



YESC

**YAZAKI ENGINEERING
STANDARD CONNECTOR**

0.5 SERIES

INTRODUCTION

YESC 0.5 SERIES

Yazaki Engineering Standard Connector

How is Yazaki addressing the need for more circuits inside passenger cars under the condition of limited space? The answer is the latest member of the Yazaki Engineering Standard Connector series: The YESC 0.5 family! The YESC 0.5 series is a UCSAR compatible 0.5 mm unsealed connection system with reduced size of up to 50 % compared to 0.64 mm systems on the market.

A whole series of male and female connectors, headers and applicable terminals is available. The male and female terminals are available for standard unsealed applications in tin (Sn) plating and in a cross-section range from 0.13 mm² up to 0.5 mm². For future applications with higher temperature requirements even a high performance material version will be offered.

The unsealed connector portfolio ranges from 2 to 24 way male and female connectors to support device and inline applications. The connectors come with a proven hinged secondary locking design and optional connector position assurance (CPA). During the design of the connectors future automatization of the wire harness was anticipated and the connectors were designed to allow automatic terminal insertion.

Specification

Validation specification	USCAR-2, USCAR-21
Sealing class	S1 (unsealed)
Vibration class	V1 (chassis profile)
Temperature class	T2 (-40 – 100°C)
Terminal retention force min. (primary locking) / (secondary locking) / (primary & secondary locking)	20 / 45N / 60N
Connector to connector mating force max.	40N (YESC 0.5), 55N (YESC 0.5/2.8 Hybrid)
Material connectors	PBT-GF+MD
Clip feature	Acc. USCAR EWCAP-005-7
Material headers	PA6T/66 GF-30
Terminal removal tool	See handling manual YPES-15-1389E
Terminal derating	See product standard YPES-11-05-314E
Terminal pitch	Horizontal: 2.00 mm / Vertical: 2.20 mm

YESC 0.5 SERIES TERMINALS

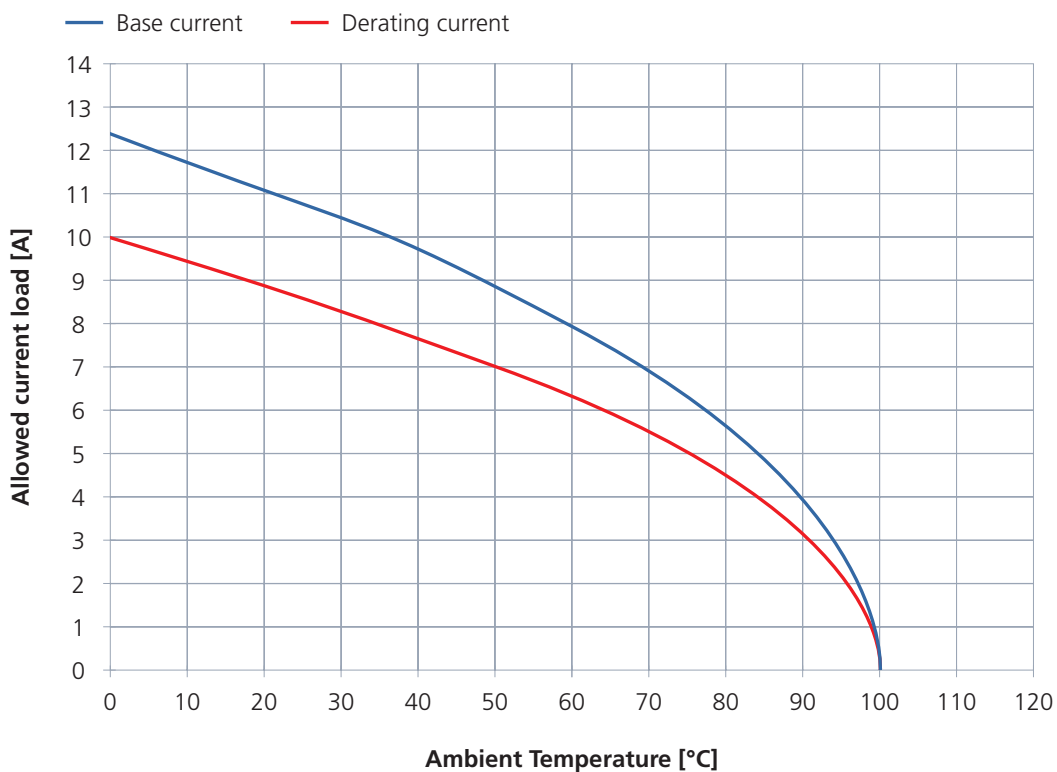
Highlights

- ▶ Male & Female terminals for 0.13 to 0.5 mm² in Sn plating
- ▶ Partially the terminals utilized advanced serration to enable Al wire crimping
- ▶ Ready for future sealed and high-performance applications due to available plating (SnAg & Ag) and material options



Derating Diagram

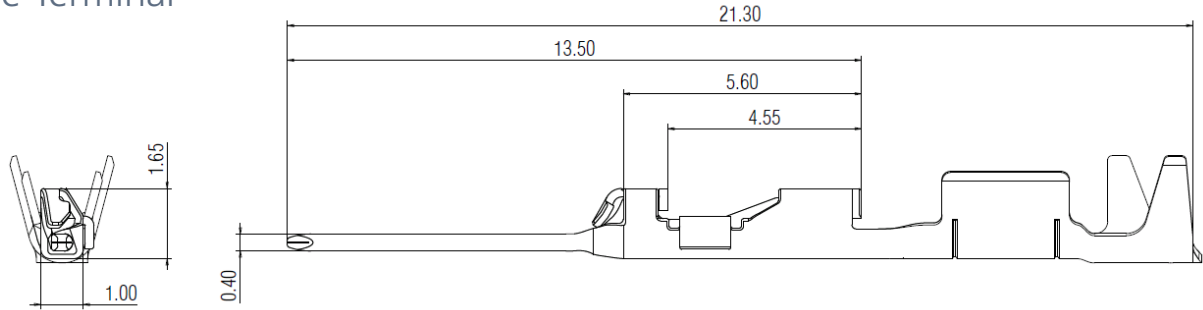
0.5 YESC female Sn plated and male Sn plated terminals connected inline, crimped on 0.5 mm² wire



For reference only, see product standard YPES-11-05-314E for full details

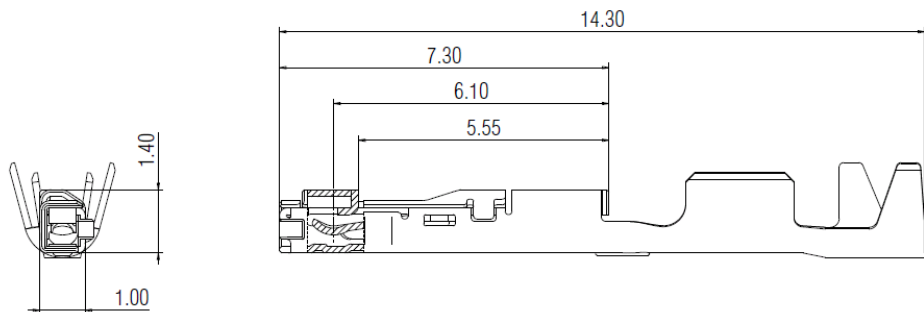
YESC 0.5 SERIES TERMINALS

Male Terminal



Part Number Male	Application	Serration	Wire Range [mm ²]	Material	Plating
7195-1199-02	Unsealed/Cu Wire	Standard	0.13 – 0.22	CuSn4	Tin
7195-1200-02	Unsealed Cu Wire & Al Wire	Advanced	0.35 – 0.50 Al only 0.50	CuSn4	Tin
7195-1201-06	Mat Seal/Cu Wire	Standard	0.13 – 0.22	CuNiSi	Silver
7195-1202-06	Mat Seal/Cu Wire	Advanced	0.35	CuNiSi	Silver

Female Terminal

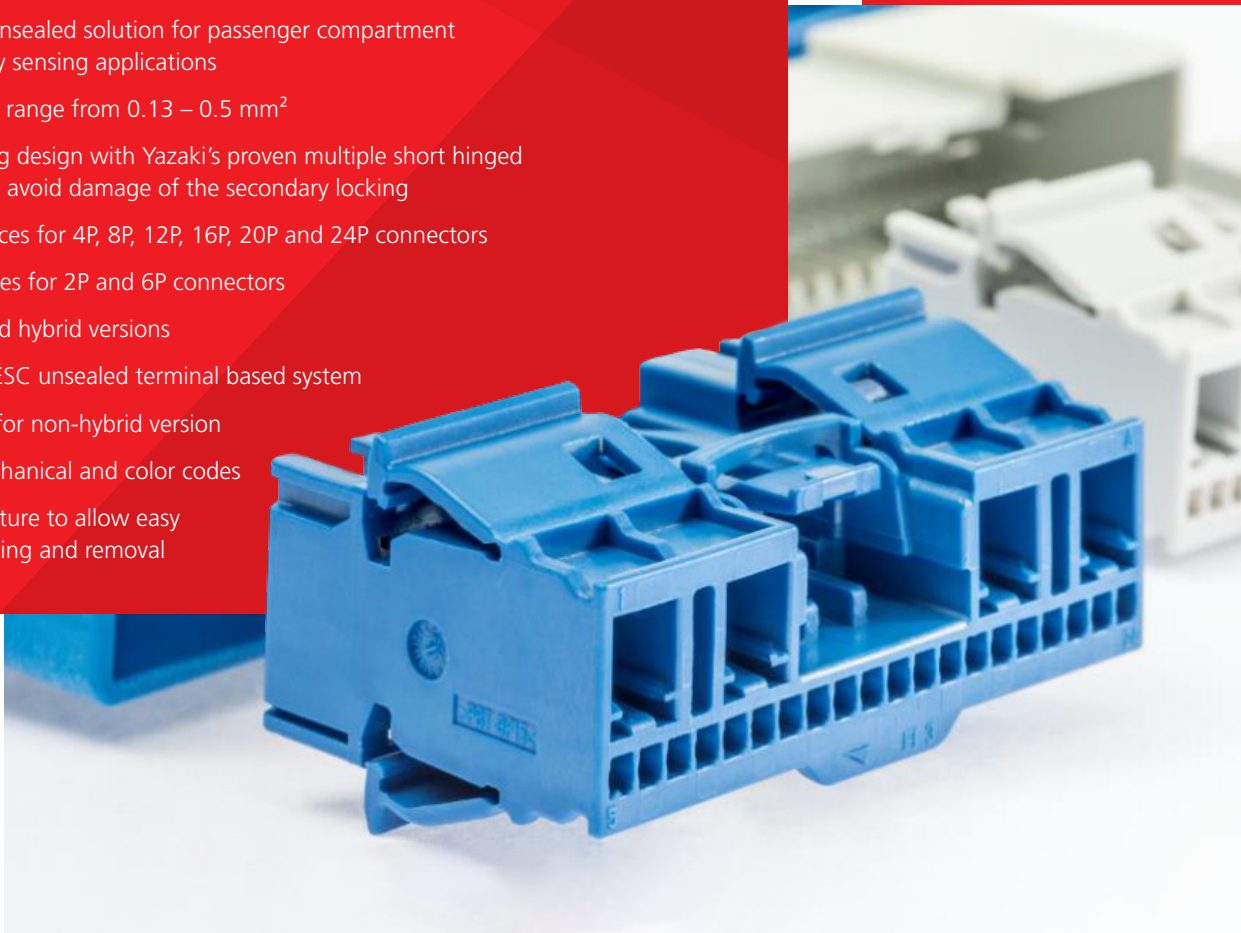


Part Number Female	Application	Serration	Wire Range [mm ²]	Material	Plating
7196-0069-02	Unsealed/Cu Wire	Standard	0.13 – 0.22	CuSn8	Tin
7196-0070-02	Unsealed/Cu Wire	Standard	0.35 – 0.50	CuSn8	Tin
7196-0072-02	Unsealed/Mat Seal Cu Wire	Standard	0.13 – 0.22	CuNiSi	Tin-Silver
7196-0072-06	Unsealed/Mat Seal Cu Wire	Standard	0.13 – 0.22	CuNiSi	Silver
7196-0073-02	Unsealed/Mat Seal Cu Wire	Standard	0.35 – 0.50	CuNiSi	Tin-Silver
7196-0073-06	Unsealed/Mat Seal Cu Wire	Standard	0.35 – 0.50	CuNiSi	Silver
7196-1348-02	Unsealed/Al Wire	Advanced	0.50	CuSn8	Tin

YESC 0.5 SERIES CONNECTORS

Highlights

- ▶ Miniaturized unsealed solution for passenger compartment and HV-battery sensing applications
- ▶ Wide wire size range from 0.13 – 0.5 mm²
- ▶ Robust housing design with Yazaki's proven multiple short hinged side spacers to avoid damage of the secondary locking
- ▶ USCAR interfaces for 4P, 8P, 12P, 16P, 20P and 24P connectors
- ▶ Yazaki interfaces for 2P and 6P connectors
- ▶ Non-hybrid and hybrid versions
- ▶ 0.5 and 2.8 YESC unsealed terminal based system
- ▶ CPA available for non-hybrid version
- ▶ Up to five mechanical and color codes
- ▶ Finger-grip feature to allow easy connector mating and removal



YESC 0.5 SERIES CONNECTORS

Connector Part Numbers

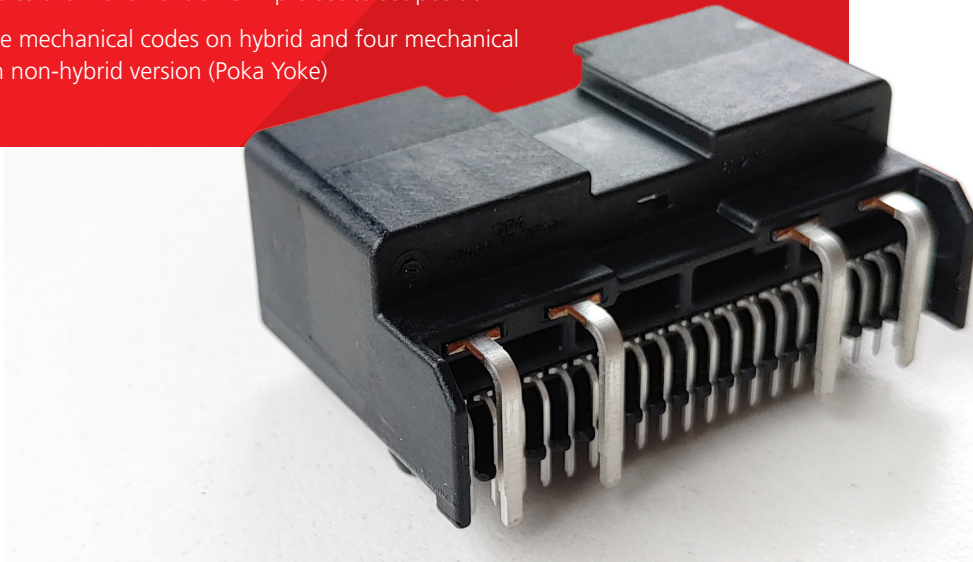
Code	No. of Poles	Male connector	Female Connector without CPA	Female Connector with CPA	Interface	
A	2	7197-8322-30	7198-8321-30	7298-8321-30	Yazaki unique	
B	2	7197-8323-40	7198-8324-40	7298-8324-40		
C	2	7197-8325-10	7198-8326-10	7298-8326-10		
D	2	7197-8327-60	7198-8328-60	7298-8328-60		
A	4	7197-1754-30	7198-1730-30	7298-1730-30	USCAR 050-U-004-1-Z02	
B	4	7197-1755-40	7198-1731-40	7298-1731-40		
C	4	7197-1756-10	7198-1732-10	7298-1732-10		
D	4	7197-1757-60	7198-1733-60	7298-1733-60		
A	6	On request	7198-1706-30	7298-1706-30	Yazaki unique	
B	6		7198-1709-40	7298-1709-40		
C	6		7198-1711-10	7298-1711-10		
D	6		7198-1712-60	7298-1712-60		
A	8	7197-2002-30	7198-1713-30	7298-1713-30	USCAR 050-U-008-1-Z02	
B	8	7197-2003-40	7198-1714-40	7298-1714-40		
C	8	7197-2004-10	7198-1715-10	7298-1715-10		
A	12	On request	7198-1734-30	7298-1734-30	USCAR 050-U-012-2-Z02	
B	12	On request	7198-1735-40	7298-1735-40		
C	12	On request	7198-1736-10	7298-1736-10		
A	16	On request	7198-4945-30	7298-4945-30	USCAR 050-U-016-2-Z01	
B	16	On request	7198-4946-40	7298-4946-40		
C	16	On request	7198-4947-10	7298-4947-10		
A	20	7197-2005-30	7198-8491-30	7298-8491-30	USCAR 050-U-020-2-Z01	
B	20	7197-2006-40	7198-8492-40	7298-8492-40		
C	20	7197-2007-10	7198-8493-10	7298-8493-10		
A	24	7197-1716-30	7198-8495-30	7298-8495-30	USCAR 050-U-024-2-Z01	
B	24	7197-1717-40	7198-8496-40	7298-8496-40		
C	24	7197-1718-10	7198-8497-10	7298-8497-10		
A	Hybrid*	On request	7189-0846-30	N/A	Yazaki unique	
B	Hybrid*	On request	7189-0849-40			
C	Hybrid*	On request	7189-0852-10			
D	Hybrid*	On request	7189-0853-90			
E	Hybrid*	On request	7189-0854-60			

*Hybrid connector 24P (4x2.8 + 20x0.5)
3P, 5P, 10P, 18P and 32P connectors & headers are available on request.

YESC 0.5 SERIES HEADERS

Highlights

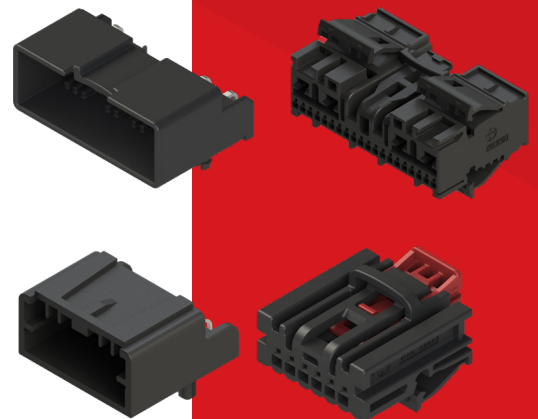
- ▶ Unsealed solution for passenger compartment signal current applications
- ▶ Suitable for THT (Through Hole Technology)
- ▶ PCB position assurance pins to guide the PCB holes and hold header position before soldering
- ▶ Locking hook assures holding between female connector and header and enables the movement of CPA pre-set to set position
- ▶ Up to five mechanical codes on hybrid and four mechanical codes on non-hybrid version (Poka Yoke)



24P Hybrid YESC Header

Header Part Numbers

Code	No. of Poles	Header	Female Connector without CPA	Female Connector with CPA
A	20x0.5+4x2.8	7388-2798-30	7189-0846-30	N/A
B	20x0.5+4x2.8	7388-2799-40	7189-0849-40	
C	20x0.5+4x2.8	7388-2800-10	7189-0852-10	
D	20x0.5+4x2.8	7388-2801-90	7189-0853-90	
E	20x0.5+4x2.8	7388-2802-60	7189-0854-60	
A	6x0.5	7225-4386-30	7198-1706-30	7298-1706-30
B	6x0.5	7225-4387-40	7198-1709-40	7298-1709-40
C	6x0.5	7225-4388-10	7198-1711-10	7298-1711-10
D	6x0.5	7225-4389-60	7198-1712-60	7298-1712-60





TECHNICAL SALES SUPPORT

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Quotation



Sample Order



Version
20-01-2023

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