ECONOMY POWER 2.5 CONNECTORS

Quick Reference Guide

The Economy Power 2.5 (EP 2.5) connector is a single row or dual row crimp connector system. Based on a 2.5mm (0.098") centerline pitch, it is a very compact solution. EP 2.5 connectors provide a comprehensive connectivity solution with vertical and right angle headers, optional TPA retainers, wire-to-wire and wire-to-board options and a range of resin materials that include types meeting Glow Wire Test and UL 94 V-0 standards, as well as packaging to support automated board assembly. Additionally, EP 2.5 connectors are intermateable with similar products available in the market, facilitating simple retrofitting.

With board space increasingly at a premium, the EP 2.5 connector series offers an ideal interconnection solution for densely packed printed circuit boards. EP 2.5 housings and contacts were designed to help workers on the shop floor. The terminals have an asymmetrical shape. This means they can only be loaded into the housing cavity one way – the right way. Ideal for household appliances, HVAC and industrial machinery, EP 2.5 connectors offers this extensive portfolio for all design needs and challenges.

FEATURES & BENEFITS

- Housing locking latch
- Polarization tabs
- Asymmetrical terminals can only be loaded into housing one way
- Standard or low insertion force (LIF) terminals
- Anti-fretting contact lubricant
- Offering includes vertical and right angle headers in single and dual row configurations
- Includes products compliant with Glow Wire test required by IEC/EN 60335-1 5th edition: Household and Similar Appliances-Safety and UL 94 V-0

SPECIFICATIONS

- Product specification: **108-2418**
- Application specification: **114-13315**

STANDARDS

- UL Recognized (U.S. and Canada) E28476
- VDE approval is being sought

MATERIALS

- Housings: UL 94 V-0 rated Nylon (UL 94 V-0 rated PBT for headers on tape in ammo box packaging)
- Contacts: Copper alloy, tin plated
- Colored housings available upon request
- Glow Wire material and UL 94 V-0 option available

ELECTRICAL

- Voltage rating: 250VAC
- Current rating: 4.2A max. (single row)

MECHANICAL

- Positions: 2 to 15, single row, wire-to-wire; 2 to 20, single row, wire-to-board; 8 to 40, dual row, all types
- Wire size: 0.13 to 0.56mm^2 (26 to 20 AWG)
- Centerline pitch: 2.5mm (0.098")
- Operating temperature: -55 to 105°C
- Selectively loaded headers available upon request

Single Row Plug Housing

Style	Flammability	Position	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Free Hanging/ Panel Mount	UL 94 V-0	x-1969442-y	-2†	-3	-4	-5	-6	-7	-8	-9	1- -0	1- -1	1- 2	1- -3	1- -4	1- -5	1- -6	1- -7	1- -8	1- -9	2- -0
Free Hanging/ Panel Mount	GWT acc. IEC 60335-1 and UL 94 V-0	x-1744417-y	-2	-3	-4	-5	-6	-7	-8	-9	1- -0	1- -1	1- 2	1- -3	1- -4	1- -5	1- -6	1- -7	1- -8	1- -9	2- -0

Single Row Receptacle Housing

Style	Flammability	Position	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Free Hanging	UL-94 V-0	x-1969588-y	-2	-3	-4	-5	-6	-7	-8	-9	1- -0	1- -1	1- 2	1- -3	1- -4	1- -5
	GWT acc. IEC 60335-1 and UL 94 V-0	x-1969589-y	-2	-3	-4	-5	-6	-7	-8	-9	1- -0	1- -1	1- 2	1- -3	1- -4	1- -5
Panel Mount	UL-94 V-0	x-1969590-y	-2	-3	-4	-5	-6	-7	-8	-9	1- -0	1- -1	1- 2	1- -3	1- -4	1- -5
	GWT acc.IEC 60335-1 and UL 94 V-0	x-1969591-y	-2	-3	-4	-5	-6	-7	-8	-9	1- -0	1- -1	1- 2	1- -3	1- -4	1- -5

TPA

Style	Flammability	Position	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Locking Plate	UL 94 V-0	X-1969443-y	-2	-3	-4	-5	-6	-7	-8	-9	1- -0	1- -1	1- 2	1- -3	1- -4	1- -5	1- -6	1- -7	1- -8	1- -9	2- -0

Single Row Headers

Style	Flammability	Position	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Vertical with Boss	UL 94 V-0	x-2132230-y	-2	-3	-4	-5	-6	-7	-8	-9	1- -0	1- -1	1- 2	1- -3	1- -4	1- -5	1- -6	1- -7	1- -8	1- -9	2- -0
	GWT acc. IEC 60335-1 and UL 94 V-0	x-1744418-y	-2	-3	-4	-5	-6	-7	-8	-9	1- -0	1- -1	1- 2	1- -3	1- -4	1- -5	1- -6	1- -7	1- -8	1- -9	2- -0
Vertical without Boss	UL 94 V-0, loose packaging	x-2132415-y	-2	-3	-4	-5	-6	-7	-8	-9	1- -0	1- -1	1- 2	1- -3	1- -4	1- -5	1- -6	1- -7	1- -8	1- -9	2- -0
	GWT acc.IEC 60335-1 and UL 94 V-0	x-1744439-y	-2	-3	-4	-5	-6	-7	-8	-9	1- -0	1- -1	1- 2	1- -3	1- -4	1- -5	1- -6	1- -7	1- -8	1- -9	2- -0
Vertical without Boss with Tape in Ammo Box Packaging	UL 94 V-0	x-2299683-y	†† -1 -2	-3	-4	-5	-6	-7	-8	-	-	-	-	-	-	-	-	-	-	-	-
Right Angle	UL-94 V-0	x-1744426-y	-2	-3	-4	-5	-6	-7	-8	-9	1- -0	1- -1	1- 2	1- -3	1- -4	1- -5	1- -6	1- -7	1- -8	1- -9	2- -0
	GWT acc.IEC 60335-1 and UL 94 V-0	x-1744446-y	-2	-3	-4	-5	-6	-7	-8	-9	1- -0	1- -1	1- 2	1- -3	1- -4	1- -5	1- -6	1- -7	1- -8	1- -9	2- -0

Notes: **Configurations available in various color options. Please contact TE sales representative for more information or visit TE.com**

† 1969442-2 is designed to mate with the full range of EP 2.5 2-position headers. Another 2-postion plug, 2301559-2, with a modified latch is available to mate with a competitive manufacturer's 2-position header of a similar design or with new TE EP 2.5 2-position header 2299683-3 with a narrow (0.85 mm wide) latch.

† † 2299683-1 has a narrow (0.85 mm wide) latch to readily mate with a competitive manufacturer's 2-position plug of a similar design or with new TE EP 2.5 2-position plug 2301559-2. 2299683-2 has a 1.6 mm wide latch to readily mate with TE EP 2.5 2-position plug 1969442-2.

Dual Row Plug Housing

Style	Flammability	Position	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
For all types	UL 94 V-0	x-1969540-y	-8	1- -0	1- -2	1- -4	1- -6	1- -8	2- -0	2- -2	2- -4	2- -6	2- -8	3- -0	3- -2	3- -4	3- -6	3- -8	4- -0
	GWT acc. IEC 60335-1 and UL 94 V-0	x-1969567-y	-8	1- -0	1- -2	1- -4	1- -6	1- -8	2- -0	2- -2	2- -4	2- -6	2- -8	3- -0	3- -2	3- -4	3- -6	3- -8	4- -0

Dual Row Receptacle Housing

Style	Flammability	Position	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
Free Hanging	UL 94 V-0	x-1969540-y	-8	1- -0	1- -2	1- -4	1- -6	1- -8	2- -0	2- -2	2- -4	2- -6	2- -8	3- -0	3- -2	3- -4	3- -6	3- -8	4- -0
	GWT acc. IEC 60335-1 and UL 94 V-0	x-1969567-y	-8	1- -0	1- -2	1- -4	1- -6	1- -8	2- -0	2- -2	2- -4	2- -6	2- -8	3- -0	3- -2	3- -4	3- -6	3- -8	4- -0
Panel Mount	UL 94 V-0	x-1969594-y	-8	1- -0	1- -2	1- -4	1- -6	1- -8	2- -0	2- -2	2- -4	2- -6	2- -8	3- -0	3- -2	3- -4	3- -6	3- -8	4- -0
	GWT acc. IEC 60335-1 and UL 94 V-0	x-1969595-y	-8	1- -0	1- -2	1- -4	1- -6	1- -8	2- -0	2- -2	2- -4	2- -6	2- -8	3- -0	3- -2	3- -4	3- -6	3- -8	4- -0

Dual Row TPA

Style	Flammability	Position	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
Locking Plate	UL 94 V-0	x-1969541-y	-8	1- -0	1- -2	1- -4	1- -6	1- -8	2- -0	2- -2	2- -4	2- -6	2- -8	3- -0	3- -2	3- -4	3- -6	3- -8	4- -0

Dual Row Vertical Row Headers

Style	Flammability	Position	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
With Boss	UL 94 V-0	x-1969543-y	-8	1- -0	1- -2	1- -4	1- -6	1- -8	2- -0	2- -2	2- -4	2- -6	2- -8	3- -0	3- -2	3- -4	3- -6	3- -8	4- -0
	GWT acc. IEC 60335-1 and UL 94 V-0	x-1969570-y	-8	1- -0	1- -2	1- -4	1- -6	1- -8	2- -0	2- -2	2- -4	2- -6	2- -8	3- -0	3- -2	3- -4	3- -6	3- -8	4- -0
Without Boss	UL 94 V-0	x-1969582-y	-8	1- -0	1- -2	1- -4	1- -6	1- -8	2- -0	2- -2	2- -4	2- -6	2- -8	3- -0	3- -2	3- -4	3- -6	3- -8	4- -0
	GWT acc. IEC 60335-1 and UL 94 V-0	x-1969584-y	-8	1- -0	1- -2	1- -4	1- -6	1- -8	2- -0	2- -2	2- -4	2- -6	2- -8	3- -0	3- -2	3- -4	3- -6	3- -8	4- -0

Dual Row Right Angle Header

Style	Flammability	Position	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
Right Angle	UL 94 V-0	x-1969572-y	-8	1- -0	1- -2	1- -4	1- -6	1- -8	2- -0	2- -2	2- -4	2- -6	2- -8	3- -0	3- -2	3- -4	3- -6	3- -8	4- -0
	GWT acc. IEC 60335-1 and UL 94 V-0	x-1969574-y	-8	1- -0	1- -2	1- -4	1- -6	1- -8	2- -0	2- -2	2- -4	2- -6	2- -8	3- -0	3- -2	3- -4	3- -6	3- -8	4- -0

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Terminals

Style	Material	Wire Range	Part Number
Standard Insertion Force Socket (Receptacle)	Plated Copper Alloy	22-26 AWG (0.13 to 0.36mm^2)	2110989-1
		20-24 AWG (0.20 to 0.56mm^2)	1744423-1
Standard Insertion Force Pin, Lanceless		22-26 AWG (0.13 to 0.36mm^2)	2238007-1
		20-24 AWG (0.20 to 0.56mm^2)	2238008-1
Low Insertion Force (LIF) Socket (Receptacle)		22-26 AWG (0.13 to 0.36mm^2)	2232905-1
		20-24 AWG (0.20 to 0.56mm^2)	2232983-1

LIF sockets reduce insertion force about 60% from that of standard sockets. Maximum insertion force is 3.5 N for the new LIF sockets, versus maximum insertion force of 8.9 N for standard sockets.

Application Tooling

Both the tab and receptacle contact can be applied to wire using OCEAN applicatior for automatic and semi-automatic applications. For low volume production and prototype work, a hand-tool is available to crimp the contacts to wire.

Part Number	Description
1590232- [ ]	HDI Quick Change Miniature Applicator
1725950- [ ]	AMP 3/K-40 Press
1725900- [ ]	AMP 5/K Press
1530232-3	AMP-O-LECTRIC Model “G” Termination Machine
1530232-2	AMP-O-LECTRIC Model “K” Termination Machine
1530232-1	Lead Making Machine
354500- [ ]	AMP-O-LECTRIC Model “G” Terminating Machine
528324- [ ]	Komax Gamma 333 PC
2217074-1	Hand tool for 22-26 AWG
2161958-1	Pin Extraction Tool

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- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
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- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

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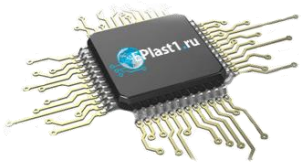
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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