



# Low Profile D-Sub Connectors

## D-Sub Steckverbinder mit geringer Einbauhöhe

### Ordering Code

### Bestellschlüssel



**FE 09 P 28 S G1 - ...**

Series Prefix / <i>Serienbezeichnung</i>				
No. of Contacts / <i>Polzahl</i>	09	15	25	37*
	1	2	3	4
Shell Size / <i>Gehäusegröße</i>				
Contact Type / <i>Kontaktart</i>				
<b>P</b>	Pin contacts / <i>Stiftkontakte</i>			
<b>S</b>	Socket contacts / <i>Buchsenkontakte</i>			
Contact Design / <i>Kontaktvariante</i>				
Machined contacts / <i>Gedrehte Kontakte</i>				
<b>1</b>	Straight PCB termination / <i>Leiterplattenanschluss, gerade</i>			
<b>28</b>	Straight PCB termination / <i>Leiterplattenanschluss, gerade</i>			
<b>21</b>	Right angled PCB termination / <i>Leiterplattenanschluss, abgewinkelt</i>			
Machined contacts / <i>Gedrehte Kontakte</i>				
<b>S</b>	Stamped contacts** / <i>Gestanzte Kontakte**</i>			
Performance Classes Available in Accordance with DIN 41652 / <i>Lieferbare Gütestufen nach DIN 41652</i>				
<b>G1</b>	= 500 Contact cycles / <i>Steckzyklen</i> = Performance class 1 / <i>Gütestufen 1</i>			
<b>G2</b>	= 200 Contact cycles / <i>Steckzyklen</i> = Performance class 2 / <i>Gütestufen 2</i>			
<b>G3</b>	= 50 Contact cycles / <i>Steckzyklen</i> = Performance class 3 / <i>Gütestufen 3</i>			
Modifications / <i>Modifikationen</i>				



- \* 37 contacts available in stamped contact design 21S only
- \* 37-polig nur mit gestanzter Kontaktvariante 21S lieferbar
- \*\* RoHS on request
- \*\* RoHS auf Anfrage

Pin connectors with dimples / *Stiftsteckverbinder mit Kontaktnoppen*

Due to their low profile, these connectors can be installed in 19" assembly systems in accordance with DIN 41494.  
*Diese Steckverbinder sind aufgrund ihres geringen Einbaumaßes besonders für 19" Aufbausysteme nach DIN 41494 geeignet.*

# Technical Data

## Technische Daten

### Mechanical Data

#### Mechanische Daten

Mechanical Data <i>Mechanische Daten</i>	
Mating force per signal contact <i>Steckkraft pro Signalkontakt</i>	≤ 3,4 N
Unmating force per signal contact <i>Ziehkraft pro Signalkontakt</i>	≥ 0,2 N

### Electrical Data

#### Elektrische Daten

Electrical Data <i>Elektrische Daten</i>	
Current rating <i>Maximale Stromstärke</i>	5 A
Test voltage between 2 contacts / shell and contact <i>Prüfspannung zwischen 2 Kontakten bzw. Kontakt und Gehäuse</i>	1200 V / 1 min.
Meets transition resistance requirements per contact pair in line with DIN 41652: <i>Erfüllt Übergangswiderstand pro Kontaktpaar nach DIN 41652:</i>	
- Straight contacts / <i>gerade Kontakte</i>	≤ 10 mΩ
- Right angled contacts / <i>abgewinkelte Kontakte</i>	≤ 25 mΩ
Insulation resistance between contacts <i>Isolationswiderstand Kontakt / Kontakt</i>	≥ 5000 MΩ
Volume resistivity <i>Spezifischer Durchgangswiderstand</i>	10 <sup>16</sup> Ω cm
Dielectric strength <i>Spezifische Durchschlagsfestigkeit</i>	50 kV / mm

### Materials and Platings

#### Materialien und Oberflächen

Materials and Platings <i>Materialien und Oberflächen</i>	
Shell <i>Gehäuse</i>	Steel <i>Stahl</i>
Insulator <i>Isolierkörper</i>	Polyester, glass filled (UL94V-0), grey <i>Polyester, glasfaserverstärkt (UL94V-0), grau</i>
Relative temperature index according to UL 746 B <i>Rel. Temperaturindex nach UL 746 B</i>	130 °C (266 °F)
Heat deflection temperature limit according to DIN 53461 HDT/A <i>Formbeständigkeitstemperatur nach DIN 53461 HDT/A</i>	210 °C (410 °F)
Sub temperature limit <i>Untere Grenztemperatur</i>	-55 °C (-67 °F)
Shell plating (standard) <i>Gehäuseoberfläche (Standard)</i>	Tin plated over nickel, pin connector shell with dimples <i>verzinkt über Nickel, Stiftsteckverbindergehäuse mit Kontaktnoppen</i>
Contact material <i>Kontaktmaterial</i>	Copper alloy <i>Kupfer-Legierung</i>
Stamped contacts <i>Gestanzte Kontakte</i>	Selective gold plating over nickel, termination area tin plated <i>selektiv vergoldet über Nickel, Anschlussbereich verzinkt</i>
Machined contacts <i>Gedrehte Kontakte</i>	Gold plating over nickel <i>vergoldet über Nickel</i>
PCB-snap-in <i>PCB-snap-in</i>	Tin plated <i>verzinkt</i>



# Dimensions (Straight PCB Termination)

## Abmessungen (Gerader Leiterplattenanschluss)

### Ordering and Dimension Example

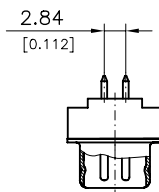
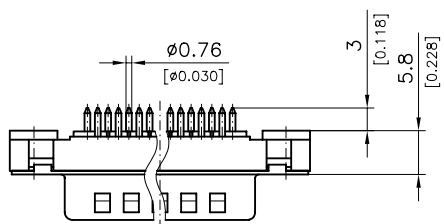
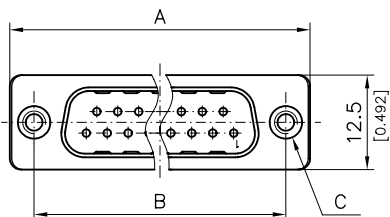
#### Bestell- und Abmessungsbeispiel

Pin connector, 15 way, contact 28, straight PCB termination, performance class 1, M3 thread, front mounted:

Stiftsteckverbinder, 15-polig, Kontakt 28, gerader Leiterplattenanschluss, Gütestufe 1, Gewinde M3, Montage frontseitig:

**FE15P28G1-0791**

**FE15P28G1-0791**



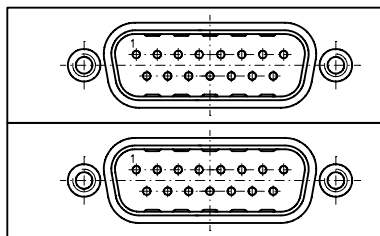
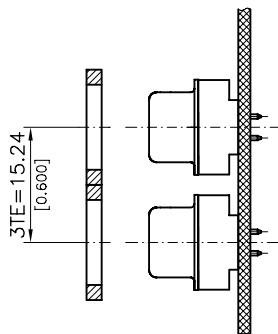
Shell Size <i>Gehäusegröße</i>	No. of Contacts <i>Polzahl</i>	A	B	C	
				4-40 UNC <i>Bestellnummer</i>	M3
1	9	30,8 (1.213)	25,0 (0.984)	FE09...-1046	FE09...-0791
2	15	39,1 (1.539)	33,3 (1.311)	FE15...-1046	FE15...-0791
3	25	53,0 (2.087)	47,04 (1.852)	FE25...-1046	FE25...-0791

### Mounting Example (Straight PCB Termination)

#### Einbaubeispiel (Gerader Leiterplattenanschluss)

1 TE = 1 division unit  
= 5.08 mm (0.200")

1 TE = 1 Teilungseinheit  
= 5,08 mm



# Dimensions (Straight PCB Termination with Snap-in Bolts)

## Abmessungen (Gerader Leiterplattenanschluss mit Schnappbolzen)

### Ordering and Dimension Example

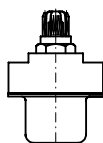
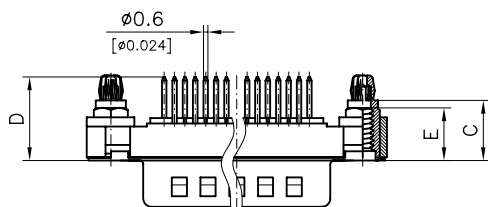
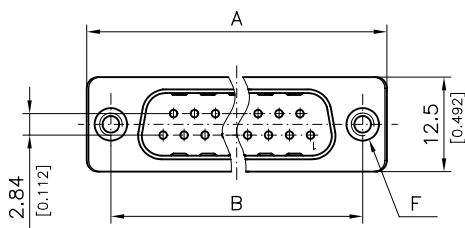
#### Bestell- und Abmessungsbeispiel

D-Sub pin connector, 15 contacts, contact 1, straight PCB termination, performance class 1, with mounted snap-in bolt for PCBs with 1.6 mm (0.063") thickness, inner thread M3:

D-Sub Stiftsteckverbinder, 15-polig, Kontakt 1, gerader Leiterplattenanschluss, Gütestufe 1, mit montierten Schnappbolzen für Leiterplatten mit 1,6 mm Stärke, Innengewinde M3:

FE15P1G1-1044

FE15P1G1-1044



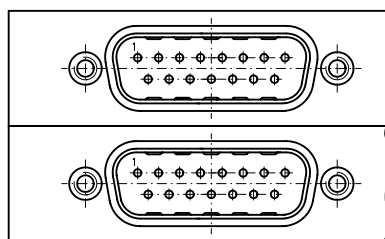
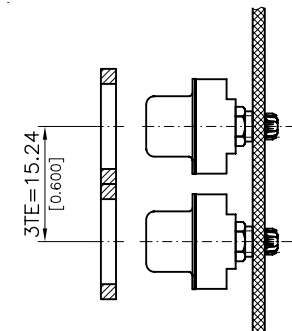
Shell Size <i>Gehäusegröße</i>	No. of Contacts <i>Polzahl</i>	A	B	C	D	E	F	
							Order Number <i>Bestellnummer</i> 4-40 UNC	M3
1	9	30,8 (1.213)	25,0 (0.984)	7,8 (0.307)	11,05 (0.435)	6,8 (0.268)	FE09...-1045	FE09...-1044
				6,0 (0.236)		—	FE09...-1262	—
2	15	39,1 (1.539)	33,3 (1.311)	7,8 (0.307)	11,05 (0.435)	6,8 (0.268)	FE15...-1045	FE15...-1044
				6,0 (0.236)		—	FE15...-1262	—
3	25	53,0 (2.087)	47,04 (1.852)	7,8 (0.307)	11,05 (0.435)	6,8 (0.268)	FE25...-1045	FE25...-1044
				6,0 (0.236)		—	FE25...-1262	—

### Mounting Example (Straight PCB Termination with Snap-in Bolts)

#### Einbaubeispiel (Gerader Leiterplattenanschluss mit Schnappbolzen)

1 TE = 1 division unit  
= 5.08 mm (0.200")

1 TE = 1 Teilungseinheit  
= 5,08 mm



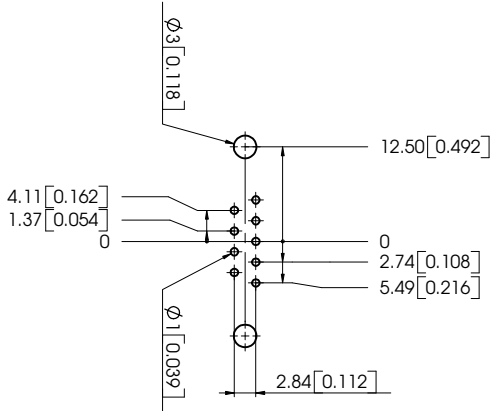


# PCB Hole Patterns PCB Thickness 1.6 mm (0.063")

## Leiterplattenlochbilder Leiterplattenstärke 1,6 mm

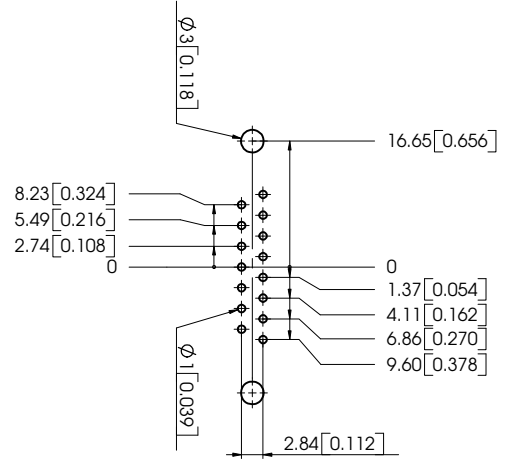
### 9 Contacts

#### 9-polig



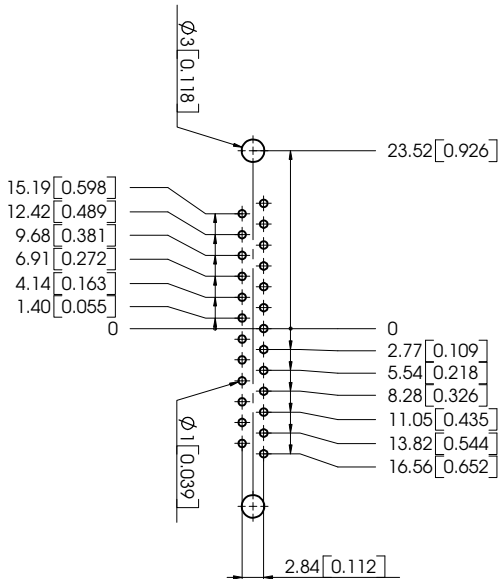
### 15 Contacts

#### 15-polig



### 25 Contacts

#### 25-polig



# Dimensions (Straight PCB Termination with Latch Lock)

## Abmessungen (Gerader Leiterplattenanschluss mit Rastelement)

### Ordering Example

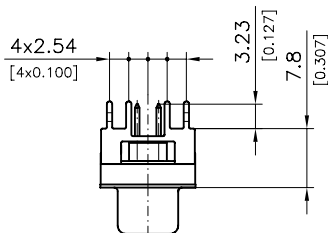
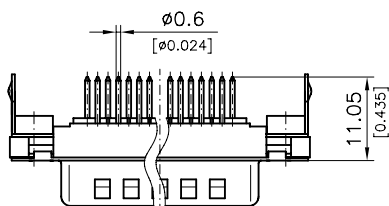
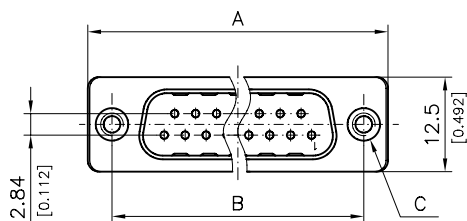
#### Bestellbeispiel

15 contacts pin connector, performance class 1, straight PCB termination, latch lock, thread M3:

15-poliger Stiftsteckverbinder, gerader Leiterplattenanschluss, Güteklasse 1, Rastelement, Gewinde M3:

FE15P1G1-1047

FE15P1G1-1047



Shell Size <i>Gehäusegröße</i>	No. of Contacts <i>Polzahl</i>	A	B	C	
				Order Number <i>Bestellnummer</i>	
				4-40 UNC	M3
1	9	30,8 (1.213)	25,0 (0.984)	FE09...-1048	FE09...-1047
2	15	39,1 (1.539)	33,3 (1.311)	FE15...-1048	FE15...-1047
3	25	53,0 (2.087)	47,04 (1.852)	FE25...-1048	FE25...-1047

### Information / Info:

Further latch lock dimensions available on request.

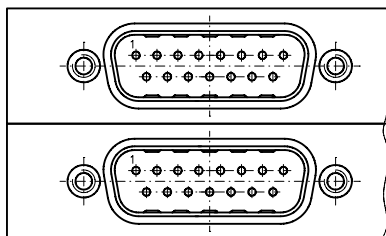
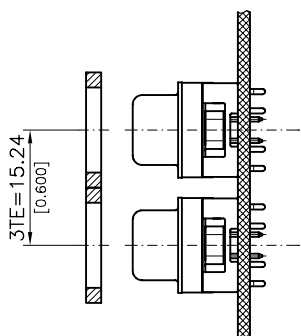
Weitere Rastelementhöhen auf Anfrage.

### Mounting Example (Straight PCB Termination with Catch Element)

#### Einbaubeispiel (Gerader Leiterplattenanschluss mit Rastelement)

1 TE = 1 division unit  
= 5.08 mm (0.200")

1 TE = 1 Teilungseinheit  
= 5,08 mm



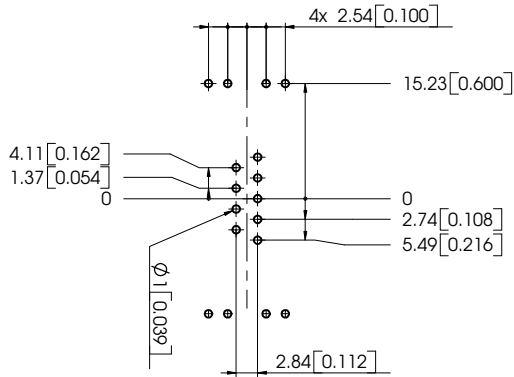


# PCB Hole Patterns PCB Thickness 1.6 mm (0.063")

## Leiterplattenlochbilder Leiterplattenstärke 1,6 mm

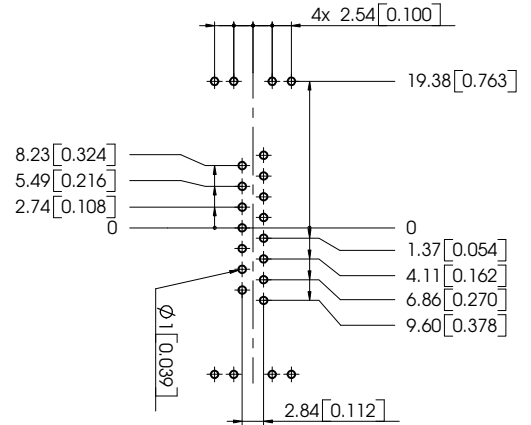
### 9 Contacts

#### 9-polig



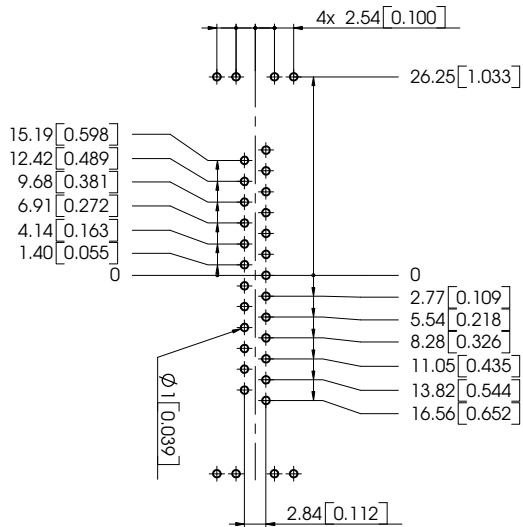
### 15 Contacts

#### 15-polig



### 25 Contacts

#### 25-polig



# Dimensions (Right Angled PCB Termination)

## Abmessungen (Abgewinkelter Leiterplattenanschluss)

### Ordering Example

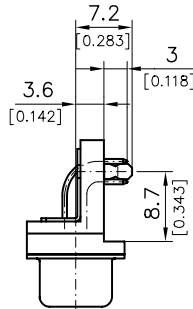
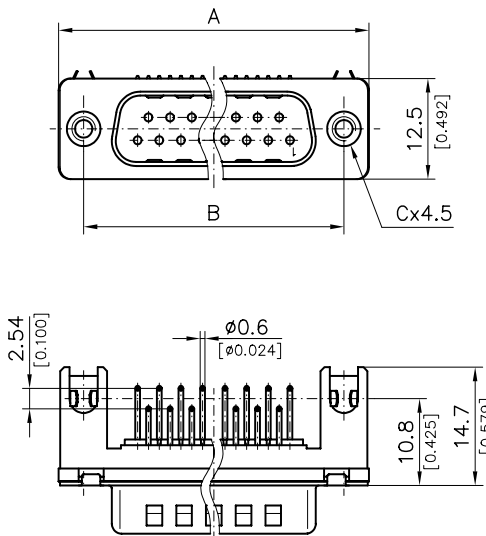
#### Bestellbeispiel

Pin connector, 15 way, right angled contacts, plastic bracket with snap-in bracket, performance class 1, M3 thread, front mounted:

FE15P21G1-1049

Stiftsteckverbinder, 15-polig, abgewinkelte Kontakte, Kunststoffwinkel mit Snap-in Winkel, Gütestufe 1, Gewinde M3, frontseitige Montage:

FE15P21G1-1049



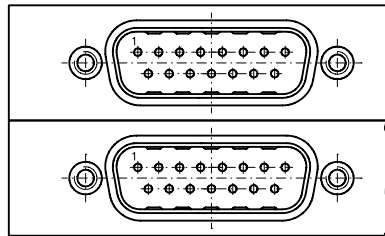
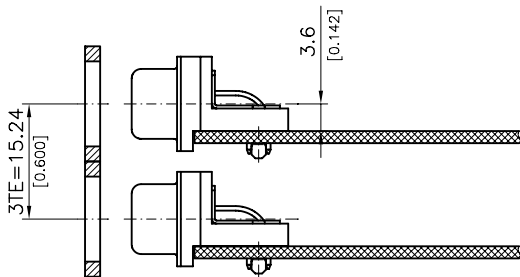
Shell Size <i>Gehäusegröße</i>	No. of Contacts <i>Polzahl</i>	A	B	C	
				Order Number <i>Bestellnummer</i>	
				4-40 UNC	M3
1	9	30,8 (1.213)	25,0 (0.984)	FE09...	FE09...-1049
2	15	39,1 (1.539)	33,3 (1.311)	FE15...	FE15...-1049
3	25	53,0 (2.087)	47,04 (1.852)	FE25...	FE25...-1049
4	37	69,3 (2.728)	63,50 (2.500)	FE37...	FE37...-1049

### Mounting Example (Right Angled PCB Termination)

#### Einbaubeispiel (Abgewinkelter Leiterplattenanschluss)

1 TE = 1 division unit  
= 5.08 mm (0.200")

1 TE = 1 Teilungseinheit  
= 5,08 mm





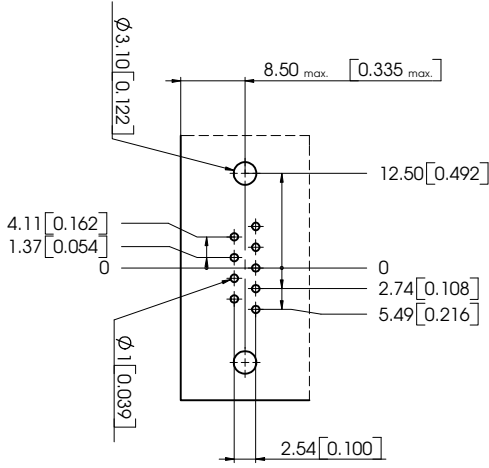


# PCB Hole Patterns PCB Thickness 1.6 mm (0.063")

## Leiterplattenlochbilder Leiterplattenstärke 1,6 mm

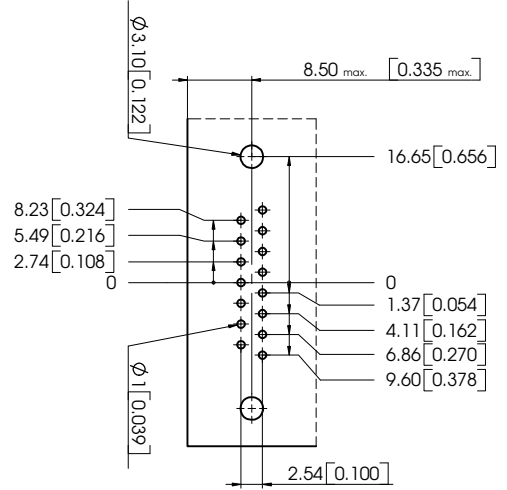
### 9 Contacts

#### 9-polig



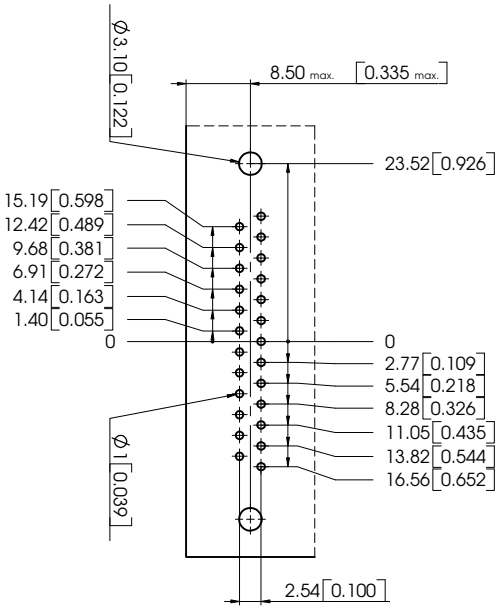
### 15 Contacts

#### 15-polig



### 25 Contacts

#### 25-polig



### 37 Contacts

#### 37-polig

