



RoHS



POWER | PROTECT | CONNECT

DOCUMENT / PART NO.: V890-1AX1-A1

TITLE : PRODUCT SPECIFICATION

ISSUE	DESCRIPTION OF CHANGE	REVIEWED BY	APPROVED BY	ECN#
A	FIRST ISSUE	BILL CHEN	SHUN LEUNG 2007-07-30	
B	ADD THREE PCB FOOTPRINT DIMENSIONS ON PAGE 4	BILL CHEN	SHUN LEUNG 2008-03-31	RD2080054
C	CHANGE JACK PORT LOGO FROM "BEL" TO "BEL STEWART"	ZX HUANG	SHUN LEUNG 2008-06-21	RD2080127
D	ADD PATENTED INFORMATION AND UPDATE ROHS DESCRIPTION & OTHER GENERAL REQUIREMENT	ANTON LIAO	LEUNG WAI SHUN 2012-08-15	RD2120170
E	UPDATE THE DRAWING FORM AND CHANGE THE BEL LOGO ON PRODUCT	ANTON LIAO	LEUNG WAI SHUN 2015-08-26	RD2150155
F	UPDATE PATENT NUMBER AND GENERAL REQUIREMENT	ANTON LIAO	LEUNG WAI SHUN 2017-04-22	RD2170060
G	MOVE THE UL LOGO FROM FRONT VIEW TO TOP VIEW	TONY YUAN		RD2250045

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REV.	G	G	G	G	G													
PAGE																		
REV.																		

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LED1 POLARITY			LED2 POLARITY		
PIN 14	PIN 13	COLOR	PIN 12	PIN 11	COLOR
-	+	YELLOW	-	+	GREEN

ELECTRICAL CHARACTERISTICS @ 25°C

URNS RATIO

TP1	1CT : 1CT ±3%
TP2	1CT : 1CT ±3%
TP3	1CT : 1CT ±3%
TP4	1CT : 1CT ±3%

CL @ 100kHz/100mVRMS

8mA DC BIAS 350µH MIN.

INS. LOSS

1MHz TO 100MHz -1.1 dB MAX

RET. LOSS (MIN) @ 100 OHMS +/-15%

1MHz-40MHz -18 dB
40MHz-100MHz -12+20LOG(F/80MHz) dB

CM TO CM REJ

1MHz - 100MHz -20 dB MIN

CROSSTALK (TX - RX)

1MHz - 30MHz -40 dB MIN
30MHz - 60MHz -30 dB MIN

HIPOT (Isolation Voltage): 1500 Vrms

100% OF PRODUCTION TESTED TO COMPLY WITH IEEE 802.3 ISOLATION REQUIREMENTS.

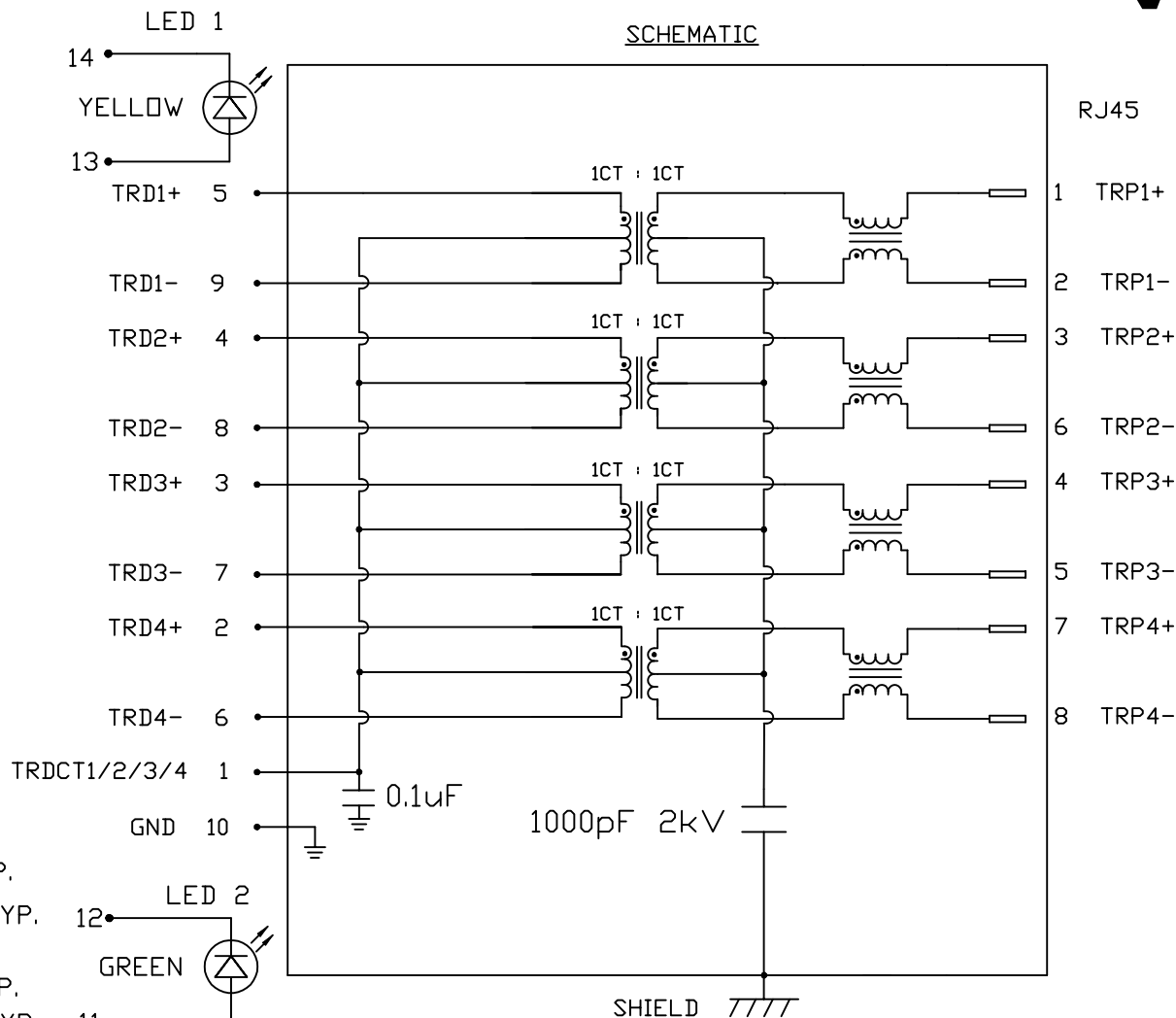
LED 1

VF (FORWARD VOLTAGE) IF=20mA YELLOW 2.1V TYP.
λD (DOMINANT WAVELENGTH) IF=20mA YELLOW 590nm TYP.

LED 2

VF (FORWARD VOLTAGE) IF=20mA GREEN 2.2V TYP.
λD (DOMINANT WAVELENGTH) IF=20mA GREEN 570nm TYP.

OPERATING TEMPERATURE 0°C TO +70°C



ORIGINATED BY BILL LIU	TITLE
DATE 2025-09-15	gigabit MagJack® (8 core, Vertical) PATENTED
DRAWN BY FRANK LIU	
DATE 2025-09-15	

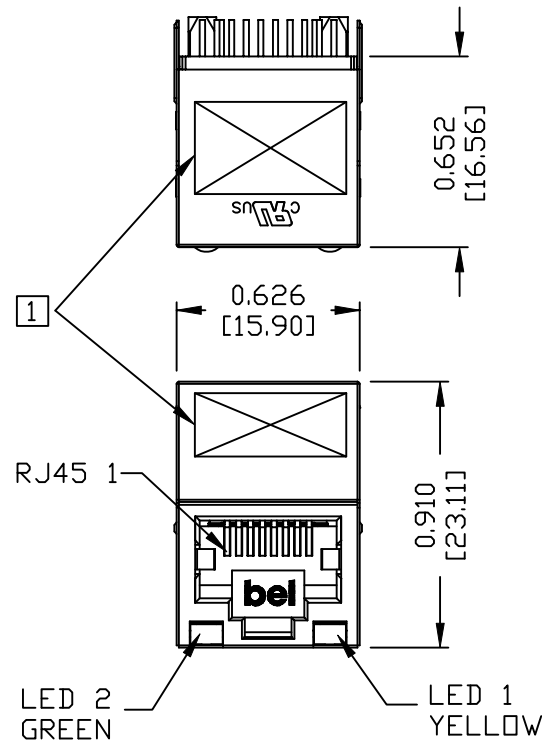
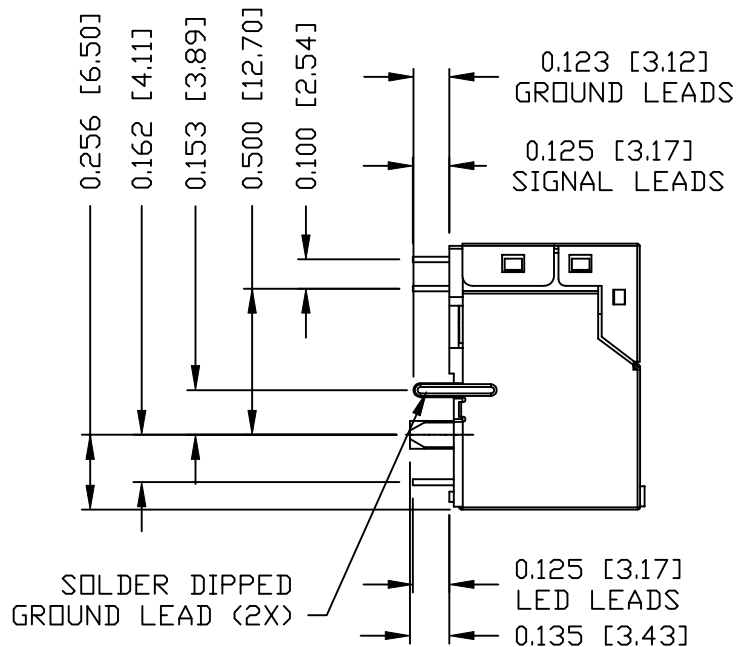
PART NO. / DRAWING NO. V890-1AX1-A1	STANDARD DIM. TOL. IN INCH	[] METRIC DIM. AS REF.
FILE NAME V890-1AX1-A1_G.DWG	.X	UNIT : INCH [mm]
	.XX	SCALE : N/A
	.XXX	SIZE : A4

REV. : G	PAGE : 2
<p>a bel group</p>	

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MECHANICAL SPECIFICATION

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NOTES:

PLASTIC HOUSING: THERMOPLASTIC PBT, BLACK
FLAMMABILITY RATING UL 94V-0
CONTACTS: 30 MICRO-INCH HARD GOLD PLATING OR EQUIVALENT.
OUTPUT PINS: TIN-COATED COPPER WIRE, DIA 0.018 INCH.
METAL SHIELD: 100 MICRO-INCH MIN MATTE TIN. PINS ARE SOLDER DIPPED.
JACK CAVITY CONFORMS TO FCC RULES AND REGULATIONS.

1. MARK PART WITH MFG LOGO, MFG NAME, PART NUMBER, DATE CODE AND PATENTED.
2. THE PRODUCT IS RoHS COMPLIANT.
c us UL RECOGNIZED - FILE #E196366 AND E169987.
3. THE PRODUCT IS PATENT PRODUCT, THE PATENT NUMBER IS U.S. PAT. 6,840,817.
4. THE PRODUCT IS RECOMMENDED FOR WAVE SOLDERING PROCESS, PEAK TEMPERATURE 260°C MAX. AND 10 SECONDS MAX..

[1] MARK PART WITH MFG LOGO, MFG NAME, PART NUMBER, DATE CODE AND PATENTED.

ORIGINATED BY
TONY YUAN
DATE 2025-09-15

DRAWN BY
JARRY YE
DATE 2025-09-15

TITLE
gigabit MagJack®
(8 core, Vertical)
PATENTED

PART NO. / DRAWING NO.
V890-1AX1-A1

FILE NAME
V890-1AX1-A1_G.DWG

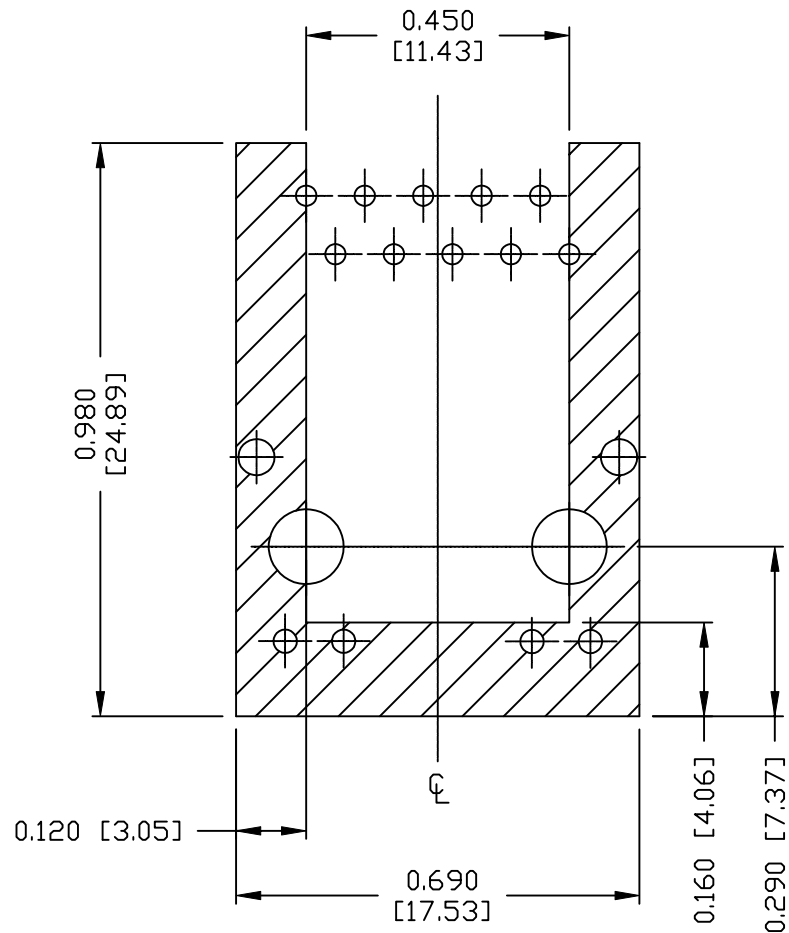
STANDARD DIM. TOL. IN INCH	[] METRIC DIM. AS REF.
.X	UNIT : INCH [mm]
.XX	SCALE : N/A
.XXX ±0.010	SIZE : A4

REV. : G PAGE : 3



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
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NOTES

THE SHADED AREA ON THE CUSTOMER BOARD ARE RECOMMENDED TO BE CLEAR OFF ANY VIA HOLE OR COMPONENT PAD.

REV. : G PAGE : 4

ORIGINATED BY TONY YUAN DATE 2025-09-15	TITLE gigabit MagJack® (8 core, Vertical) PATENTED	PART NO. / DRAWING NO. V890-1AX1-A1	STANDARD DIM. TOL. IN INCH	[] METRIC DIM. AS REF.	 bel MAGNETIC SOLUTIONS a bel group
DRAWN BY JARRY YE DATE 2025-09-15		FILE NAME V890-1AX1-A1_G.DWG	.X .XX .XXX ±0.004	UNIT : INCH [mm] SCALE : N/A  SIZE : A4	

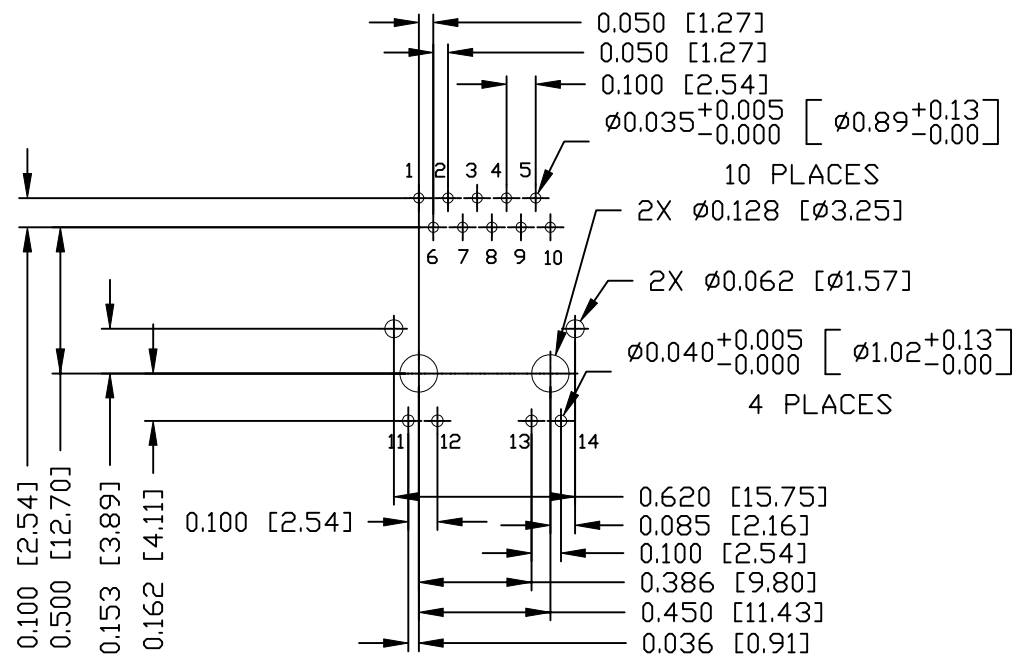
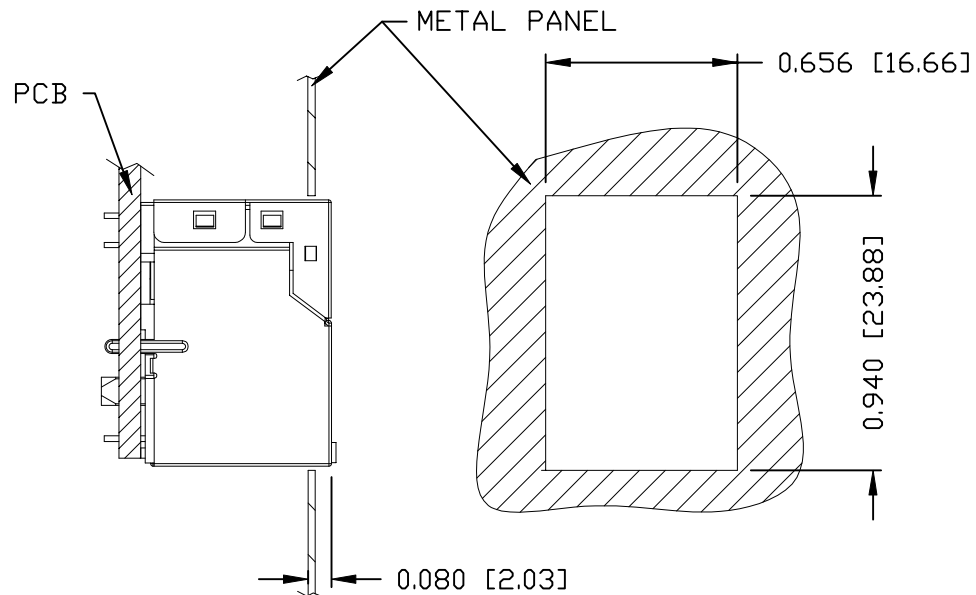
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RECOMMENDED PCB FOOTPRINT
COMPONENT SIDE VIEW

SUGGESTED PANEL OPENING



NOTES:

THE DISTANCE OF PANEL INSIDE SURFACE RELATIVE TO FRONT SURFACE OF PART IS ONLY A SUGGESTION. IN CASE THIS DISTANCE IS DIFFERENT, THE REQUIRED PANEL OPENING DIMENSIONS CHANGE ACCORDINGLY.

PACKING INFORMATION

PACKING TRAY : 0200-9999-I3(TOP)

0200-9999-I4(BOTTOM)

PACKING QUANTITY : 55 PCS FINISHED GOODS PER TRAY
9 TRAYS (495 PCS FINISHED GOODS)
PER CARTON BOX

NOTER: CARDBOARDS ARE PLACED BETWEEN LAYERS
OF PACKING TRAY INSIDE CARTON BOX
(INCLUDE THE UPPERMOST AND LOWERMOST TRAY)

REV. : G PAGE : 5

ORIGINATED BY
TONY YUAN
DATE 2025-09-15
DRAWN BY
JARRY YE
DATE 2025-09-15

TITLE
gigabit MagJack®
(8 core, Vertical)
PATENTED

PART NO. / DRAWING NO.
V890-1AX1-A1
FILE NAME
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STANDARD DIM. TOL. IN INCH	[] METRIC DIM. AS REF.
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