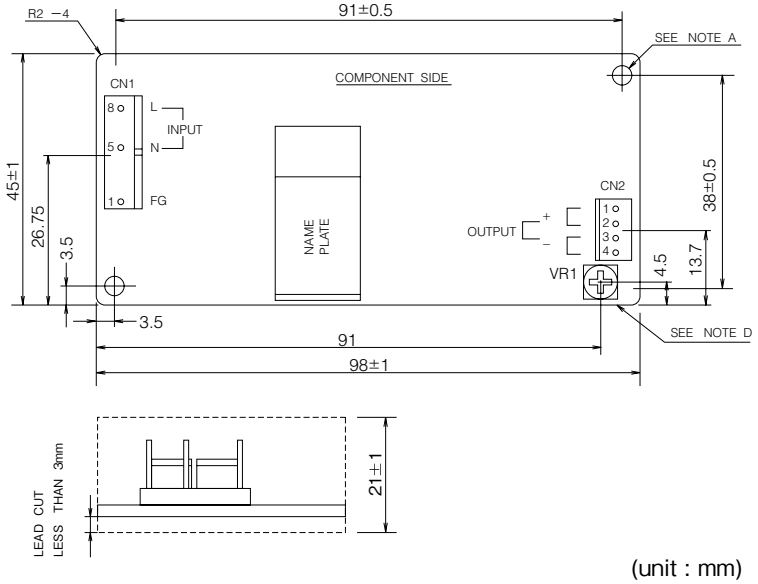
Outline Drawing

【ZWS5 (Standard : MOLEX connector)】



(unit : mm)

CONNECTORS USED:

PART DESCRIPTION	PART NAME	MANUFACT.	QTY
PIN HEADER (INPUT SIDE CN1)	6373-A8A (102)52	MOLEX	1
PIN HEADER (OUTPUT SIDE CN2)	6373-A04A-102	MOLEX	1

MATCHING HOUSINGS & PINS (NOT INCLUDED WITH THE PRODUCT):

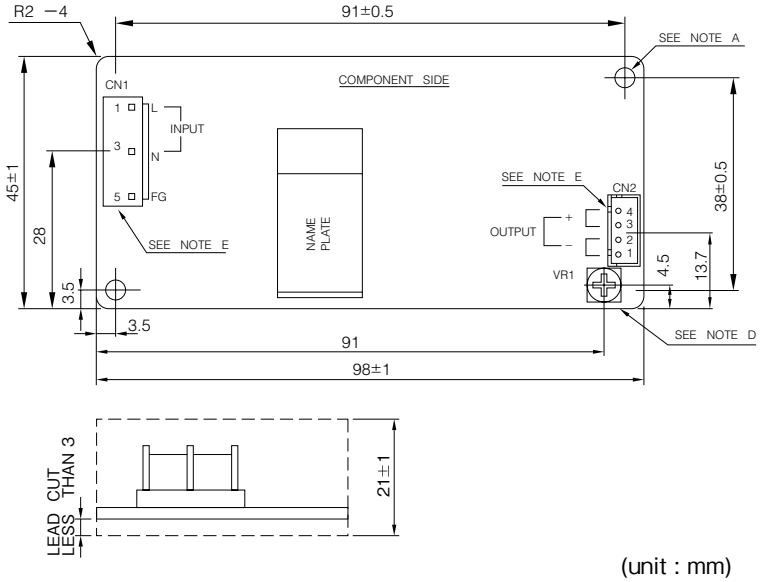
SOCKET HOUSING (CN1)	7880-08B	MOLEX	1
SOCKET HOUSING (CN2)	7880-04B	MOLEX	1
TERMINAL PINS (CN1,2)	7879-2-P912	MOLEX	7

HAND CRIMPING TOOL : 11-01-0037 OR JHTR2262A MANUFACTURER : MOLEX

PCB MATERIAL
GLASS COMPOSITE : CEM-3 UL94V-0

NOTES
A: THE 2-Φ3.5 HOLE ARE CUSTOMER CHASSIS MOUNTING HOLES. ALL MUST BE SCREWED IN ORDER TO CONFORM THE VIBRATION SPEC.
B: MODEL NAME, MAXIMUM OUTPUT POWER, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT, MAXIMUM PEAK OUTPUT CURRENT ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.
C: COUNTRY OF MANUFACTURE WILL BE SHOWN HERE.
D: TO KEEP THE DISTANCE MORE THAN 4mm BETWEEN PC-BOARD EDGE AND CUSTOMER CHASSIS.
E: FOR I/O TERMINAL CONNECTIONS, PLEASE USE THE RECOMMENDED CONNECTORS. MOLEX SOCKET HOUSING TERMINAL PINS ARE DIFFICULT TO PROCURE IN JAPAN. WHEN MANUFACTURING IN JAPAN, PLEASE USE "/J" MODELS FOR JST CONNECTORS.

【ZWS5 (/J : JST connector)】



(unit : mm)

CONNECTORS USED:

PART DESCRIPTION	PART NAME	MANUFACT.	QTY
PIN HEADER (INPUT SIDE CN1)	B3P-5-VH	J.S.T.	1
PIN HEADER (OUTPUT SIDE CN2)	B4B-XH-A	J.S.T.	1

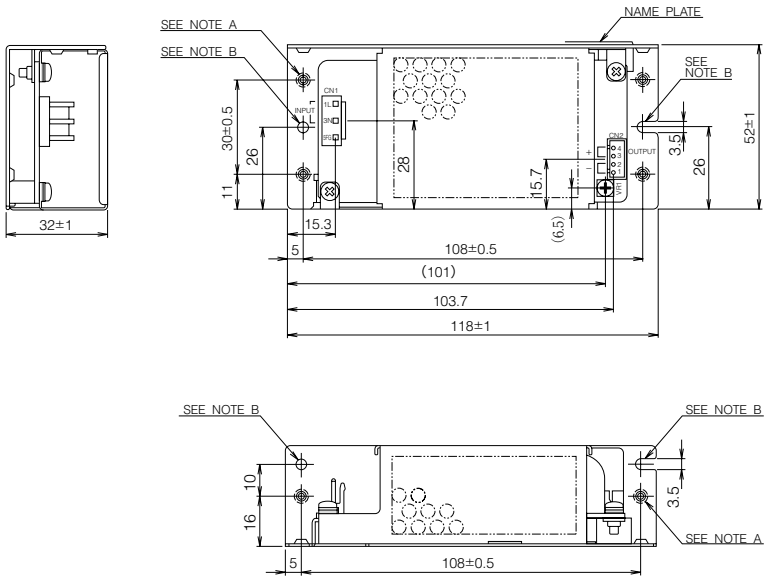
MATCHING HOUSINGS & PINS (NOT INCLUDED WITH THE PRODUCT):

SOCKET HOUSING (CN1)	VHR-5N	J.S.T.	1
SOCKET HOUSING (CN2)	XHP-4	J.S.T.	1
TERMINAL PINS (CN1)	SVH-21T-P1.1	J.S.T.	3
TERMINAL PINS (CN2)	BXH-001T-P0.6 OR SXH-001T-P0.6	J.S.T.	4

HAND CRIMPING TOOL : YC-160R CN1 MANUFACTURER: J.S.T.
: YC-110R CN2 MANUFACTURER: J.S.T.
: YRS-110 CN2 MANUFACTURER: J.S.T.

NOTES
A: THE 2-Φ3.5 HOLE ARE CUSTOMER CHASSIS MOUNTING HOLES. ALL MUST BE SCREWED IN ORDER TO CONFORM THE VIBRATION SPEC.
B: MODEL NAME, MAXIMUM OUTPUT POWER, NOMINAL OUTPUT VOLTAGE, MAXIMUM OUTPUT CURRENT, MAXIMUM PEAK OUTPUT CURRENT ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.
C: COUNTRY OF MANUFACTURE WILL BE SHOWN HERE.
D: TO KEEP THE DISTANCE MORE THAN 4mm BETWEEN PC-BOARD EDGE AND CUSTOMER CHASSIS.
E: PIN-ORDER OF CONNECTORS CN1 & CN2 ARE OPPOSITE TO PIN-ORDER ON LEGEND.

【ZWS5 (/JA : With cover)】



CONNECTORS USED:

PART DESCRIPTION	PART NAME	MANUFACT.	QTY
PIN HEADER (INPUT SIDE CN1)	B3P-5-VH	J.S.T.	1
PIN HEADER (OUTPUT SIDE CN2)	B4B-XH-A	J.S.T.	1

MATCHING HOUSINGS & PINS (NOT INCLUDED WITH THE PRODUCT):

SOCKET HOUSING (CN1)	VHR-5N	J.S.T.	1
SOCKET HOUSING (CN2)	XHP-4	J.S.T.	1
TERMINAL PINS (CN1)	SVH-21T-P1.1	J.S.T.	3
TERMINAL PINS (CN2)	BXH-001T-P0.6 OR SXH-001T-P0.6	J.S.T.	4

HAND CRIMPING TOOL : YC-160R CN1
: YC-110R OR YRS-110 CN2
MANUFACTURER : J.S.T.

NOTES
A: M3 EMBOSSED TAPPED & COUNTERSUNK HOLES (6) ARE FOR CUSTOMER CHASSIS MOUNTING.
B: φ3.5 HOLES (2) AND R1.75 SLOT HOLES (2) FOR CUSTOMER CHASSIS MOUNTING.
C: MODEL NAME, NOMINAL OUTPUT VOLTAGE, MAXMUM OUTPUT CURRENT, MAXIMUM PEAK OUTPUT CURRENT AND COUNTRY OF MANUFACTURE ARE SHOWN HERE IN ACCORDANCE WITH THE SPECIFICATIONS.

(unit : mm)

ZWS

ZWS10 Specifications

ITEMS/UNITS		MODEL	ZWS10-3	ZWS10-5	ZWS10-12	ZWS10-15	ZWS10-24
Input	Voltage Range (*3)	V	AC85 - 265 or DC110 - 330				
	Frequency (*3)	Hz	47 - 440				
	Efficiency (typ) (*2)	%	62	70		71	
	Current (100/200VAC)(typ)	A	0.30 / 0.15				
	Inrush Current (100/200VAC)(typ)	A	15 / 30 at Ta=25℃, cold start				
Output	Nominal Voltage	VDC	3.3	5	12	15	24
	Minimum Current	A	0				
	Maximum Current	A	2		0.85	0.7	0.45
	Maximum Peak Current (*1)	A	2.4		1.02	0.84	0.54
	Maximum Power	W	6.6	10.0	10.2	10.5	10.8
	Maximum Peak Power (*1)	W	7.92	12.0	12.24	12.6	12.96
	Maximum Line Regulation (*4)(*10)	mV	20		48	60	96
	Maximum Load Regulation(*5)(*10)	mV	40		96	120	150
	Temperature Coefficient (*6)	mV	60		140	180	280
	Maximum Ripple & Noise (0 to +60℃)(*10)	mVp-p	120		150		200
	Maximum Ripple & Noise (−10 to 0℃)(*10)	mVp-p	160		180		200
	Hold-up Time (100VAC)(typ) (*2)	ms	17 at 100VAC, 10W, Ta=25℃				
	Voltage Adjustable Range		+/-10%				
Function	Over Current Protection (*7)		>125%				
	Over Voltage Protection (*8)		>140%				
	Parallel Operation		-				
	Series Operation (*9)		Possible				
Environment	Operating Temperature (*11)	℃	-10 to +50 : 100%, +60 : 70%				
	Storage Temperature	℃	-30 to +85				
	Operating Humidity	%RH	30 - 90				
	Storage Humidity	%RH	10 - 95				
	Vibration		10-55Hz (sweep 1min) less than 19.6m/s² X, Y, Z 1h each				
	Shock		Less than 196.1m/s²				
	Cooling		Convection cooling				
Isolation	Withstand Voltage		Input - FG : 2kVAC (20mA), Input - Output : 3kVAC (20mA), Output - FG : 500VAC (100mA) for 1min				
	Isolation Resistance		More than 100MΩ at 25℃ and 70%RH Output - FG 500VDC				
Standards	Safety Standards		Approved by UL60950-1, CSA C22.2 No.60950-1, EN60950-1 Built to meet DENAN.				
	EMI		Built to meet EN55022-B, FCC-ClassB, VCCI-B				
Mechanical	Weight (typ)	g	120				
	Size (W x H x D)	mm	50 x 21 x 105				

(*1) Operating time at peak output is less than 10 seconds. (Duty=0.35)

(*2) At 100VAC and maximum output current, Ta=25℃.

(*3) For cases where conformance to various safety specs (UL, CSA) are required, to be described as 100 - 240VAC, 50/60Hz on name plate.

(*4) From 85 - 265VAC and constant load.

(*5) From Min load - Full load (maximum power) and constant input voltage.

(*6) From -10 to +50℃ constant input voltage and load.

(*7) Current limiting with automatic recovery.
Avoid to operate over load or dead short for 30 seconds.

(*8) Over voltage clamping by zener diode.

(*9) Refer to instruction manual.

(*10) Please refer to Fig A for measurement of line & load regulation and ripple voltage.

(*11) At standard mounting method, Fig B.

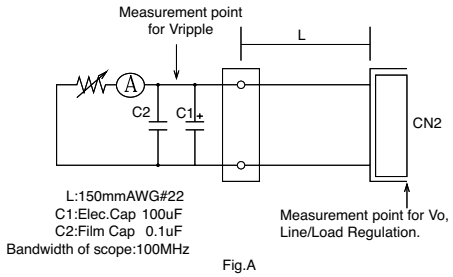


Fig.A

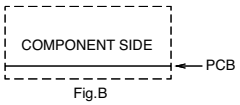
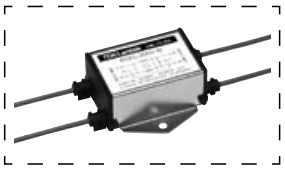


Fig.B

●Recommended EMC Filter



RSEL-20R5W

Please refer to "TDK-Lambda EMC Filters" catalog.

ZWS