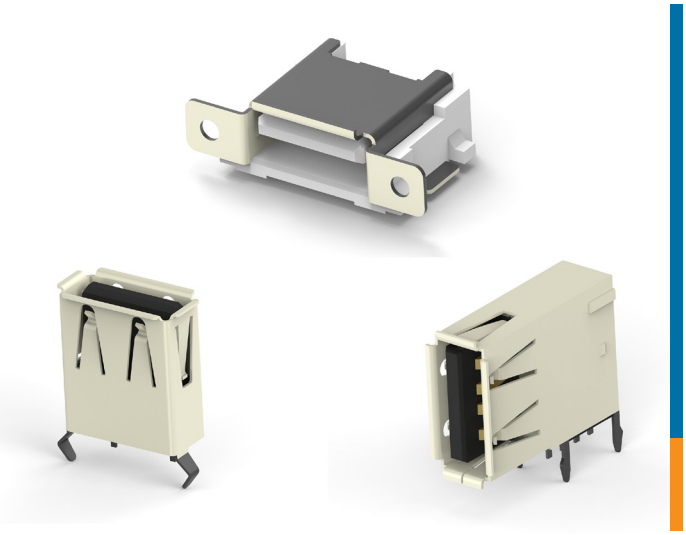


STANDARD USB CONNECTORS TYPE A

TE Connectivity's (TE) USB connectors are designed to an industry standard controlled by the USB Implementers Forum. USB is characterized by a widespread market adoption and consists of several form factors to accomodate different device requirements. Standard USB connectors Type A is the most common USB connector, used in a wide range of applications across all most industries. We offer a wide range of standard USB connectors Type A in different orientations and features.

The TE USB portfolio is a complete interconnection technology for I/O devices and has many variants of PCB retention, orentation, position offset and more. Our technological capability enables our Standard USB connector Type A series to be an efficient, cost saving solution for our customers.

Features

- Reliability-optimized design can provide a stable connection even after thousands of insertions
- Cost savings achieved by the intergration of power and data transportation within one connector
- Our large portfolio and highly customizable product can provide design flexibility

Benefits

- Quality
- Reliability
- Robust design
- Broad portfolio

Applications

- Computers
- Consumer electronics
- Industrial machinery

Standard USB Connectors Type A

Specification and feature overview

TE offers a broad selection of high quality standard USB connectors Type A within a standard as well as an extended specification and with or without special features. Below is an overview of the specifications and range of features that TE offers. Please view the tables on pages 5 to 7 to find the specification of a specific part number.

	Parameter	Standard Spec.			Extended Spec.		
		Min	Max	Unit	Min	Max	Unit
Performance	Industry standard	USB 2.0			USB 3.0		
	Data rate	-	480	Mbps	-	5	Gbps
	Max. current rating**	-	1	A	-	1.5	A
						1.8	
						2.5	
						3	
	Max. voltage rating	-	30	V	-		V
	Durability**	-	1,500	Matings	-	5000	Matings
						30000	
	Moisture Sensitivity Level (MSL)**	1			5A		
	Operating temperature range**	-55	85	°C	-55	105	°C
					-40	80	°C
					-20	85	°C
					0	50	°C

	Feature	Standard Spec.		Extended Spec.	
		Value	Unit	Value	Unit
Design Aspects	Number of contacts	4	quantity	N/A	
	Contact pitch	2.0/2.5	mm		
		0.078 / 0.098	inch		
	Contact length (tail-length)*	1.20 - 3.81	mm		
		0.047 - 0.150	Inch		
	Offset**	N/A		4.00 or 4.13	mm
				0.157 or 0.162	Inch
	Recommended PCB thickness*	1.0 - 1.6	mm	N/A	
		0.039 - 0.063	Inch		

	Feature	
Material	Housing	Thermoplastic
	Shell	Nickel or Tin
	Mating contact area	Gold

	Parameter	Standard Spec.
Process Aspects	Max. soldering temperature**	240 or 260 °C
	Contact termination process**	Surface Mount/Through Hole
	Pick & place capable**	Yes/No
	Packing**	Tray/Tape and Reel

	Regulation
Compliance	A statement of compliance can be generated for any available standard USB Type A part number on te.com

*Refer to the customer drawing for the most accurate value
** Refer to the Selection Table on page X-X for the most accurate value

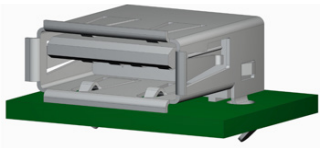
Selection Guide

TE offers standard USB connectors Type A with a number of options to optimize designs. Below are explanations of the different design options we offer. On pages 5 to 7 there are part number tables which list these features for each available part number.

Orientation and Position

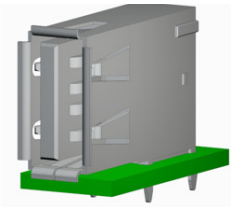
TE offers standard USB connectors Type A in a right angle (R/A), vertical (V/T), flagged or right angle/panel mount orientations

Right Angle

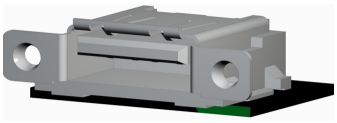


Vertical

Flagged



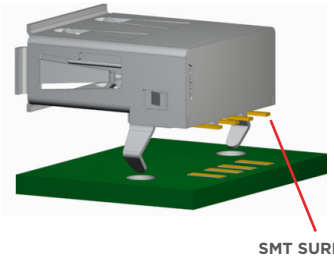
Right Angle / Panel Mount



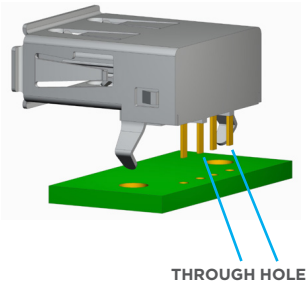
Contact Termination Type

TE offers standard USB connectors Type A for both surface mount (SMT) and through hole (T/H) termination to the PCB

Surface Mount



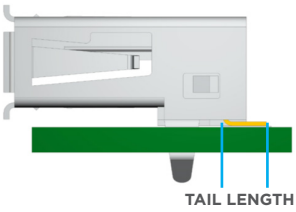
Through Hole



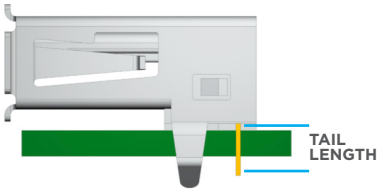
Tail Length

The tail length of a connector is defined as illustrated

Surface Mount Type

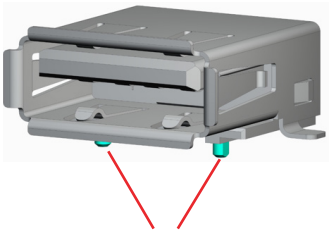


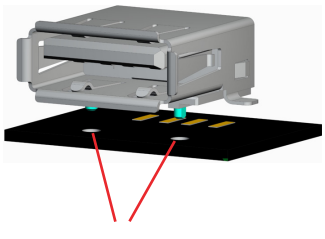
Through Hole Type



Locating Post

Some of our SMT connectors have a feature called a locating post which serves to position the connector on the PCB during reflow.

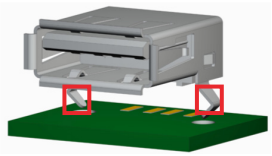




PCB Retention Type

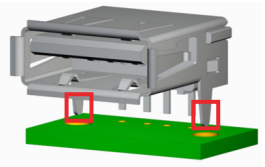
Our connectors are designed to have a robust and strong mechanical retention when being soldered to a PCB. Depending on your PCB design there are four different solutions for holding the connector to the PCB after SMT.

Kinked Legs



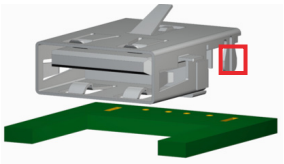
The PCB needs to have holes in which the DIPs of the connector will be inserted and soldered.

Straight Legs



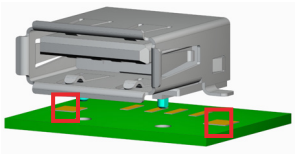
The PCB needs to have holes in which the DIPs of the connector will be inserted and soldered.

Board Locks



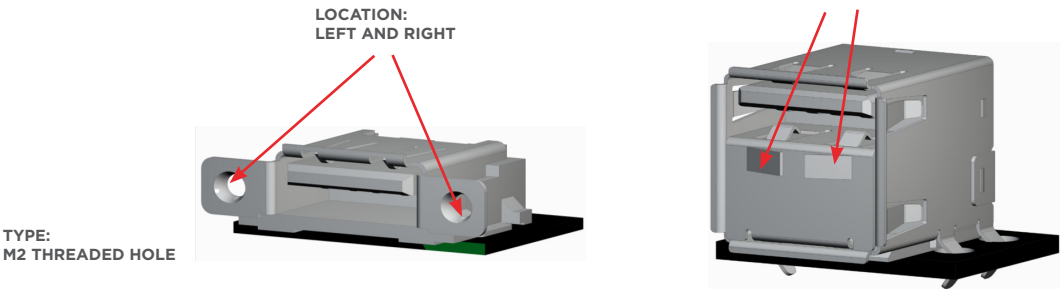
The PCB needs to have holes in which the DIPs of the connector will be inserted and soldered.

SMT Hold-Downs



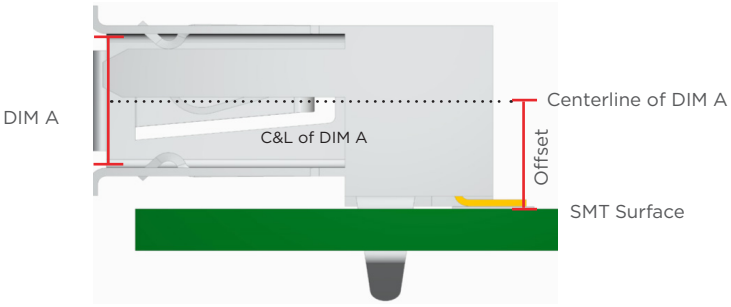
The PCB needs to have pads to which hold-down features on the connector are soldered.

Panel Ground



Offset

The definition of the offset is the distance between the SMT surface/top of the PCB and the mating center of the connector. This is helpful when designing a panel/shell.



Part Number Detail

Right Angle Orientation

Part Number (housing color)	Process (T/H or SMT)	Max solder. temp.	Pick and place capable	Locating posts	Flange	Panel Ground	PCB-retention	DIP	Tail-length [mm]	Offset [mm]	MSL	Current-rating [A]	Operating Temperature Range [°C]	Mating cycles [nr]
292303-1 (Black)	T/H	240°C	No	No	Yes	No	Kinked Legs	2x	2.84	N/A	1	1	-55 – 85	1500
292303-2 (Black)	T/H	240°C	No	No	Yes	No	Kinked Legs	2x	2.29	N/A	1	1	-55 – 85	1500
292303-3 (Natural)	T/H	240°C	No	No	Yes	No	Kinked Legs	2x	2.84	N/A	1	1	-55 – 85	1500
292303-4 (Black)	T/H	260°C	No	No	Yes	No	Kinked Legs	2x	2.84	N/A	1	1	-55 – 85	1500
292303-5 (Natural)	T/H	260°C	No	No	Yes	No	Kinked Legs	2x	2.84	N/A	1	1	-55 – 85	1500
292303-6 (Black)	T/H	260°C	No	No	Yes	No	Kinked Legs	2x	2.29	N/A	1	1	-55 – 85	1500
292303-7 (Natural)	SMT	260°C	No	No	Yes	No	Kinked Legs	2x	2.84	4.13	1	1	-55 – 85	1500
292303-8 (Natural)	T/H	240°C	No	No	Yes	No	Kinked Legs	2x	2.47	N/A	1	1	-55 – 85	1500
292303-9 (Natural)	SMT	260°C	No	Yes	Yes	No	SMT Hold-Down	0x	2.47	4.13	1	1	-55 – 85	1500
1-292303-1 (Black)	SMT	240°C	No	No	Yes	No	Kinked Legs	2x	1.85	N/A	1	1	-55 – 85	1500
1-292303-4 (Black)	T/H	240°C	No	No	Yes	No	Kinked Legs	2x	3.56	N/A	1	1	-55 – 85	1500
1-292303-5 (Black)	T/H	240°C	No	No	Yes	No	Kinked Legs	2x	3.81	N/A	1	1	-55 – 85	1500
1-292303-6 (Black)	SMT	260°C	No	Yes	Yes	No	Kinked Legs	no	1.85	4.13	1	1	-55 – 85	1500
1674459-4 (Natural)	T/H	260°C	No	Yes	Yes	No	Kinked Legs	4x	1.70	N/A	1	1	-55 – 85	30000
1746311-1 (Black)	T/H	240°C	No	No	No	No	Straight Leg, Hold-Downs	2x	2.90	N/A	1	1	-40 – 80	1500
1746311-2 (White)	T/H	240°C	No	No	No	No	Hold-Downs, Straight Leg	2x	2.90	N/A	1	1	-40 – 80	1500
1775315-1 (Black)	T/H	260°C	No	No	Yes	Ground Finger	Kinked Legs	4x	2.80	N/A	1	2.5	-20 – 85	1500
1932055-1 (Black)	T/H	240°C	No	No	Yes	No	Kinked Legs	4x	2.60	N/A	1	N/A	-55 – 85	1500
1932638-2 (Black)	SMT	260°C	No	No	Yes	No	Straight Leg	4x	2.39	4.13	1	1	-55 – 85	1500
1932638-3 (Black)	SMT	260°C	No	No	Yes	No	Straight Leg	4x	2.39	4.13	1	1	-55 – 85	1500
1932638-4 (Black)	SMT	260°C	No	No	Yes	No	Straight Leg	4x	2.39	4.13	1	1	-55 – 85	1500
1932638-5 (Black)	SMT	260°C	Yes	No	Yes	No	Straight Leg	4x	2.39	4.13	1	1	-55 – 85	1500
1932733-1 (Black)	T/H	260°C	No	No	Yes	Ground Finger	Boardlocks	2x	2.90	N/A	5A	1	-40 – 80	1500

Part Number Detail Continue

Right Angle Orientation Continue

Part Number (housing color)	Process (T/H or SMT)	Max solder. temp.	Pick and place capable	Locating posts	Flange	Panel Ground	PCB-retention	DIP	Tail-length [mm]	Offset [mm]	MSL	Current-rating [A]	Operating Temperature Range [°C]	Mating cycles [nr]
2041370-1 (Black)	T/H	260°C	No	No	Yes	No	Boardlocks	2x	2.84	N/A	5A	1.5	-20 – 85	1500
6364372-1 (Black)	T/H	240°C	Yes	No	Yes	No	Straight Leg	2x	2.84	N/A	1	1	-55 – 85	1500
6364372-2 (Natural)	T/H	260°C	No	No	Yes	No	Straight Leg	2x	2.84	N/A	1	1	-55 – 85	1500
6364372-3 (Natural)	T/H	260°C	No	No	Yes	No	Straight Leg	2x	2.84	N/A	1	1	-55 – 85	1500
1932258-1 (USB 3,0) (Blue)	T/H	260°C	No	No	Yes	No	Kinked Legs	2x	2.30	N/A	5A	1.8	-55 – 105	5000
1-1932258-2 (USB 3,0) (Blue)	T/H	260°C	No	No	Yes	No	Kinked Legs	2x	2.30	N/A	5A	1.8	-55 – 105	5000

Vertical Orientation

P/N (housing color)	Process (TH or SMT)	Max solder. temp.	Pick and place capable	Locating posts	Flange	Panel Ground	PCB-retention	DIP	Tail-length [mm]	Offset [mm]	MSL	Current-rating [A]	Operating Temperature Range [°C]	Mating cycles [nr]
1734366-1 (Black)	T/H	240°C	No	No	Yes	No	Kinked Legs	2x	2.80	N/A	1	1	-40 – 80	1500
1734366-2 (White)	T/H	240°C	No	No	Yes	No	Kinked Legs	2x	2.80	N/A	1	1	-40 – 80	1500
1734366-3 (Blue)	T/H	240°C	No	No	Yes	No	Kinked Legs	2x	2.80	N/A	1	1	-40 – 80	1500
1734366-4 (Black)	T/H	240°C	No	No	Yes	No	Kinked Legs	2x	2.80	N/A	1	1	-40 – 80	1500
1734366-6 (Black)	T/H	260°C	Yes	No	Yes	No	Kinked Legs	2x	2.80	N/A	5A	1	-40 – 80	1500
1775690-2 (Black)	T/H	240°C	No	No	Yes	No	Boardlocks	2x	3.50	N/A	5A	2.5	-20 – 85	1500
2041556-1 (Black)	T/H	260°C	No	No	Yes	No	Straight Leg	2x	2.80	N/A	1	1	-40 – 80	1500

Flagged Orientation

P/N (housing color)	Process (TH or SMT)	Max solder. temp.	Pick and place capable	Locating posts	Flange	Panel Ground	PCB-retention	DIP	Tail-length [mm]	Offset [mm]	MSL	Current-rating [A]	Operating Temperature Range [°C]	Mating cycles [nr]
292336-1 (Black)	T/H	240°C	No	No	Yes	No	Hold-Downs	4x	2.29	N/A	1	1	-55 – 85	1500
292336-2 (Natural)	T/H	240°C	No	No	Yes	No	Hold-Downs	4x	2.29	N/A	1	1	-55 – 85	1500
440260-1 (Black)	T/H	240°C	No	No	Yes	No	Hold-Downs	4x	2.84	N/A	1	N/A	-55 – 85	1500
440260-2 (Natural)	T/H	240°C	No	No	Yes	No	Hold-Downs	4x	2.29	N/A	1	N/A	-55 – 85	1500
1734775-1 (Black)	T/H	240°C	No	No	Yes	No	Kinked Legs	4x	2.45	N/A	1	1.5	0 – 50	250
1-1734775-1 (Black)	T/H	240°C	No	No	Yes	No	Kinked Legs	4x	3.30	N/A	1	1.5	0 – 50	250

Right Angle/Panel Mount

P/N (housing color)	Process (TH or SMT)	Max solder. temp.	Pick and place capable	Locating posts	Flange	Panel Ground	PCB-retention	DIP	Tail-length [mm]	Offset [mm]	MSL	Current-rating [A]	Operating Temperature Range [°C]	Mating cycles [nr]
1612243-1 (White)	SMT	260°C	Yes	Yes	Yes	M2 Threaded Hole	SMT Hold-Down	4x	1.85	4	1	1	-55 – 85	1500
1-1674429-1 (White)	SMT	260°C	Yes	Yes	Yes	M2 Threaded Hole	SMT Hold-Down	2x	1.85	4	1	1	-55 – 85	1500
1-1674429-2 (Black)	SMT	260°C	Yes	Yes	Yes	M2 Threaded Hole	SMT Hold-Down	2x	1.85	4	1	1	-55 – 85	1500
1-353576-1 (White)	SMT	260°C	Yes	Yes	Yes	M2 Threaded Hole	SMT Hold-Down	2x	1.85	4	1	1	-55 – 85	1500
1-353576-2 (Black)	SMT	260°C	Yes	Yes	Yes	M2 Threaded Hole	SMT Hold-Down	2x	1.85	4	1	1	-55 – 85	1500
353928-2 (Black)	SMT	260°C	Yes	Yes	Yes	M2 Threaded Hole	SMT Hold-Down	4x	1.85	4	1	1	-55 – 85	1500
353929-1 (White)	SMT	260°C	Yes	Yes	Yes	M2 Threaded Hole	SMT Hold-Down	4x	1.85	4	1	1	-55 – 85	1500
353929-4 (Black)	SMT	260°C	Yes	Yes	Yes	M2 Threaded Hole	SMT Hold-Down	4x	1.85	4	1	1	-55 – 85	1500
353929-6 (Black)	SMT	260°C	Yes	Yes	Yes	M2 Threaded Hole	SMT Hold-Down	2x	1.85	4	1	1	-55 – 85	1500
1-5353576-2 (Black)	SMT	260°C	Yes	Yes	Yes	M2 Threaded Hole	SMT Hold-Down	2x	1.85	4	1	1	-55 – 85	1500
5353929-1 (White)	SMT	260°C	Yes	Yes	Yes	M2 Threaded Hole	SMT Hold-Down	2x	1.85	4	1	1	-55 – 85	1500
5353929-4 (Black)	SMT	260°C	Yes	Yes	Yes	M2 Threaded Hole	SMT Hold-Down	2x	1.85	4	1	1	-55 – 85	1500
5353929-6 (Black)	SMT	260°C	Yes	Yes	Yes	M2 Threaded Hole	SMT Hold-Down	2x	1.85	4	1	1	-55 – 85	1500

TE Technical Support Center

USA:	1.800.522.6752
Canada:	1 .905.475.6222
Mexico:	52.0.55.1106.0800
Latin/S. America:	54.0.11.4733.2200
Germany:	49.0.6251.133.1999
UK:	44.0.800.267666
France:	33.0.1.3420.8686
Netherlands:	31.0.73.6246.999
China:	86.0.400.820.6015

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