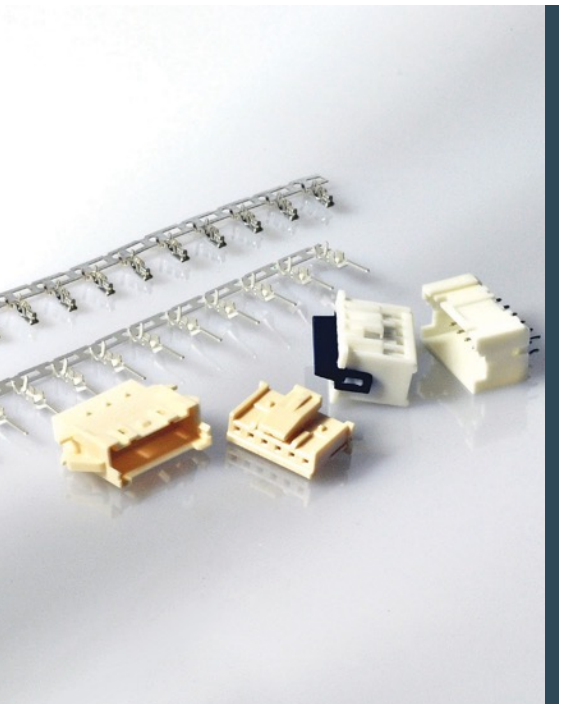

ECONOMY POWER 2.5 CONNECTORS

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 2.5 mm (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, wire-to-panel 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 excellent 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. Excellent for household appliances, HVAC and industrial machinery, EP 2.5 connectors help offer an extensive portfolio for all design needs and challenges.

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

FEATURES & BENEFITS

- Housing locking latch
- Polarization tabs
- Asymmetrical terminals can only be loaded intohousing 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

ECONOMY POWER 2.5 CONNECTORS

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
For all types	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
	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
For all types	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

SINGLE ROW TPA

Style	Flammability	Position	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ergonomic Locking Plate	UL 94 V-0	x-1969825-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
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-1969730-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.

ECONOMY POWER 2.5 CONNECTORS

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-2324579-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-2323743-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
For all types	UL-94 V-0	x-2324582-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-2324201-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-2324584-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-2323745-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
Ergonomic Locking Plate	UL 94 V-0	x-2315219-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
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 HEADERS

Style	Flammability	Position	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
With Boss	GWT acc. IEC 60335-1 and UL 94 V-0	x-2324245-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	GWT acc.IEC 60335-1 and UL 94 V-0	x-2323751-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	GWT acc. IEC 60335-1 and UL 94 V-0	x-2323750-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

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

ECONOMY POWER 2.5 CONNECTORS

TERMINALS

Style	Material	Wire Range	Part Number	OCEAN Applicator
Standard Insertion Force Socket (Receptacle)	Plated Copper Alloy	22-26 AWG (0.13 to 0.36 mm^2)	2110989-1	2151950-1, -2
		20-24 AWG (0.20 to 0.56 mm^2)	1744423-1	2151793-1
Standard Insertion Force Pin, Lanceless		22-26 AWG (0.13 to 0.36 mm^2)	2238007-1	2151950-1, -2
		20-24 AWG (0.20 to 0.56 mm^2)	2238008-1	2837034-1, -2
Low Insertion Force (LIF) Socket (Receptacle)		22-26 AWG (0.13 to 0.36 mm^2)	2232905-1	2151950-1
		20-24 AWG (0.20 to 0.56 mm^2)	2232983-1	2151793-1

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
2161400-5	AMP 3K/40 Press
2161500-1	AMP 5K/40 Press
3-2161500-1	AMP 5K/30 Press
2151950-1	OCEAN_2.0_Applicator
2217000- [ ]	AMP-O-LECTRIC Model “G II” Terminating Machine
2371642-1	Hand tool for 22-26 AWG
	Pin Extraction Tool

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