

# EVBS-C7

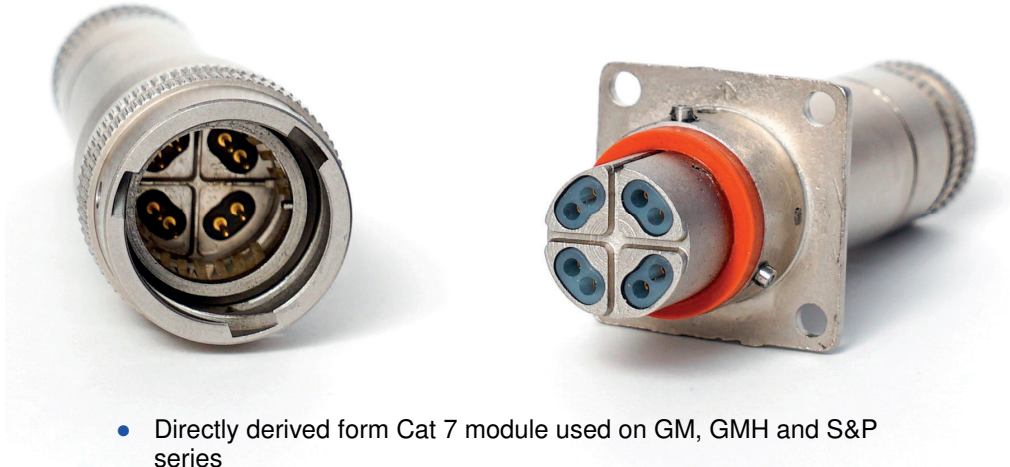
Bayonet Category 7 connector

the definitive alternative for  
Ethernet static  
interconnections inside  
railways vehicles

- 
- ✓ Passenger control
  - ✓ Networking and lighting control
  - ✓ Diagnostic support for brakes, motors and doors
  - ✓ Passenger display and Internet connection

# EVBS-C7

- ✓ Ethernet Cat 6A
- ✓ Ethernet Cat 7
- ✓ Ethernet Cat 7A



- Directly derived from Cat 7 module used on GM, GMH and S&P series
- Audible, visible and tactile mating.
- One quarter turn lock for coupling
- Vibration and shock resistant: according to EN 61373 category 1, class B, body mounted.
- Fire behaviour: according to EN 45545-2
- Positive fitting to the dimensions requested by the most updated cables for static applications
- Match CAT 7A requirements.
- Tested according to Trenitalia 376575.
- Over-moulded contacts pairs at controlled impedance.
- Each pair is fully shielded from the adjacent to reduce the crosstalk.
- 2x4 contact termination 23 AWG - available 24 and 26 AWG.
- Reduced components quantity makes easier and more reliable assembly.
- The square receptacle makes possible the reliable fixing on panels and racks

## Order Code

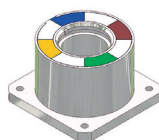
Prefix	EVBS-C7	EVBS-C7	6	EII	N03
Shell type	1 = Female module 6 = Male module				
Module adapter	XA = Adapter for heat shrink tube GV = Adapter with shielding nut & cone XE...Ax = Adapter for crimping sleeve and heat shrink tube EII = Double spring adapter (strain relief & shielding)				
Contacts termination	N03 = AWG23 N04 = AWG24 N... = Consult Factory for dedicated contact equipment				

(#) Available as type1 with female contacts and type 6 with male contacts

## EVBS-C7 assembly tools



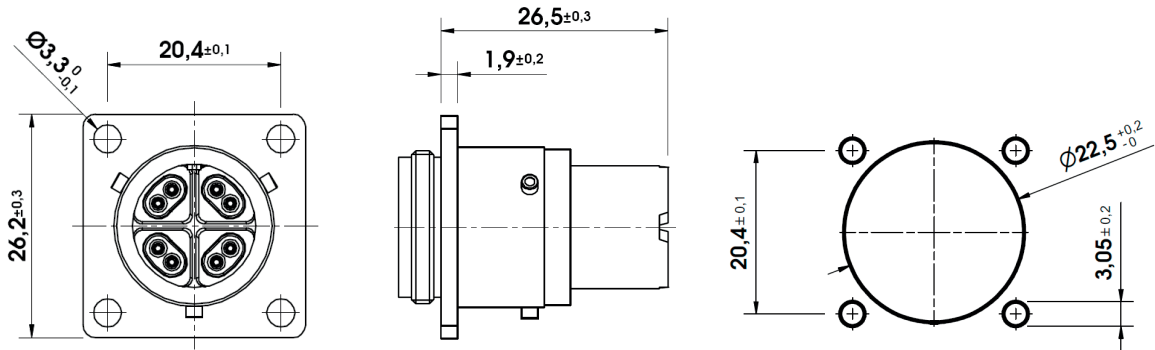
61166  
Wire stripping tool



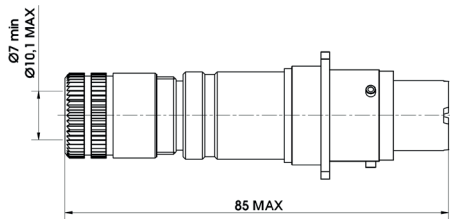
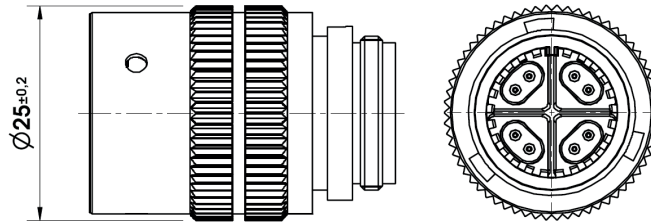
61171  
Wire identification tool

61165  
Contacts crimping tool

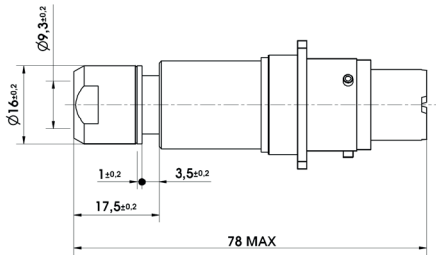
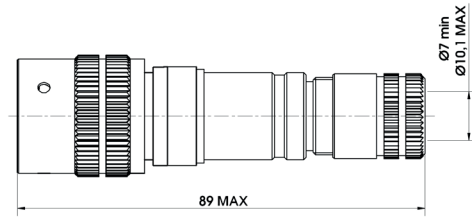




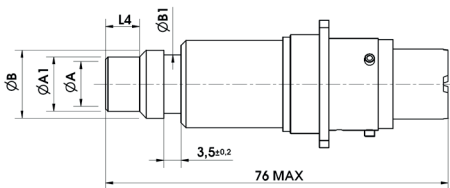
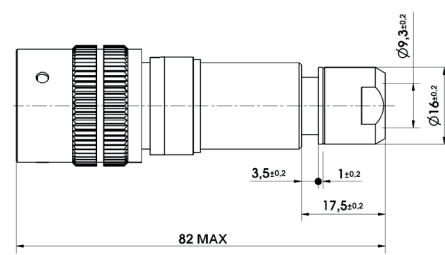
Panel cut out for front or rear mounting.  
Max rear mounting panel thickness: 2,5mm



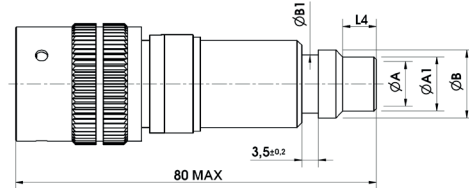
EII



GV



XE...Ax



Suffix	A	A1	B	B1	L4
A6	6.2	7.8	11	9	8
A9	9.2	11.2	14	12	7

### Materials and finishes

Shell	Aluminum alloy – Electro-less nickel plated
Inner contacts	Copper alloy – Gold plating over Nickel
Insulator	Controlled impedance thermo plastic resin

# DATA CONNECTORS AND SIGNALS EVBS SERIES





## Connettore serie EVBS/*EVBS connector series*

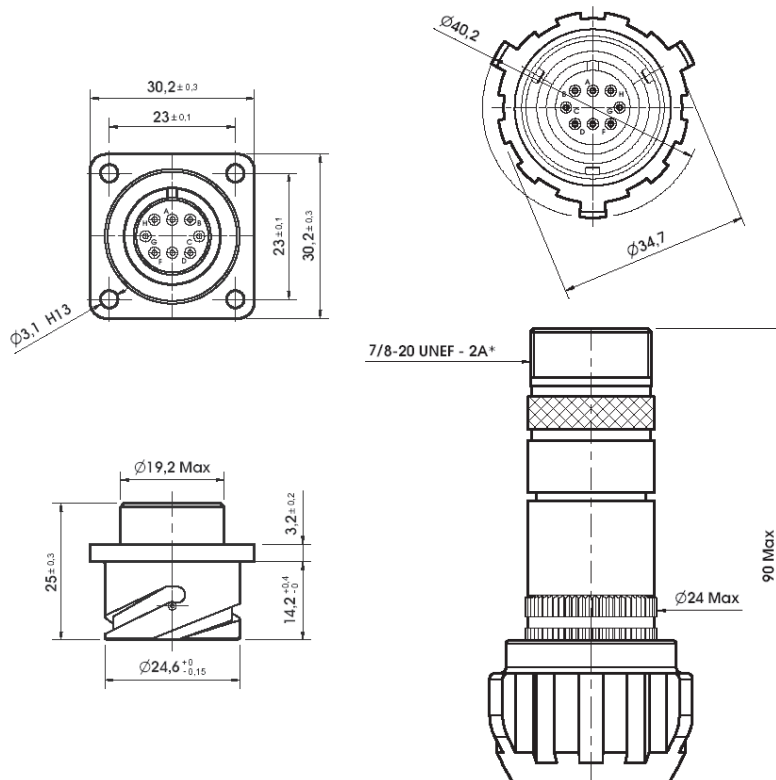


La soluzione affidabile per le trasmissioni con cavi LAN categoria 5E o 6 in applicazioni ferroviarie.

- Ingombro ridotto
- Accoppiamento a baionetta
- Tenuta stagna IP67 (a connettori accoppiati)
- Resistenza a vibrazioni e urti
- Collegamento ai moderni sistemi di protezione cavo
- Predisposto per accettare ogni tipo di schermatura
- Materiali e trattamenti conformi agli attuali standard per ferrovia
- Testato rispetto agli standard normalmente richiesti
- Inserti per 2 o 4 coppie con o senza schermatura esterna

*EVBS is a new reliable solution for data transmission through LAN 5E or 6 cat. cables in railways applications.*

- *Reduced overall dimensions*
- *Bayonet coupling*
- *IP67 water resistance (mated connectors)*
- *Vibration and shock resistant*
- *Easy connection to the most common updated conduit systems*
- *Arranged for any shielding requirement*
- *Materials and finishes comply the updated requirements for railways applications*
- *Tested according to standard requirements*
- *Insert arrangements available for 2 or 4 twisted pairs with or w/out shielding*



**Caratteristiche serie:**

- contatti a crimpare dorati
- continuità di schermo
- ghiera ricoperta in gomma
- trattamento conduttivo

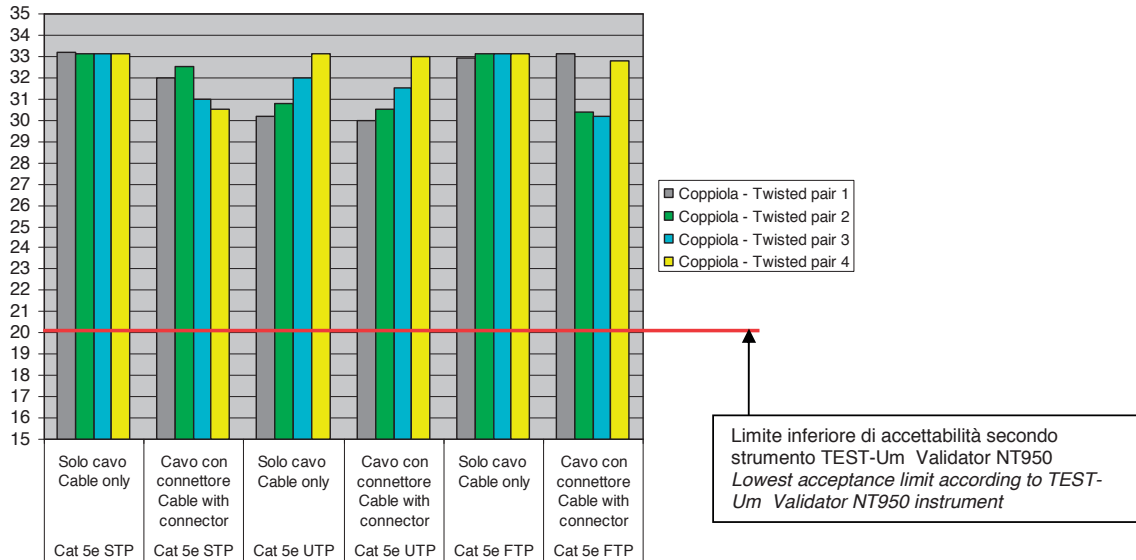
**Series characteristics:**

- gold plated crimp contacts
- shield continuity
- rubber coated coupling nut
- conductive plating

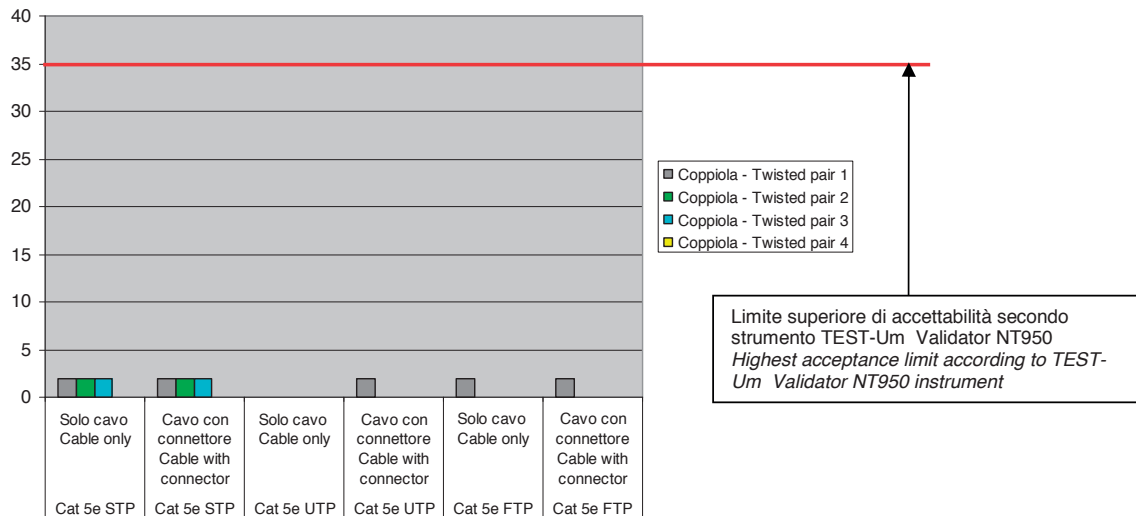
Dati rilevati su connettore a 8 poli NON schermato:

*Below data concern an unshielded 8 poles connector:*

**SNR**



**SKEW**

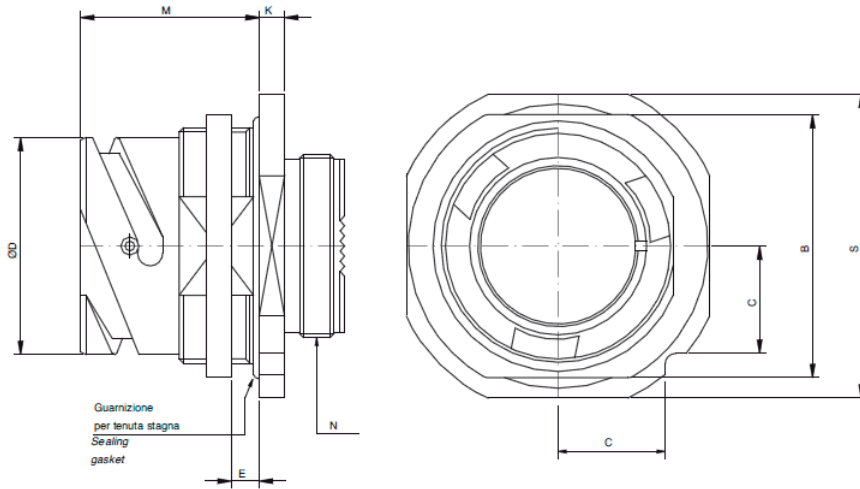


**BERT**

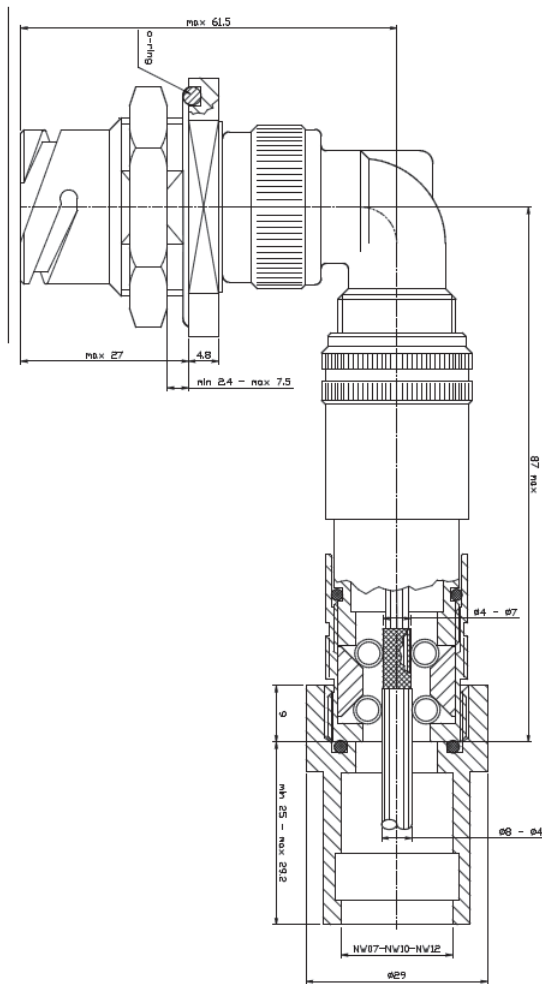
0 errori – riscontrato con qualsiasi tipo di cavo

*0 mistakes - with any cable*

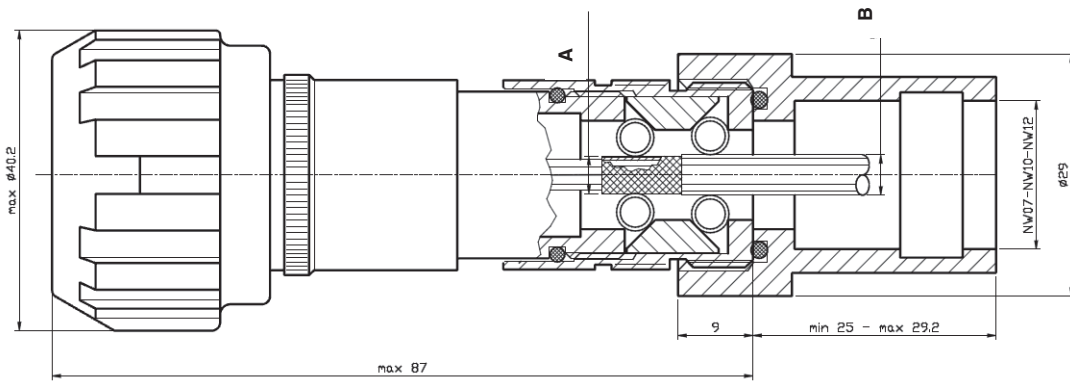
# Jam nut receptacle thread post



# Jam nut receptacle thread post with 90° elbow

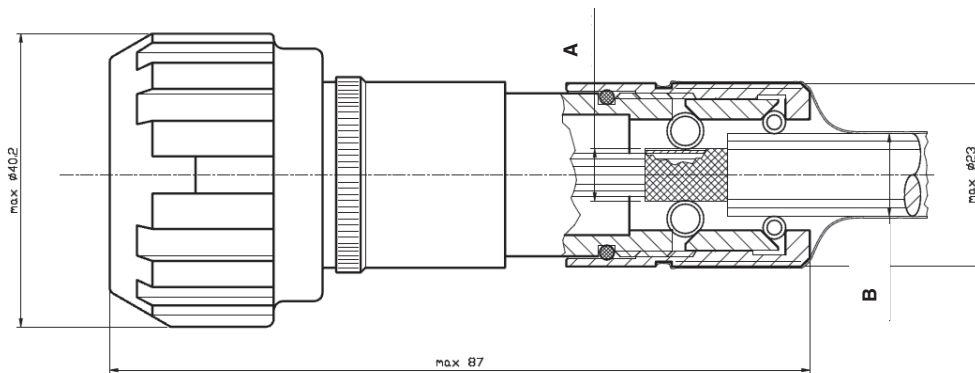


### Conduit adapter backshell



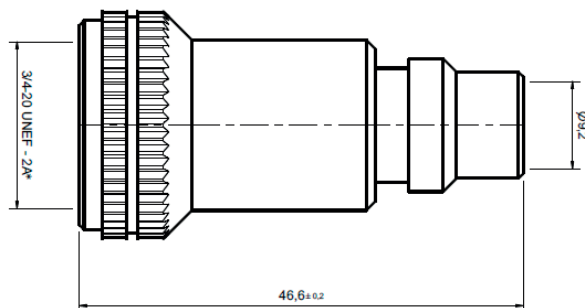
Backshell Type	A(shielding)	B (outside cable diameter)	Backshell Thread
P1	5.9	8-4	7/8" 20UNEF 2°
P2	5.9	10-5	7/8" 20UNEF 2°

### Heat shrinkable sleeve adapter backshell



Backshell Type	A (shielding)	B (outside cable diameter)	Backshell Thread
S1	5.9	13-8.5	7/8" 20UNEF 2°

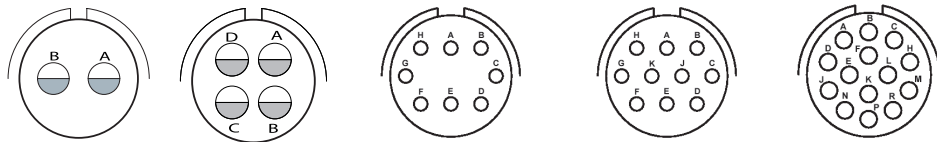
### Crimp backshells



Backshell Type	A(shielding)
C1	9.2
C2	5.9



## Available arrangement



ARRANGEMENT	14S-9	14S-2	14SZ8	14SZ10	14SZ14
No. of contacts	2	4	8	10	14
Contact size	16S	16S	20	20	20

## Part number creation

Serie	Type	Arrangement	Contact Type	backshell	Plating
EVBS	6	14S-2	P	C1	F16

<b>Serie</b>	
EVBS	Standard
RF EVBS	Flame retardant rubber
<b>Type</b>	
2	Front mount receptacle
30	Rear mount receptacle threaded post
38	Rear mount receptacle with 90°elbow <i>(on request)</i>
70	Jam nut receptacle thread post <i>(on request)</i>
78	Jam nut receptacle thread post with 90°elbow <i>(on request)</i>
6	Plug with inline backshell
8	Plug with 90°backshell <i>(on request)</i>
<b>Arrangement</b>	
14S-9	2 contacts size 16S
14S-2	4 contacts size 16S
14SZ8	8 contact size 20
14SZ10	10 contacts size 20
14SZ14	14 contacts size 20
<b>Contact type</b>	
P	Pin contact
S	Socket contacts
<b>Backshell</b>	Mandatory for 38 78 6 8 types
P1	Cable Overall diameter 8-4mm
P2	Cable Overall diameter 10-5mm
S1	Cable Overall diameter 13-8.5
C1	Pass trough hole 9mm
C2	Pass trough hole 5mm
<b>Plating</b>	
F5:	Nichelatura chimica / <i>Electroless nichel</i>
F7:	Verniciatura nera / <i>Black epoxy varnish</i>
F16:	CCF-black passivation