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RoHS

POWER | PROTECT | CONNECT

DOCUMENT / PART NO.: V890-1RX1-A1

TITLE : PRODUCT SPECIFICATION

ISSUE	DESCRIPTION OF CHANGE	REVIEWED BY	APPROVED BY	ECN#
A	FIRST ISSUE	CHRIS NG	SHUN LEUNG 2006-04-15	
B	CHANGE JACK PORT LOGO FROM "BEL" TO "BEL STEWART"	ZX HUANG	SHUN LEUNG 2008-06-21	RD2080127
C	ADD PATENTED INFORMATION AND UPDATE ROHS DESCRIPTION & OTHER GENERAL REQUIREMENT	ANTON LIAO	LEUNG WAI SHUN 2012-08-31	RD2120186
D	UPDATE PRODUCT SPECIFICATION TO MEET GENERAL REQUIREMENT	ANTON LIAO	LEUNG WAI SHUN 2017-06-29	RD2170094
E	MOVE THE UL LOGO FROM FRONT VIEW TO TOP VIEW	TONY YUAN	WaiShun Leung 2025.10.17 14:09:48 +08'00'	RD2250045

PAGE	1	2	3	4	5													
REV.	E	E	E	E	E													
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LED1 POLARITY			LED2 POLARITY		
PIN 11	PIN 12	COLOR	PIN 13	PIN 14	COLOR
+	−	YELLOW	+	−	GREEN
−	+	GREEN			

ELECTRICAL CHARACTERISTICS @ 25°C

TURNS RATIO
- TP1 1CT : 1CT ±3%
- TP2 1CT : 1CT ±3%
- TP3 1CT : 1CT ±3%
- TP4 1CT : 1CT ±3%

OCL @ 100kHz/100mVRMS
- 8mA DC BIAS 350 µH MIN.

INS. LOSS
- 1MHz TO 100MHz −1.1 dB MAX

RET. LOSS (MIN)
- 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

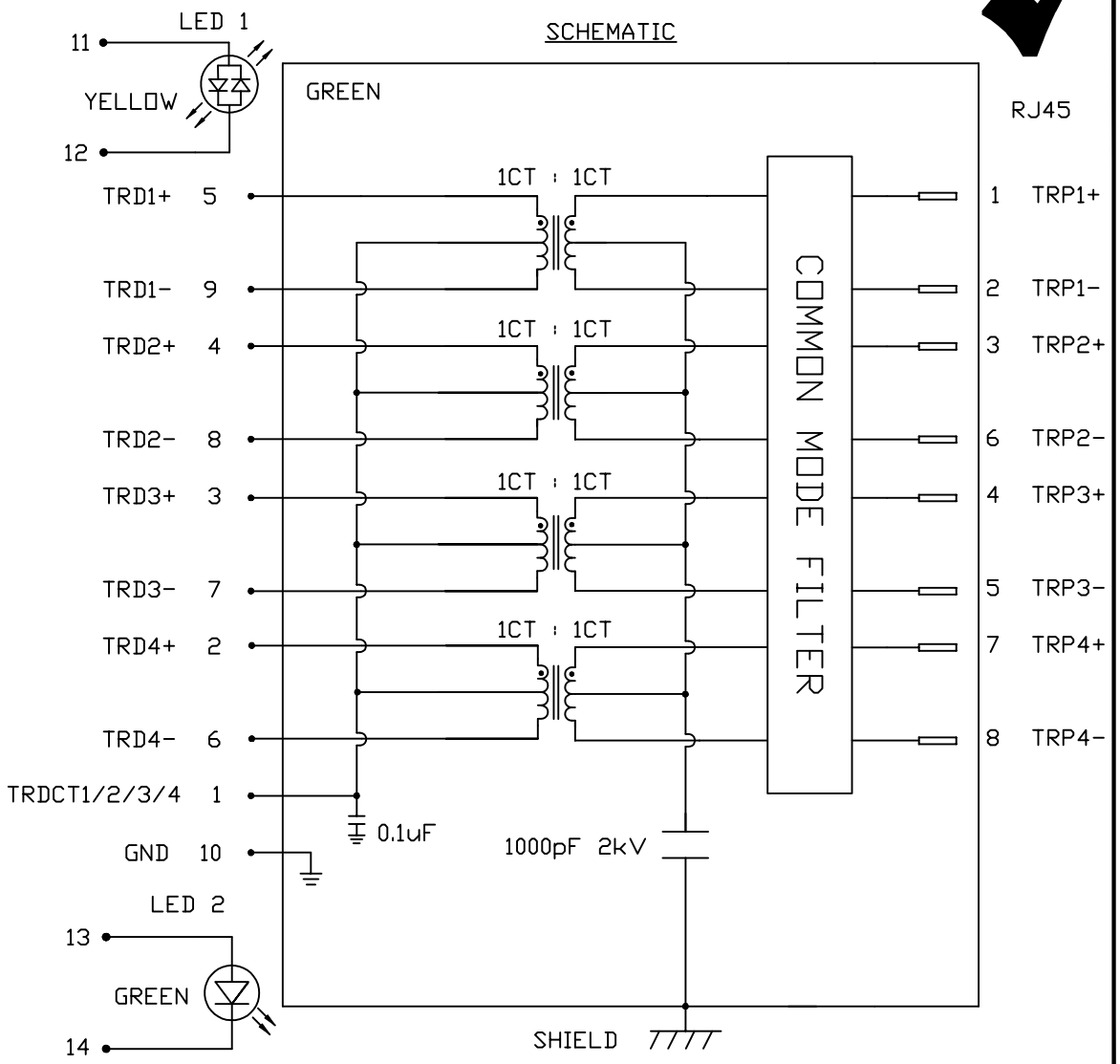
HIPOT (Isolation Voltage): 1500 Vrms
- 100% OF PRODUCTION TESTED TO COMPLY WITH IEEE 802.3 ISOLATION REQUIREMENTS

LED 1
- VF (FORWARD VOLTAGE) IF=20mA GREEN 2.2V TYP. YELLOW 2.1V TYP.
- λD (DOMINANT WAVELENGTH) IF=20mA GREEN 570nm TYP. 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.

SCHEMATIC



REV. : E | PAGE : 2

ORIGINATED BY: BILL LIU DATE: 2025-09-15	TITLE: gigabit MagJack® (8 core, Vertical) PATENTED	PART NO. / DRAWING NO.: V890-1RX1-A1 FILE NAME: V890-1RX1-A1_E.DWG	STANDARD DIM. TOL. IN INCH: .X, .XX, .XXX [ ] METRIC DIM. AS REF. UNIT : INCH [mm] SCALE : N/A SIZE : A4
DRAWN BY: FRANK LIU DATE: 2025-09-15			

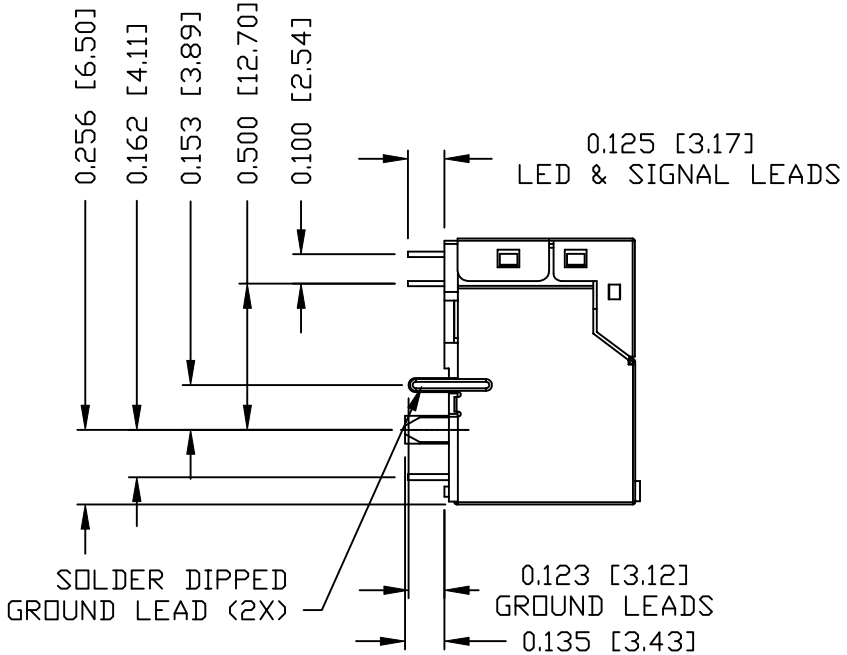
bel MAGNETIC SOLUTIONS a bel group

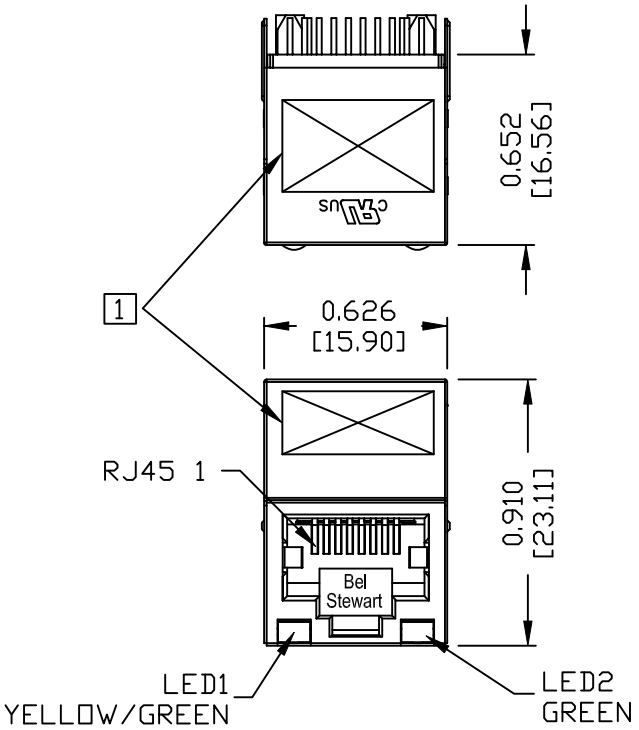
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MECHANICAL SPECIFICATION





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.
100 MICRO-INCH MIN MATTE TIN.
PINS ARE SOLDER DIPPED.

METAL SHIELD: NICKEL PLATED ON COPPER ALLOY.
(ALL GROUND LEADS 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.

c UL us UL RECOGNIZED - FILE #E196366 AND E169987.

2. THE PRODUCT IS RoHS COMPLIANT.
3. THE PRODUCT IS PATENT PRODUCT. THE PATENT NUMBER IS U.S. PAT. 6,840,817.
4. THE PART IS RECOMMENDED FOR WAVE SOLDERING. THE SUGGESTED PEAK WAVE SOLDERING CONDITION IS 260°C MAX AND 10 SECONDS MAX.

REV. : E	PAGE : 3

ORIGINATED BY TONY YUAN DATE 2025-09-15	TITLE gigabit MagJack® (8 core, Vertical) PATENTED	PART NO. / DRAWING NO. V890-1RX1-A1	STANDARD DIM. TOL. IN INCH		[ ] METRIC DIM. AS REF.
DRAWN BY JARRY YE DATE 2025-09-15		FILE NAME V890-1RX1-A1_E.DWG	.X		UNIT : INCH [mm]
			.XX		SCALE : N/A
			.XXX	±0.010	SIZE : A4

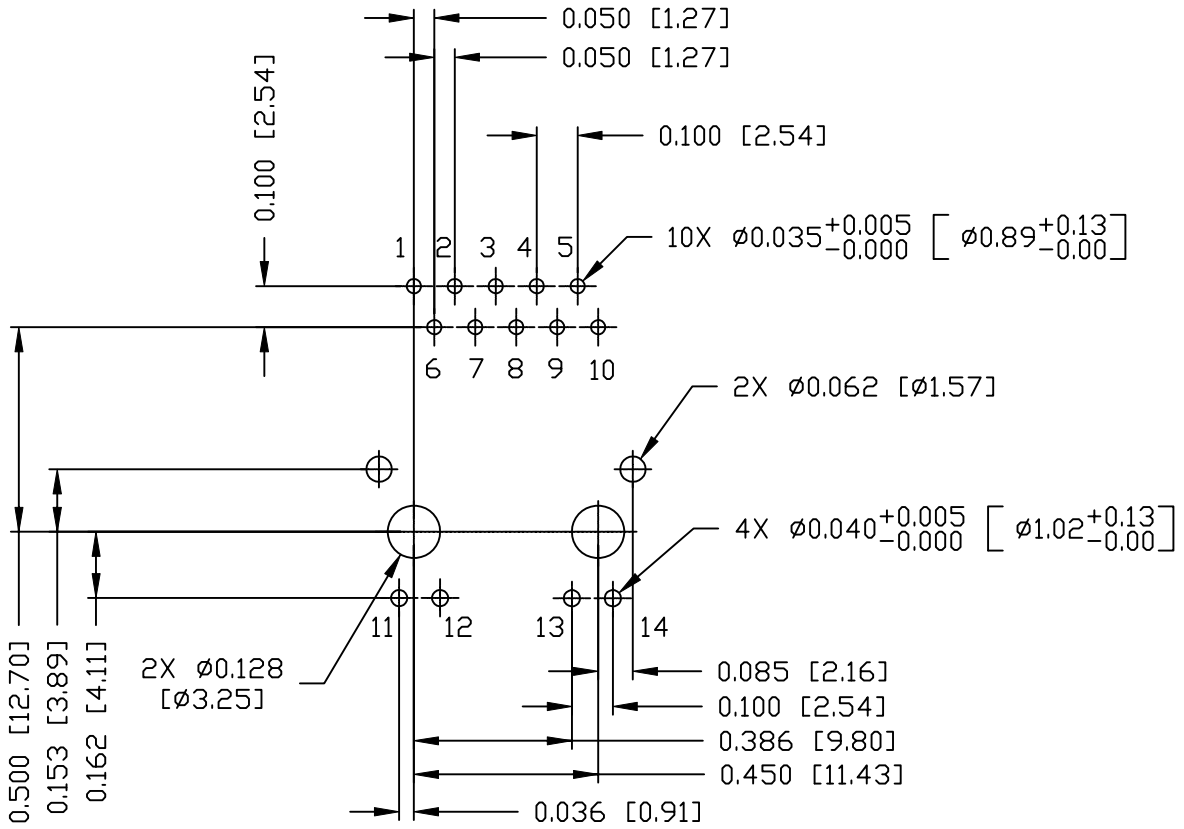
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RECOMMENDED PCB FOOTPRINT
COMPONENT SIDE VIEW



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DRAWN BY: JARRY YE DATE: 2025-09-15		FILE NAME: V890-1RX1-A1_E.DWG	.X / UNIT : INCH [mm] .XX / SCALE : N/A .XXX ±0.004 / SIZE : A4

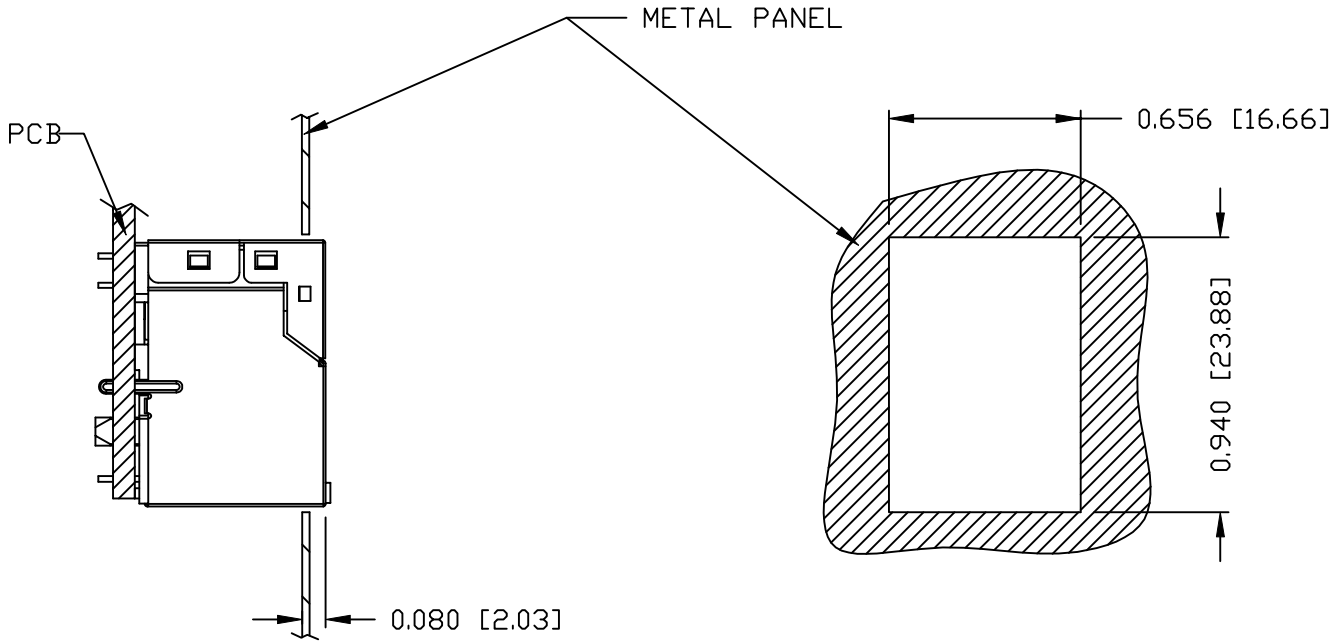
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SUGGESTED PANEL OPENING



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 PACKIING TRAY INSIDE CARTON BOX (INCLUDE THE UPPERMOST AND LOWERMOST TRAY)

REV. : E	PAGE : 5

ORIGINATED BY TONY YUAN DATE 2025-09-15	TITLE gigabit MagJack® (8 core, Vertical) PATENTED	PART NO. / DRAWING NO. V890-1RX1-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 V890-1RX1-A1_E.DWG	.X .XX .XXX ±0.005	UNIT : INCH [mm] SCALE : N/A SIZE : A4	

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