

8525 Series EN3646



EN3646 Qualified Connectors

SOURIAU is now the first manufacturer to offer all EN3646 qualified connectors.

A wide range ■ Shell sizes 08 to 24.
3 platings available for aluminum connector.
Hermetic stainless steel version.

Time saving ■ Bayonet locking system: one of the quickest in the aerospace connectors market.

Proven technology ■ Used on many applications: aerospace, railway, nuclear, telecom/datacom infrastructures.

Customizable ■ Fuel tank version.
Various PC tail contacts lengths.
Can be delivered with backshells.





Description

- Bayonet coupling
- Intermateable with MIL-C 26482 Series I and II
- RFI shielding plug
- Gold plated crimp contacts #20, #16, #12
- Minicoax contacts #16
- Hermetic version available

Technical features

Mechanical

- **Shell & plating:**
 - . Aluminum:
 - Black anodized
 - Nickel
 - Olive green cadmium
 - . Passivated stainless steel (hermetic)
- **Insulator:**
 - . Thermoplastic
 - . Glass sealed (hermetic)
- **Seal:** Silicone elastomer
- **Contact:**
 - . Copper alloy
 - . Gold plated ferrous alloy (hermetic)
- **Contact plating:** Gold
- **Endurance:**
 - . 500 mating cycles for models A and Y
 - . 250 mating cycles for models RS and WS
- **Shock:**
 - . Model Y, as per EN3646, 100 m/s² (10g) during 6 ms in the X, Y and Z axis
- **Vibration:**
 - . From 10 to 2000 Hz - acceleration: 20G
- **Contact retention in insert:**
 - . size 20: 90 N
 - . size 16: 115 N
 - . size 12: 136 N

Electrical

- **Contact resistance:**
 - . size 20: $\leq 1 \text{ m}\Omega$
 - . size 16: $\leq 0.55 \text{ m}\Omega$
 - . size 12: $\leq 0.35 \text{ m}\Omega$
- **Insulation resistance:**
 - . $\geq 5000 \text{ M}\Omega$ at 500 Vdc
- **Max current rating per contact:**

	Size 20	Size 16	Size 12
Standard	7.5 A	13 A	23 A
Hermetic	5 A	10 A	17 A
- **Shell continuity:**
 - . 5 m Ω , plug with grounding ring and receptacle
 - . 50 m Ω , plug with grounding ring and hermetic receptacle

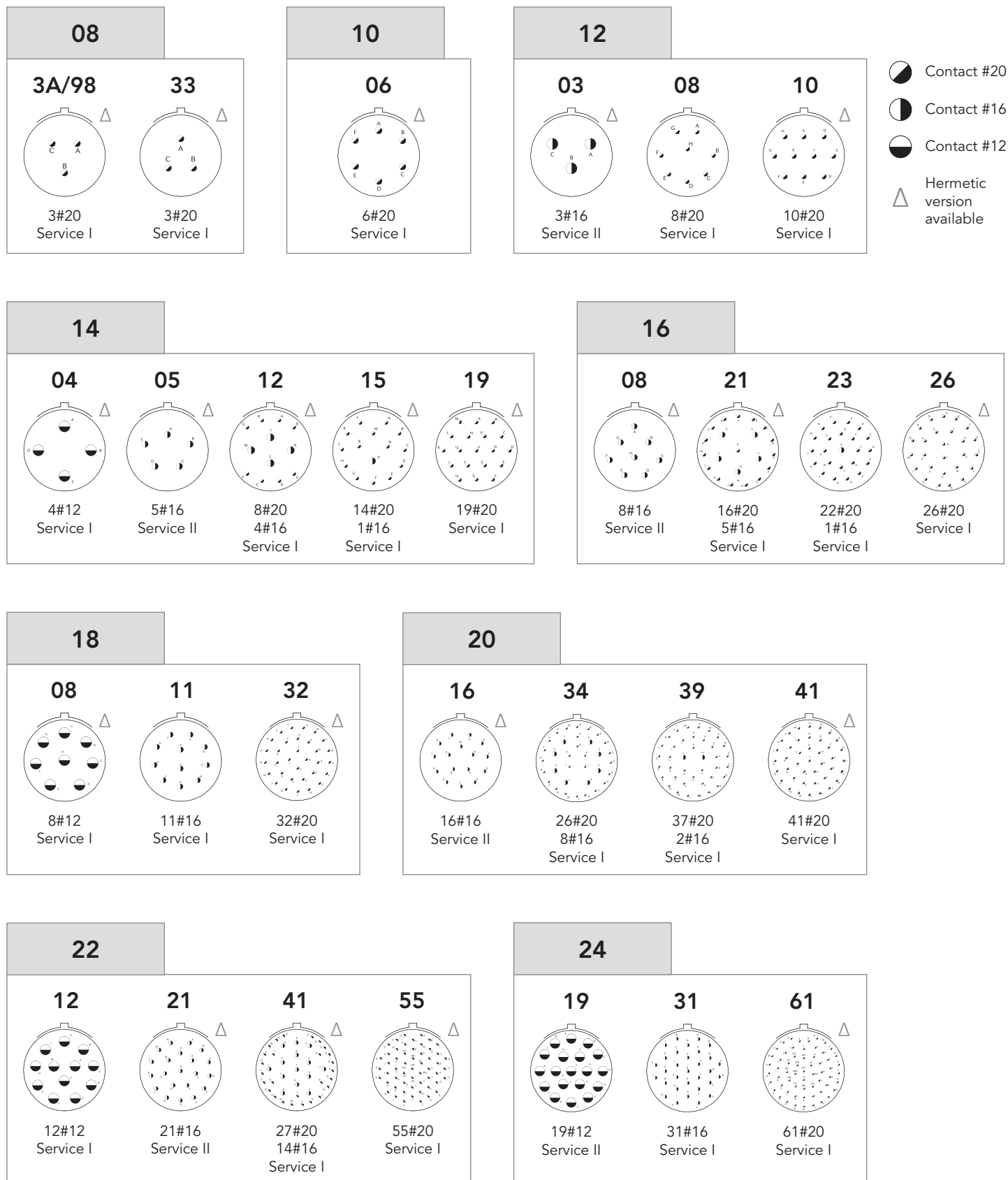
- **Dielectric withstanding voltage:**

Service	sea level	at 21000 m
I	1500 Vrms	375 Vrms
II	2300 Vrms	550 Vrms

Environmental

- **Temperature range:**
 - . -65°C to +175°C class WS
 - . -65°C to +200°C class A, RS and Y
- **Damp heat:** 56 days
- **Salt spray:**
 - . 500 hours, class WS, Y
 - . 48 hours, class A, RS
- **Leakage:** Low pressure immersion 33mbar
- **Corrosion resistance:** as per EN3646-001
- **Fluid resistance:** as per EN3646-001

Contact layouts



Ordering information

Basic series	EN3646	RS0	10	06	M	N
Shell type, temperature, plating and rear teeth A6: Aluminum plug without grounding spring, 200°C, black anodized plated, 3 rear teeth at 120° RS6: Aluminum plug with grounding spring, 200°C, nickel plated, 3 rear teeth at 120° WS6: Aluminum plug with grounding spring, 175°C, olive green cadmium plated, rear teeth over 360° A0: Aluminum square flange receptacle, 200°C, black anodized plated, 3 rear teeth at 120° RS0: Aluminum square flange receptacle, 200°C, nickel plated, 3 rear teeth at 120° WS0: Aluminum square flange receptacle, 175°C, olive green cadmium plated, rear teeth over 360° A7: Aluminum jam nut receptacle, 200°C, black anodized plated, 3 rear teeth at 120° RS7: Aluminum jam nut receptacle, 200°C, nickel plated, 3 rear teeth at 120° WS7: Aluminum jam nut receptacle, 175°C, olive green cadmium plated, rear teeth over 360°						
Shell size: 08, 10, 12, 14, 16, 18, 20, 22, 24						
Contact layout: See previous page						
Contact type M: Male F: Female A: Connector delivered without male contact B: Connector delivered without female contact C: Connector delivered with male contact #20 large barrel D: Connector delivered with female contact #20 large barrel						
Orientation: N, W, X, Y, Z						

Hermetic connectors

Basic series	EN3646	Y	0	08	03	M	N
Y: Hermetic, mandatory suffix							
Shell type: 0: Square flange receptacle, 200°C, passivated stainless steel 1: Solder mount receptacle, 200°C, passivated stainless steel 7: Jam nut receptacle, 200°C, passivated stainless steel							
Shell size: 08, 10, 12, 14, 16, 18, 20, 22, 24							
Contact layout: See previous page							
M: Pin solder contacts							
Orientation: N, W, X, Y, Z							

Aluminum protective covers

Basic series	EN3646	RS3	C	10
Cover style, temperature and plating A3: Cover for receptacle, 200°C, black anodized plated RS3: Cover for receptacle, 200°C, nickel plated WS3: Cover for receptacle, 175°C, olive green cadmium plated A4: Cover for plug, 200°C, black anodized plated RS4: Cover for plug, 200°C, nickel plated WS4: Cover for plug, 175°C, olive green cadmium plated				
Fixing type C: Small fixing attachment, 4.20 mm hole diameter D: Large fixing attachment				
Size: 08, 10, 12, 14, 16, 18, 20, 22, 24				

Please consult us.

Dummy receptacles

Basic series	EN3646	WS5	10
Temperature and plating A5: 200°C, black anodized plated RS5: 200°C, nickel plated WS5: 175°C, olive green cadmium plated			
Size: 08, 10, 12, 14, 16, 18, 20, 22, 24			

Please consult us.

Contacts

Technical characteristics

Contact type	Male contact Ø	Retention force	Current rating	Contact resistance	Admissible wires		
					External Ø over insulator	Admissible section	Wire gauge
#20	1 mm	90 N	7.5 A	≤ 1 mΩ	0.98 to 2.11 mm	0.25 to 0.6 mm ²	24 to 20
#20 large barrel						0.25 to 1 mm ²	24 to 18
#16	1.6 mm	115 N	13 A	≤ 0.55 mΩ	1.34 to 2.62 mm	0.6 to 1.2 mm ²	20 to 16
#16 large barrel						1 to 2 mm ²	18 to 14
#12	2.4 mm	136 N	23 A	≤ 0.35 mΩ	2.45 to 4.01 mm	1.2 to 3 mm ²	16 to 12
#12 small barrel			10 A		0.98 to 2.11 mm	0.25 to 1 mm ²	24 to 18

Note: Reducing sleeve for #20 standard contact available. For wire 0.09 to 0.21 mm². PN 8522-2142PZ.

Part numbers EN3155

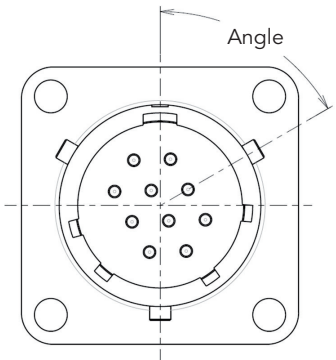
Contact type		Part number		Color band	Dot
		Male contact	Female contact		
Standard contacts	#20	018M2020	019F2020	Red/Red	-
	#20 large barrel	018M2018	019F2018	Red/Violet	-
	#16	018M1616	019F1616	Blue/Blue	-
	#16 large barrel	018M1614	019F1614	Blue/Orange	-
	#12	018M1212	019F1212	Yellow/Yellow	-
	#12 small barrel	018M1218	019F1218	Violet/Yellow	-
Thermocouple contacts	#20 chromel	056M2020	057F2020	Red/Red	Yellow/White
	#20 alumel	054M2020	055F2020	Red/Red	Black/White

Minicoax contacts

Installed instead of size 16 contacts.

Part numbers		
Male contacts	8522-2-001	8522-2-002
Female contacts	8522-1-001	8522-1-002
Admissible cables	RG 316 U KX 22 A RG 174 U KX 3 A RG 188 A/U RG 179 B/U	RG 178 B/U KX 21 A RG 196 A/U

Orientation

Polarization code												
			Shell size	Layout	N	W	X	Y	Z			
			08	3A 33	0 0	60 90	210 -	- -	- -			
			10	06	0	90	-	-	-			
			12	03 08 10	0 0 0	- 90 60	- 112 155	180 203 270	- 292 295			
			14	04 05 12 15 19	0 0 0 0 0	45 40 43 17 30	- 92 90 110 165	- 184 - 155 315	- 273 - 234 -			
			16	08 21 23 26	0 0 0 0	54 - 158 60	152 - 270 -	180 - - 275	331 - - 338			
			18	08 11 32	0 0 0	180 62 85	- 119 138	- 241 222	- 340 265			
			20	16 39 41	0 0 0	238 63 45	318 144 126	333 252 225	347 333 -			
			22	12 21 41 55	0 0 0 0	- 16 39 30	- 135 135 142	- 175 264 226	6 349 - 314			
			24	19 31 61	0 0 0	30 90 90	165 225 180	315 255 270	- - 324			

Maximum connector weights (in grams)

Shell type		Shell size	8	10	12	14	16	18	20	22	24
Sealed without contacts	Square flange receptacle (type 0)		6	10	13	16	22	26	33	39	49
	Jam nut receptacle (type 7)		6	8	11	16	21	23	29	38	42
	Plug (type 6)		9	13	19	23	28	31	39	45	55
Hermetic with contacts	Solder mount receptacle (type 1H)		7	9	13	17	21	26	32	37	43
	Square flange receptacle (type 02H)		10	12	16	21	26	33	41	47	55
	Large square flange receptacle (type 02H spec. 002)		16	18	24	29	34	40	56	60	70
	Jam nut receptacle (type 07H)		20	25	38	45	52	63	86	96	115

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