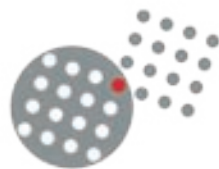


D Subminiature Connectors



SOURIAU
Connection Technology



D - subminiature connectors

SOURIAU

Connectors and interconnect systems for harsh environments

The company designs, manufactures and markets high performance interconnect solutions for severe environments from industrial broadline and universal ranges to complex system with integrated functions: filtering, high speed data transmission, hermetic seal, separation mechanism, remote handling, underwater mating, ...



Industrial



Aeronautical



Equipment & system

The dedicated end markets for SOURIAU's products are aeronautical, defense-space and industrial



Railway
Geophysics
Manufacturing environment
Instrumentation
Automation & process



Civil & military aircraft
Helicopter
Weapon delivery system
Avionics



Military marine
Communications
Satellites
Launcher & missile

SOURIAU was established in 1917 and has been created by successive acquisitions of the industrial, aeronautical, defense and space activities of SOURIAU, JUPITER and BURNDY.

The Group's products are engineered and manufactured in the USA and Dominican Republic, Europe and Morocco, Japan and India, and sold by a worldwide sales and marketing organization, and in addition to SOURIAU's offices, a large network of licensed distributors and agents.

SOURIAU complies with most of national and international Quality Assurance Standards, production unit with ISO 14001

Quality Certificate
Management System

ISO 9001

Environment Certificate
Management System

ISO 14001

Quality Certificate
Management System

Aeronautic Industry : EN 9100



D - subminiature connectors

Description

Souriau D-Sub connectors are used for military/aerospace applications and in industrial field: information systems, communication systems, industrial electronic...

D-Sub connectors are designed to ensure the connection function in all applications where weight and dimension are very important.

They are especially used as Input/Output connectors in interface fonctions. So, they are subjects to mechanical constraints that are sometimes severes. In order to prevent risks (pulling up, accidental unmating...), a large range of accessories is supplied (Catalogue coming soon).

Contents

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D-Sub mounting options.....	9		



D - subminiature connectors

Technical characteristics

Characteristics		Series	Crimp version		Crimp + PCB version	Solder + PCB version
			8630 HE501/HE308	SMA MIL	8635 High density	Hermetic
Environmental	Temperature		-55°C to +125°C/ -55°C to +155°C	-55°C to +125°C	-55°C to +155°C	-55°C to +125°C
	Salt spray		48 H (cadmium) 24 H (Tin) 24 H (Zinc)	48 H (cadmium)	48 H (cadmium) 24 H (Tin) 24 H (Zinc)	48 H (cadmium)
	Damp heat		56 days	56 days	56 days	56 days
	Sealing version		No/Yes	No	Yes	Yes
	Hermeticity		-	-	-	Under air helium differential pressure, leakage $\leq 1.04 \times 10^{-5}$ Atm.cm ³ /S
Standard	NFC 93425		HE501/HE508	-	-	-
	MIL C 24308 C		-	MIL	Compliant to MIL	Compliant to MIL
Material	Shell		Steel	Steel	Steel	Steel
	Housing		Thermoplastic/ Thermodur	Thermoplastic	Thermodur	Glass bead
	Contact		Copper alloy	Copper alloy	Copper alloy	Ferrous alloy
Plating	Shell		Cadmium, Tin, Zinc	Cadmium	Cadmium, Tin, Zinc	Cadmium, Gold, Tin bright, Tin mat, Nickel
	Contact		Gold over Nickel	Gold over Nickel	Gold over Nickel	Gold, Tin mat, Nickel
Electrical	Contact rating (max)		7.5 A	7.5 A	5 A	5 A
	Test voltage Max Vrms/ 50 Hz		1000 Vrms	1000 Vrms	1000 Vrms	750 Vrms
	Nominal voltage Vrms/ 50 Hz		300 Vrms	300 Vrms	300 Vrms	N/A
	Insulation resistance		≥ 5000 M Ω	≥ 5000 M Ω	≥ 5000 M Ω	≥ 5000 M Ω
	Contact resistance		≤ 7.3 m Ω	≤ 7.3 m Ω	≤ 7.3 m Ω	≤ 14 m Ω
Mechanical & Dimensional	Insertion/extraction force per contact (N)		5N max/0.3 min	5N max/0.3 min	5N max/0.3 min	N/A
	Endurance		500	500	500	500
	Ct \varnothing		1mm	1 mm	0.76 mm	1 mm
Wire	Wire gauge		AWG 20 to 28	AWG 20 to 24	AWG 22 to 28	N/A
	Max \varnothing over insulator		1.7 mm	1.7 mm	1.4 mm	N/A
Indents version			Available	N/A	Available	N/A
Page			10/12	14	16	18



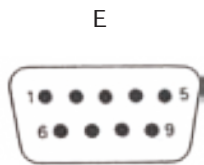
D - subminiature connectors

Standard connectors : 8630 (HE 501/HE508), SMA, Hermetic

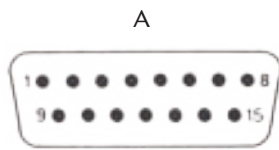
Layouts :

Male insulator front view

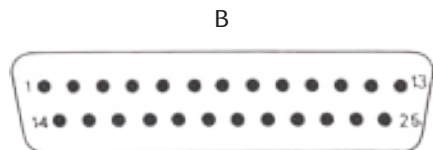
Contacts are individually numbered on both side of insulator.



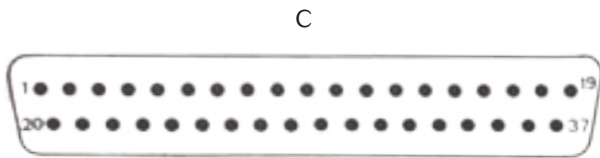
9 contacts



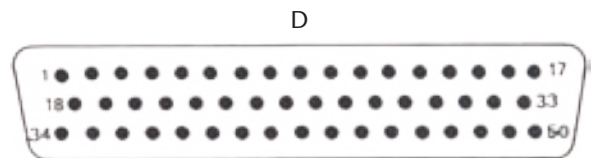
15 contacts



25 contacts

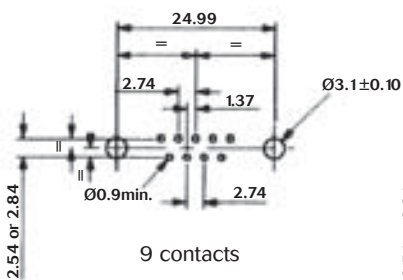


37 contacts

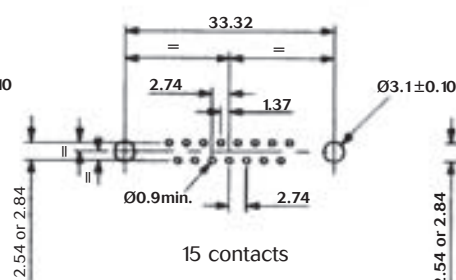


50 contacts

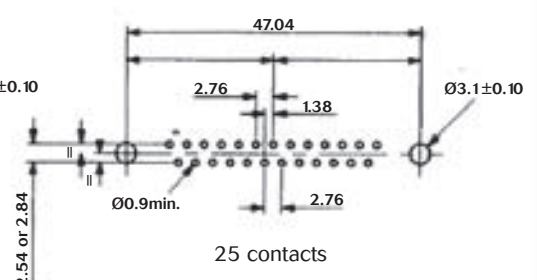
PCB drilling dimensions (mm) (for Hermetic version only) :



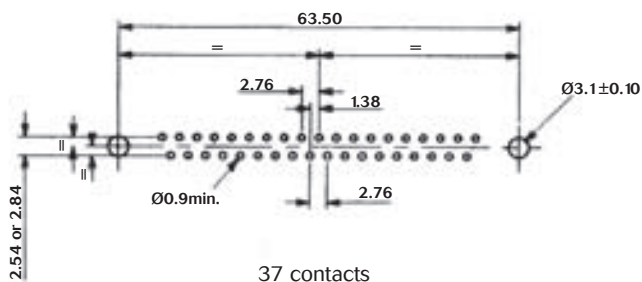
9 contacts



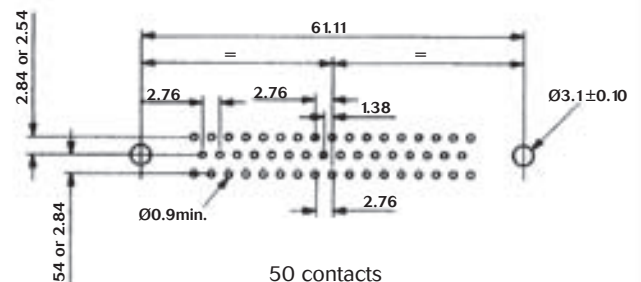
15 contacts



25 contacts



37 contacts



50 contacts

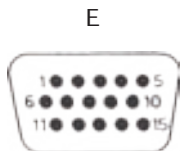
D - subminiature connectors

High density connectors : 8635

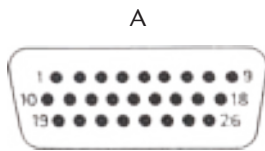
Layouts :

Male insulator front view

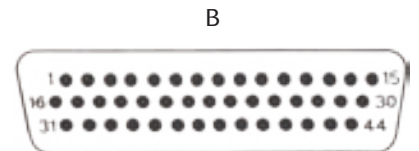
Contacts are individually numbered on both side of insulator.



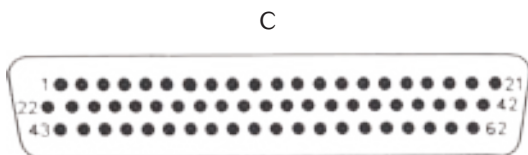
15 contacts



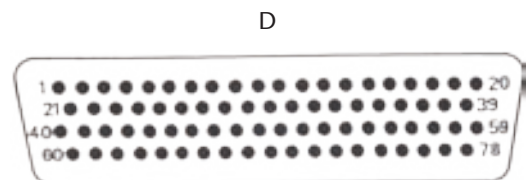
26 contacts



44 contacts

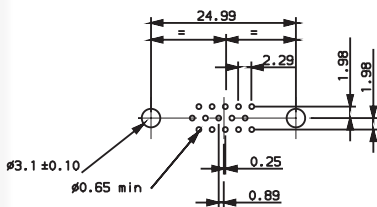


62 contacts

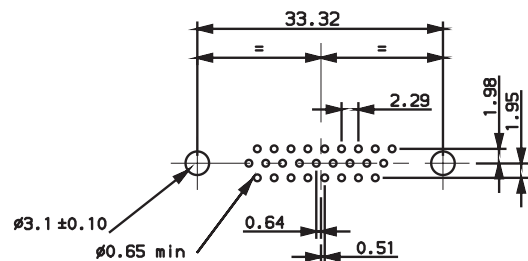


78 contacts

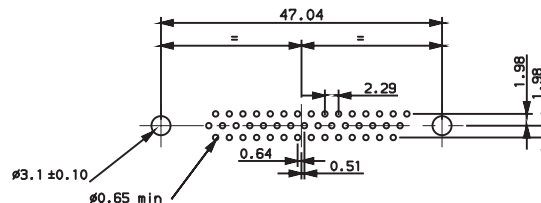
PCB drilling dimensions (mm) :



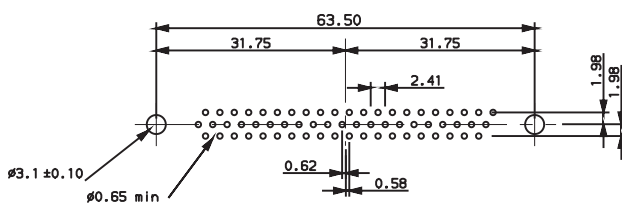
15 contacts



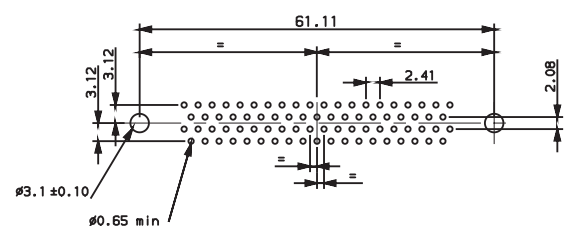
26 contacts



44 contacts



62 contacts



78 contacts



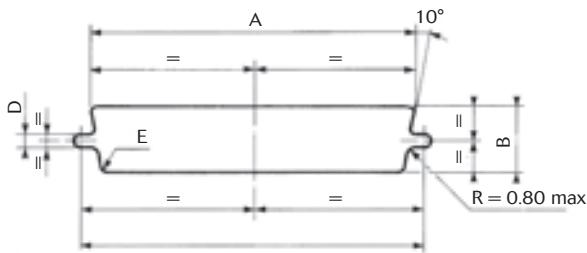
D - subminiature connectors

Panel cut out & Panel mounting

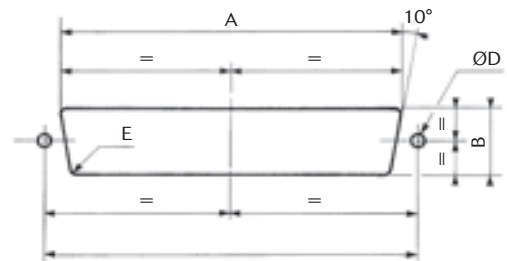
Panel cut-out

Shell size	Mounting type	A +/-0.2	B +/-0.2	C +/-0.2	D +/-0.05	E +/-0.1
E	Front	22.20	13.00	25.00	3.00	2.10
	Rear	20.50	11.40	25.00	3.00	3.30
A	Front	30.50	13.00	33.30	3.00	2.10
	Rear	28.80	11.40	33.30	3.00	3.30
B	Front	44.30	13.00	47.00	3.00	2.10
	Rear	42.50	11.40	47.00	3.00	3.30
C	Front	60.70	13.00	63.50	3.00	2.10
	Rear	59.10	11.40	63.50	3.00	3.30
D	Front	58.30	15.80	61.50	3.00	2.10
	Rear	56.30	14.10	61.50	3.00	3.30

Cut-out front panel mounting
(screw mounting)

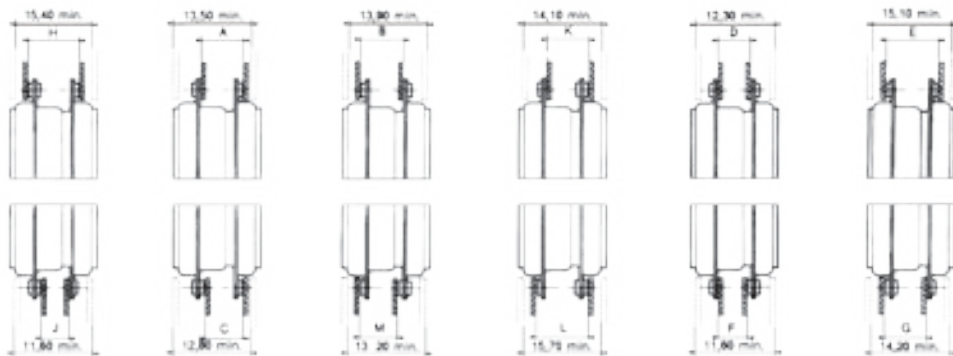


Cut-out rear panel mounting
(screw mounting)



Panel mounting

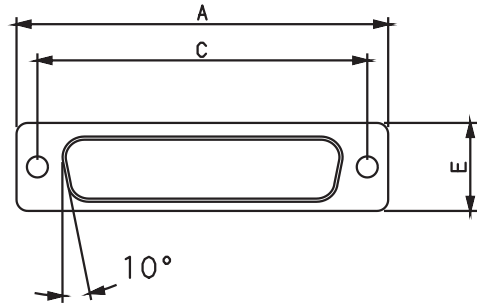
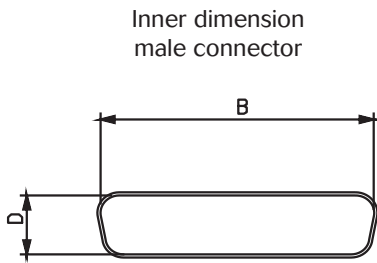
It is recommended that only one pair of connectors should be float mounted.
Rigid mounted connectors require 2 screws $\varnothing 3\text{mm}$
Float mounting connectors require $\varnothing 2\text{mm}$



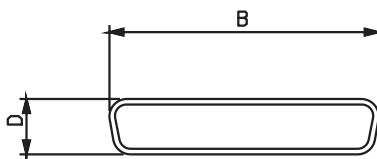
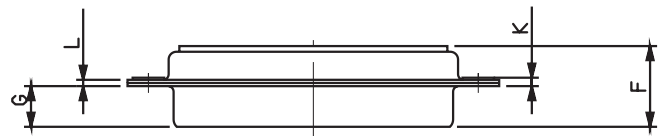
Shell size	A 0/+0.6	B 0/+0.6	C 0/+0.6	D 0/+0.6	E 0/+0.6	F 0/+0.6	G 0/+0.6	H 0/+0.6	J 0/+0.6	K 0/+0.6	L 0/+0.6	M 0/+0.6
E	7.65	7.65	6.85	6.45	8.85	5.65	8.25	9.45	5.65	8.25	9.45	6.85
A	7.55	7.55	6.75	6.35		9.15	5.55	8.15	9.35	5.55	8.15	9.35
B		7.95			6.35			8.35	9.55			9.75
C		7.95	6.35	8.35	9.55			9.75	7.15			
D	7.55	7.95	6.75	6.35	9.15	5.55	8.35	9.55	5.55	8.15	9.75	7.15

D - subminiature connectors

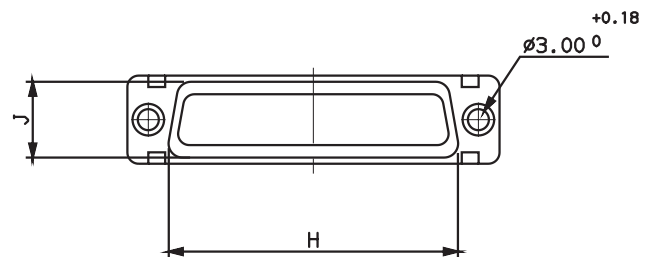
Shell dimensions



View of
mating faces



Outer view
female connector



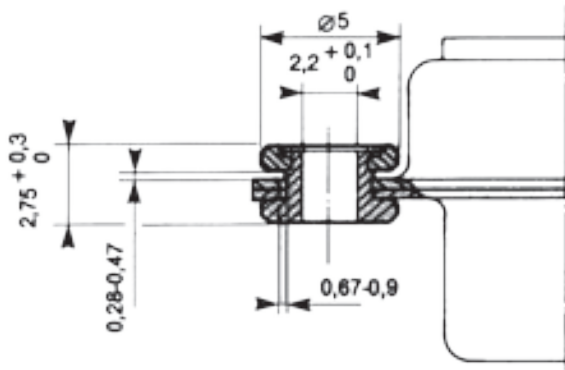
Shell size	Contact type	A +/-0.38	B +/-0.13	C +/-0.13	D +/-0.13	E +/-0.38	F Max	G +/-0.25	H +/-0.25	J +/-0.25	K Max	L +/-0.12
E	Pin	30.81	16.91	24.99	8.35	12.55	10.99	5.85	19.27	10.71	1.50	0.90
	Socket		16.33		7.89		11.21	6.05				
A	Pin	39.14	25.24	33.32	8.35		10.99	5.85	27.50			
	Socket		24.66		7.89		11.21	6.05				
B	Pin	53.03	38.96	47.04	8.35		11.07	5.75	41.27			
	Socket		38.37		7.89		11.21	6.05				
C	Pin	69.32	55.42	63.50	8.35	11.09	5.75	57.70				
	Socket		54.83		7.89	11.21	6.05					
D	Pin	66.93	52.80	61.11	11.20	15.37	11.09	5.75	55.32	13.56	1.70	1.00
	Socket		52.42		10.74		11.21	6.05			1.50	



D - subminiature connectors

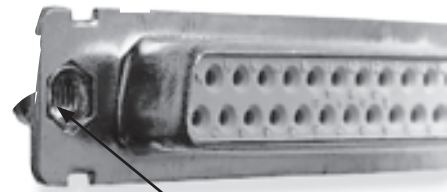
Mounting options

F: Float mounting



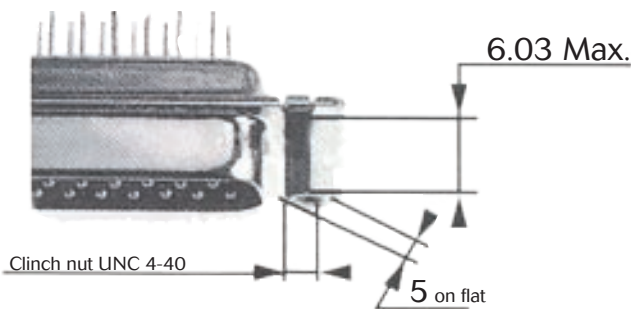
L: Clinch nut M3

O: Clinch nut UNC 4-40



Clinch nut UNC 4-40

V: Female screw lock UNC 4-40



8630 and 8635 series (dimensions in mm).



D - subminiature connectors

8630 Series HE 501

Connector accommodating removable machined crimp contacts for 20/24 or 26/28 AWG wires

In compliance with
 NFC 93425/HE 501
 Class -55°C to +125°C
 Contact #20
 Standard shell plating : Cadmium
 Other platings available : Tin
 Zinc



Ordering information

Series 8630 (8631 : float mounting)	8630	-	25	P	L	-	-	-
Options 1	None - Standard L - Clinch nut M3 (8630 only) O - Clinch nut UNC 4.40 (8630 only) V - Female screw lock UNC 4.40 (8630 only)							
Number of contacts	09, 15, 25, 37, 50							
Contact type	P - Pin S - Socket							
Contacts	None - With standard 20/24 AWG contacts L - Without contacts							
Rear type	None - Standard H - Shielding termination fingers (only for T plating)							
Shell plating	None - Cadmium T - Tin Z - Zinc							
Front type	None - Standard X - With indents (only for front of male connector)							

Diameter of the insulator cable Max.: 1.6 mm



D - subminiature connectors

8630 Series HE 501

Removable crimp contact ordering information



Gauge	Pin	Socket	øA
AWG 20/24	8630-162	8630-165	1.17
AWG 26/28	8631-4111	8631-6121	0.6

Cross reference list for qualified part number HE501 & SOURIAU

Examples:
 HE501 F 25 BP = 8631 25 P
 HE501 N 37 BS = 8630 37 S

Connector type		HE501	SOURIAU P/N
Removal crimp contact AWG 20/24	Standard	Pin	HE501 N ** BP
		Socket	HE501 N ** BS
	Float mounting	Pin	HE501 F ** BP
		Socket	HE501 F ** BS

** : Shell size

D - subminiature connectors

8630 Series HE 508

Connector accommodating removable machined crimp contacts for 20/24 AWG wires

For heavy duty applications
 Class -55°C to +155°C
 Special proof versions available
 Contacts #20
 Standard shell plating: Cadmium
 Other platings available : Tin
 Zinc



Ordering information

Series 8630	863 0 25 P 012 L N - - -
Options 1	0 - Standard mounting holes (Ø=3.10) 1 - Float mounting
Number of contacts	09, 15, 25, 37, 50
Contact type	P - Pin S - Socket
Specification	None - Standard 012 - Splash proof (see page 13 for details) 015 - Dust-proof (see page 13 for details)
Contacts	None - With standard 20/24 AWG contacts L - Without contact
HE 508 coding	N - Mandatory for standard version (not for 012 Splash proof version and for 015 Dust proof version)
Rear type	None - Standard H - Shielding termination fingers (only for T plating)
Shell plating	None - Cadmium T - Tin Z - Zinc
Front type	None - Standard X - With indents (only for front of male connector)



D - subminiature connectors

8630 Series HE 508

Cross reference list for qualified part number HE508 & SOURIAU

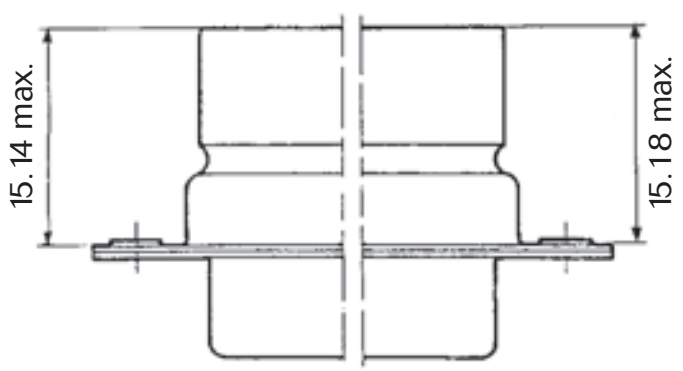
Example:
HE508 N 25 BP = 8630 25 PN

Connector type			HE508	SOURIAU P/N
Removal crimp contact AWG 20/24	Standard	Pin	HE508 N ** BP	8630 ** PN
		Socket	HE508 N ** BS	8630 ** SN
	Float mounting	Pin	HE508 F ** BP	8631 ** PN
		Socket	HE508 F ** BS	8631 ** SN

** : Shell size

Special proof versions (available in HE508 series only)

Examples:
 8630 25 P012
 012: Splash proof version, grommet + interfacial seal + potting (conform to IP65)
 8630 25 P015
 015: Dust proof version, rear grommet only



D - subminiature connectors

SMA MIL-C Series

MIL C 24308 C
Connector accomodating
removable machined crimp
contacts for 20/24 AWG
wires

Class -55°C to +125°C
 Shell plating: Cadmium
 Contact #20



Ordering information

Series S-MA		S	B	MA	-	25	P	L	N
Shell size	E, A, B, C, D								
S-MA series	MA - Mandatory								
Options 1	None - Standard F - Float mounting								
Number of contacts	09, 15, 25, 37, 50								
Type	P - Pin S - Socket								
Contact	Blank - With MIL contacts L - Without MIL contacts N - Mandatory for classified QPL version								

Diameter of insulator cable max: 1.6 mm
 This serie can be ordered directly with MIL part number (See page 15).

Crimp contact for AWG 20/24 wire





D - subminiature connectors

SMA MIL-C Series

MIL C 24308 C contact

AWG	Contact type	SOURIAU P/N	Reference	Colour code
20/24	Pin	8630 3020 A	M39029/64-369	Orange/Blue/White
	Socket	8630 3022 A	M39029/63-368	Orange/Blue/Grey

Tool part number for SMA Series



M22520/2-01

Tools	P/N	Standard	SOURIAU
Plier		M22520/2-01	8476-01
Locator		M22520/2-08	8476-08
Extraction plastic tool		-	8630-06A
MIL extraction tool		M81969/1-02	8630-3330

MIL vs SOURIAU cross reference

Connector type	Male connector		Female connector	
	MIL-C-24308 C	SOURIAU	MIL-C-24308 C	SOURIAU
Standard with contact	M24308/4-1F	SEMA09PN	M24308/2-1F	SEMA09SN
	M24308/4-2F	SAMA15PN	M24308/2-2F	SAMA15SN
	M24308/4-3F	SBMA25PN	M24308/2-3F	SBMA25SN
	M24308/4-4F	SCMA37PN	M24308/2-4F	SCMA37SN
	M24308/4-5F	SDMA50PN	M24308/2-5F	SDMA50SN
Standard without contact	M24308/4-259F	SEMA09PLN	M24308/2-281F	SEMA09SLN
	M24308/4-260F	SAMA15PLN	M24308/2-282F	SAMA15SLN
	M24308/4-261F	SBMA25PLN	M24308/2-283F	SBMA25SLN
	M24308/4-262F	SCMA37PLN	M24308/2-284F	SCMA37SLN
	M24308/4-263F	SDMA50PLN	M24308/2-285F	SDMA50SLN
Float mounting with contact	M24308/4-302F	SEMAF09PN	M24308/2-342F	SEMAF09SN
	M24308/4-303F	SAMAF15PN	M24308/2-343F	SAMAF15SN
	M24308/4-304F	SBMAF25PN	M24308/2-344F	SBMAF25SN
	M24308/4-305F	SCMAF37PN	M24308/2-345F	SDMAF37SN
	M24308/4-306F	SDMAF50PN	M24308/2-346F	SEMAF50SN
Float mounting without contact			M24308/2-482F	SEMAF09SLN
			M24308/2-483F	SAMAF15SLN
			M24308/2-484F	SBMAF25SLN
			M24308/2-485F	SCMAF37SLN
		M24308/2-486F	SDMAF50SLN	



D - subminiature connectors

8635 Series

High density Connector

SOURIAU 8635 connectors for aerospace and military applications offer high density crimp and straight spill contacts in standard E, A, B, C, D shells.

The 8635 connectors meet the requirements of MIL-C-24308 dust and splash proof specifications.

Class -55°C to +155°C
 Standard shell plating: Cadmium
 Other platings available : Tin
 Zinc

Contact #22D



Ordering information

Series	8635	-	44	P	012	L	-	-	-
Options 1	None - Standard mounting holes (Ø=3.10) F - Float mounting L - Clinch nut M3 O - Clinch nut UMC 4.40 V - Female screw lock UNC 4.40								
Number of contacts	15, 26, 44, 62, 78								
Contact type	P - Pin S - Socket								
Specification	None - Standard 012 - Splash-proof (see page 17 for details) 015 - Dust-proof (see page 17 for details) 017 - Straight spills (see page 17 for details)								
Contacts	None - With standard 20/24 AWG contacts L - Without contacts								
Rear type	None - Standard H - Shielding termination fingers (only for T plating)								
Shell plating	None - Cadmium T - Tin Z - Zinc								
Front type	None - Standard X - With indents (only for front of male connector)								

Diameter of insulator cable max: 1.4 mm



D - subminiature connectors

8635 Series

Contacts part numbers

	Type	Part number
Standard	Pin	8635-4100
	Socket	8635-9100
Compliant with MIL-C-24308	Pin	8635-4110
	Socket	8635-9110

Tooling part numbers

Contact size	Contact type	Plier		Locator	
		Souriau P/N	Standard P/N	Souriau P/N	Standard P/N
#22D	Pin	8476-01	M22520/2-01	8476-09	M22520/2-09
	Socket			8476-07	M22520/2-07



M22520/2-01

Insertion and extraction tools

Contact size	Standard P/N
#22D	M22520/14-01



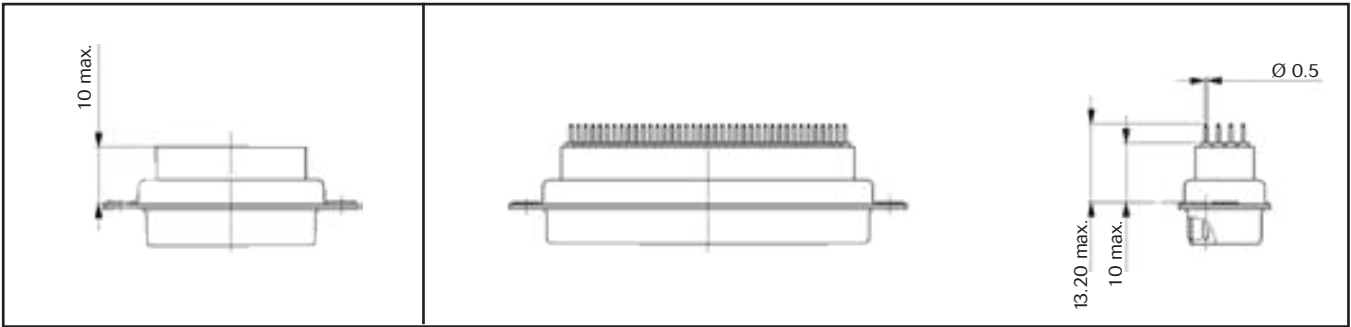
Special proof versions

- 012: Splash proof version, grommet + interfacial seal + potting (conform to IP65)
- 015: Dust proof version, rear grommet only

Dimensions

Standard version (crimp contacts)

Straight spill version (spec 017)





D - subminiature connectors

D-Sub hermetic connectors

D-Sub hermetic connector

Hermetic rectangular connectors are manufactured with glass bead insulator. They are used in all applications requiring perfect hermeticity.

Shell housing may be solder or screw mounted.

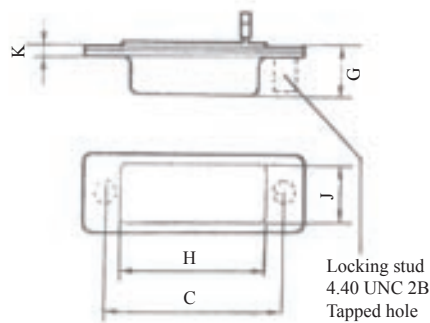
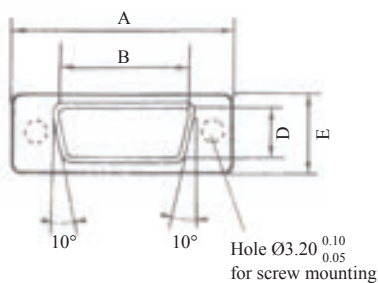
3 types of contacts terminations are available: Solder bucket, Solder eyelet or Straight spill.

They are compliant to MIL-C-24308 C.



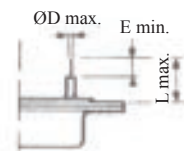
Dimensions (mm)

Shell size	A _{0/+0.30}	B	C Screw mounting	D	E _{0/+0.30}	G max	H _{+/-0.20}	J _{+/-0.20}	K _{+0.10 -0.20}
E	30.80	16.94	24.99	8.41	12.54	8.45	18.40	9.40	2.50
A	39.14	25.27	33.32				23.70		
B	53.03	39.00	47.04				37.56		
C	69.29	55.45	63.50	11.10	15.36	8.75	53.97	12.70	2.70
D	66.92	52.86	61.11				50.80		

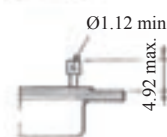


Solder bucket

Straight spills



Solder eyelet





D - subminiature connectors

D-sub hermetic connectors

Part numbers & specifications

Shell size	Plating		Solder mounting				Screw mounting		
	Shell	Cts	With locking stub		Without locking stub		Solder bucket	Straight spill	Eyelet
			Solder bucket	Straight spill	Solder bucket	Straight spill			
E 9 Cts	Cadmium	Gold	DEH09P002	DEH09P004	DEH09P006	DEH09P008	DEH09P102	DEH09P104	-
	Cadmium	Gold	-	DEH09P014	-	-	-	-	-
	Gold	Gold	-	-	-	-	DEH09P122	DEH09P124	-
	Tin bright	Gold	DEH09P007	DEH09P012	DEH09P023	DEH09P010	DEH09P107	DEH09P113	-
	Tin bright	Gold	-	DEH09P015	DEH09P025	-	-	DEH09P116	-
	Tin bright	Gold	-	DEH09P016	DEH09P005	-	-	-	-
	Tin bright	Gold	-	DEH09P017	-	-	-	-	-
	Tin mat	Tin mat	-	-	-	DEH09P009	-	-	-
	Nickel	Nickel	-	-	-	-	-	-	DEH09P121
A 15 Cts	Cadmium	Gold	DAH15P002	DAH15P004	DAH15P006	DAH15P008	DAH15P102	DAH15P104	-
	Cadmium	Gold	-	DAH15P014	-	-	-	-	-
	Gold	Gold	-	-	-	-	DAH15P122	DAH15P124	-
	Tin bright	Gold	DAH15P007	DAH15P012	DAH15P023	DAH15P010	DAH15P107	DAH15P113	-
	Tin bright	Gold	-	DAH15P015	DAH15P005	-	DAH15P119	DAH15P116	-
	Tin bright	Gold	-	DAH15P016	-	-	DAH15P120	-	-
	Tin mat	Tin mat	-	-	-	DAH15P009	-	-	-
B 25 Cts	Cadmium	Gold	DBH25P002	DBH25P004	DBH25P006	DBH25P008	DBH25P102	DBH25P104	-
	Cadmium	Gold	-	DBH25P014	DBH25P020	-	-	-	-
	Gold	Gold	-	-	-	-	DBH25P122	DBH25P124	-
	Tin bright	Gold	DBH25P007	DBH25P011A	DBH25P023	DBH25P010	DBH25P107	DBH25P113	-
	Tin bright	Gold	-	DBH25P012	DBH25P005	-	-	DBH25P115	-
	Tin bright	Gold	-	DBH25P015	-	-	-	DBH25P116	-
	Tin bright	Gold	-	DBH25P016	-	-	-	-	-
	Tin bright	Gold/Tin	-	-	-	-	-	DBH25P125	-
	Tin mat	Tin mat	-	-	-	DBH25P009	-	-	-
C 37 Cts	Cadmium	Gold	DCH37P002	DCH37P004	DCH37P006	DCH37P008	DCH37P102	DCH37P104	-
	Cadmium	Gold	-	DCH37P014	-	-	-	-	-
	Gold	Gold	-	-	-	-	DCH37P122	DCH37P124	-
	Tin bright	Gold	DCH37P007	DCH37P012	DCH37P023	DCH37P010	DCH37P107	DCH37P113	-
	Tin bright	Gold	-	DCH37P015	DCH37P005	DCH37P021	-	DCH37P114	-
	Tin bright	Gold	-	DCH37P016	-	-	-	DCH37P116	-
	Tin mat	Tin mat	-	-	-	DCH37P009	-	-	-
D 50 Cts	Cadmium	Gold	DDH50P002	DDH50P004	DDH50P006	DDH50P008	DDH50P102	DDH50P104	-
	Cadmium	Gold	-	DDH50P014	-	-	-	-	-
	Gold	Gold	-	-	-	-	DDH50P122	DDH50P124	-
	Tin bright	Gold	DDH50P007	DDH50P012	DDH50P023	DDH50P010	DDH50P107	DDH50P113	-
	Tin bright	Gold	-	DDH50P015	DDH50P005	-	-	DDH50P114	-
	Tin bright	Gold	-	DDH50P016	DDH50P019	-	-	DDH50P116	-
	Tin mat	Tin mat	-	-	-	DDH50P009	-	-	-



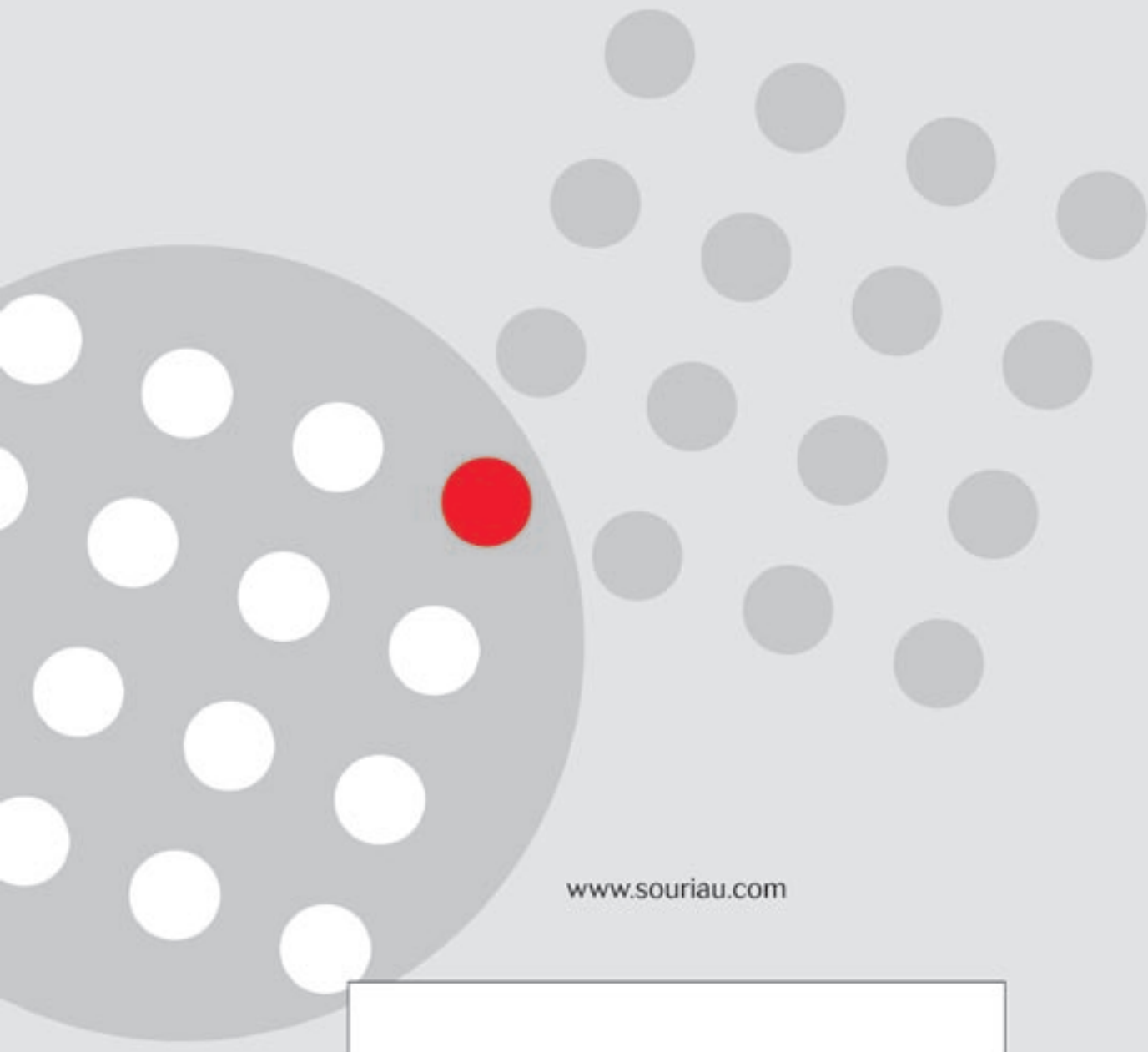
D - subminiature connectors

D-sub hermetic connectors

Straight spill version dimensions

N° specification	004	008	009	010	011A	012	014	015	016
L max	7.62				3.40	5.25	3.83	9.60	7.62
E min	6.40				2.00	4.02	2.13	8.43	6.40
ø D max	0.83				0.60	0.68	0.63	0.83	0.83

N° specification	017	021	104	113	114	115	116	124	125
L max	3.83	7.62		6.82		16.35	7.62		
E min	2.13	6.40		5.60		15.18	6.40		
ø D max	0.60	0.83		0.65		0.85	0.83		



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