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Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China









VARIOSUB D-SUB 15 Contact Inserts, Sleeve Housings

VARIOSUB is a range of plug connectors specially designed for signal and data technology in an industrial environment with high degrees of protection, temperatures and mechanical stress. The range is characterized by the simple Push-Pull locking mechanism, use of conventional D-SUB contact inserts, IP67 protection and EMC protection.

The VARIOSUB housings offer the space and time-saving Push-Pull locking, which snaps in with a noticeable click. Two integrated lamellar cable screw connections for cable diameters of 3-10 mm provide high cable strain relief.

When locked, the housings fulfill the requirements of IP67 protection, and require only little operating force thanks to a special profile gasket.

Red snap-in profiles offer up to 16 coding possibilities to avoid incorrect plugging. Marker labeling is also provided for.

An internal metal sleeve and shroud on the panel mounting base provide optional EMC protection.

Simple logistics due to the small number of individual components and high functionality of the housings help to save costs and increase availability. Mounting flanges on the panel mounting base accept the contact inserts. This allows internal and external wall mounting of the contact inserts.

The male and female inserts in D-SUB 15 format enable 15 data lines up to 0.35 mm² conductor cross section or 10 lines with 0.5 mm² conductor cross section to be connected. The connection points are clearly numbered. This facilitates any start-up under field conditions.

Industrial connectors are available for the sleeve and mounting side. They are made with screw connection, for soldering onto printed circuit boards, with a flatribbon cable connection and for crimp contacts.

For currents up to 40 A or in combination with signal lines, two versions are available as male and female connectors. The use of these plug connectors saves space on the inside of the device. The contacts are equipped with U-grooves for manual solder connection and cover the maximum possible cross section range.



VARIOSUB D-SUB 15 Contact Inserts Screw Connection





Description		Туре	Order No.	Pcs./Pkt.
Male contact inserts, with PCB and 15 x MPT 0,5 screw connections		VS-15-ST-DSUB/15-MPT-0,5	16 88 07 8	10
Female contact inserts, with PCB and 15 x MPT 0,5 screw connections		VS-15-BU-DSUB/15-MPT-0,5	16 88 09 4	10
Technical data				
Mechanical data				
Insertion force per signal contact	[N]	≤ 3.3		
Extraction force per signal contact	[N]	≤ 2.2		
Insertion/withdrawal cycles		≥ 200		
Material and surfaces				
Insulating body		PBTP		
Contact material		Cu allo	/	
Contact surface		Ni/Au		
Electrical data				
Max. amperage	[A]	1		
Operating voltage	[V]	63		
Contact resistance per contact pair	[mΩ]	≤ 2.5		
Insulation resistance	[MΩ]	≥ 5000		
Thermal and climatice data				
Temperature range	[°C]	- 20 to +	80	

VARIOSUB D-SUB 15 Contact Inserts Solder Connection



Description		Туре	Order No.	Pcs./Pkt.
Male contact inserts, solder connection, 15-pos., with straight solder pins, with hole		VS-15-ST-DSUB-EG	16 88 87 4	10
Female contact inserts, solder connection, 15-pos., with straight solder pins, with hole		VS-15-BU-DSUB-EG	16 88 88 7	10
Male contact inserts, solder connection, 15-pos., with angled solder pins, with thread		VS-15-ST-DSUB-ER	16 88 08 1	10
Female contact inserts, solder connection, 15-pos., with angled solder pins, with thread		VS-15-BU-DSUB-ER	16 88 12 0	10
Technical data				
Mechanical data				
Insertion force per signal contact Extraction force per signal contact	[N] [N]	≤ 3.3 < 2.2		
Insertion/withdrawal cycles	נואן	≥ 2.2 ≥ 200		
Material and surfaces		€ 200		
Insulating body		РВТР		
Contact material		Cu alloy		
Contact surface		Ni/Au		
Electrical data				
Max. amperage	[A]	1		
Operating voltage	[V]	63		
Contact resistance per contact pair	$[m\Omega]$	≤ 2.5		
Insulation resistance	$[M\Omega]$	≥ 5000		
Thermal and climatice data			_	
Temperature range	[°C]	- 55 to + 12	5	

VARIOSUB D-SUB 15 Contact Inserts Flat-Ribbon Cable Connection



Description		Туре	Order No.	Pcs./Pkt.
Male contact inserts, flat-ribbon cable connection, 15-pos., with holes		VS-15-ST-DSUB-FK	16 88 89 0	10
Female contact inserts, flat-ribbon cable connection, 15-pos., with holes		VS-15-BU-DSUB-FK	16 88 90 0	10
Technical data				
Mechanical data				
Insertion force per signal contact	[N]		≤ 3.3	
Extraction force per signal contact	[N]		≤ 2.2	
Insertion/withdrawal cycles			≥ 200	
Material and surfaces				
Insulating body			PBTP	
Contact material		(Cu alloy	
Contact surface			Ni/Au	
Electrical data				
Max. amperage	[A]		1	
Operating voltage	[V]		63	
Contact resistance per contact pair	$[m\Omega]$		≤ 2.5	
Insulation resistance	$[M\Omega]$		≥ 5000	
Thermal and climatice data				
Temperature range	[°C]	- 55	5 to + 125	

VARIOSUB D-SUB 15 Contact Inserts Crimp Connection



Description		Туре	Order No.	Pcs./Pkt.
Male contact carrier, crimp contact carriers, 15-pos., with thread		VS-15-ST-DSUB-CD-G	16 88 91 3	10
Female contact carrier, crimp contact carriers, 15-pos., with thread		VS-15-BU-DSUB-CD-G	16 88 92 6	10
Male contact carrier, crimp contact carriers, 15-pos., with holes		VS-15-ST-DSUB-CD-B	16 88 93 9	10
Female contact carrier, crimp contact carriers, 15-pos., with holes		VS-15-BU-DSUB-CD-B	16 88 94 2	10
Accessories				
Turned male crimp contacts, surface gold-plated	AWG 24-20 AWG 28-24	VS-ST-CD-1,0/14,8/0,5 VS-ST-CD-1,0/14,8/0,2	16 88 96 8 16 88 97 1	30
Turned female crimp contacts, surface gold-plated	AWG 24-20 AWG 28-24	VS-BU-CD-1,0/14,4/0,5 VS-BU-CD-1,0/14,4/0,2	16 88 98 4 16 88 99 7	30
Technical data				
Mechanical data Insertion force per signal contact Extraction force per signal contact Insertion/withdrawal cycles Electrical data	[N]	<u>≤</u>	≤ 3.3 ≤ 2.2 : 200	
Max. amperage Operating voltage Insulation resistance Thermal and climatice data	[A] [V] [MΩ]	2	1 63 5000	
Temperature range	[°C]_	- 55	to + 125	

VARIOSUB D-SUB 15 Contact Inserts with High Current Contacts Solder Connection



Female contact carrier, for power contacts, 3-pos. VS-15-BU-DSUB-3P 16 88 21 Accessories VS-ST-LK-3,6/22,4/2,6 16 88 24 Male power contact for 20 A, with U-groove solder connection VS-ST-LK-3,6/22,4/2,6 16 88 24 Female power contact for 20 A, with U-groove solder connection VS-BU-LK-3,6/22,8/2,6 16 88 25 Male power contact for 40 A, with U-groove solder connection VS-ST-LK-3,6/22,4/4,6 16 88 26 Female power contact for 40 A, with U-groove solder connection VS-BU-LK-3,6/22,8/4,6 16 88 27 Technical data Mechanical data Insulating body PBTP GV (UL 94 V0) Insulating body Steel Tin-plated Cu alloy Housing surface Tin-plated Cu alloy Contact surface and gold over nickel Cu alloy 0.8 μm gold over nickel Electrical data Max. amperage, power contacts [A] 20 or 40 Operating voltage [V] 125 125	Pcs./Pkt.	Order No.	Туре		Description
for power contacts, 3-pos. Accessories Male power contact for 20 A, with U-groove solder connection Female power contact for 20 A, with U-groove solder connection Male power contact for 20 A, with U-groove solder connection Male power contact for 40 A, with U-groove solder connection WS-ST-LK-3,6/22,8/2,6 16 88 25 Male power contact for 40 A, with U-groove solder connection VS-ST-LK-3,6/22,8/4,6 16 88 27 WS-BU-LK-3,6/22,8/4,6 16 88 27 Technical data Mechanical data Insertion/withdrawal cycles Machanical data Insertion/withdrawal cycles Machanical data Insulating body Housing Housing surface Contact material Contact material Contact material Contact surface Electrical data Max. amperage, power contacts [A] 20 or 40 Operating voltage [V]	10	16 88 20 1	VS-15-ST-DSUB-3P		
Male power contact for 20 A, with U-groove solder connection VS-ST-LK-3,6/22,4/2,6 16 88 24 Female power contact for 20 A, with U-groove solder connection VS-BU-LK-3,6/22,8/2,6 16 88 25 Male power contact for 40 A, with U-groove solder connection VS-ST-LK-3,6/22,4/4,6 16 88 26 Female power contact for 40 A, with U-groove solder connection VS-BU-LK-3,6/22,8/4,6 16 88 27 Technical data Insertion/withdrawal cycles ≥ 500 Material and surfaces Insulating body PBTP GV (UL 94 V0) Housing Steel Housing surface Tin-plated Contact material Cu alloy Contact surface 0.8 μm gold over nickel Electrical data Max. amperage, power contacts [A] 20 or 40 Operating voltage [V] 125	10	16 88 21 4	VS-15-BU-DSUB-3P		
with Ú-groove solder connection Female power contact for 20 A, with U-groove solder connection Male power contact for 40 A, with U-groove solder connection Female power contact for 40 A, with U-groove solder connection VS-ST-LK-3,6/22,4/4,6 16 88 26 Female power contact for 40 A, with U-groove solder connection VS-BU-LK-3,6/22,8/4,6 16 88 27 Technical data Insertion/withdrawal cycles Mechanical data Insertion/withdrawal cycles Insulating body Housing Steel Housing surface Housing surface Contact material Contact material Contact surface Electrical data Max. amperage, power contacts [A] Qoperating voltage [V] 16 88 25 16 88 26 16 88 27					Accessories
Wale power contact for 40 A, with U-groove solder connection VS-ST-LK-3,6/22,4/4,6 16 88 26 Female power contact for 40 A, with U-groove solder connection VS-BU-LK-3,6/22,8/4,6 16 88 27 Technical data VS-BU-LK-3,6/22,8/4,6 16 88 27 Mechanical data Insertion/withdrawal cycles ≥ 500 Material and surfaces Insulating body PBTP GV (UL 94 V0) Housing Steel Tin-plated Housing surface Tin-plated Cu alloy Contact material Cu alloy Contact surface 0.8 μm gold over nickel Electrical data Max. amperage, power contacts [A] 20 or 40 Operating voltage [V] 125	30	16 88 24 3	VS-ST-LK-3,6/22,4/2,6		
with Ü-groove solder connection Female power contact for 40 A, with U-groove solder connection Technical data Mechanical data Insertion/withdrawal cycles Insulating body Housing Housing surface Housing surface Contact material Contact material Contact surface Electrical data Max. amperage, power contacts [A] 20 or 40 Operating voltage VS-BU-LK-3,6/22,8/4,6 16 88 27 VS-BU-LK-3,6/22,8/4,6 16 88 27 VS-BU-LK-3,6/22,8/4,6 16 88 27 PBTP GV (UL 94 V0) Steel Tin-plated Cu alloy Cu alloy Co 1.8 μm gold over nickel Electrical data Max. amperage, power contacts [A] 20 or 40 Operating voltage	30	16 88 25 6	VS-BU-LK-3,6/22,8/2,6		
with U-groove solder connection Technical data Mechanical data Insertion/withdrawal cycles Insulating body Housing Housing Housing Housing Steel Housing surface Contact material Contact material Contact surface Electrical data Max. amperage, power contacts [A] Operating voltage [V] Zoor 40 Operating voltage	30	16 88 26 9	VS-ST-LK-3,6/22,4/4,6		
Mechanical data ≥ 500 Insertion/withdrawal cycles ≥ 500 Material and surfaces Insulating body PBTP GV (UL 94 V0) Housing Steel Housing surface Tin-plated Contact material Cu alloy Contact surface 0.8 μm gold over nickel Electrical data Max. amperage, power contacts [A] 20 or 40 Operating voltage [V] 125	30	16 88 27 2	VS-BU-LK-3,6/22,8/4,6		
Insertion/withdrawal cycles Material and surfaces Insulating body Housing Housing surface Housing surface Contact material Contact surface Contact surface Electrical data Max. amperage, power contacts Operating voltage ≥ 500 PBTP GV (UL 94 V0) Steel PBTP GV (UL 94 V0) Steel Tin-plated Cull of Cu alloy Cu alloy Cu alloy Cu alloy 0.8 μm gold over nickel of Cu alloy 20 or 40 Operating voltage					Technical data
Housing Steel Housing surface Tin-plated Contact material Cu alloy Contact surface 0.8 μm gold over nickel Electrical data 20 or 40 Max. amperage, power contacts [A] 20 or 40 Operating voltage [V] 125			≥ 500		Insertion/withdrawal cycles Material and surfaces
Contact material Cu alloy Contact surface 0.8 µm gold over nickel Electrical data Max. amperage, power contacts [A] 20 or 40 Operating voltage [V] 125		· V0)	Steel		Housing
Contact surface 0.8 μm gold over nickel Electrical data Max. amperage, power contacts [A] 20 or 40 Operating voltage [V] 125					
Max. amperage, power contacts [A] 20 or 40 Operating voltage [V] 125		nickel	0.8 μm gold over ι		Contact surface
Operating voltage [V] 125					
-1					
Contact resistance per contact pair $[m\Omega]$ ≤ 2.5					
Insulation resistance $[M\Omega]$ ≥ 5000 Specific contact resistance $[\Omega cm]$ 10^{16}					
			· •		
Specific internal insulation resistance [KV/mm] 50 Thermal and climatice data			50	[Kv/mm]	
Thermal and climatice data Temperature range [°C] - 20 to + 80		1	20 to . 00	[00]	

Note: The power contacts must be ordered separately since they are not included in the scope of supply of the contact carriers of combi contact inserts.

VARIOSUB D-SUB 15 Contact Inserts with High Current and Signal Contacts Solder Connection



Description		Туре	Order No.	Pcs./Pkt.
Male contact carrier, for 2 power contacts, with 5 signal contacts, U-groove solder connection		VS-15-ST-DSUB-2P-5S	16 88 22 7	10
Female contact carrier, for 2 power contacts, with 5 signal contacts, U-groove solder connection		VS-15-BU-DSUB-2P-5S	16 88 23 0	10
Accessories				
Male power contact for 20 A, with U-groove solder connection		VS-ST-LK-3,6/22,4/2,6	16 88 24 3	30
Female power contact for 20 A, with U-groove solder connection		VS-BU-LK-3,6/22,8/2,6	16 88 25 6	30
Male power contact for 40 A, with U-groove solder connection		VS-ST-LK-3,6/22,4/4,6	16 88 26 9	30
Female power contact for 40 A, with U-groove solder connection		VS-BU-LK-3,6/22,8/4,6	16 88 27 2	30
Technical data				
Mechanical data Insertion/withdrawal cycles Material and surfaces		≥ 500		
Insulating body Housing Housing surface		PBTP GV (UL Steel Tin-plate	,	
Contact material Contact surface Electrical data		Cu alloy 0.8 µm gold ov	/	
Max. amperage, signal contacts Max. amperage, power contacts Operating voltage Thermal and climatice data	[A] [A] [V]	5 20 or 40 125)	
Temperature range	[°C]	- 20 to +	80	

Note: The power contacts must be ordered separately since they are not included in the scope of supply of the contact carriers of combi contact inserts.

VARIOSUB D-SUB 15 Sleeve Housings



Description	Туре	Order No.	Pcs./Pkt.
Plastic sleeve housing, with Push-Pull locking for panel mounting base, with 2 inclined PG11 lamellar screw connections, with 2 screws for fastening the contact inserts	VS-15-T-2PG11	16 88 05 2	5
Accessories			
PG 11 cap nut with seal for conductor diameters from 3-7mm for conductor diameters from 5-10mm	VS-PG11 (3-7) VS-PG11 (5-10)	16 88 11 7 16 88 10 4	5
Cover cap, for vacant PG11 screw connections	VC-PG 11 BS	16 88 14 6	10
Coding profile, made of red plastic, mounted in the panel mounting base and sleeve housing (4 profiles for each plug connector), see Fig. 1	CP-HCC 4	16 00 02 7	100
Marker labels, for snapping in	ZBN 18: UNBEDRUCKT	28 09 12 8	10
EMC internal sleeve, with connection clamp and screw for contacting 2 conductor screens	VS-15-TI-2EMV	16 88 06 5	5
Protective cover, for covering the contact insert in the panel mounting frame or sleeve housing	VS-15-SD	18 87 09 9	5
Technical data			
Insulation material		PA	
Inflammability class acc. to UL 94		V0	
Degree of protection	I	P67	
Temperature range [°C]	- 20) to + 80	

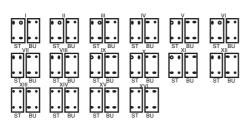
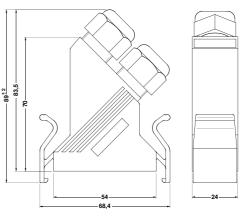


Figure 1: Coding for housings with one contact insert

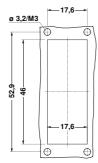


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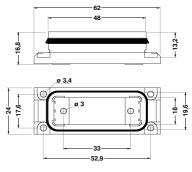
VARIOSUB D-SUB 15 Panel Mounting Frames



Description	Туре	Order No.	Pcs./Pkt.
Plastic panel mounting frame, with radially-acting profile gasket mounted, with enclosed self-adhesive flat gasket (without mounting screws)	VS-15-A	16 88 03 6	5
Accessories			
EMC shroud, for contacting a D-SUB contact insert on the mounting side with the outer wall of the housing	VS-15-A-EMV-S	16 88 04 9	5
Protective cover , for covering the contact insert in the panel mounting frame or sleeve housing	VS-15-SD	18 87 09 9	5
Technical data			
Insulation material		PA	
Inflammability class acc. to UL 94		V0	
Degree of protection		IP67	
Temperature range [°C]	<u> </u>	- 20 to + 80	



Panel cutout: VS-15-A

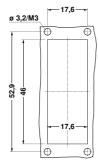


VS-15-A

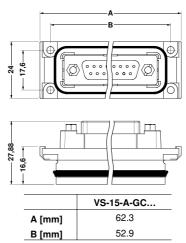


The illustration shows the 9-pos. version

Description		Туре	Order No.	Pcs./Pkt.
Panel mounting frame, with gender changer	Female / Female	VS-15-A-GC-BU/BU	16 89 71 8	5
Panel mounting frame, with gender changer	Male / Male	VS-15-A-GC-ST/ST	16 89 72 1	5
Technical data				
Insulation material			PA	
Inflammability class acc. to UL 94			V0	
Degree of protection			IP67	
Temperature range	[°C]	- 2	20 to + 80	



Panel cutout: VS-15-A-GC...

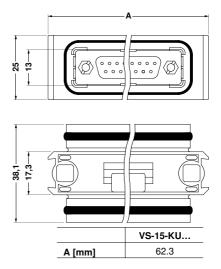


Dimensional drawing: VS-15-A-GC...



The illustration shows the 9-pos. version

Description		Туре	Order No.	Pcs./Pkt.
Coupling, 15-pos.,	Female / Female	VS-15-KU-BU/BU	16 89 65 3	5
Coupling, 15-pos.	Male / Male	VS-15-KU-ST/ST	16 89 66 6	5
Technical data				
Insulation material		PA		
Inflammability class acc. to UL 94		V0		
Degree of protection		IP67		
Temperature range	[°C]	- 20 to +	80	



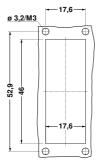
Dimensional drawing: VS-15-KU...

VARIOSUB D-SUB 15 Plug Connector Sets

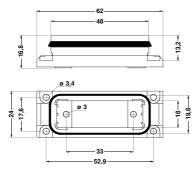




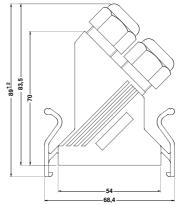
Description		Туре	Order No.	Pcs./Pkt.
Set VARIOSUB D-SUB 15, standard version for D-SUB 15 contact inserts, with Push-Pull locking, IP67		VS-15-SET-STD	16 89 12 9	1
Set VARIOSUB D-SUB 15, EMC version for D-SUB 15 contact inserts, with Push-Pull locking, IP67		VS-15-SET-EMV	16 89 13 2	1
Accessories				
Protective cover, for covering the contact insert in the panel mounting frame or sleeve housing		VS-15-SD	18 87 09 9	5
Technical data				
Insulation material		PA		
Inflammability class acc. to UL 94		V0		
Degree of protection		IP67		
Temperature range	[°C]	- 20 to + 8	30	

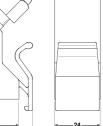


Panel cutout of panel mounting frame



Dimensions: Panel mounting frame



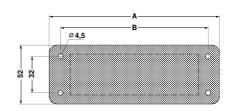


Dimensions: Sleeve housing

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Description	Туре	Order No.	Pcs./Pkt.
VARIOSUB adapter plates, 1 x VS15 reinforced, including adapter frame and protective cover 1 x VS15, 1 x RJ 45/IP67	VS-ADP16-VS15 VS-ADP24-VS15/RJ45	16 52 14 3 16 52 18 5	1
Accessories			
Hand punch pliers, pliers for punching tool	VS-LWZH	18 89 51 4	1
Square punch, punching tool for cutting out the panel mounting frame	VS-LWZH/24,6/20,1	16 89 52 7	1



Туре	Α	В
VS-ADP 16	123	103
VS-ADP 24	150	130

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