Table of Contents

Main characteristics		3
ZD*	*Solder cup*	4
ZD*A	*High density, solder cup*	7
D*A	*Crimp cable*	11
ZD*A F0	*High density, crimp cable*	14
ZD* OL2	*Straight PCB*	18
ZD*A OL2	*High density, straight PCB*	22
ZD* 1AKN	*90° PCB, Euro Footprint*	26
ZED*	*90° PCB, U.S. Footprint*	28
ZD* 1AKN	*High density, 90° PCB*	30
Accessories		33
Reeled contacts		34
PCB Hole Pattern		35
Mounting Options		38
Panel Cutouts		39
USA Tooling for ZDA / D*A		40
European Tooling for ZDA / D*A		41
Product Safety Information		42

Cannon ZD Connectors

- Stamped contacts ZD* series connectors.
- Closed-entry socket insulator for secure blind mating.
- Compatible with all other D*Subminiature series.
- Particularly suitable for industrial applications (control and measurement), and for computer- telecom- or medical equipment.
- Glass filled thermoplastic Insulator, UL 94V-0 (E112081)
- Standard arrangement (9, 15, 25, 37, 50 contacts), and high density arrangement (15, 26, 44, 62, 78) are available for both male and female connectors
- The references mentioned in this catalogue are class 3. See notes for class 2.



Electrical characteristics

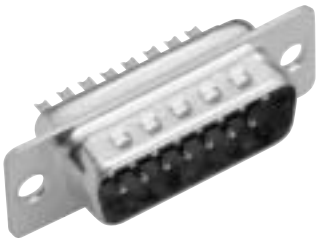
Rated current	5 A (Standard density) 2 A (High density) 1 A (IDC)
Dielectric withstanding voltage	1000 VAC for 1 min. (IDC 500 VAC for 1 min.)
Contact resistance	20 mΩ on mated contacts
Operating temperature range	-55° / + 105°C
Insulation resistance Standard / High density	5000 MΩ at 500 VDC (IDC 1000 MΩ at 500 VDC)

Mechanical characteristics

Insulators	Glass filled thermoplastic, black
Male Contacts	Brass, stamped and formed
Female Contacts	Phosphore bronze, stamped and formed
Finish	Gold over nickel in contact area, balance tin
Shells	Steel, plated
Mechanical endurance	Class 3: 50 mating / unmating cycles min. Class 2: 200 mating / unmating cycles min.

Dimensions shown in mm
Specifications and dimensions subject to change

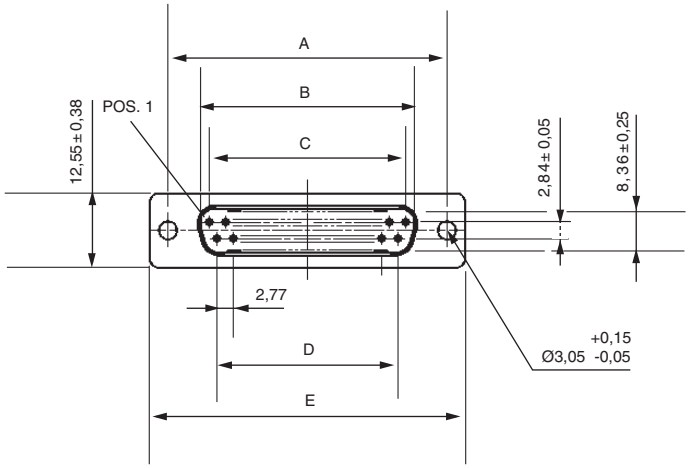
Plug 9 – 15 – 25 – 37 contacts

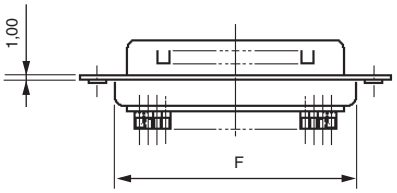


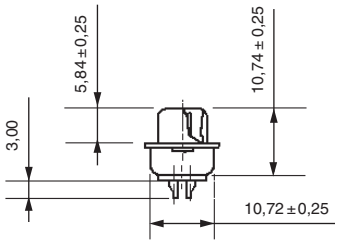
Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
E / 9	ZDE9P	ZDEE9P	ZDEE9P-AB
A / 15	ZDA15P	ZDAE15P	ZDAE15P-AB
B / 25	ZDB25P	ZDBE25P	ZDBE25P-AB
C / 37	ZDC37P	ZDCE37P	ZDCE37P-AB

Note: *Class 2 - Add suffix A191 Example: ZDE9P-A191*







Shell	A ± 0,13	B ± 0,25	C ± 0,13	D ± 0,13	E ± 0,38	F ± 0,25
E	24,99	16,92	11,08	8,31	30,89	19,28
A	33,32	25,25	19,39	16,62	39,10	27,51
B	47,04	38,96	33,24	30,47	53,09	41,30
C	63,50	55,25	49,86	47,09	69,40	57,71

- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

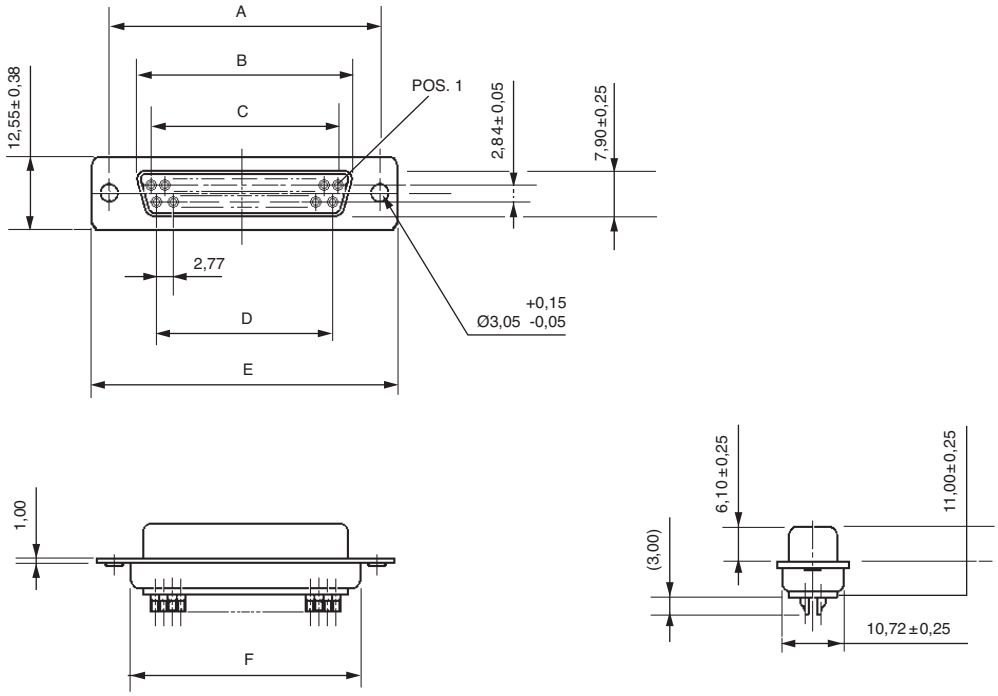
Receptacle 9 – 15 – 25 – 37 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
E / 9	ZDE9S	ZDEE9S	ZDEE9S-AB
A / 15	ZDA15S	ZDAE15S	ZDAE15S-AB
B / 25	ZDB25S	ZDBE25S	ZDBE25S-AB
C / 37	ZDC37S	ZDCE37S	ZDCE37S-AB

Note: *Class 2 - Add suffix A191 Example: ZDE9S-A191*



Shell	A ± 0,13	B ± 0,25	C ± 0,13	D ± 0,13	E ± 0,38	F ± 0,25
E	24,99	16,33	10,96	8,22	30,89	19,28
A	33,32	24,66	19,18	16,44	39,10	27,51
B	47,04	38,38	33,24	30,47	53,09	41,30
C	63,50	54,84	49,86	47,09	69,40	57,71

- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

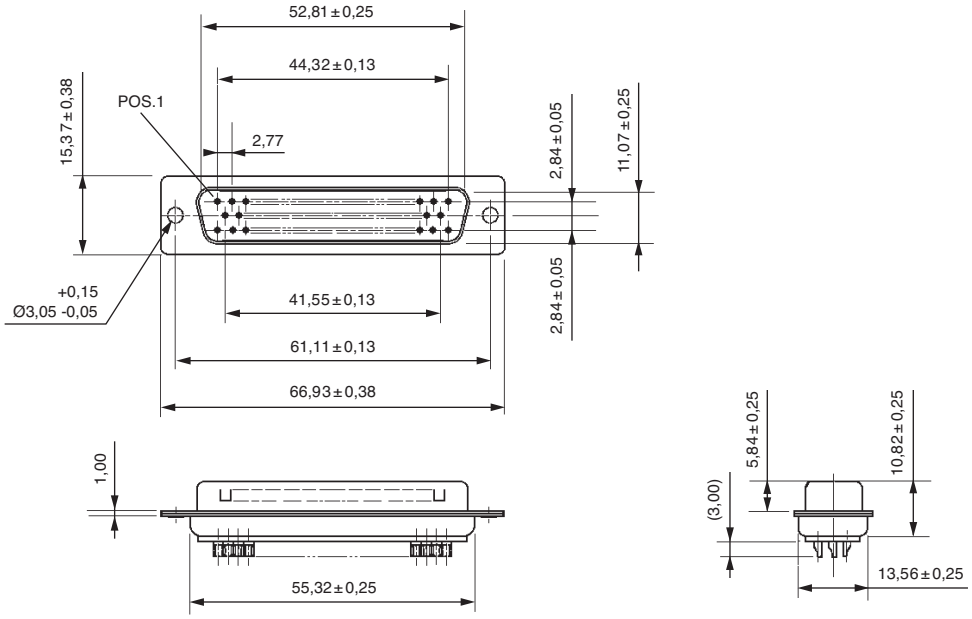
Plug 50 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
D / 50	ZDD50P	ZDDE50P	ZDDE50P-AB

Note: *Class 2 - Add suffix A191 Example: ZDD50P-A191*



- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

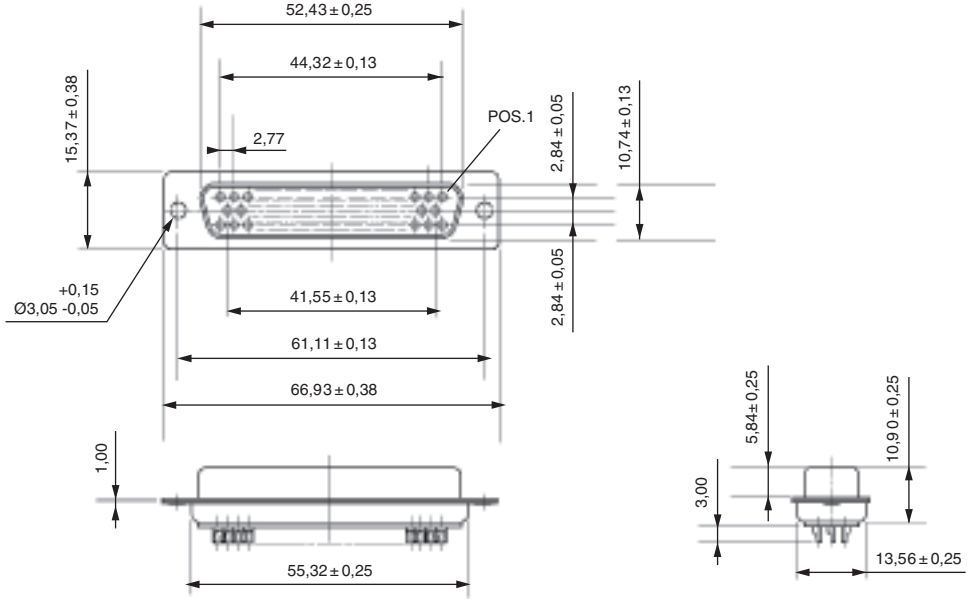
Receptacle 50 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
D / 50	ZDD50S	ZDDE50S	ZDDE50S-AB

Note: *Class 2 - Add suffix A191 Example: ZDD50S-A191*



- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

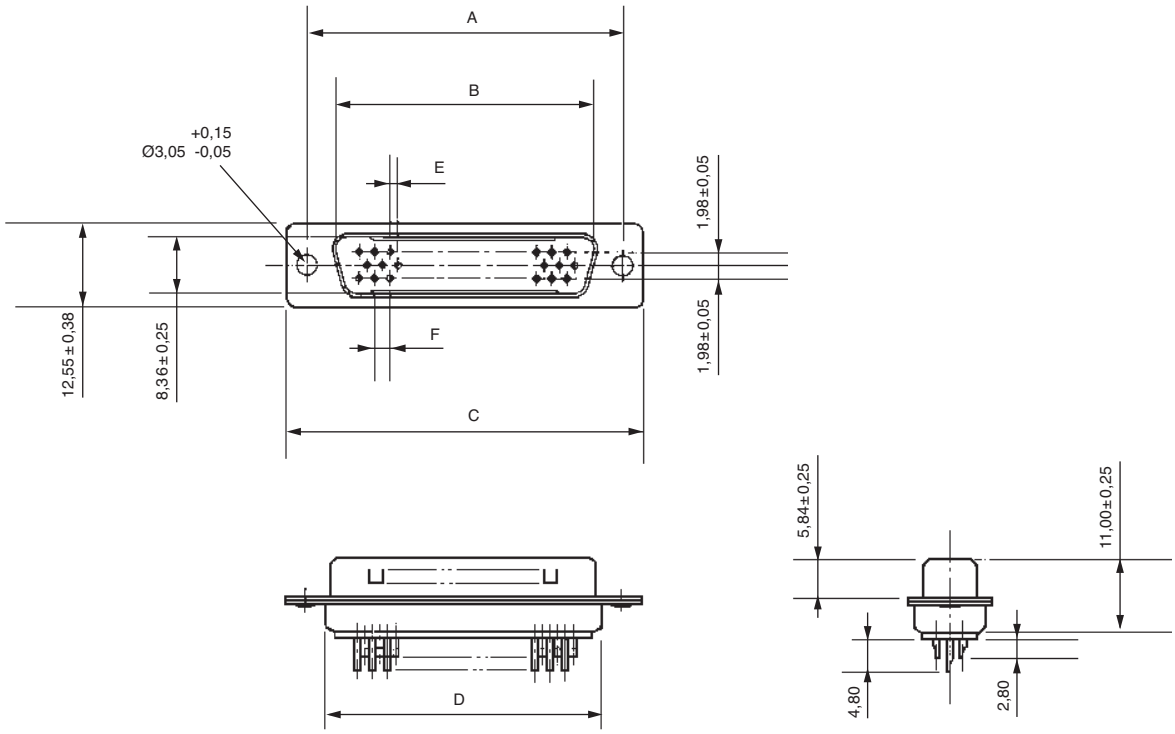
Plug 15 – 26 – 44 - 62 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
E / 15	ZDEA15P	ZDEAE15P	ZDEAE15P-AB
A / 26	ZDAA26P	ZDAAE26P	ZDAAE26P-AB
B / 44	ZDBA44P	ZDBAE44P	ZDBAE44P-AB
C / 62	ZDCA62P	ZDCAE62P	ZDCAE62P-AB

Note: *Class 2 - Add suffix A191 Example: ZDEA15P-A191*



Shell	A ± 0,13	B ± 0,25	C ± 0,38	D ± 0,25	E ± 0,05	F ± 0,05
E	24,99	16,92	30,89	19,28	1,145	2,29
A	33,32	25,25	39,10	27,51	1,145	2,29
B	47,04	38,96	53,09	41,30	1,145	2,29
C	63,50	55,25	69,40	57,71	1,205	2,41

- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

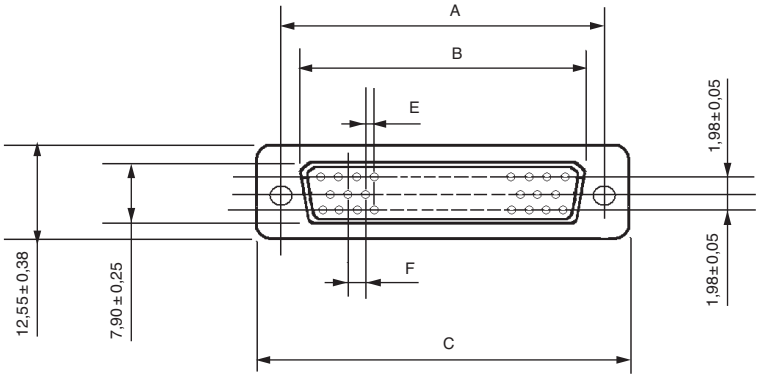
Receptacle 15 – 26 – 44 - 62 contacts

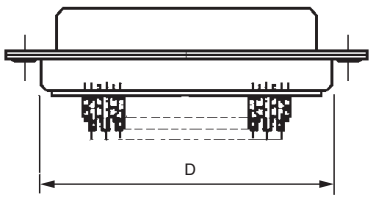


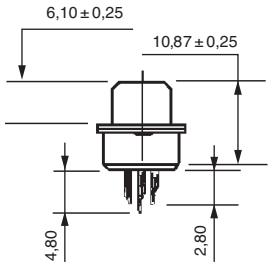
Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
E / 15	ZDEA15S	ZDEAE15S	ZDEAE15S-AB
A / 26	ZDAA26S	ZDAAE26S	ZDAAE26S-AB
B / 44	ZDBA44S	ZDBAE44S	ZDBAE44S-AB
C / 62	ZDCA62S	ZDCAE62S	ZDCAE62S-AB

Note: *Class 2 - Add suffix A191 Example: ZDEA15S-A191*







Shell	A ± 0,13	B ± 0,25	C ± 0,38	D ± 0,25	E ± 0,05	F ± 0,05
E	24,99	16,33	30,89	19,28	1,145	2,29
A	33,32	24,66	39,10	27,51	1,145	2,29
B	47,04	38,38	53,09	41,30	1,145	2,29
C	63,50	54,84	69,40	57,71	1,145	2,29

- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

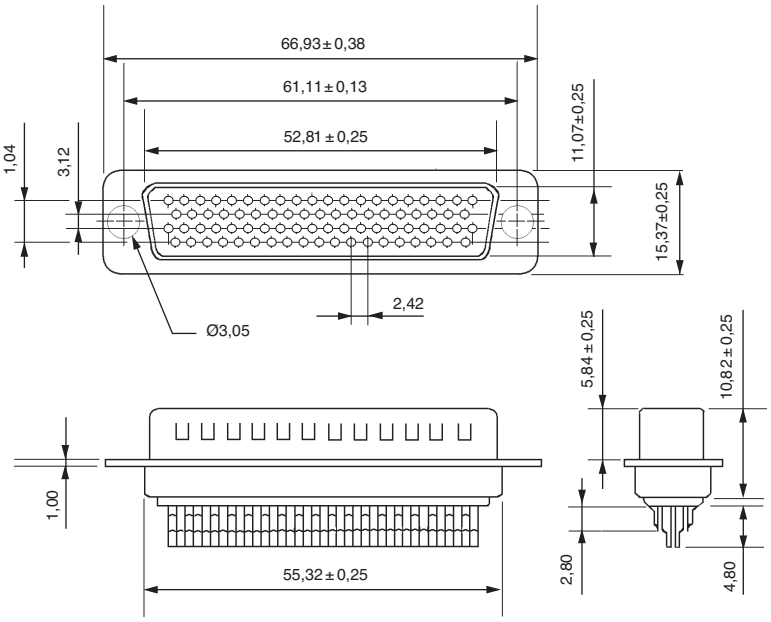
Plug 78 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
D / 78	ZDDA78P	ZDDAE78P	ZDDAE78P-AB

Note: *Classe 2 - Add suffix A191 Example: ZDDA78P-A191*



- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

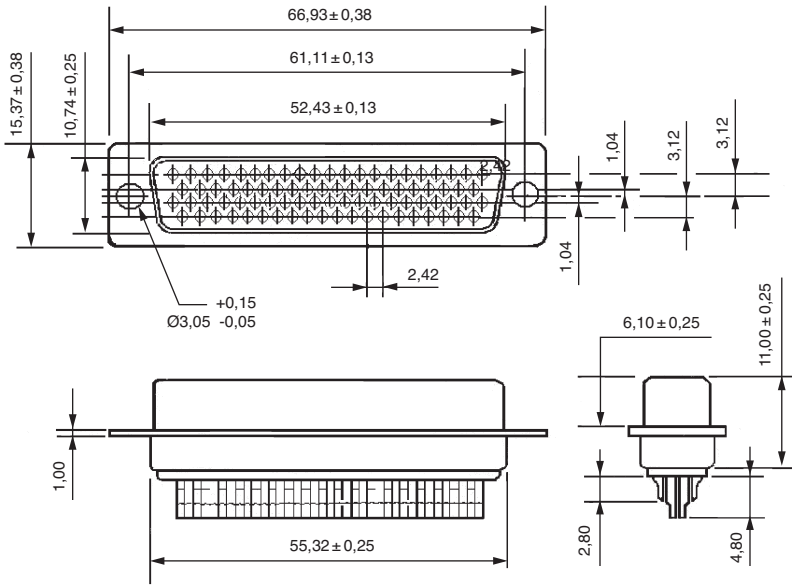
Receptacle 78 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
D / 78	ZDDA78S	ZDDAE78S	ZDDAE78S-AB

Note: *Class 2 - Add suffix A191 Example: ZDDA78S-A191*



- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

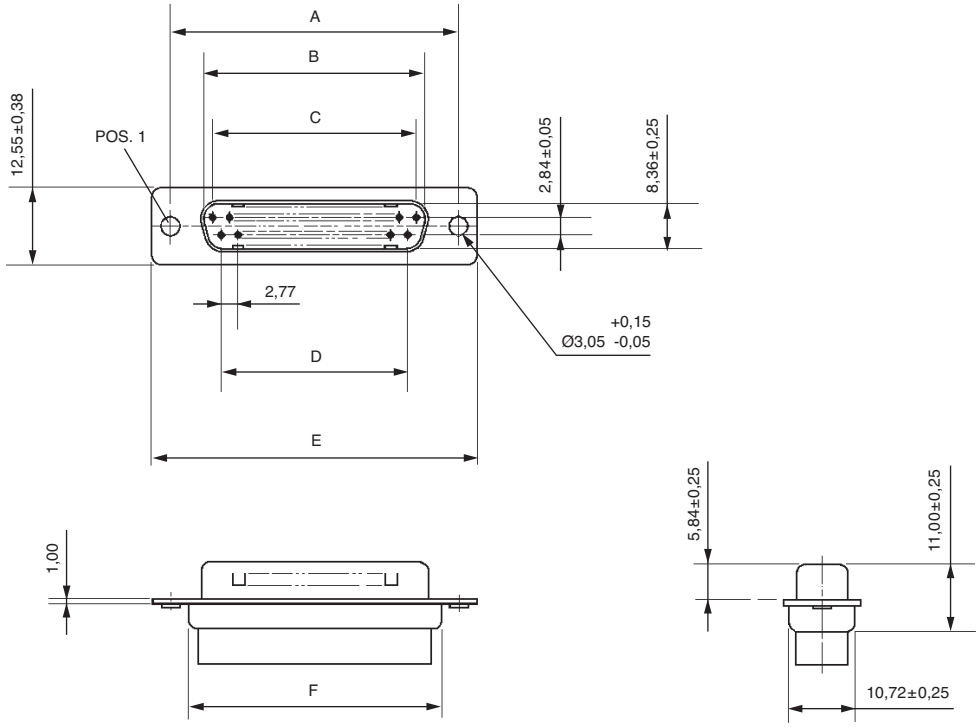
Plug 9 – 15 – 25 – 37 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
E / 9	DEA9P-K87-FO	DEAE9P-K87-FO	DEAE9P-K87-AB-FO
A / 15	DAA15P-K87-FO	DAAE15P-K87-FO	DAAE15P-K87-AB-FO
B / 25	DBA25P-K87-FO	DBAE25P-K87-FO	DBAE25P-K87-AB-FO
C / 37	DCA37P-K87-FO	DCAE37P-K87-FO	DCAE37P-K87-AB-FO

Connector supplied without contacts



Shell	A ± 0,13	B ± 0,25	C ± 0,13	D ± 0,13	E ± 0,38	F ± 0,25
E	24,99	16,92	11,08	8,31	30,89	19,28
A	33,32	25,25	19,39	16,62	39,10	27,51
B	47,04	38,96	33,24	30,47	53,09	41,30
C	63,50	55,25	49,86	47,09	69,40	57,71

- Reeled contacts, page 34
- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

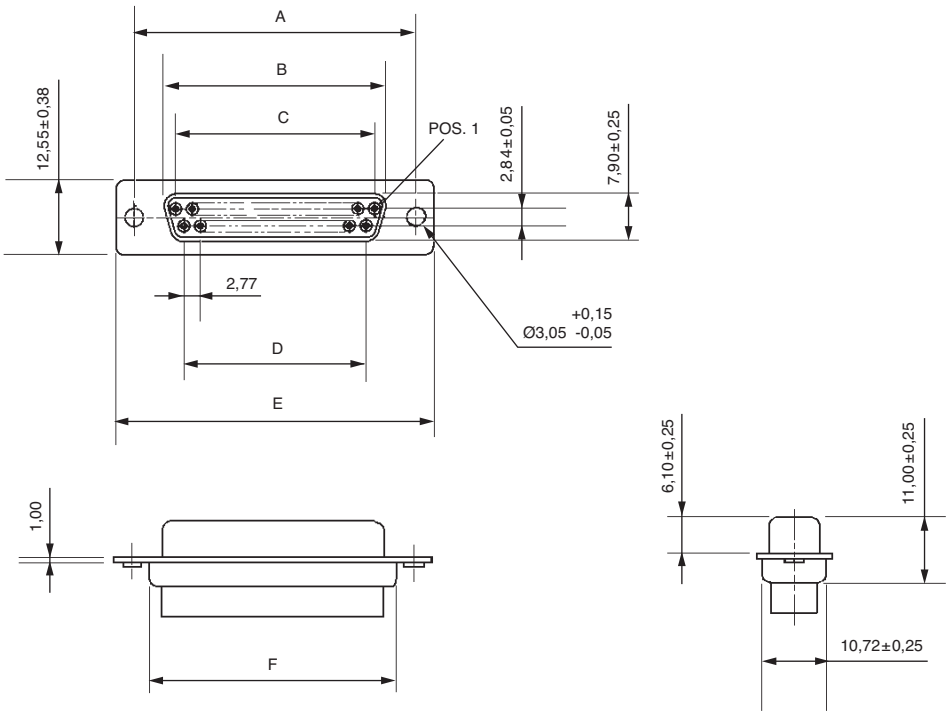
Receptacle 9 – 15 – 25 – 37 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
E / 9	DEA9S-A197-FO	DEAE9S-A197-FO	DEAE9S-A197-AB-FO
A / 15	DAA15S-A197-FO	DAAE15S-A197-FO	DAAE15S-A197-AB-FO
B / 25	DBA25S-A197-FO	DBAE25S-A197-FO	DBAE25S-A197-AB-FO
C / 37	DCA37S-A197-FO	DCAE37S-A197-FO	DCAE37S-A197-AB-FO

Connectors supplied without contacts



Shell	A ± 0,13	B ± 0,25	C ± 0,13	D ± 0,13	E ± 0,38	F ± 0,25
E	24,99	16,33	11,08	8,31	30,89	19,28
A	33,32	24,66	19,39	16,62	39,10	27,51
B	47,04	38,38	33,24	30,47	53,09	41,30
C	63,50	54,84	49,86	47,09	69,40	57,71

- Reeled contacts, page 34
- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

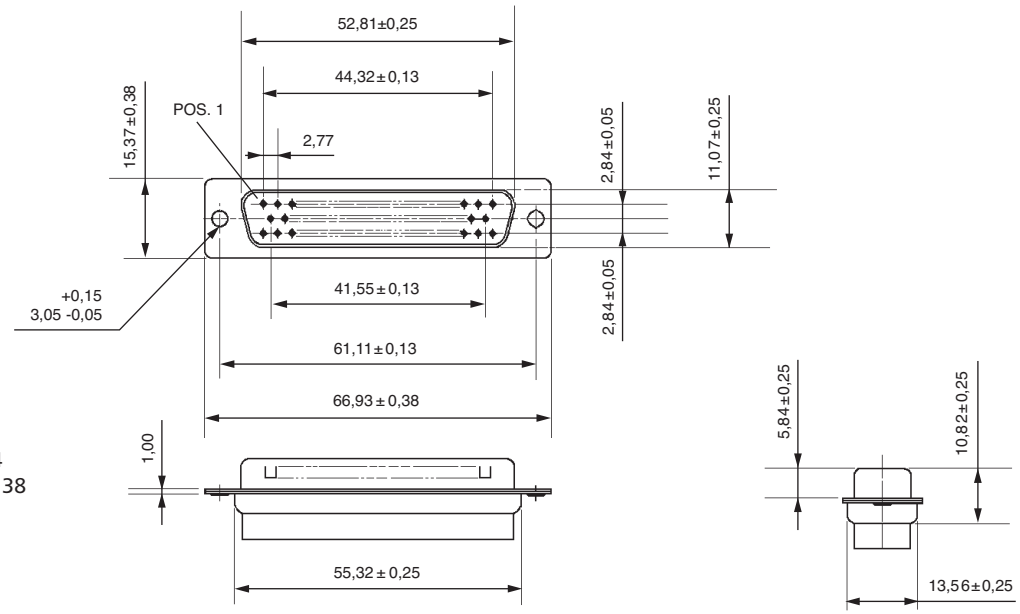
Plug 50 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
D / 50	DDA50P-K87-FO	DDAE50P-K87-FO	DDAE50P-K87-AB-FO

Connectors supplied without contacts



- Reeled contacts, page 34
- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

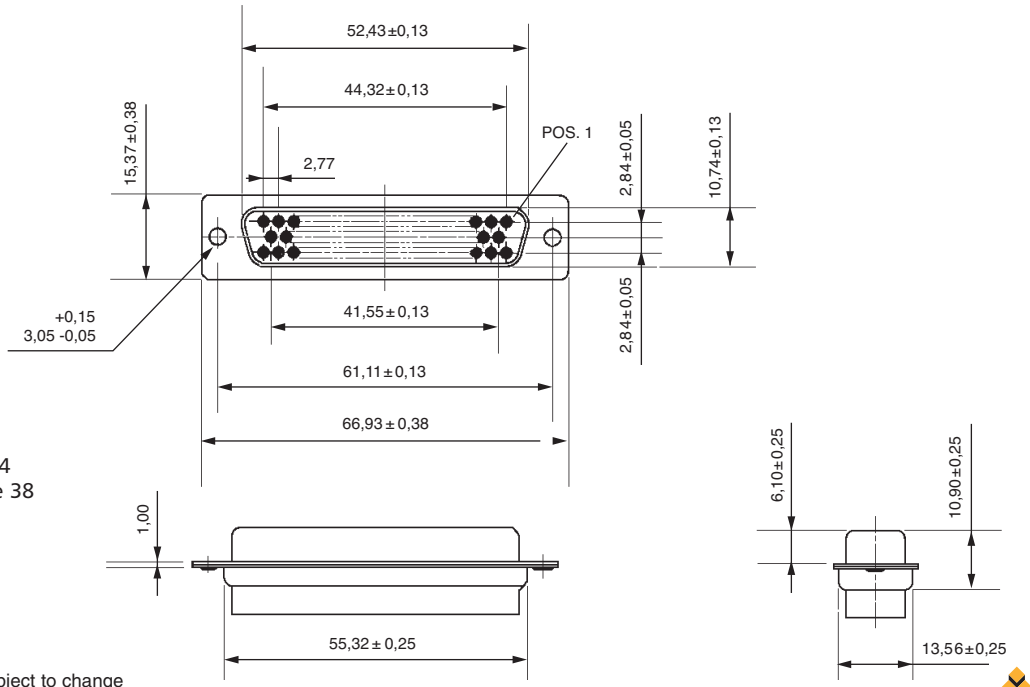
Receptacle 50 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
D / 50	DDA50S-A197-FO	DDAE50S-A197-FO	DDAE50S-A197-AB-FO

Connectors supplied without contacts



- Reeled contacts, page 34
- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

Dimensions shown in mm

Specifications and dimensions subject to change

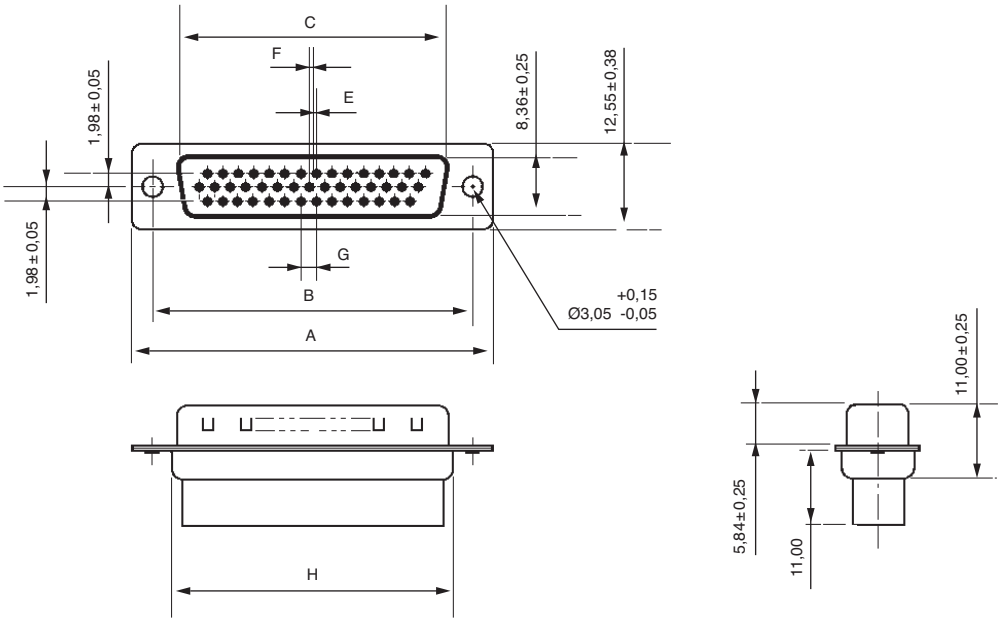
Plug 15 - 26 - 44 - 62 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
E / 15	ZDEA15P-FO	ZDEAE15P-FO	ZDEAE15P-AB-FO
A / 26	ZDAA26P-FO	ZDAAE26P-FO	ZDAAE26P-AB-FO
B / 44	ZDBA44P-FO	ZDBAE44P-FO	ZDBAE44P-AB-FO
C / 62	ZDCA62P-FO	ZDCAE62P-FO	ZDCAE62P-AB-FO

Connectors supplied without contacts



Shell	A ± 0,38	B ± 0,13	C ± 0,25	E	F	G ± 0,05	H ± 0,25
E	30,89	24,99	16,92	0,25	0,89	2,29	19,28
A	39,10	33,32	25,25	0,51	0,64	2,29	27,51
B	53,09	47,04	38,96	0,51	0,64	2,29	41,30
C	69,40	63,50	55,25	0,58	0,62	2,41	57,71

- Reeled contacts, page 34
- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

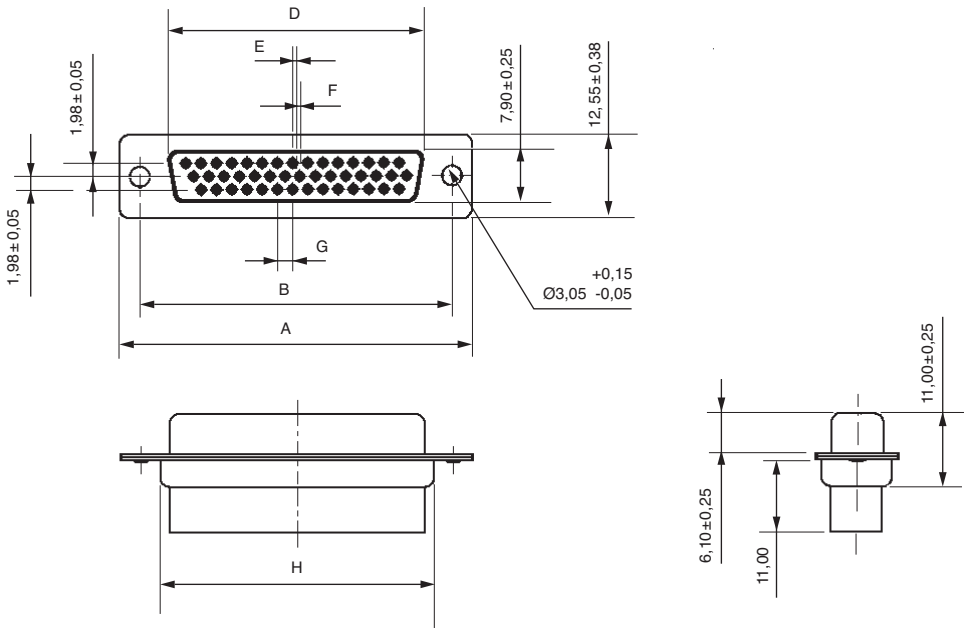
Receptacle 15 - 26 - 44 - 62 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
E / 15	ZDEA15S-FO	ZDEAE15S-FO	ZDEAE15S-AB-FO
A / 26	ZDAA26S-FO	ZDAAE26S-FO	ZDAAE26S-AB-FO
B / 44	ZDBA44S-FO	ZDBAE44S-FO	ZDBAE44S-AB-FO
C / 62	ZDCA62S-FO	ZDCAE62S-FO	ZDCAE62S-AB-FO

Connectors supplied without contacts



Shell	A ± 0,38	B ± 0,13	D ± 0,25	E	F	G ± 0,05	H ± 0,25
E	30,89	24,99	16,33	0,25	0,89	2,29	19,28
A	39,10	33,32	24,66	0,51	0,64	2,29	27,51
B	53,09	47,04	38,38	0,51	0,64	2,29	41,30
C	69,40	63,50	54,84	0,58	0,62	2,41	57,71

- Reeled contacts, page 34
- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

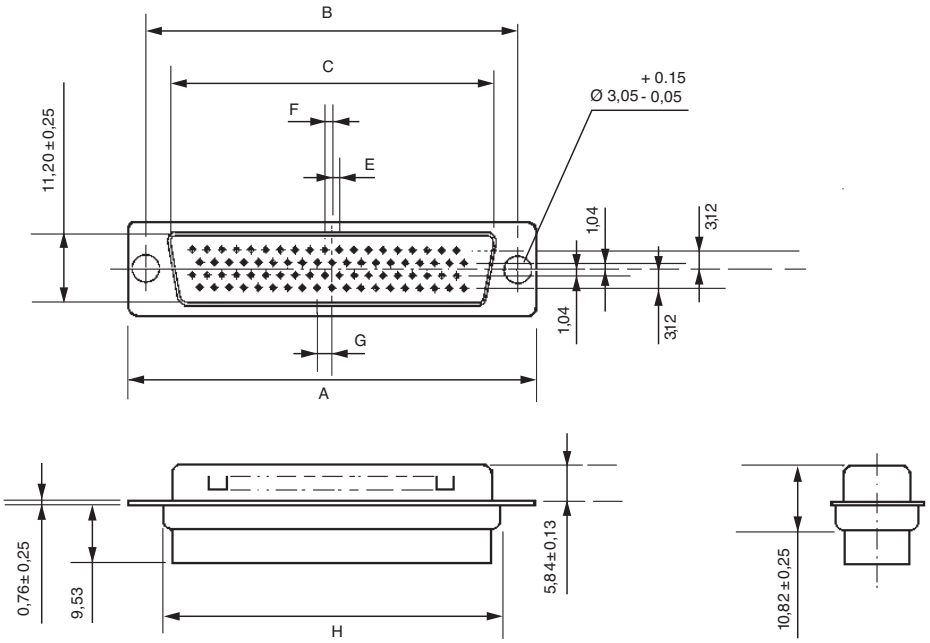
Plug 78 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
D / 78	ZDDA78P-FO	ZDDAE78P-FO	ZDDAE78P-AB-FO

Connectors supplied without contacts



Shell	A ± 0,38	B ± 0,13	C ± 0,25	E	F	G ± 0,05	H ± 0,25
D	66,93	61,11	52,81	1,21	1,21	2,41	55,32

- Reeled contacts, page 34
- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

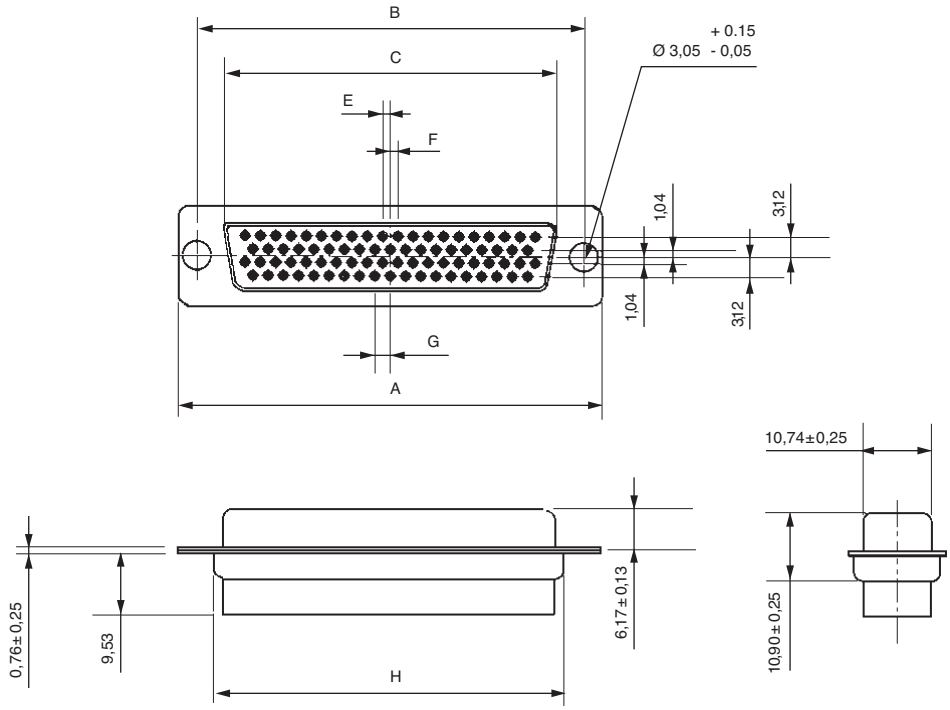
Receptacle 78 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4-40	Screwlock thread 4-40
D / 78	ZDDA78S-FO	ZDDAE78S-FO	ZDDAE78S-AB-FO

Connectors supplied without contacts



Shell	A ± 0,38	B ± 0,13	C ± 0,25	E	F	G ± 0,05	H ± 0,25
D	66,93	61,11	52,43	1,21	1,21	2,41	55,32

- Reeled contacts, page 34
- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

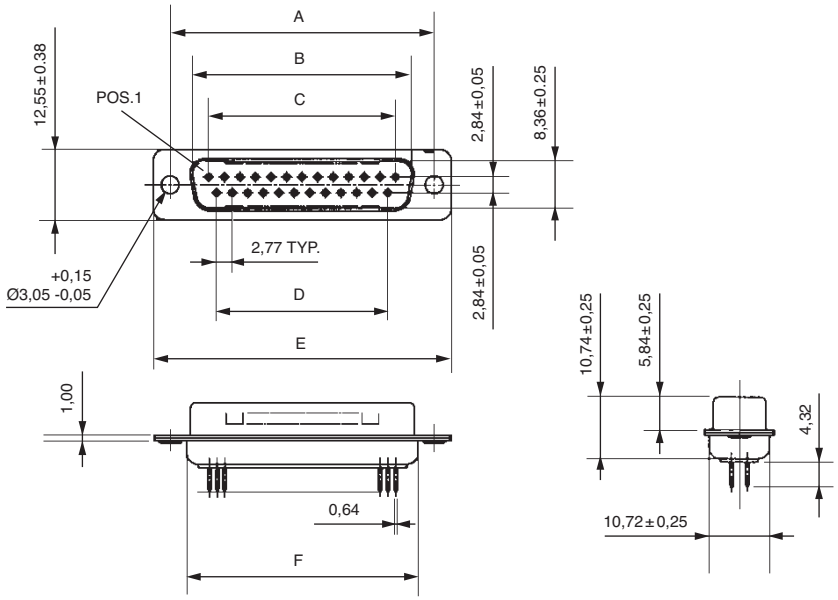
Plug 9 – 15 – 25 – 37 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4 - 40	Screwlock thread 4 - 40	Boardlock and thread 4 - 40 2B	Boardlock and screwlock 4 - 40 2B
E / 9	ZDE9POL2	ZDEE9POL2	ZDEE9POL2-AB	ZDEE9POL2-146	ZDEE9POL2-AB146
A / 15	ZDA15POL2	ZDAE15POL2	ZDAE15POL2-AB	ZDAE15POL2-146	ZDAE15POL2-AB-146
B / 25	ZDB25POL2	ZDBE25POL2	ZDBE25POL2-AB	ZDBE25POL2-146	ZDBE25POL2-AB-146
C / 37	ZDC37POL2	ZDCE37POL2	ZDCE37POL2-AB	ZDCE37POL2-146	ZDCE37POL2-AB-146

Note: *Class 2 - Add suffix A191 Example: ZDE9POL2-A191*



Shell	A ± 0,13	B ± 0,25	C ± 0,13	D ± 0,13	E ± 0,38	F ± 0,25
E	24,99	16,92	11,07	8,31	30,89	19,28
A	33,32	25,25	19,39	16,60	39,10	27,51
B	47,04	38,96	33,24	30,47	53,09	41,30
C	63,50	55,42	49,86	47,09	69,40	57,71

- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

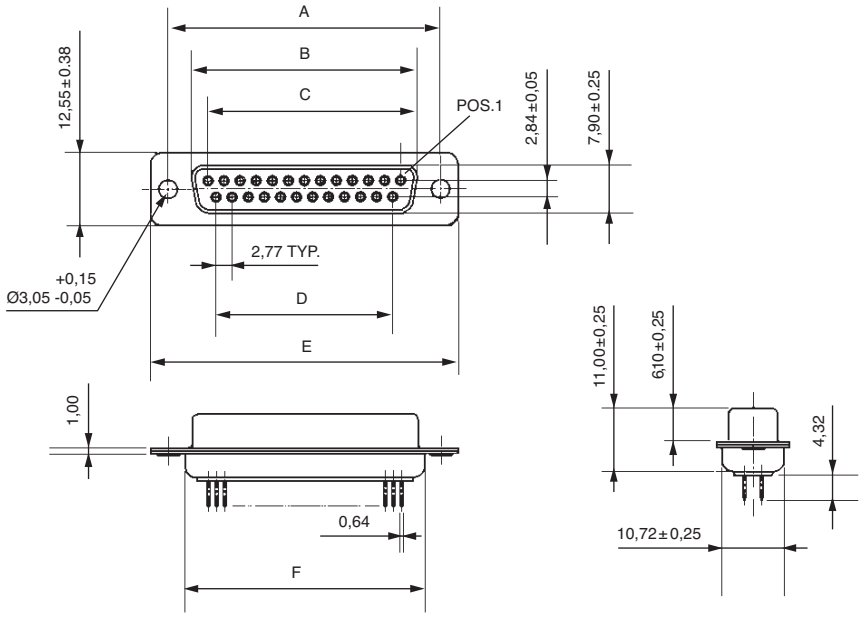
Receptacle 9 – 15 – 25 – 37 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut thread 4 - 40	Screwlock thread 4 - 40	Boardlock and thread 4 - 40 2B	Boardlock and screwlock 4 - 40 2B
E / 9	ZDE9SOL2	ZDEE9SOL2	ZDEE9SOL2-AB	ZDEE9SOL2-146	ZDEE9SOL2-AB-146
A / 15	ZDA15SOL2	ZDAE15SOL2	ZDAE15SOL2-AB	ZDAE15SOL2-146	ZDAE15SOL2-AB-146
B / 25	ZDB25SOL2	ZDBE25SOL2	ZDBE25SOL2-AB	ZDBE25SOL2-146	ZDBE25SOL2-AB-146
C / 37	ZDC37SOL2	ZDCE37SOL2	ZDCE37SOL2-AB	ZDCE37SOL2-146	ZDCE37SOL2-AB-146

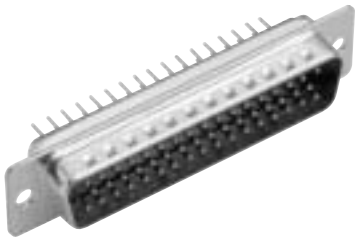
Note: *Class 2 - Add suffix A191 Example: ZDE9SOL2-A191*



Shell	A ± 0,13	B ± 0,25	C ± 0,13	D ± 0,13	E ± 0,38	F ± 0,25
E	24,99	16,33	11,08	8,31	30,89	19,28
A	33,32	24,66	19,39	16,60	39,10	27,51
B	47,04	38,38	33,24	30,47	53,09	41,30
C	63,50	54,84	49,86	47,09	69,40	57,71

- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

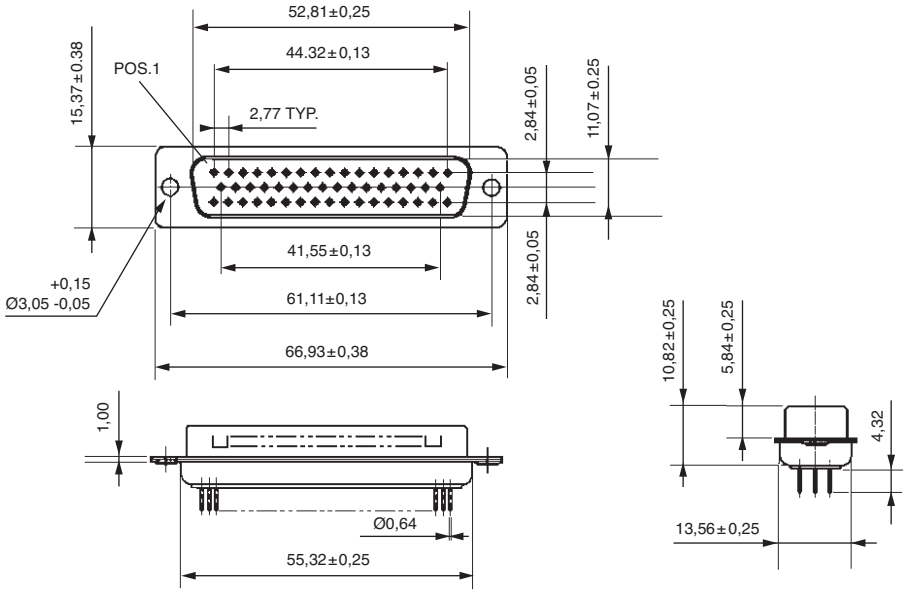
Plug 50 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut	Screwlock thread 4 - 40	Boardlock and thread 4 - 40 2B	Boardlock and screwlock 4 - 40 2B
D / 50	ZDD50POL2	ZDDE50POL2	ZDDE50POL2-AB	ZDDE50POL2-146	ZDDE50POL2-AB-146

Note: *Class 2 - Add suffix A191 Example: ZDD50POL2-A191*



- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

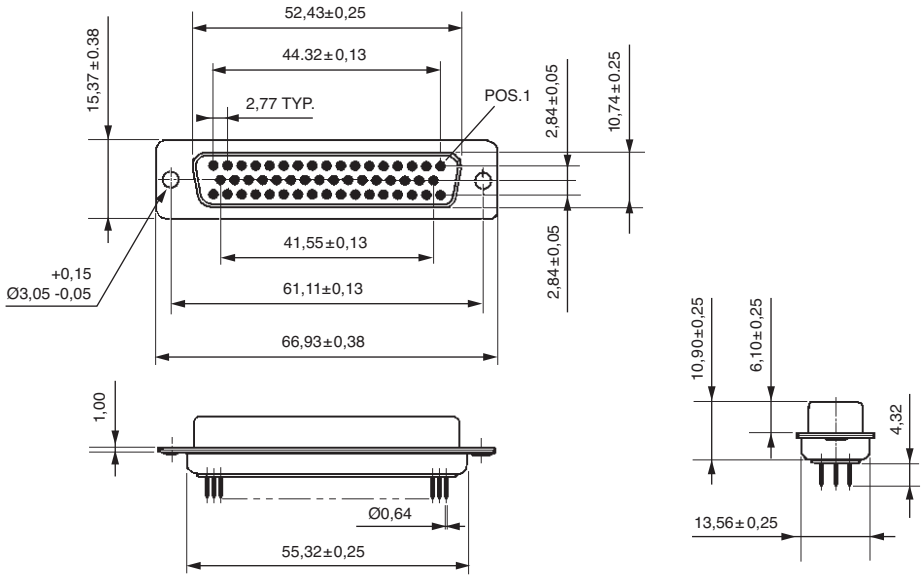
Receptacle 50 contacts



Designation

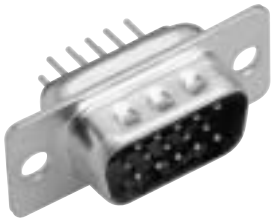
Shell size / Arrangement	Through hole	Captive nut thread 4 - 40	Screwlock thread 4 - 40	Boardlock and thread 4 - 40	Boardlock and screwlock 4 - 40
D / 50	ZDD50SOL2	ZDDE50SOL2	ZDDE50SOL2-AB	ZDDE50SOL2-146	ZDDE50SOL2-AB-146

Note: *Class 2 - Add suffix A191 Example: ZDD50SOL2-A191*



- Mounting options, page 38
- Panel cutout, page 39
- Accessories, page 33

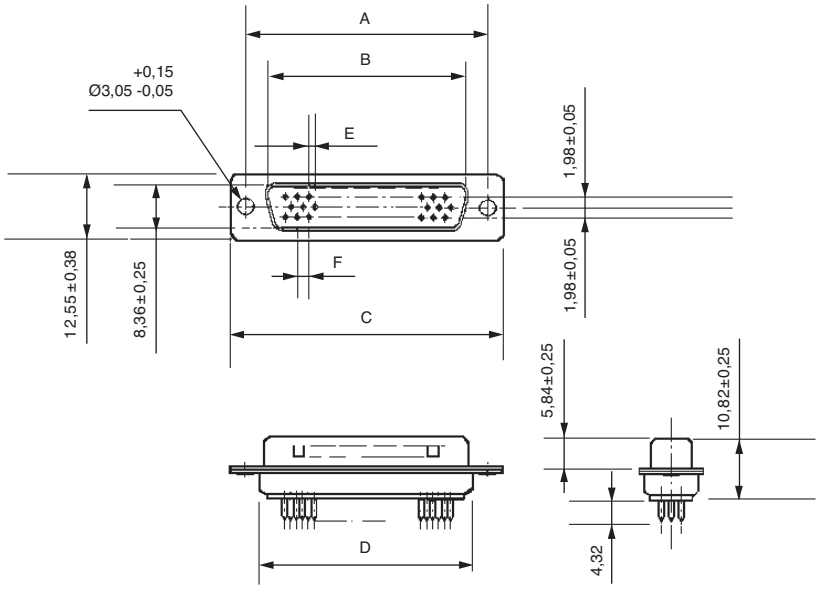
Plug 15 – 26 – 44 - 62 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut 4 - 40 2B	Screwlock 4 - 40 2B	Boardlock and thread 4 - 40 2B	Boardlock and screwlock 4 - 40 2B
E / 15	ZDEA15POL2	ZDEAE15POL2	ZDEAE15POL2-AB	ZDEAE15POL2-146	ZDEAE15POL2-AB-146
A / 26	ZDAA26POL2	ZDAAE26POL2	ZDAAE26POL2-AB	ZDAAE26POL2-146	ZDAAE26POL2-AB-146
B / 44	ZDBA44POL2	ZDBAE44POL2	ZDBAE44POL2-AB	ZDBAE44POL2-146	ZDBAE44POL2-AB-146
C / 62	ZDCA62POL2	ZDCAE62POL2	ZDCAE62POL2-AB	ZDCAE62POL2-146	ZDCAE62POL2-AB-146

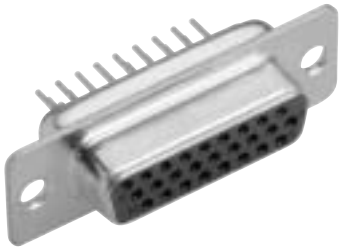
Note: *Class 2 - Add suffix A191 Example: ZDEA15POL2-A191*



Shell	A ± 0,13	B ± 0,25	C ± 0,38	D ± 0,25	E ± 0,05	F ± 0,05
E	24,99	16,92	30,89	19,28	1,145	2,29
A	33,32	25,25	39,10	27,51	1,145	2,29
B	47,04	38,96	53,09	41,30	1,145	2,29
C	63,50	55,25	69,40	57,71	1,145	2,29

- Mounting options, page 38
- PCB hole pattern, page 35
- Panel cutout, page 39

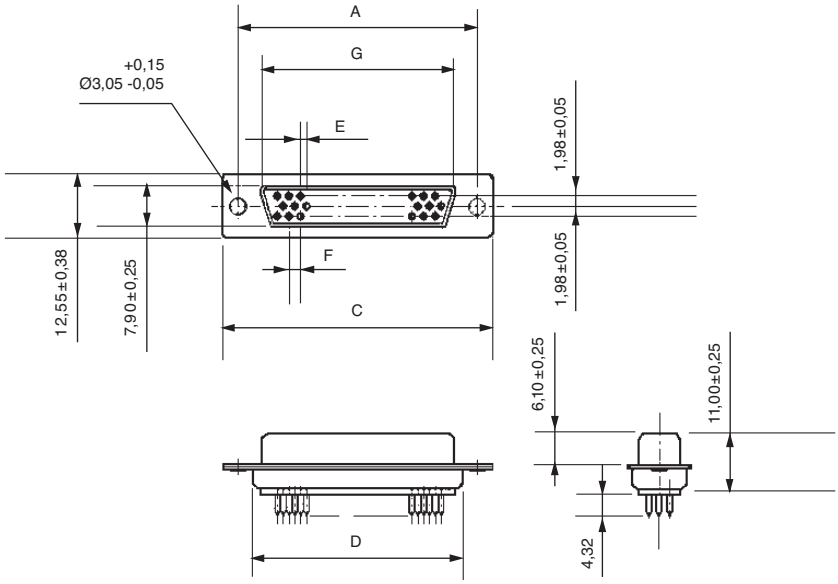
Receptacle 15 – 26 – 44 - 62 contacts



Designation

Shell size / Arrangement	Through hole	Captive nut 4 - 40 2B	Screwlock 4 - 40 2B	Boardlock and thread 4 - 40 2B	Boardlock and screwlock 4 - 40 2B
E / 15	ZDEA15SOL2	ZDEAE15SOL2	ZDEAE15SOL2-AB	ZDEAE15SOL2-146	ZDEAE15SOL2-AB-146
A / 26	ZDAA26SOL2	ZDAAE26SOL2	ZDAAE26SOL2-AB	ZDAAE26SOL2-146	ZDAAE26SOL2-AB-146
B / 44	ZDBA44SOL2	ZDBAE44SOL2	ZDBAE44SOL2-AB	ZDBAE44SOL2-146	ZDBAE44SOL2-AB-146
C / 62	ZDCA62SOL2	ZDCAE62SOL2	ZDCAE62SOL2-AB	ZDCAE62SOL2-146	ZDCAE62SOL2-AB-146

Note: *Class 2 - Add suffix A191 Example: ZDEA15SOL2-A191*



Shell	A ± 0,13	G ± 0,25	C ± 0,38	D ± 0,25	E ± 0,05	F ± 0,05
E	24,99	16,33	30,89	19,28	1,145	2,29
A	33,32	24,66	39,10	27,51	1,145	2,29
B	47,04	38,38	53,09	41,30	1,145	2,29
C	63,50	54,84	69,40	57,71	1,145	2,29

- Mounting options, page 38
- PCB hole pattern, page 35
- Panel cutout, page 39

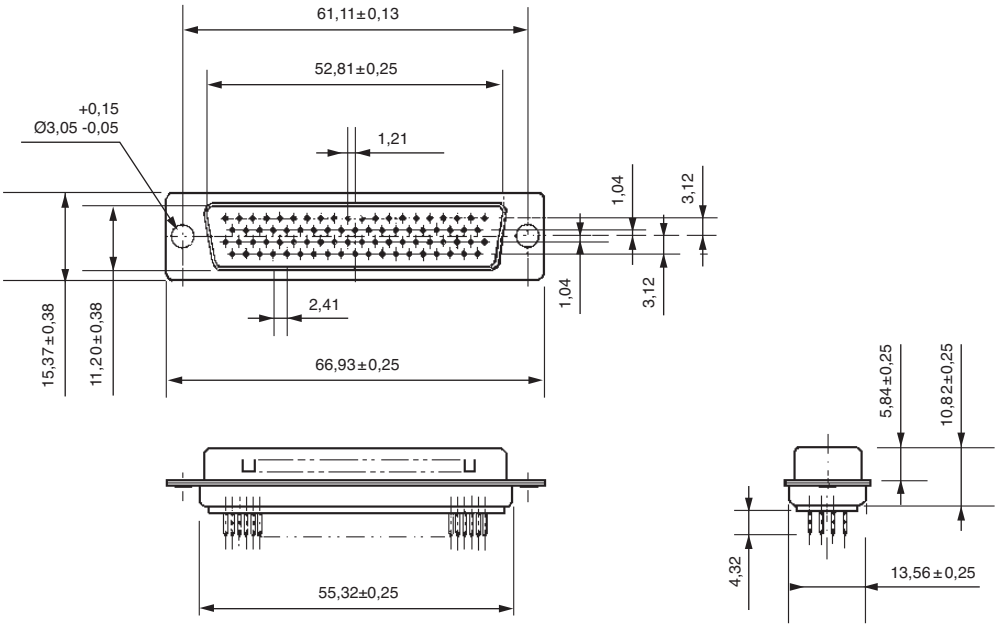
Plug 78 contacts



Designation

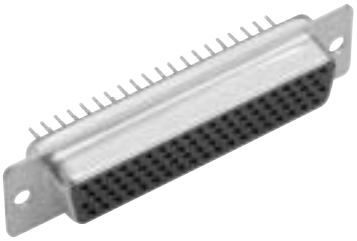
Shell size / Arrangement	Through hole	Captive nut thread 4 - 40	Screwlock thread 4 - 40	Boardlock and thread 4-40 2B	Boardlock and screwlock 4 - 40 2B
D / 78	ZDDA78POL2	ZDDAE78POL2	ZDDAE78POL2-AB	ZDDAE78POL2-146	ZDDAE78POL2-AB-146

Note: *Class 2 - Add suffix A191 Example: ZDDA78P0L2-A191*



- Mounting options, page 38
- PCB hole pattern, page 35
- Panel cutout, page 39

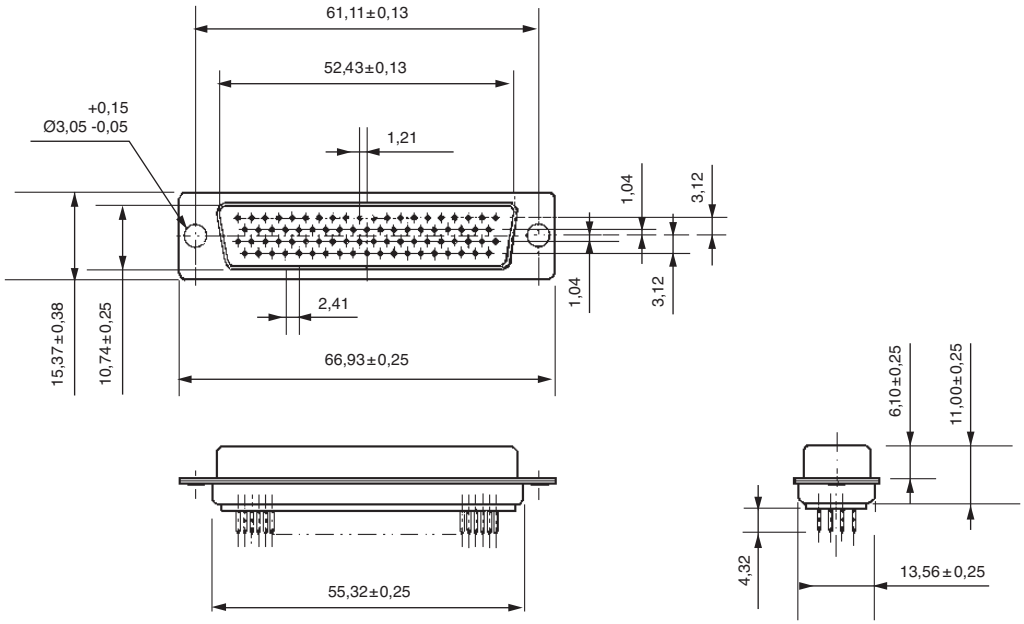
Receptacle 78 contacts



Designation

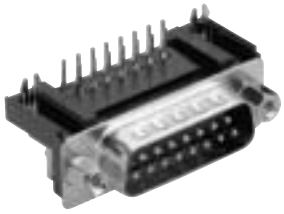
Shell size / Arrangement	Through hole	Captive nut thread 4 - 40	Screwlock thread 4 - 40	Boardlock and thread 4 - 40 2B	Boardlock and screwlock 4 - 40 2B
D / 78	ZDDA78SOL2	ZDDAE78SOL2	ZDDAE78SOL2-AB	ZDDAE78SOL2-146	ZDDAE78SOL2-AB-146

Note: *Class 2 - Add suffix A191 Example: ZDDA78S0L2-A191*



- Mounting options, page 38
- PCB hole pattern, page 35
- Panel cutout, page 39

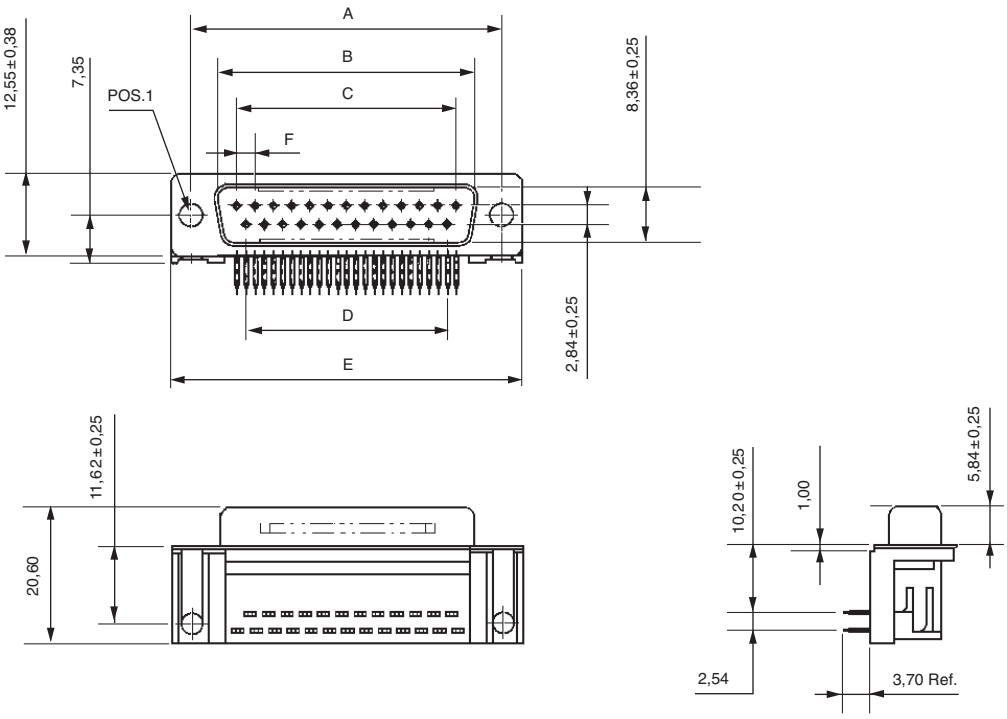
Plug 9 – 15 – 25 – 37 contacts



Designation

Shell size / Arrangement	Boardlock and screwlock 4-40 2B	Boardlock, threaded insert 4-40 2B
E / 9	ZDE9P-1AKN-146	ZDEL9P-1AKN-146
A / 15	ZDA15P-1AKN-146	ZDAL15P-1AKN-146
B / 25	ZDB25P-1AKN-146	ZDBL25P-1AKN-146
C / 37	ZDC37P-1AKN-146	ZDCL37P-1AKN-146

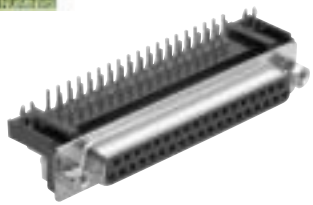
Note: *Class 2 - Add suffix A191 Example: ZDE9P-1AKN-A191-146*



Shell	A ± 0,25	B ± 0,25	C ± 0,13	D ± 0,13	E ± 0,38	F ± 0,05±0.13
E	24,99	16,92	10,96	8,22	30,89	2,74
A	33,32	25,25	19,18	16,44	39,10	2,74
B	47,04	38,96	33,24	30,47	53,09	2,77
C	63,50	55,42	49,86	47,09	69,40	2,77

- PCB hole pattern, page 35
- Panel cutout, page 39

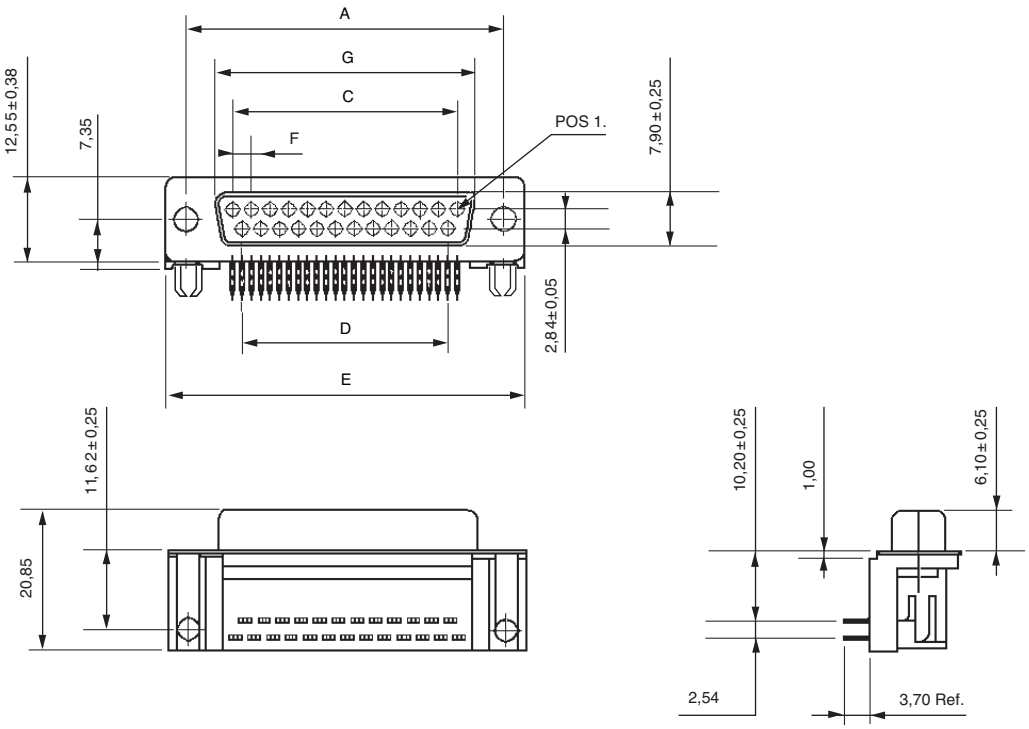
Receptacle 9 – 15 – 25 – 37 contacts



Designation

Shell size / Arrangement	Boardlock and screwlock 4-40 2B	Boardlock, threaded insert 4-40 2B
E / 9	ZDE9S-1AKN-146	ZDEL9S-1AKN-146
A / 15	ZDA15S-1AKN-146	ZDAL15S-1AKN-146
B / 25	ZDB25S-1AKN-146	ZDBL25S-1AKN-146
C / 37	ZDC37S-1AKN-146	ZDCL37S-1AKN-146

Note: *Class 2 - Add suffix A191 Example: ZDE9S-1AKN-A191-146*



Shell	A ± 0,25	C ± 0,13	D ± 0,13	E ± 0,38	F	G ± 0,25
E	24.99	10,96	8,22	30,89	2,74	16,33
A	33.32	19,18	16,44	39,10	2,74	24,66
B	47.04	33,24	30,47	53,09	2,77	38,38
C	63.50	49,86	47,09	69,40	2,77	54,84

- PCB hole pattern, page 35
- Panel cutout, page 39

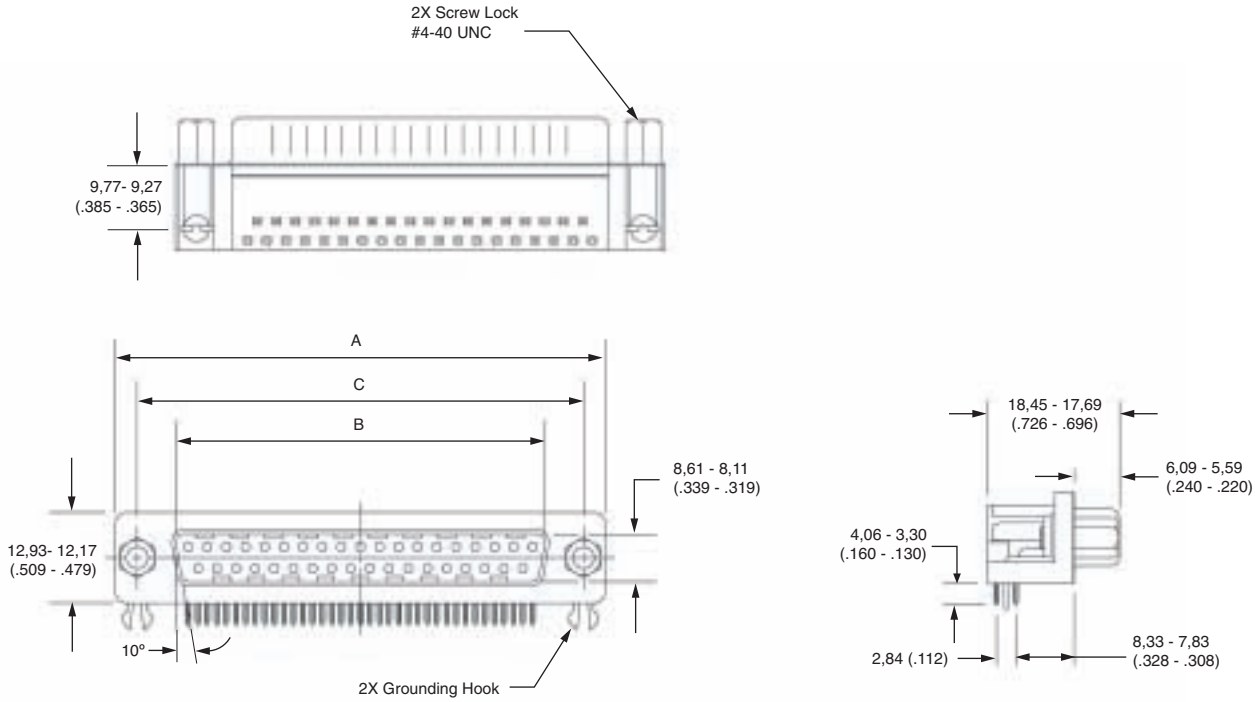
Plug 90° Solder Termination (Stamped) - U.S. Footprint .318 inch



Part Numbers

Shell size	Layout	Plastic Bracket Integrated Grounding Strap, Boardlock, Threaded Insert #4-40 UNC	Plastic Bracket Integrated Grounding Strap, Boardlock, Threaded Insert #4-40 UNC
DE	9	ZEDEL9PBA	ZEDE9PBA
DA	5	ZEDAL15PBA	ZEDA15PBA
DB	25	ZEDBL25PBA	ZEDB25PBA
DC	37	ZEDCL37PBA	ZEDC37PBA

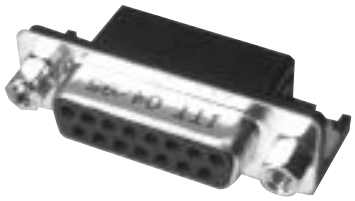
Note: *For contacts with 30 microinches of gold add -30. Example ZEDEL9PBA-30*



Dimensions

Shell size	A ±0,38 (.15)	B ±0,25 (.010)	C ±0,25 (.010)
DE	30,89 (1.216)	16,92 (.666)	24,99 (.984)
DA	39,09 (1.539)	25,25 (.994)	33,32 (1.312)
DB	53,09 (2.090)	38,96 (1.534)	47,04 (1.852)
DC	69,40 (2.732)	55,42 (2.182)	63,50 (2.500)

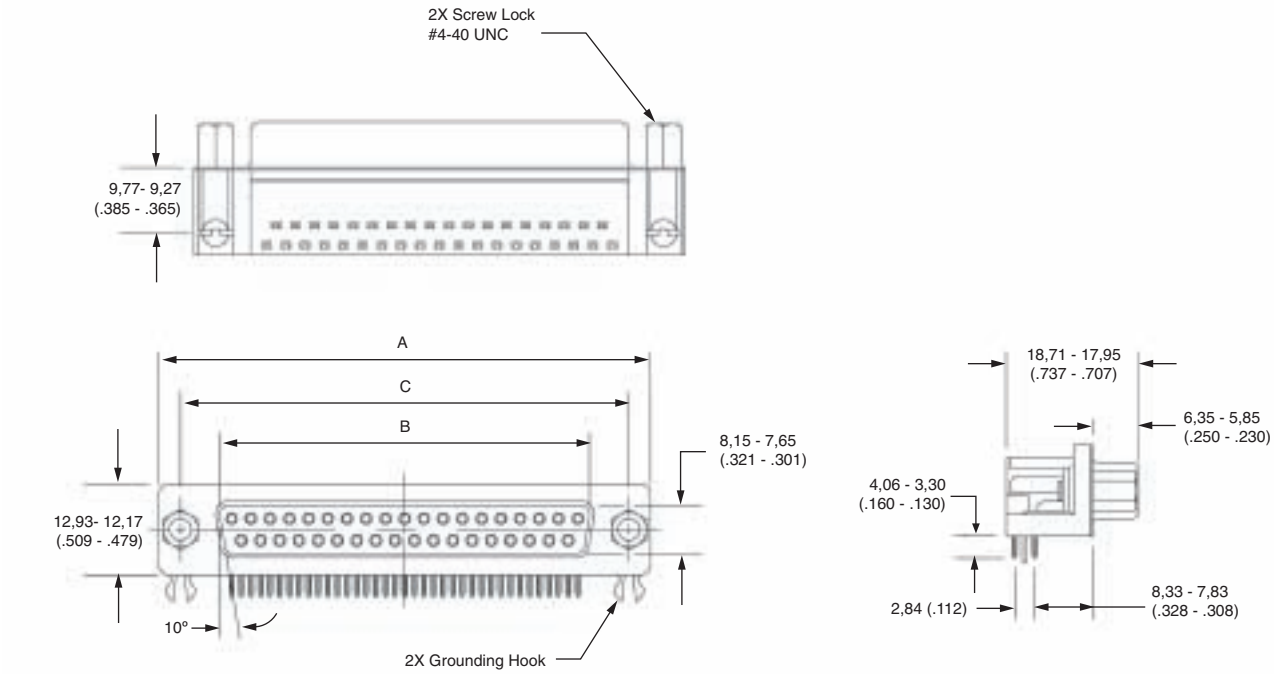
Receptacle 90° Solder Termination (Stamped) - U.S. Footprint .318 inch



Part Numbers

Shell size	Layout	Plastic Bracket Integrated Grounding Strap, Boardlock, Threaded Insert #4-40 UNC	Plastic Bracket Integrated Grounding Strap, Boardlock, Threaded Insert #4-40 UNC
DE	9	ZEDEL9SBA	ZEDE9SBA
DA	15	ZEDAL15SBA	ZEDA15SBA
DB	25	ZEDBL25SBA	ZEDB25SBA
DC	37	ZEDCL37SBA	ZEDC37SBA

Note: *For contacts with 30 microinches of gold add -30. Example ZEDEL9SBA-30*

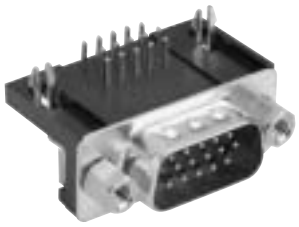


Dimensions

Shell size	A ±0,38 (.15)	B ±0,25 (.010)	C ±0,25 (.010)
DE	30,89 (1.216)	16,28 (.641)	24,99 (.984)
DA	39,09 (1.539)	24,66 (.971)	33,32 (1.312)
DB	53,09 (2.090)	38,38 (1.511)	47,04 (1.852)
DC	69,40 (2.732)	54,84 (2.159)	63,50 (2.500)

Dimensions shown in mm
Specifications and dimensions subject to change

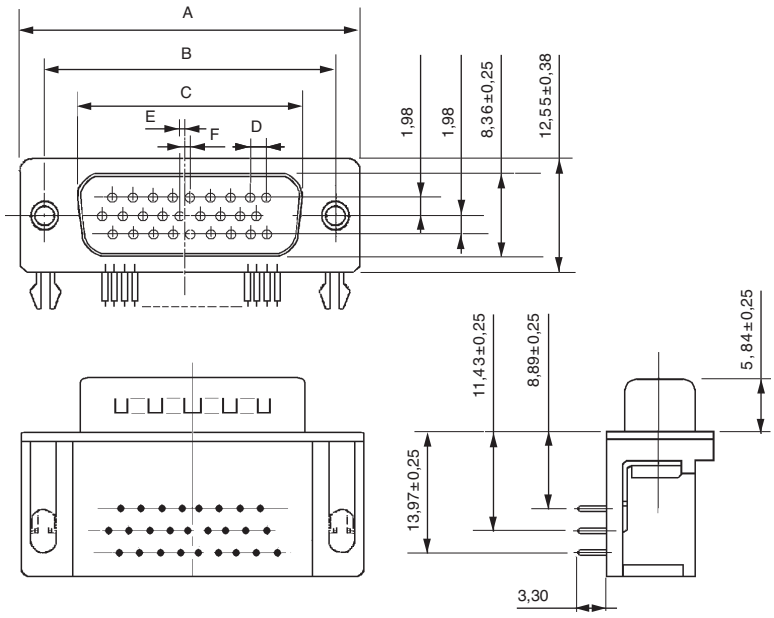
Plug 15 – 26 – 44 - 62 contacts



Designation

Shell size / Arrangement	Boardlock and screwlock 4-40 2B	Boardlock, threaded insert 4-40 2B
E / 15	ZDE15P1AKN-146	ZDEL15P1AKN-146
A / 26	ZDA26P1AKN-146	ZDAL26P1AKN-146
B / 44	ZDB44P1AKN-146	ZDBL44P1AKN-146
C / 62	ZDC62P1AKN-146	ZDCL62P1AKN-146

Note: *Class 2 - Add suffix A191 Example: ZDE15P1AKN-A191-146*



Shell	A ± 0,38	B ± 0,13	C ± 0,25	D ± 0,05	E	F
E	30,89	24,99	16,92	2,29	0,89	0,25
A	39,10	33,32	25,25	2,29	0,64	0,51
B	53,09	47,04	38,96	2,29	0,64	0,51
C	69,40	63,50	55,42	2,41	0,62	0,58

- PCB hole pattern, page 35
- Panel cutout, page 39

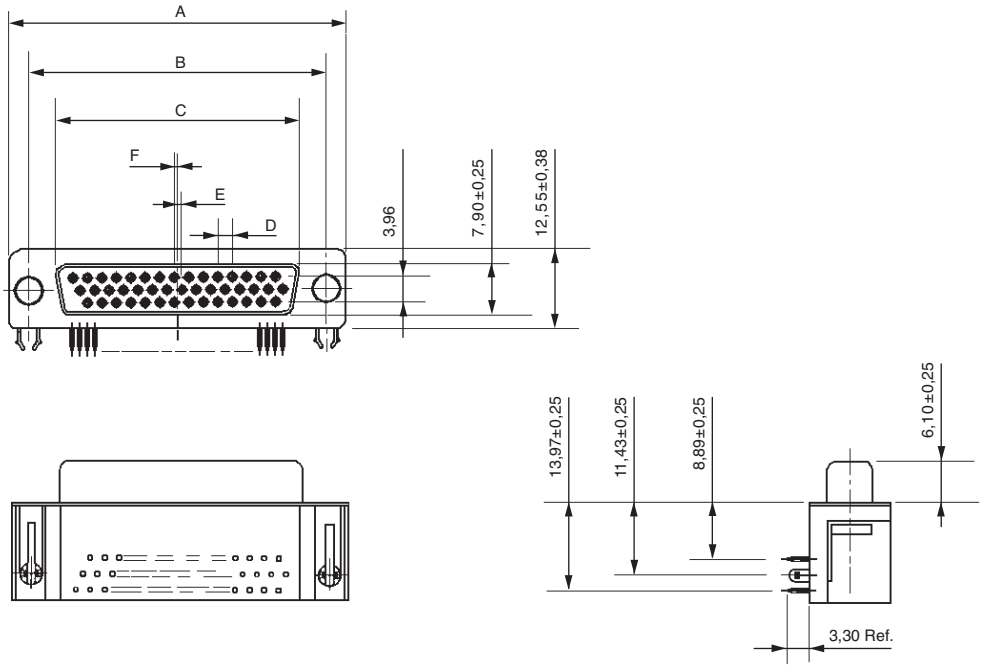
Receptacle 15 – 26 – 44 - 62 contacts



Designation

Shell size / Arrangement	Boardlock and screwlock 4-40 2B	Boardlock threaded insert 4-40 2B
E / 15	ZDE15S1AKN-146	ZDEL15S1AKN-146
A / 26	ZDA26S1AKN-146	ZDAL26S1AKN-146
B / 44	ZDB44S1AKN-146	ZDBL44S1AKN-146
C / 62	ZDC62S1AKN-146	ZDCL62S1AKN-146

Note: *Class 2 - Add suffix A191 Example: ZDE15S1AKN-A191-146*



Shell	A ± 0,38	B ± 0,13	C ± 0,25	D ± 0,05	E	F
E	30,89	24,99	16,33	2,29	0,89	0,25
A	39,10	33,32	24,66	2,29	0,64	0,51
B	53,09	47,04	38,38	2,29	0,64	0,51
C	69,40	63,50	54,84	2,41	0,62	0,58

- PCB hole pattern, page 35
- Panel cutout, page 39

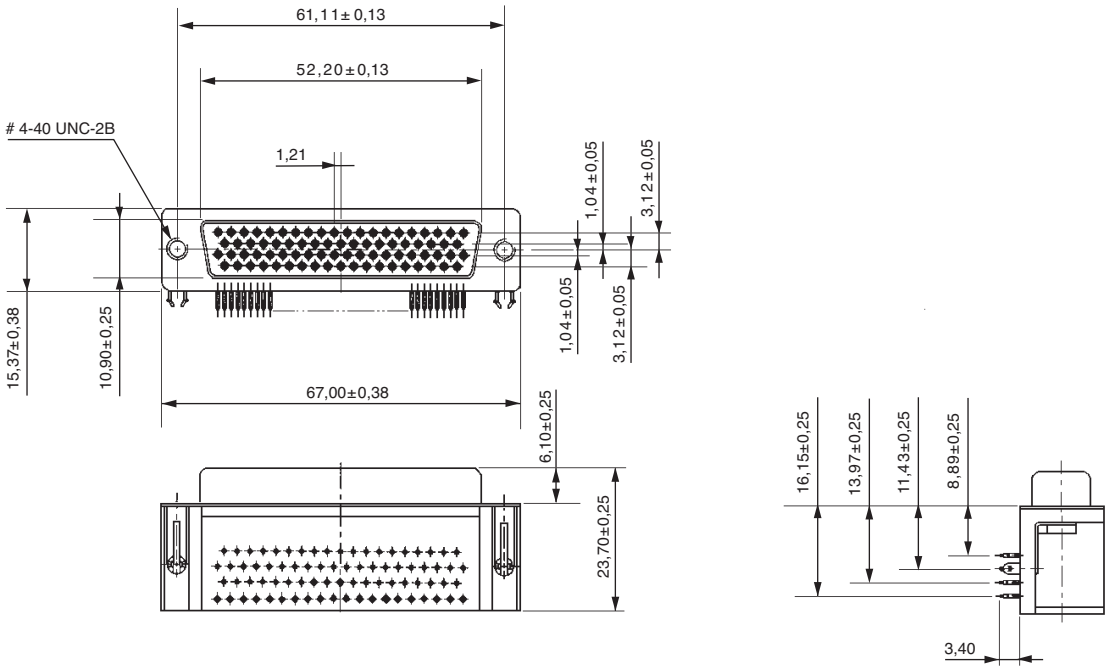
Receptacle 78 contacts



Designation

Shell size / Arrangement	Boardlock and screwlock 4-40 2B	Boardlock, threaded insert 4-40 2B
D / 78	ZDD78S1AKN-146	ZDDL78S1AKN-146

Note: *Class 2 - Add suffix A191 Example: ZDD78S1AKN-A191-146*



- PCB hole pattern, page 35
- Panel cutout, page 39

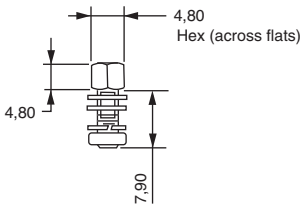
Female screwlock

(Steel, tin over nickel finish)

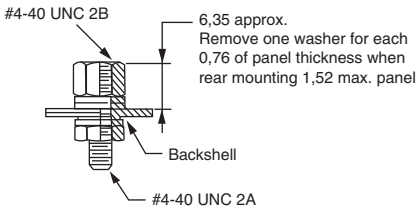
D20418-134



Front panel mount



Rear panel mount



The reference is for one piece.
Packaging: Pack of 100 pieces

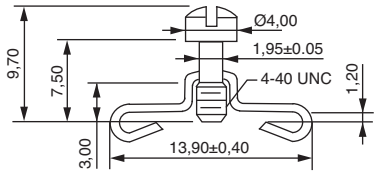
Note: *for other finishes or packaging, please consult factory.*

Male screwlock

(Steel, tin over nickel finish)

D20419-211 *E thru C Shell Sizes*
D20420-157 *D Shell Size*





The reference is for one piece
Packaging: Pack of 100 pieces

Note: *for other finishes or packaging, please consult factory*

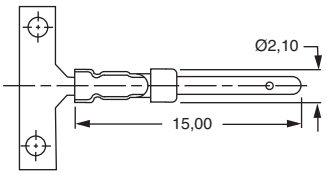
Crimp contacts

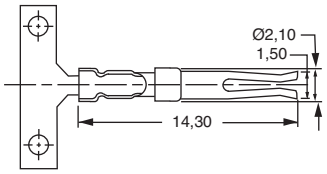
Stamped contacts with insulation support, available size 20 (standard density) or size 22 (high density).
Supplied on reels, orientation to be specified when ordering.

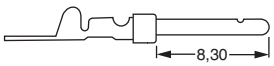
Size 20

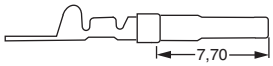


Male contacts









Finish	AWG 24 - 28	AWG 20 - 24	Quantity per Reel
A191	980-2002-307	980-2002-305	400
Gold flash (class 3)	980-2000-925	980-2000-924	5000
A191 (class 2)	980-2000-946	980-2000-945	5000



Female contacts

Finish	AWG 24 - 28	AWG 20 - 24	Quantity per Reel
A191	980-2002-306	980-2002-304	400
Gold flash (class 3)	980-2000-926	980-2000-923	5000
A191	980-2000-944	980-2000-943	5000

Size 22

Male contacts

Finish	AWG 24 - 26	Quantity per Reel
A191	980-2002-311	400
Gold flash (class 3)	110238-1009	10000
A191 (class 2)	110238-1005	10000

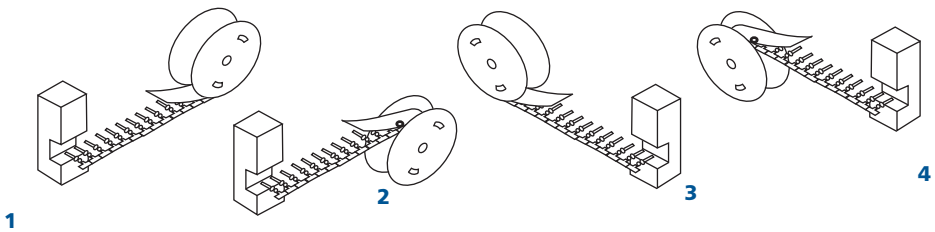
Female contacts

AWG 24 - 26	Quantity per Reel
980-2002-310	400
110238-1010	10000
110238-1006	10000

Reeling orientation

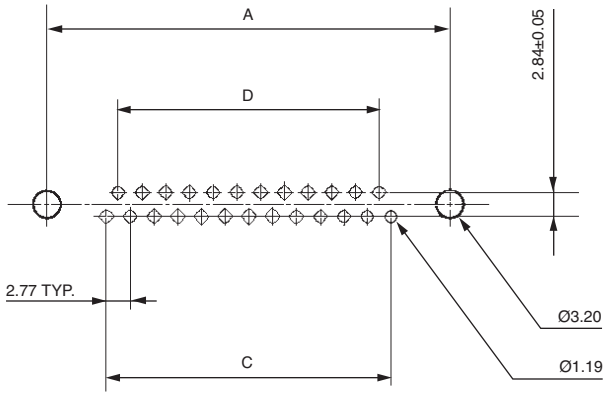
Precise the correct reeling orientation, by adding the suffix
1, 2, 3 or 4 to the reference

Example: ZD110238-1009-2



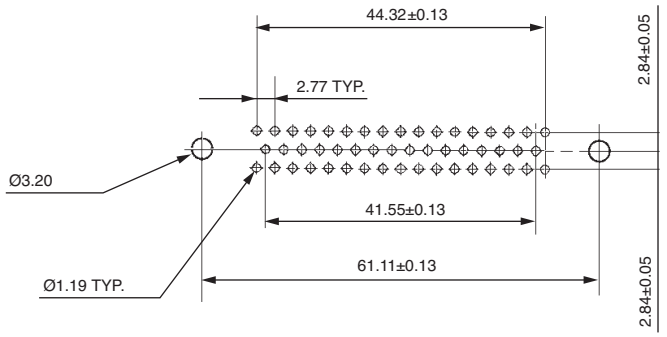
Straight PCB OL2 terminations, standard density

Sizes 9, 15, 25, 37



Shell size	A ± 0,13	C ± 0,13	D ± 0,13
9	24,99	10,96	8,22
15	33,32	19,18	16,44
25	47,04	33,24	30,47
37	63,50	49,86	47,09

Size 50

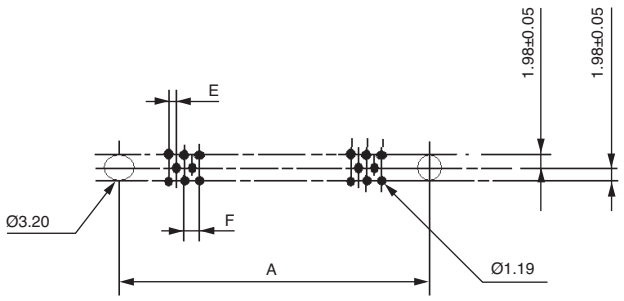


Dimensions shown in mm

Specifications and dimensions subject to change

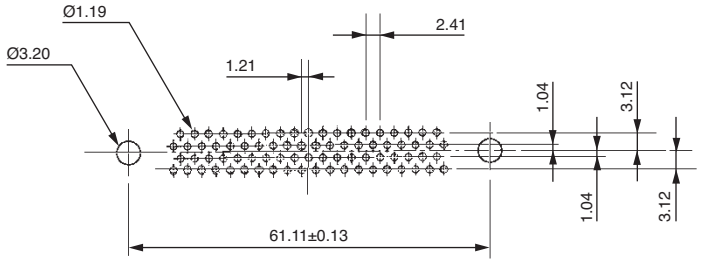
Straight PCB OL2 terminations, high density

Sizes 15, 26, 44, 62



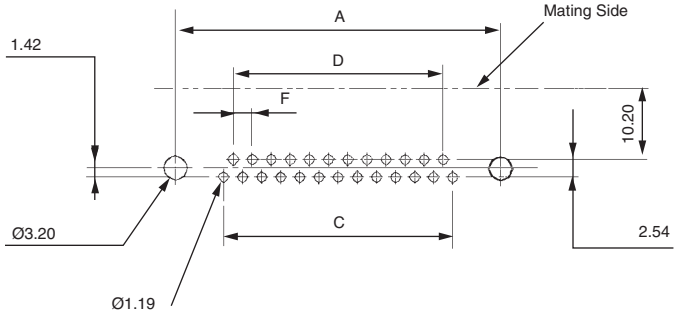
Shell size	A ± 0,13	E ± 0,05	F ± 0,05
15	24,99	1,145	2,29
26	33,32	1,145	2,29
44	47,04	1,145	2,29
62	63,50	1,205	2,41

Size 78



90° PCB 1AKN terminations, standard density

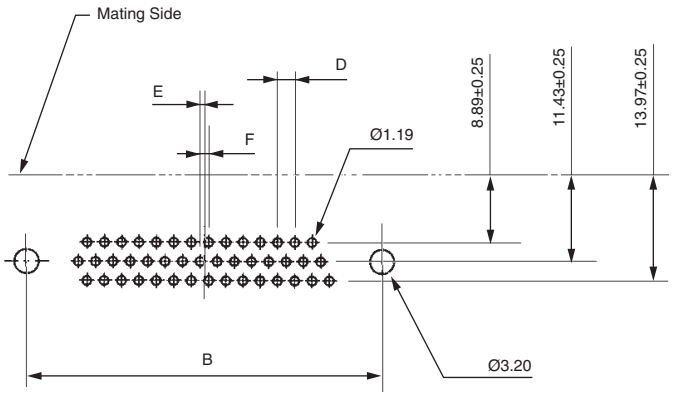
Sizes 9, 15, 25, 37



Shell size	A ± 0,13	C ± 0,13	D ± 0,13	F ± 0,10
9	24,99	10,96	8,22	2,74
15	33,32	19,18	16,44	2,74
25	47,04	33,24	30,47	2,77
37	63,50	49,86	47,09	2,77

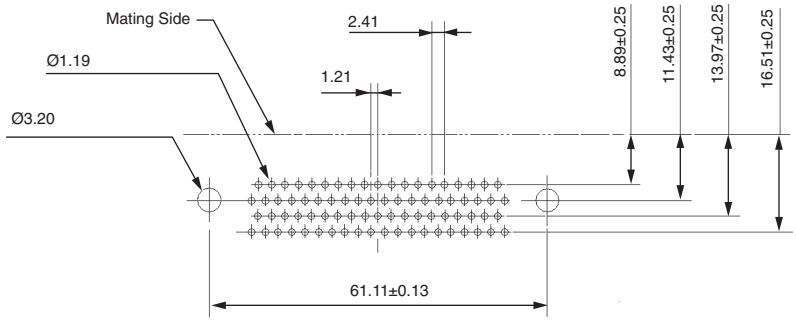
90° PCB 1AKN terminations, high density

Sizes 15, 26, 44, 62

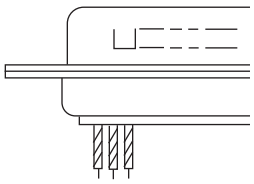


Shell size	B ± 0,13	D ± 0,05	E	F
15	24,99	2,29	0,89	0,25
26	33,32	2,29	0,64	0,51
44	47,04	2,29	0,64	0,51
62	63,50	2,41	0,62	0,58

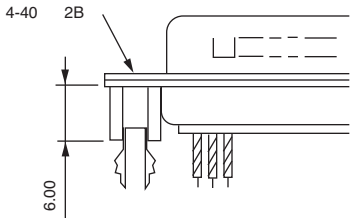
Size 78



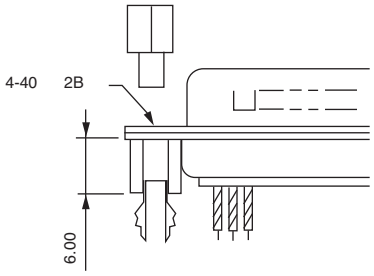
Dimensions shown in mm
Specifications and dimensions subject to change



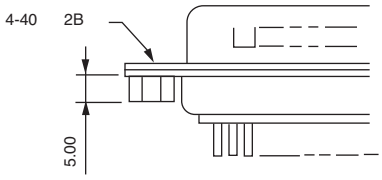
Nothing
Through hole Ø 3.05



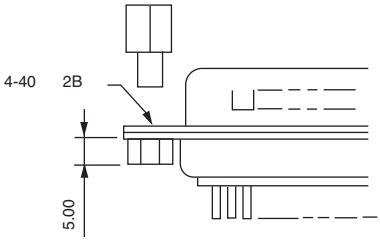
E and -146
Boardlock with thread 4-40



E, AB and -146
Boardlock and female screwlocks

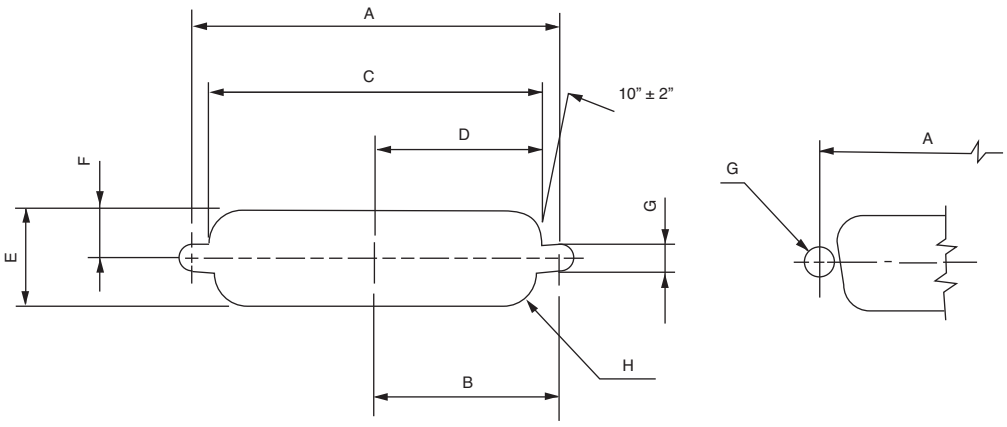


E
Captive nuts 4-40 2B



E and AB
Captive nuts and female screwlocks 4-40

Standard and high density connectors



Shell size	Mounting method	A ± 0,13	B ± 0,25	C ± 0,13	D ± 0,13	E ± 0,38	F ± 0,25	G ± 0,25	H ± 0,25
E	Front	24,99	12,50	22,20	11,10	13,03	6,53	3,05	2,11
	Rear	24,99	12,50	20,47	10,24	11,40	5,72	3,05	3,35
A	Front	33,32	16,66	30,53	15,27	13,03	6,53	3,05	2,11
	Rear	33,32	16,66	28,80	14,40	11,40	5,72	3,05	3,35
B	Front	47,04	23,52	44,27	22,15	13,03	6,53	3,05	2,11
	Rear	47,04	23,52	42,52	21,26	11,40	5,72	3,05	3,35
C	Front	63,50	31,75	60,73	30,38	13,03	6,53	3,05	2,11
	Rear	63,50	31,75	59,08	29,54	11,40	5,72	3,05	3,35
D	Front	61,11	30,56	58,34	29,18	13,03	6,53	3,05	2,11
	Rear	61,11	30,56	56,34	28,17	11,40	5,72	3,05	3,35

Dimensions shown in mm
Specifications and dimensions subject to change

ABT-607 Pneumatic Crimper

The ABT-607 is a pneumatic powered and controlled machine. It is designed for customers with moderate volume. This machine is designed to semi-automatically crimp stamped and formed contacts onto pre-stripped stranded or single conductor electrical wire. This machine will accommodate size 34 thru 12 AWG wire and is actuated by the use of a footpedal.

Machine Crimp: 800 per hour

Power Requirements: Pneumatic = 100 psi, 2 cu. ft. per min.

ABT-607



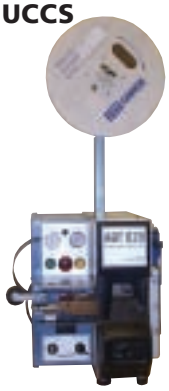
ABT-620 Semi-Automatic Crimper/Stripper

The ABT-620 Universal Cannon Crimper/Stripper is a pneumatic powered, microprocessor controlled machine. It is designed to semi-automatically strip insulation from stranded or single conductor electrical wire and attach a stamped and formed contact by crimping. The machine will accommodate 34 thru 12 AWG wire. Primary application of the machine is the termination of jacketed cable where the individual leads cannot be stripped on fully automated equipment. The ABT-620 UCCS operates automatically upon insertion of a wire or it can be switched over to foot pedal operation as desired.

Machine Strip/Crimp Rate: 1200+ per hour

Power Requirement: Electrical = 115 VAC, 60 Hz, 20 A
Pneumatic= 80 psi, 2cu. ft.per min.

ABT-620 UCCS



Insertion/Extraction Tools

D*A

CIET-D*A-20-24	CIET-D*A-24-26	ZD-HD
980-0008-135	980-0008-136	CIET-22DF
(20 - 24 AWG)	(24 - 26 AWG)	980-0004-804

Hand - Crimp Tool

D*A Contacts

CCT-D*A-1	995-2000-000

ZD HD (size 22 contacts)

CCT-22D	995-2000-022



Semi-Automatic Crimp Machine EPS 2000

Contacts are terminated fast and reliable with the crimp machine EPS 2000 from ITT Industries, Cannon. Up to 20 crimp terminations per minute can be achieved. The crimp tools can be easily exchanged for different contact types and wire sizes. No time consuming adjustments are necessary. The electrically operated machine can either be released by a foot pedal or a sensor.

Technical Data

Lift	40 mm
Lift Time	0.3 sec
Upper and lower dead centre	continuously adjustable
Wire size to be processed	up to 6 mm^2
Drive	three phase motor, electronic brake, 0.75 kW, 380 V, 50 Hz, 3-phase
Weight	60 kg

Dimensions (without contact reel)

Height	900 mm
Width	800 mm
Depth	500 mm

Order References

Semi-Automatic Crimp Machine
121586-5043

Semi-Automatic Stripper/Crimper
121586-5058

Quick Change Tools

Fig.	Description	Part Number
1	Stripper/Crimper	WWZ-2500
2	Crimper only	WWZ-20.100

Insertion/Extraction Tools

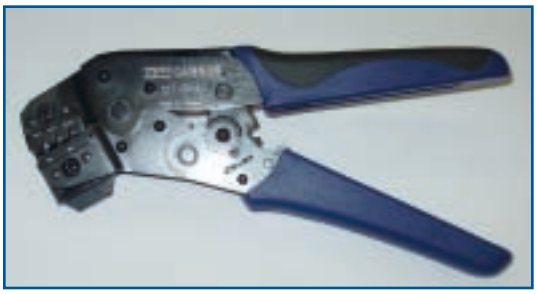
D*A
CIET-20HDL 274-7010-000
Tool for insertion and extraction of contacts

CIET-20-D 995-0001-695
Metal tool for extraction of contacts

ZD-HD
CIET-22DF
980-0004-804

Hand - Crimp Tool

D*A Contacts
CCT-DA 121086-3303



Dimensions shown in mm
Specifications and dimensions subject to change

1. MATERIAL CONTENT AND PHYSICAL FORM
Electrical connectors do not usually contain hazardous materials. They contain conducting and non-conducting materials and can be divided into two groups.
a) Printed circuit types and low cost audio types which employ all plastic insulators and casings.
b) Rugged, Fire Barrier and High Reliability types with metal casings and either natural rubber, synthetic rubber, plastic or glass insulating materials. Contact materials vary with type of connector and also application and are usually manufactured from either: Copper, copper alloys, nickel, alumel, chromel or steel. In special applications, other alloys may be specified.

2. FIRE CHARACTERISTICS AND ELECTRIC SHOCK HAZARD
There is no fire hazard when the connector is correctly wired and used within the specified parameters. Incorrect wiring or assembly of the connector or careless use of metal tools or conductive fluids, or transit damage to any of the component parts may cause electric shock or burns. Live circuits must not be broken by separating mated connectors as this may cause arcing, ionization and burning. Heat dissipation is greater at maximum resistance in a circuit. Hot spots may occur when resistance is raised locally by damage, e.g. cracked or deformed contacts, broken strands of wire. Local overheating may also result from the use of the incorrect application tools or from poor quality soldering or slack screw terminals. Overheating may occur if the ratings in the product Data Sheet/Catalog are exceeded and can cause breakdown of insulation and hence electric shock. If heating is allowed to continue it intensifies by further increasing the local resistance through loss of temper of spring contacts, formation of oxide film on contacts and wires and leakage currents through carbonization of insulation and tracking paths. Fire can then result in the presence of combustible materials and this may release noxious fumes. Overheating may not be visually apparent. Burns may result from touching overheated components.

3. HANDLING
Care must be taken to avoid damage
to any component parts of electrical connectors during installation and use. Although there are normally no sharp edges, care must be taken when handling certain components to avoid injury to fingers. Electrical connectors may be damaged in transit to the customers, and damage may result in creation of hazards. Products should therefore be examined prior to installation/use and rejected if found to be damaged.

4. DISPOSAL
Incineration of certain materials may release noxious or even toxic fumes.

5. APPLICATION
Connectors with exposed contacts should not be selected for use on the current supply side of an electrical circuit, because an electric shock could result from touching exposed contacts on an unmated connector. Voltages in excess of 30 V ac or 42.5 V dc are potentially hazardous and care should be taken to ensure that such voltages cannot be transmitted in any way to exposed metal parts of the connector body. The connector and wiring should be checked, before making live, to have no damage to metal parts or insulators, no solder blobs, loose strands, conducting lubricants, swarf, or any other undesired conducting particles. Circuit resistance and continuity check should be made to make certain that there are no high resistance joints or spurious conducting paths. Always use the correct application tools as specified in the Data Sheet/Catalog. Do not permit untrained personnel to wire, assemble or tamper with connectors. For operation voltage please see appropriate national regulations.

IMPORTANT GENERAL INFORMATION
(i) Air and creepage paths/Operating voltage. The admissible operating voltages depend on the individual applications and the valid national and other applicable safety regulations.
For this reason the air and creepage path data are only reference values. Observe reduction of air and creepage paths due to PC board and/or harnessing.

(ii) Temperature
All information given are temperature limits. The operation temperature depends on the individual application.

(iii) Other important information
Cannon continuously endeavors to improve their products. Therefore, Cannon products may deviate from the description, technical data and shape as shown in this catalog and data sheets.

"Engineered for life" is a registered trademark of ITT Corporation, ©2006. All other trademarks or registered trademarks are property of their respective owners. All data subject to change without notice.

Product Warranty
ITT Electronic Components, a Division of ITT Corporation manufactures the highest quality products available in the marketplace; however these products are intended to be used in accordance with the specifications in this publication. Any use or application that deviates from the stated operating specifications is not recommended and may be unsafe. No information and data contained in this publication shall be construed to create any liability on the part of Cannon. Any new issue of this publication shall automatically invalidate and supersede any and all previous issues. A limited warranty applies to Cannon products. Except for obligations assumed by Cannon under this warranty, Cannon shall not be liable for any loss, damage, cost of repairs, incidental or consequential damages of any kind, whether or not based on express or implied warranty, contract, negligence or strict liability arising in connection with the design, manufacture, sale, use or repair of the products. Product availability, prices and delivery dates are exclusively subject to our respective order confirmation form; the same applies to orders based on development samples delivered. This publication is not to be construed as an offer. It is intended merely as an invitation to make an offer. By this publication, Cannon does not assume responsibility or any liability for any patent infringements or other rights of third parties which may result from its use. Reprinting this publication is generally permitted, indicating the source. However, Cannon's prior consent must be obtained in all cases.

Rack & Panel Connectors

ITT is the world leader in rack and panel connectors, offering unmatched variety of shell configurations and insert arrangements, materials, plating and contact options. Many of our standard and custom designs meet the stringent requirements of ARINC 600, ARINC 404 (MIL-C-81659), and MIL-DTL-83733 standards.



www.ittcannon.com/rackandpanel

Circular/Filter/Hermetic Connectors

As a world leader in circular, filter and hermetic connectors, ITT can leverage its design and manufacturing expertise to fit virtually any application. Our expertise includes fast positive mating for a wide range of military applications, as well as numerous sizes and contact configuration for various harsh environments. ITT can also meet numerous specs, including NATO and MIL standards.



www.ittcannon.com/circulars • www.ittcannon.com/filter • www.ittcannon.com/hermetics

D-Subminiature Connectors

Cannon invented D-sub connectors in 1952. Our family of D-Subs now includes combinations of signal, power and RF, as well as severe service sealed connectors. Cannon D-Subs are available with an extensive line of backshells and accessories and are one of the most economical shielded connector solutions available. Qualified to the MIL-DTL-24308 specification.



www.ittcannon.com/dsubs

Fiber Optic Connectors and Cable Assemblies

Cannon fiber optic solutions provide an excellent performance/cost value. Performance can be tailored to the end system, and our use of superior materials and bonding agents provides highly effective solutions. Our wide variety of products includes fiber optic hybrid contacts, multi-channel, rack and panel, and hi-rel assemblies, including MIL and ARINC standard solutions.



www.ittcannon.com/fiberoptics

Microminiature Connectors

Cannon microminiature connectors offer high performance and reliability with exceptional versatility. Available in rectangular, circular and strip configurations for countless applications, many of our connectors meet or exceed applicable requirements of the MIL-DTL-83513 specification.



www.ittcannon.com/micro

ITT's Electronic Components business (**www.ittcannon.com**) is an international supplier of connectors, interconnects, cable assemblies, I/O card kits and smart card systems. As a worldwide leader in connector technology for nearly a century, ITT offers one of the industry's broadest product offerings, manufacturing capability worldwide, fast time to market, high volume/high yield capacity, robust design and Value-Based Product Development and an extensive sales and customer support network.

ITT