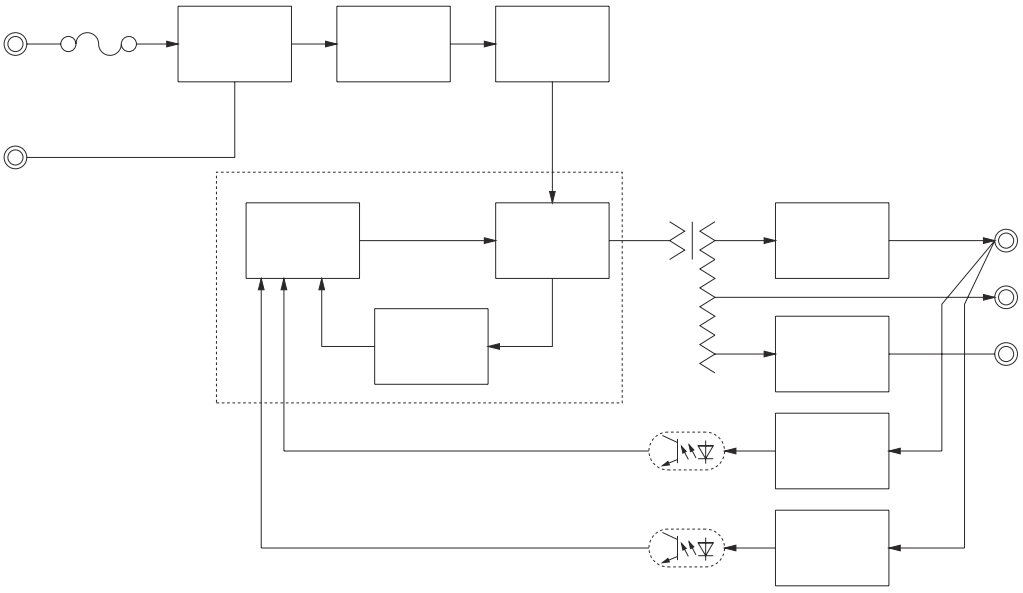
	＊5	16.8	15.0
DC OUTPUT	VOLTAGE[V] ＊6	±12 (+24)	±15 (+30)
	CURRENT1[A]	0.7	0.5
	CURRENT2[A] ＊5	1.4	1.0

SPECIFICATIONS

	MODEL		PBW15F-12		PBW15F-15	
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC110 - 370 (AC50 or DC70 Please refer to the instruction manual 1.1 Input voltage ＊8)			
	CURRENT[A]	ACIN 100V	0.40typ (CURRENT1)			
		ACIN 200V	0.20typ (CURRENT1)			
	FREQUENCY[Hz]		50/60 (47 - 440) or DC			
	EFFICIENCY[%]	ACIN 100V	74typ (CURRENT1)		78typ (CURRENT1)	
		ACIN 200V	77typ (CURRENT1)		80typ (CURRENT1)	
	INRUSH CURRENT[A]	ACIN 100V	15typ (CURRENT1) (At cold start)			
		ACIN 200V	30typ (CURRENT1) (At cold start)			
	LEAKAGE CURRENT[mA]		0.15/0.30max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1,DENAN)			
OUTPUT	VOLTAGE[V]		±12	/ (+24V reference number)	±15	/ (+30V reference number)
	CURRENT1[A]		0.7	/ 0.7	0.5	/ 0.5
	CURRENT2[A]	＊5	1.4	/ -	1.0	/ -
	LINE REGULATION[mV]	＊9 ＊11	60max	/ 96max	60max	/ 96max
	LOAD REGULATION 1[mV]	＊3 ＊11	600max	/ 150max	600max	/ 150max
	LOAD REGULATION 2[mV]	＊4 ＊11	750max	/ -	750max	/ -
	RIPPLE[mVp-p]	0 to +50℃ ＊1	120max	/ 240max	120max	/ 240max
		-10 - 0℃ ＊1	160max	/ 320max	160max	/ 320max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊1	150max	/ 300max	150max	/ 300max
		-10 - 0℃ ＊1	180max	/ 360max	180max	/ 360max
	TEMPERATURE REGULATION[mV]	0 to +50℃	120max		150max	
		-10 to +50℃	150max		180max	
	DRIFT[mV]	＊2	48max		60max	
	START-UP TIME[ms]		200typ(ACIN 100V, Io=100%) ＊Start-up time is 700ms typ for less than 1minute of applying input again from turning off the input voltage.			
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)			
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		9.60 - 13.2 (+V and -V are simultaneously adjusted)		13.2 - 16.5 (+V and -V are simultaneously adjusted)	
	OUTPUT VOLTAGE SETTING[V]		11.5 - 12.5 (+V and -V CURRENT1)		14.4 - 15.6 (+V and -V CURRENT1)	
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current and recovers automatically			
	OVERVOLTAGE PROTECTION[V]		16.8 - 24.0		20.0 - 29.0	
	OPERATING INDICATION		LED (Green)			
	REMOTE ON/OFF		None			
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)			
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)			
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)			
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max			
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max			
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis			
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis			
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN			
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B			
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 (Not built-in to active filter ＊7) ＊12			
OTHERS	CASE SIZE/WEIGHT		31×78×85mm [1.22×3.07×3.35 inches] (without terminal block) (W×H×D) / 200g max (with cover : 235g max)			
	COOLING METHOD		Convection			

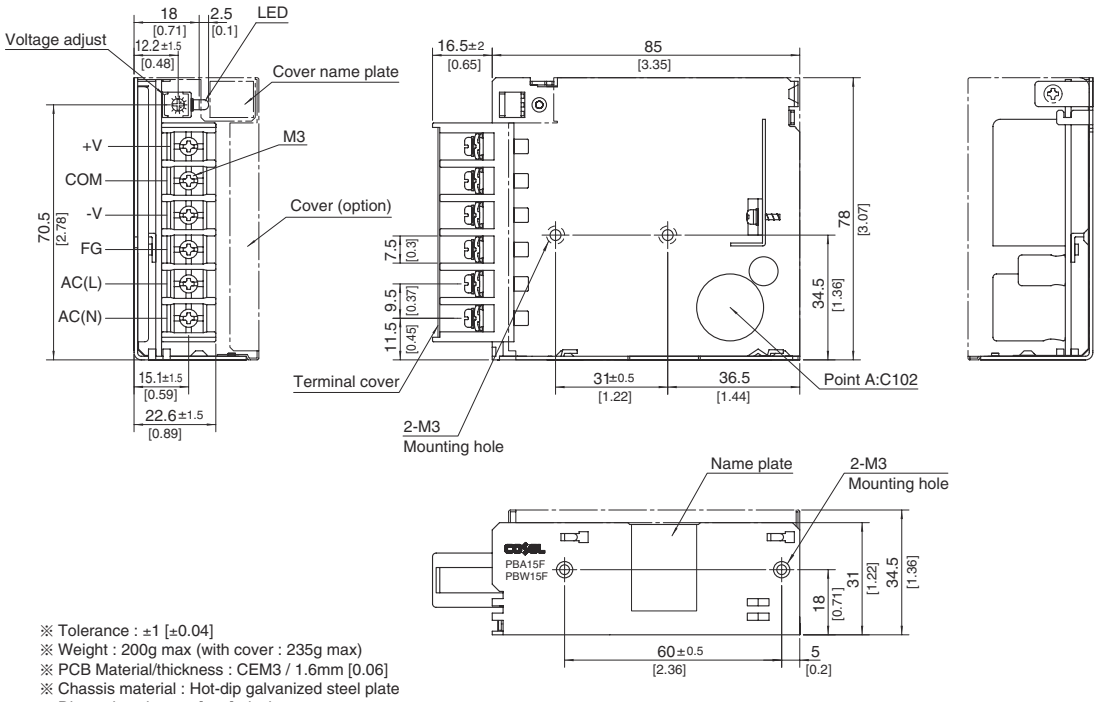
＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 Figures for 0 to rated current 1.The current not measured side is fixed.
＊4 Figures for 0 to rated current 2.The current not measured side is fixed.
＊5 The sum of +power -power must be less than output power.
＊6 ±12,±15 can be used as +24 and +30.
＊7 When two or more units are used,they may not comply with the harmonic attenuator. Please contact us for details.
＊8 Derating is required.
＊9 Figures to rated current 1.
＊10 Please contact us about safety approvals for the model with option.
＊11 Please contact us about dynamic load and input response.
＊12 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with cover.
＊ A sound may occur from power supply at peak loading.

Block diagram



External view

※ External size of option T,J1,N1 and V is different from standard model and refer to 7 Option of instruction manual for details.



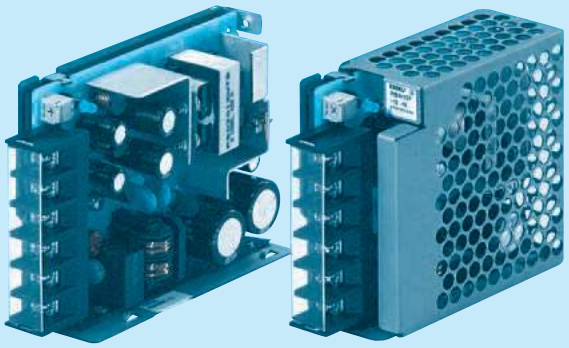
※ Tolerance : ±1 [±0.04]
※ Weight : 200g max (with cover : 235g max)
※ PCB Material/thickness : CEM3 / 1.6mm [0.06]
※ Chassis material : Hot-dip galvanized steel plate
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 0.6N • m(6.3kgf • cm)max
※ Screw tightening torque : M3 0.8N • m(8.5kgf • cm)max
※ Please connect safety ground to the unit in 2-M3 holes.

COSEL AC-DC Power Supplies Enclosed Type

PBW30F

Ordering information

PB	W	30	F	-□	-□
①	②	③	④	⑤	⑧



Cover is optional

Example recommended EMI/EMC filter
NAC-06-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

①Series name
②Dual output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊10
C :with Coating
G :Low leakage current
E :Low leakage current and EMI class A
T :Vertical terminal block
J1 :VH (J.S.T.) connector type
N :with Cover
N1 :with DIN rail
V :Output voltage setting potentiometer externally

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

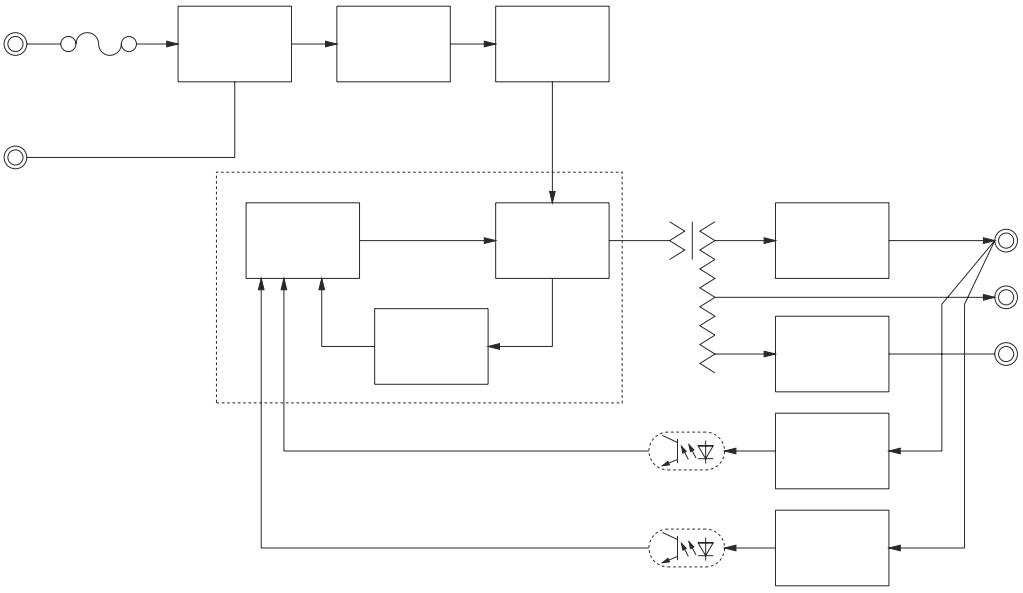
	＊5	15	31.2	30.0
DC OUTPUT	VOLTAGE[V] ＊6	±5 (+10)	±12 (+24)	±15 (+30)
	CURRENT1[A]	1.5	1.3	1.0
	CURRENT2[A] ＊5	2.0	1.7	1.4

SPECIFICATIONS

	MODEL		PBW30F-5	PBW30F-12	PBW30F-15
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC110 - 370 (AC50 or DC70 Please refer to the instruction manual 1.1 Input voltage ＊8)		
	CURRENT[A]	ACIN 100V	0.4typ (CURRENT1)	0.7typ (CURRENT1)	
		ACIN 200V	0.25typ (CURRENT1)	0.4typ (CURRENT1)	
	FREQUENCY[Hz]		50/60 (47 - 440) or DC		
	EFFICIENCY[%]	ACIN 100V	75typ (CURRENT1)	77typ (CURRENT1)	78typ (CURRENT1)
		ACIN 200V	75typ (CURRENT1)	81typ (CURRENT1)	79typ (CURRENT1)
	INRUSH CURRENT[A]	ACIN 100V	15typ (CURRENT1) (At cold start)		
		ACIN 200V	30typ (CURRENT1) (At cold start)		
	LEAKAGE CURRENT[mA]		0.30/0.65max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1,DENAN)		
OUTPUT	VOLTAGE[V]		±5 / (+10V reference number)	±12 / (+24V reference number)	±15 / (+30V reference number)
	CURRENT1[A]		1.5 / 1.5	1.3 / 1.3	1.0 / 1.0
	CURRENT2[A]	＊5	2.0 / -	1.7 / -	1.4 / -
	LINE REGULATION[mV]	＊9 ＊11	20max / 36max	60max / 96max	60max / 96max
	LOAD REGULATION 1[mV]	＊3 ＊11	250max / 100max	600max / 150max	600max / 150max
	LOAD REGULATION 2[mV]	＊4 ＊11	500max / -	750max / -	750max / -
	RIPPLE[mVp-p]	0 to +50℃ ＊1	80max / 240max	120max / 240max	120max / 240max
		-10 - 0℃ ＊1	140max / 320max	160max / 320max	160max / 320max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊1	120max / 300max	150max / 300max	150max / 300max
		-10 - 0℃ ＊1	160max / 360max	180max / 360max	180max / 360max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max	120max	150max
		-10 to +50℃	60max	150max	180max
	DRIFT[mV]	＊2	20max	48max	60max
	START-UP TIME[ms]		200typ(ACIN 100V, Io=100%) ＊Start-up time is 700ms typ for less than 1minute of applying input again from turning off the input voltage.		
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)		
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		4.99 - 6.00 (+V and -V are simultaneously adjusted)	9.60 - 13.2 (+V and -V are simultaneously adjusted)	13.2 - 16.5 (+V and -V are simultaneously adjusted)
	OUTPUT VOLTAGE SETTING[V]		4.99 - 5.30 (+V and -V CURRENT1)	11.5 - 12.5 (+V and -V CURRENT1)	14.4 - 15.6 (+V and -V CURRENT1)
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current and recovers automatically		
	OVERVOLTAGE PROTECTION[V]		6.90 - 10.0	16.8 - 24.0	20.0 - 29.0
	OPERATING INDICATION		LED (Green)		
	REMOTE ON/OFF		None		
ISOLATION	INPUT-OUTPUT		AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)		
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)		
	OUTPUT-FG		AC500V 1minute, Cutoff current = 25mA, DC500V 50MΩ min (At Room Temperature)		
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max		
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max		
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis		
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis		
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN		
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B		
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 (Not built-in to active filter ＊7) ＊12		
OTHERS	CASE SIZE/WEIGHT		31×78×103mm [1.22×3.07×4.06 inches] (without terminal block) (W×H×D) / 270g max (with cover : 310g max)		
	COOLING METHOD		Convection		

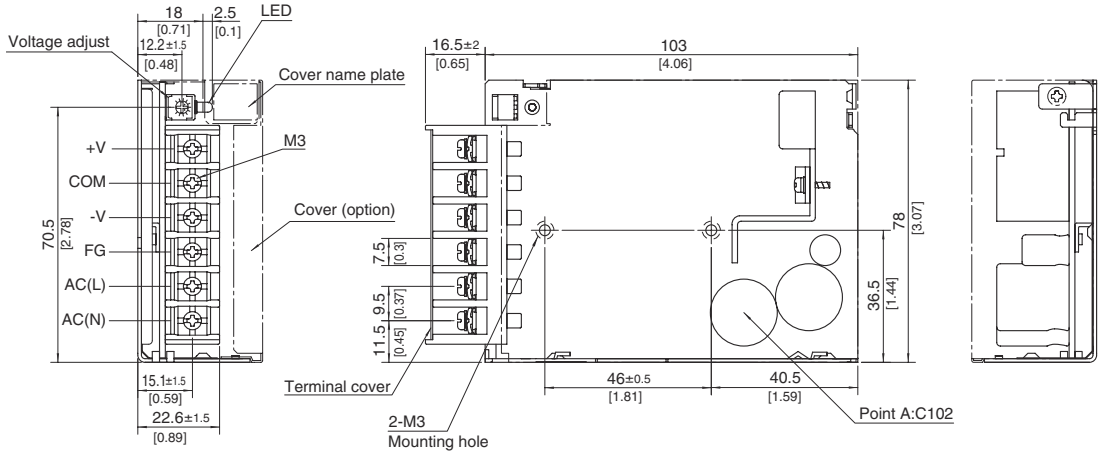
＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 Figures for 0 to rated current 1.The current not measured side is fixed.
＊4 Figures for 0 to rated current 2.The current not measured side is fixed.
＊5 The sum of +power -power must be less than output power.
＊6 ±5,±12,±15 can be used as +10,+24 and +30.
＊7 When two or more units are used,they may not comply with the harmonic attenuator. Please contact us for details.
＊8 Derating is required.
＊9 Figures to rated current 1.
＊10 Please contact us about safety approvals for the model with option.
＊11 Please contact us about dynamic load and input response.
＊12 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with cover.
＊ A sound may occur from power supply at peak loading.

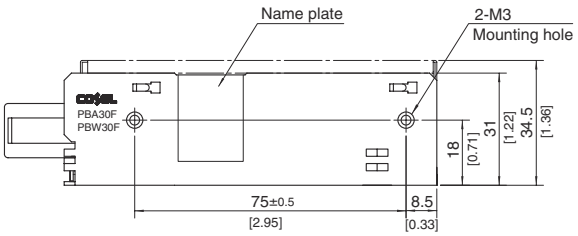
Block diagram



External view

※ External size of option T,J1,N1 and V is different from standard model and refer to 7 Option of instruction manual for details.





※ Tolerance : ±1 [±0.04]
※ Weight : 270g max (with cover : 310g max)
※ PCB Material/thickness : CEM3 / 1.6mm [0.06]
※ Chassis material : Hot-dip galvanized steel plate
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 0.6N • m(6.3kgf • cm)max
※ Screw tightening torque : M3 0.8N • m(8.5kgf • cm)max
※ Please connect safety ground to the unit in 2-M3 holes.

COSEL **AC-DC Power Supplies Enclosed Type**

PBW50F

Ordering information

PB	W	50	F	-□	-□
①	②	③	④	⑤	⑧

Example recommended EMI/EMC filter
NAC-06-472

High voltage pulse noise type : NAP series
Low leakage current type : NAM series

＊A higher current rating EMI/EMC filter may be recommended in view of the other devices that could be connected in parallel with the power supply.

Cover is optional

①Series name
②Dual output
③Output wattage
④Universal input
⑤Output voltage
⑥Optional ＊9
C :with Coating
G :Low leakage current (0.15mA max / ACIN 240V)
E :Low leakage current and EMI class A (0.5mA max / ACIN 240V)
T :Vertical terminal block
J1 :VH (J.S.T.) connector type
R :with Remote ON/OFF
N :with Cover
N1 :with DIN rail
V :Output voltage setting potentiometer externally

＊Make sure necessary tests will be carried out on your end equipment with the power supply installed in accordance with any required EMC/EMI regulations.

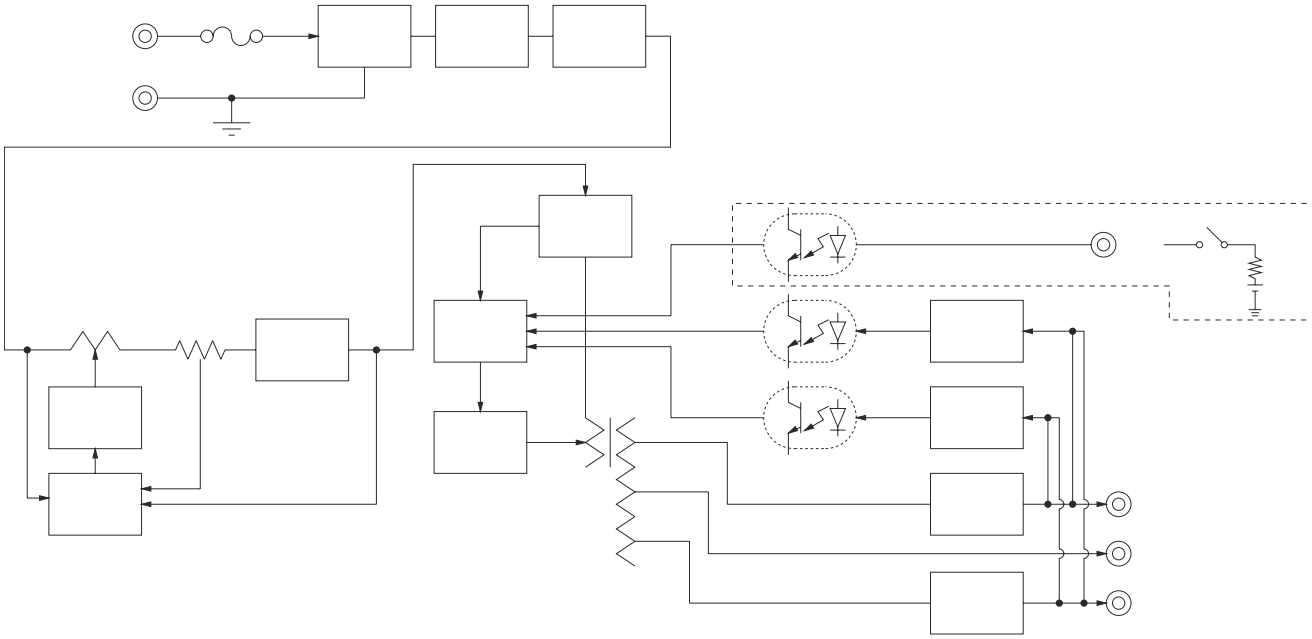
	＊6	30	50.4	51
DC OUTPUT	VOLTAGE[V] ＊8	±5 (+10)	±12 (+24)	±15 (+30)
	CURRENT1[A]	3.0	2.1	1.7
	CURRENT2[A] ＊6	4.0	2.7	2.4

SPECIFICATIONS

	MODEL		PBW50F-5		PBW50F-12		PBW50F-15	
INPUT	VOLTAGE[V]		AC85 - 264 1φ or DC120 - 370 (AC50 or DC70 Please refer to the instruction manual 1.1 Input voltage ＊3)					
	CURRENT[A]	ACIN 100V	0.45typ (CURRENT1)		0.70typ (CURRENT1)			
		ACIN 200V	0.30typ (CURRENT1)		0.40typ (CURRENT1)			
	FREQUENCY[Hz]		50/60 (47 - 63)					
	EFFICIENCY[%]	ACIN 100V	76typ (CURRENT1)		81typ (CURRENT1)		81typ (CURRENT1)	
		ACIN 200V	77typ (CURRENT1)		83typ (CURRENT1)		83typ (CURRENT1)	
	POWER FACTOR(Io=100%)	ACIN 100V	0.98typ		0.99typ			
		ACIN 200V	0.87typ		0.93typ			
	INRUSH CURRENT[A]	ACIN 100V	15typ (CURRENT1) (At cold start)					
		ACIN 200V	30typ (CURRENT1) (At cold start)					
	LEAKAGE CURRENT[mA]		0.40/0.75max (ACIN 100V/240V 60Hz, Io=100%, According to IEC62368-1,DENAN)					
OUTPUT	VOLTAGE[V]		±5	/ (+10V reference number)	±12	/ (+24V reference number)	±15	/ (+30V reference number)
	CURRENT1[A]		3.0	/ 3.0	2.1	/ 2.1	1.7	/ 1.7
	CURRENT2[A]	＊6	4.0	/ -	2.7	/ -	2.4	/ -
	LINE REGULATION[mV]		20max	/ 36max	48max	/ 96max	60max	/ 96max
	LOAD REGULATION 1[mV]	＊4	250max	/ 100max	600max	/ 150max	600max	/ 150max
	LOAD REGULATION 2[mV]	＊5	500max	/ -	750max	/ -	750max	/ -
	RIPPLE[mVp-p]	0 to +50℃ ＊1	80max	/ 240max	120max	/ 240max	120max	/ 240max
		-10 - 0℃ ＊1	140max	/ 320max	160max	/ 320max	160max	/ 320max
	RIPPLE NOISE[mVp-p]	0 to +50℃ ＊1	120max	/ 300max	150max	/ 300max	150max	/ 300max
		-10 - 0℃ ＊1	160max	/ 360max	180max	/ 360max	180max	/ 360max
	TEMPERATURE REGULATION[mV]	0 to +50℃	50max		120max		150max	
		-10 to +50℃	60max		150max		180max	
	DRIFT[mV]	＊2	20max		48max		60max	
	START-UP TIME[ms]		350typ(ACIN 100V, Io=100%)					
	HOLD-UP TIME[ms]		20typ (ACIN 100V, Io=100%)					
	OUTPUT VOLTAGE ADJUSTMENT RANGE[V]		4.99 - 6.00 (+V and -V are simultaneously adjusted)		9.60 - 13.2 (+V and -V are simultaneously adjusted)		13.2 - 16.5 (+V and -V are simultaneously adjusted)	
	OUTPUT VOLTAGE SETTING[V]		4.99 - 5.30 (+V and -V CURRENT1)		11.5 - 12.5 (+V and -V CURRENT1)		14.4 - 15.6 (+V and -V CURRENT1)	
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION		Works over 105% of rated current and recovers automatically					
	OVERVOLTAGE PROTECTION[V]		6.90 - 10.0		16.8 - 24.0		20.0 - 29.0	
	OPERATING INDICATION		LED (Green)					
	REMOTE ON/OFF		Optional (Required external power source)					
ISOLATION	INPUT-OUTPUT · RC	＊7	AC3,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)					
	INPUT-FG		AC2,000V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (At Room Temperature)					
	OUTPUT · RC-FG	＊7	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)					
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE		-10 to +71℃ (Refer to "Derating"), 20 - 90%RH (Non condensing) 3,000m (10,000feet) max					
	STORAGE TEMP.,HUMID.AND ALTITUDE		-20 to +75℃, 20 - 90%RH (Non condensing) 9,000m (30,000feet) max					
	VIBRATION		10 - 55Hz, 19.6m/s² (2G), 3minutes period, 60minutes each along X, Y and Z axis					
	IMPACT		196.1m/s² (20G), 11ms, once each X, Y and Z axis					
SAFETY AND NOISE REGULATIONS	AGENCY APPROVALS (At only AC input)		UL60950-1, C-UL(CSA60950-1), EN62368-1 Complies with DEN-AN					
	CONDUCTED NOISE		Complies with FCC Part15 classB, VCCI-B, CISPR22-B, EN55011-B, EN55022-B					
	HARMONIC ATTENUATOR		Complies with IEC61000-3-2 ＊10					
OTHERS	CASE SIZE/WEIGHT		31×82×120mm [1.22×3.23×4.72 inches] (without terminal block) (W×H×D) / 280g max (with cover : 325g max)					
	COOLING METHOD		Convection					

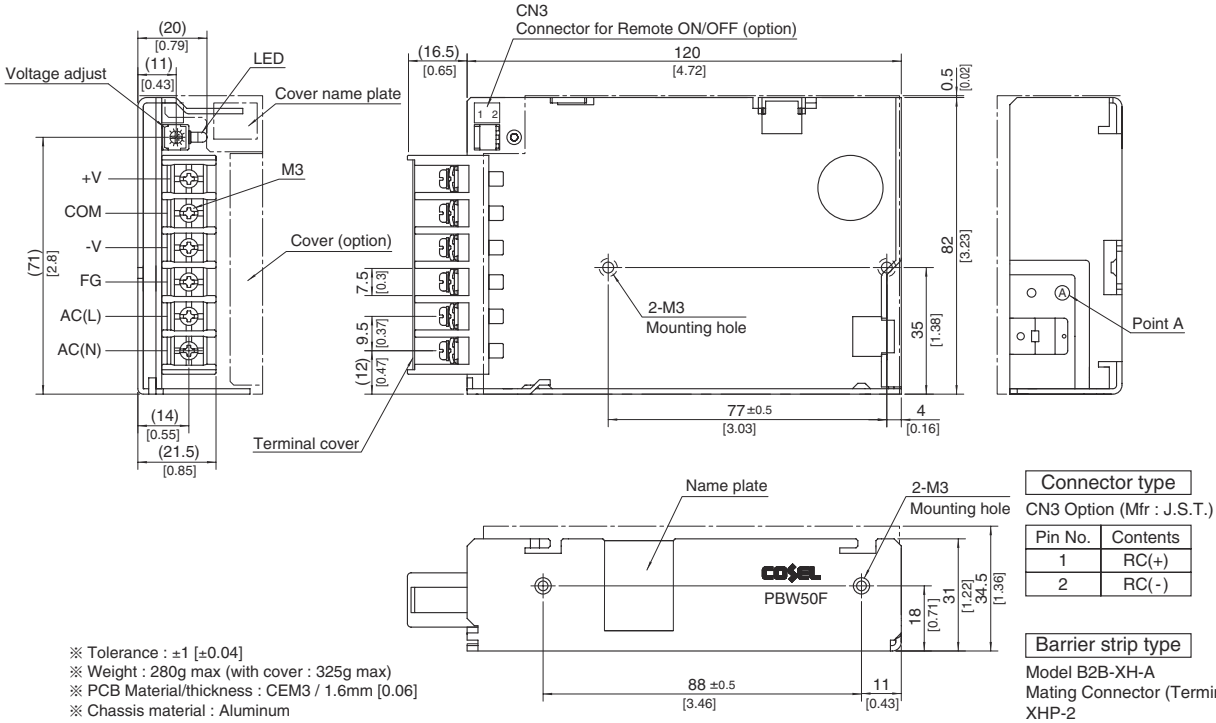
＊1 Measured by 20MHz oscilloscope or Ripple-Noise meter(equivalent to KEISOKU-GIKEN : RM101).
＊2 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
＊3 Derating is required.
＊4 Figures for 0 to rated current 1.The current not measured side is fixed.
＊5 Figures for 0 to rated current 2.The current not measured side is fixed.
＊6 The sum of +power -power must be less than output power.
＊7 RC is applied to remote ON/OFF option. RC is isolated with input/output and FG.
＊8 ±5,±12,±15 can be used as +10,+24 and +30.
＊9 Please contact us about safety approvals for the model with option.
＊10 Please contact us about class C.
＊ Parallel operation with other model is not possible.
＊ Derating is required when operated with cover.
＊ A sound may occur from power supply at peak loading.

Block diagram



External view

※ External size of option T,J1,R,N1 and V is different from standard model and refer to 7 Option of instruction manual for details.



※ Tolerance : ±1 [±0.04]
※ Weight : 280g max (with cover : 325g max)
※ PCB Material/thickness : CEM3 / 1.6mm [0.06]
※ Chassis material : Aluminum
※ Dimensions in mm, [ ]= inches
※ Mounting torque : 0.49N • m(5kgf • cm)max
※ Screw tightening torque : M3 0.8N • m(8.5kgf • cm)max
※ Please connect safety ground to the unit in 2-M3 holes.

Connector type

CN3 Option (Mfr : J.S.T.)

Pin No.	Contents
1	RC(+)
2	RC(-)

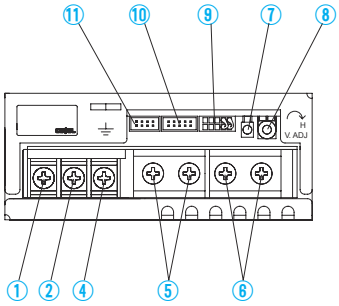
Barrier strip type

Model B2B-XH-A
Mating Connector (Terminal)
XHP-2
(BXH-001T-P0.6
or SXH-001T-P0.6)

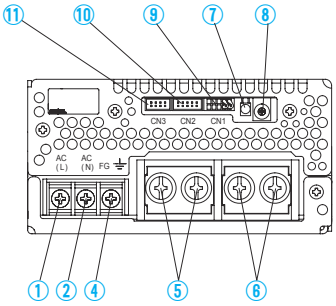
Terminal Blocks

✻The following information covers PBA300F - 1500F. Please see External View for PBA10F - 150F and PBW15F - 50F.

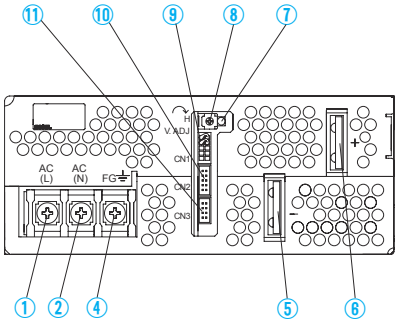
● PBA300F



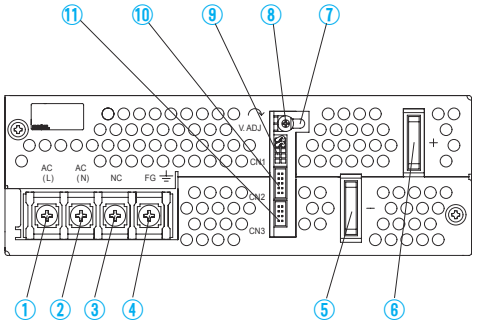
● PBA600F



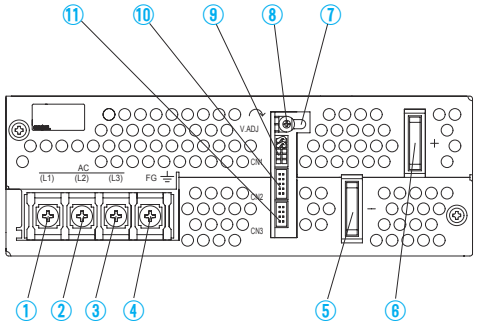
● PBA1000F



● PBA1500F



● PBA1500T



✻PBA300F - 1500F

①AC (L) } Input Terminals AC85 - 264V ϕ47 - 63Hz
②AC (N) } (M4)
③NC
④Frame ground (M4 ⏚)
⑤-Output
⑥+Output
⑦LED
⑧Output voltage adjustable potentiometer
⑨CN1
⑩CN2 } Connectors
⑪CN3

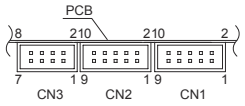
✻Please see Optional Parts for dedicated harnesses.

✻PBA1500T

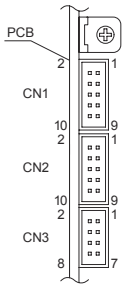
①AC (L1)
②AC (L2)
③AC (L3)
④Frame ground (M4 ⏚)
⑤-Output
⑥+Output
⑦LED
⑧Output voltage adjustable potentiometer
⑨CN1
⑩CN2 } Connectors
⑪CN3

Terminal Blocks

● PBA300F, 600F Pin Configuration



● PBA1000F, 1500F Pin Configuration



Pin Configuration and Functions of CN1 and CN2

Pin No.	Function
1	+M : Self sensing terminal. (Do not wire for external connection.)
2	+S : +Sensing
3	-M : Self sensing terminal. (Do not wire for external connection.)
4	-S : -Sensing
5	VB : Voltage balance
6	CB : Current balance
7	TRM : Adjustment of output voltage
8	-S : -Sensing
9	RC2 : Remote ON/OFF
10	RCG : Remote ON/OFF (GND)

Pin Configuration and Functions of CN3

Pin No.	Function
1	-S : -Sensing
2	-S : -Sensing
3	AUX : Auxiliary output (12V 0.1A)
4	RC1 : Remote ON/OFF
5	AUXG : Auxiliary output (GND)
6	N.C. : No connection
7	PG : Alarm
8	PGG : Alarm (GND)

✻Common signs among CN1, CN2 and CN3 such as -S represent the same potential.

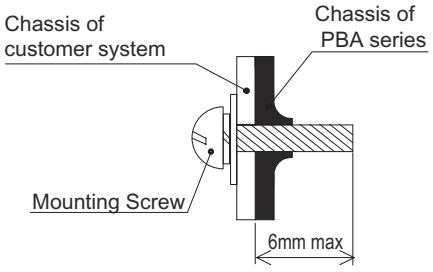
Matching connecters and terminals on CN1, CN2 and CN3

Connector		Housing	Terminal	Mfr.
CN1 CN2	S10B-PHDSS	PHDR-10VS	Reel : SPHD-002T-P0.5 Loose : BPHD-001T-P0.5	J.S.T.
CN3	S8B-PHDSS	PHDR-08VS		

Assembling and Installation Method

Installation Method

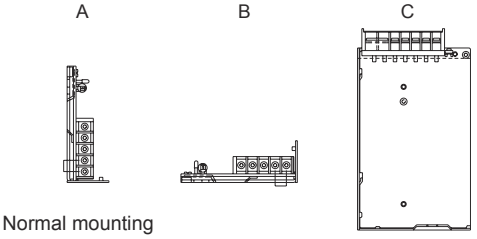
■Do not insert a screw more than 6mm from the outside of a power supply to keep enough insulation distance between the screw and internal components.



● PBA10F, PBA15F, PBW15F, PBA30F, PBW30F, PBA50F, PBW50F, PBA75F, PBA100F and PBA150F

■If you use two or more power supplies side by side, please keep a sufficient distance between them to allow enough air ventilation.

■Ambient temperature around each power supply should not exceed the temperature range shown in "derating".



Normal mounting

● PBA300F, PBA600F, PBA1000F, PBA1500F and PBA1500T

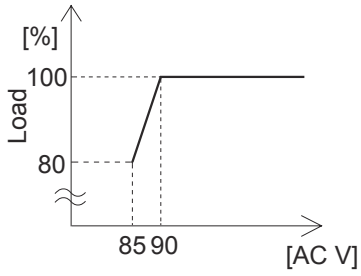
■The power supplies have a built-in forced cooling fan. Do not block ventilation at the suction side (terminal block side) and its opposite side (fan installation side). If you need to secure a power supply by screws, securely fix it, taking into consideration of its weight. You can install it in any direction.

■If you use a power supply in a dusty environment, it can give a cause for a failure. Please consider taking such countermeasures as installing an air filter near the suction area of the system to prevent a failure.

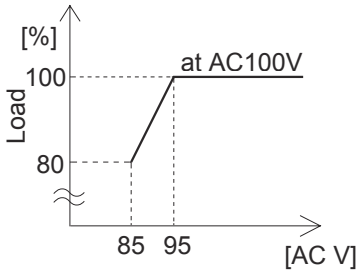
■In PBA300F, PBA1500F and PBA1500T, ventilation holes are located on the mounting side. If you would like to install the unit by using that side, please contact us for details.

Derating

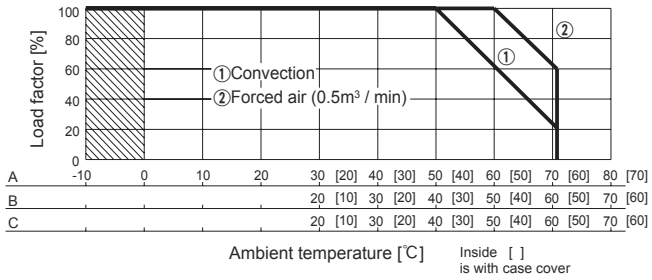
●PBA10F, PBA15F, PBW15F, PBA30F, PBW30F Input voltage Derating Curve



●PBA1500F Input voltage Derating Curve

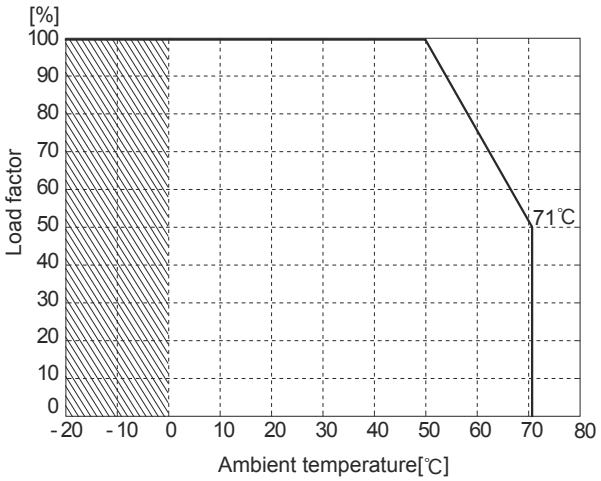


●PBA10F, PBA15F, PBW15F, PBA30F, PBW30F, PBA50F, PBW50F, PBA75F, PBA100F, PBA150F Ambient temperature derating curve



■In the hatched area, the specification of Ripple, Ripple Noise is different from other area.
■The ambient temperature should be measured 5 to 10 cm away from the power supply so that it won't be influenced by the heat from the power supply. Please consult us for more details.
■Make sure the temperature at point A is less than the temperatures shown in Instruction Manual 4.

●PBA300F, PBA600F, PBA1000F, PBA1500F, PBA1500T Ambient temperature derating curve



■In the hatched area, the specification of Ripple, Ripple Noise is different from other area.
■Derating curve depending on an ambient temperature (temperature of air sucked in for a cooling purpose) is shown above.

Instruction Manual

◆ It is neccessary to read the “Instruction Manual” and “Before using our product” before you use our product.

Instruction Manual	https://www.cosel.co.jp/redirect/catalog/en/PBA/
Instruction Manual	https://www.cosel.co.jp/redirect/catalog/en/PBW/
Before using our product	https://en.cosel.co.jp/technical/caution/index.html

PBA PBW NOTICE

Basic Characteristics Data

PBA10F	Flyback converter	100	0.3	250V 2.5A	LF	CEM-3	Yes		Yes	✻1
PBA15F	Flyback converter	100	0.4		Thermistor	CEM-3	Yes		Yes	✻1
PBA30F	Flyback converter	100	0.7	250V 3.15A	Thermistor	CEM-3	Yes		Yes	✻1
PBA50F	Active filter	60 - 550	0.7	250V 2A	Thermistor	CEM-3	Yes		Yes	✻1
	Forward converter	130								
PBA75F	Active filter	60 - 550	1.0	250V 3.15A	Thermistor	CEM-3	Yes		Yes	✻1
	Forward converter	120								
PBA100F	Active filter	60 - 550	1.3		Thermistor	CEM-3	Yes		Yes	✻1
	Forward converter	120								
PBA150F	Active filter	60 - 550	2.0	250V 4A	Thermistor	CEM-3	Yes		Yes	✻1
	Forward converter	120								
PBA300F	Active filter	230	4.1	250V 10A	SCR	FR-4		Yes	Yes	Yes
	Forward converter	330								
PBA600F	Active filter	130	8.2	250V 15A	SCR	FR-4		Yes	Yes	Yes
	Forward converter	330								
PBA1000F	Active filter	130	13	250V 30A	SCR	FR-4		Yes	Yes	Yes
	Forward converter	280								
PBA1500F	Active filter	130	19		SCR	FR-4		Yes	Yes	Yes
	Forward converter	200								
PBA1500T	Active filter	130	6	250V 16A	SCR	FR-4		Yes	Yes	Yes
	Forward converter	200								
PBW15F	Flyback converter	100	0.4	250V 2.5A	Thermistor	CEM-3	Yes		Yes	✻1
PBW30F	Flyback converter	100	0.7	250V 3.15A	Thermistor	CEM-3	Yes		Yes	✻1
PBW50F	Active filter	60 - 550	0.7	250V 2A	Thermistor	CEM-3	Yes		Yes	✻1
	Forward converter	130								

✻1 Refer to Series/Parallel Operation of Instruction Manual.
✻ The value of input current is at ACIN 100V and rated load, ACIN 200V 3ϕ and rated load in PBA1500T.