

## VARIOSUB RJ45/IP20 Plug Connectors

---

VARIOSUB-RJ45/IP20 was developed for using RJ45 plug connectors in harsh industrial environments. With it, devices for Industrial Ethernet can also utilize the standard plug connectors of the IT world.

The VARIOSUB-RJ45/IP20 plug connector is suitable for use on devices, infrastructural components and control cabinets. It fulfills the requirements of IAONA for use in light duty areas and is suitable for Fast Ethernet transmission at 100 Mbit/s. Various female inserts and panel mounting frames are available for the equipment side, while there is a sleeve housing and a male insert for the conductor side.

The female inserts for PCB mounting and the panel mounting frames are built to the standard pitch dimension, which means existing PCB layouts can continue to be used and space-saving equipment designs are possible. In addition, commercially available male inserts can still be used. In this case, there is no need for adapter cables or other special solutions during startup and servicing.

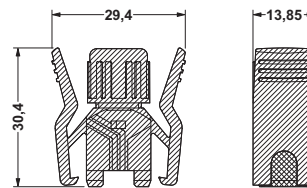
The sleeve with its Push-Pull locking system safeguards the connection against mechanical stress, shocks and vibration. Also, it makes it possible to use cables with a diameter from 5 to 8.5 mm and a core cross section from AWG 24 to AWG 26 as solid or stranded conductors. This locking method saves space and provides ease of accessibility. It can be operated without tools and, when locked, provides the IP 20 degree of protection.



# VARIOSUB RJ45/IP20 Sleeve Housings



Description	Type	Order No.	Pcs./Pkt.
<b>Plastic sleeve housing,</b> with push-pull locking to the panel mounting frame	VS-8-T-RJ45/IP 20	16 88 63 8	5
<b>Technical data</b>			
<b>Temperature range</b> [°C]	-40 to +85		
<b>Material</b>	PA		
<b>Inflammability class acc. to UL 94</b>	V0		



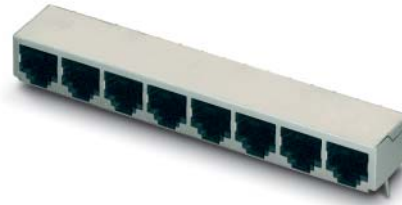
Dimensional drawing; VS-8-RJ45

# VARIOSUB RJ45 Male Insert

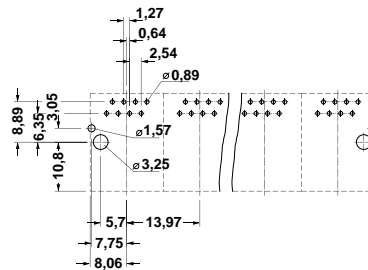


Description	Type	Order No.	Pcs./Pkt.
<b>Male insert RJ45,</b> 8-pos., with IDC connection system	VS-8-ST-RJ45	16 88 57 3	5
<b>Accessories</b>			
<b>Crimping pliers,</b> without die die for VARIOSUB RJ45 male insert	<b>CRIMPFOX-LC</b> <b>CRIMPFOX-LC-RJ 45 S</b>	<b>12 06 69 6</b> <b>12 07 42 0</b>	1
<b>Technical data</b>			
<b>Number of positions</b>	8		
<b>Nominal voltage/Nominal current</b> [V] / [A]	60 / 1		
<b>Transmission rate</b> [Mbit/s]	100		
<b>Surge voltage category</b>	II		
<b>Contamination class</b>	2		
<b>Core diameter</b> [mm <sup>2</sup> ] / AWG	0.14 - 0.25 / 24 - 22		
<b>Cable diameter</b> [mm]	5 - 8.5		
<b>Temperature range</b> [°C]	-40 to +85		
<b>Inflammability class acc. to UL 94</b>	V0		

# VARIOSUB RJ45 Female Inserts for PCB Assembly

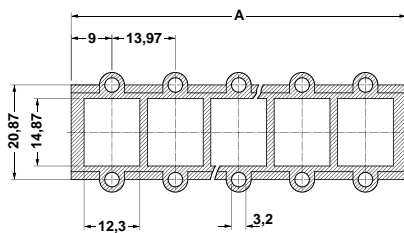


Description		Type	Order No.	Pcs./Pkt.
Female insert RJ45, 8-pos.	1-pos.	VS-8-BU-RJ45/LP-1	16 88 58 6	5
	2-pos.	VS-8-BU-RJ45/LP-2	16 88 59 9	
	4-pos.	VS-8-BU-RJ45/LP-4	16 88 60 9	
	6-pos.	VS-8-BU-RJ45/LP-6	16 88 61 2	
	8-pos.	VS-8-BU-RJ45/LP-8	16 88 62 5	
Technical data				
Number of positions		8		
Nominal voltage/Nominal current	[V] / [A]	60 / 1		
Transmission rate	[Mbit/s]	100		
Surge voltage category		II		
Contamination class		2		
Temperature range	[°C]	-40 to +85		
Inflammability class acc. to UL 94		V0		



Drilling plan: VS-8-BU-RJ 45/LP-...

# VARIOSUB RJ45/IP20 Panel Mounting Frames for Female Inserts for PCB Assembly

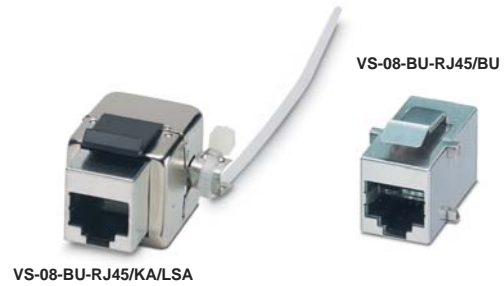


Dimensional drawing: VS-8-A-RJ45/LP-...-IP 20



Description		Dim. A [mm] (see dim. drawing)	Type	Order No.	Pcs./Pkt.
Panel mounting frame RJ45, without fixing screws	1-pos.	31.97	VS-8-A-RJ45/LP-1-IP 20	16 88 64 1	5
	2-pos.	45.94	VS-8-A-RJ45/LP-2-IP 20	16 88 65 4	
	4-pos.	73.88	VS-8-A-RJ45/LP-4-IP 20	16 88 66 7	
	6-pos.	101.82	VS-8-A-RJ45/LP-6-IP 20	16 88 67 0	
	8-pos.	129.76	VS-8-A-RJ45/LP-8-IP 20	16 88 68 3	
Technical data					
Material			PA		
Temperature range	[°C]		-40 to +85		
Inflammability class acc. to UL 94			V0		

## VARIOSUB RJ45 Modular Female Inserts

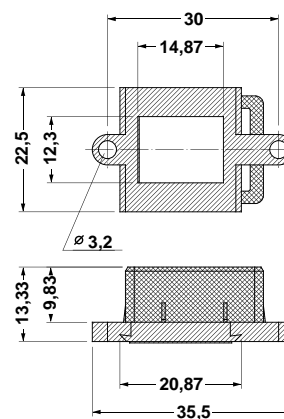


Description	Type	Order No.	Pcs./Pkt.
<b>Female insert RJ45,</b> 8.pos.	fem. conn. to fem. conn. fem. conn. to cable (LSA)	<b>VS-08-BU-RJ45/BU</b> <b>VS-08-BU-RJ45/KA/LSA</b>	<b>16 89 06 4</b> <b>16 89 45 9</b> 5
<b>Technical data</b>			
<b>Number of positions</b>		8	
<b>Nominal voltage/Nominal current</b>	[V] / [A]	60 / 1	
<b>Transmission rate</b>	[Mbit/s]	100	
<b>Surge voltage category</b>		II	
<b>Contamination class</b>		2	
<b>Temperature range</b>	[°C]	-40 to +85	
<b>Inflammability class acc. to UL 94</b>		V0	

## VARIOSUB RJ45/IP20 Panel Mounting Frames for Female Inserts

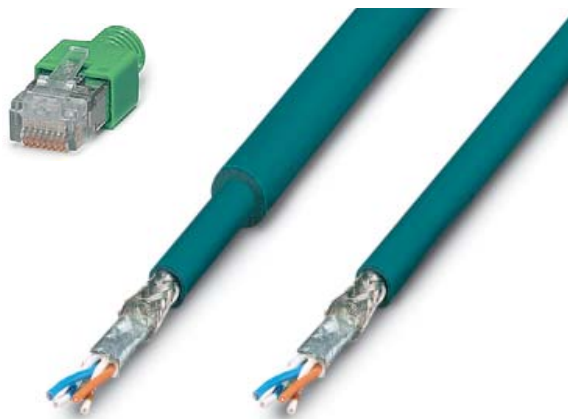


Description	Type	Order No.	Pcs./Pkt.
<b>Panel mounting frame RJ45/IP20,</b> without fixing screws, for modular female inserts		<b>VS-08-A-RJ45/MOD-1-IP20</b>	<b>16 89 43 3</b> 5
<b>Technical data</b>			
<b>Material</b>		PA	
<b>Temperature range</b>	[°C]	-40 to +85	
<b>Inflammability class acc. to UL 94</b>		V0	



Dimensional drawing: VS-8-A-RJ45/MOD-1-IP 20

# VARIOSUB Ethernet Cables



Description	Color	Type	Order No.	Pcs./Pkt.
<b>CAT 5-S/UTP cable</b> (J-02YS(ST)C HP 2 x 2 x 24 AWG), heavy-duty installation cable 2 x 2 x 0.22 mm <sup>2</sup> , solid conductor, shielded, outer sheath: Ø 7.8 mm, inner sheath: Ø 5.2 mm		FL CAT5 HEAVY	27 44 81 4	1
<b>CAT 5-S/UTP cable</b> (J-LI02YS(ST)C H 2 x 2 x 26 AWG), light-duty flexible installation cable 2 x 2 x 0.14 mm <sup>2</sup> , stranded, shielded, outer sheath: Ø 5.2 mm		FL CAT5 FLEX	27 44 83 0	1
<b>CAT 5-S/UTP cable</b> , (J-LI02YS(ST)C H 4 x 2 x 26 AWG), light-duty flexible installation cable 4 x 2 x 0.14 mm <sup>2</sup> , stranded, shielded, outer sheath: Ø 5.2 mm		VS-CAT5-4x2x26AWG	16 52 10 1	1
<b>Preassembled cable</b> , preassembled at both ends with VARIOSUB RJ45 or RJ45 connector, (see ordering example <sup>1)</sup> )		VS-RJ45 CONF/...	16 89 34 9	1
<b>Accessories</b>				
<b>Bend-protection sleeve<sup>2)</sup></b> , for male insert VS-08-ST-RJ45, if no VARIOSUB sleeve is used	gray green	VS-08-KS/GR VS-08-KS/GN	16 89 21 3 16 89 22 6	5
<b>Crimping pliers</b> , without die for VARIOSUB RJ45 male insert		CRIMPFOX-LC CRIMPFOX-LC-RJ 45 S	12 06 69 6 12 07 42 0	1

<sup>1)</sup> Minimum length: 0.2 m, Maximum length: 50 m FLEX, 100 m HEAVY, Minimum order quantity: 10 pcs.; steps: 0.1 m

<sup>2)</sup> We recommend the gray color for connections that are not crossed (Line = Li) and the green color for crossed connections (Crossover = Co).

## Ordering example for cable with connector assembly

Heavy-duty installation cable, preassembled at one end with the VARIOSUB-RJ45/IP67 connector and at the other end with a standard RJ45 connector and a green bend-protection sleeve as crossover connection, 3.5 m long

Qty.	Order No.	Cable type	Connection	Head 1	Head 2	Cable type	Length of cable in meters
1	16 89 34 9	VS-RJ45 CONF	CO	VS IP67	RJ45	CH	3,5
			Crossover Line CO LI	VS-RJ45 IP67 VS-RJ45 IP20 RJ-45	VS IP67 VS IP20 RJ45	VS-RJ45 IP67 VS-RJ45 IP20 RJ-45	VS IP67 VS IP20 RJ45
						FL CATS HEAVY FL CATS FLEX	CH CF

# VARIOSUB

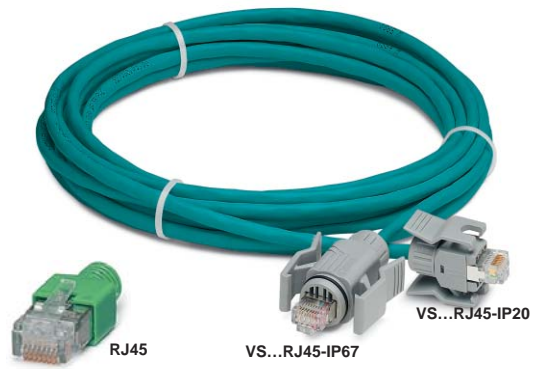
## Ethernet Cables, Preassembled



Description	Cable length [m]	Type	Order No.	Pcs./Pkt.
<b>Ethernet cable,</b> Daetwyler Uninet 5502 flex, 4 x 2-pair, with sleeve housing VS-08-T-RJ45/IP67 at both ends, shielded, preassembled, connection not crossed (Line)	1 2 5	<b>VS-08-VS67-VS67/4P-AWG26-OF/1,0</b> <b>VS-08-VS67-VS67/4P-AWG26-OF/2,0</b> <b>VS-08-VS67-VS67/4P-AWG26-OF/5,0</b>	<b>16 89 37 8</b> <b>16 89 38 1</b> <b>16 89 39 4</b>	1
<b>Ethernet cable,</b> Daetwyler Uninet 5502 flex, 4 x 2-pair, with sleeve housing VS-08-T-RJ45/IP67 and RJ45 connector with bend-protection sleeve, shielded, preassembled, connection not crossed (Line)	1 2 5	<b>VS-08-VS67-RJ45/4P-AWG26-OF/1,0</b> <b>VS-08-VS67-RJ45/4P-AWG26-OF/2,0</b> <b>VS-08-VS67-RJ45/4P-AWG26-OF/5,0</b>	<b>16 89 40 4</b> <b>16 89 41 7</b> <b>16 89 42 0</b>	1
<b>Ethernet cable,</b> VS-CAT5-4x2x26AWG, 4 x 2-pair, with sleeve housing VS-08-T-RJ45/IP67 at both ends, shielded, preassembled, connection not crossed (Line)	1 2 5	<b>VS-08-VS67-VS67/4P-AWG26-CF/1,0</b> <b>VS-08-VS67-VS67/4P-AWG26-CF/2,0</b> <b>VS-08-VS67-VS67/4P-AWG26-CF/5,0</b>	<b>16 52 01 7</b> <b>16 52 02 0</b> <b>16 52 03 3</b>	1
<b>Ethernet cable,</b> VS-CAT5-4x2x26AWG, 4 x 2-pair, with sleeve housing VS-08-T-RJ45/IP67 and RJ45 connector with bend-protection sleeve, shielded, preassembled, connection not crossed (Line)	1 2 5	<b>VS-08-VS67-RJ45/4P-AWG26-CF/1,0</b> <b>VS-08-VS67-RJ45/4P-AWG26-CF/2,0</b> <b>VS-08-VS67-RJ45/4P-AWG26-CF/5,0</b>	<b>16 52 04 6</b> <b>16 52 05 9</b> <b>16 52 06 2</b>	1

# VARIOSUB

## Ethernet Cables, Patch Cables, Preassembled



Description	Types of plug connectors to cable ends	Type	Order No.	Pcs./Pkt.
<b>Ethernet cable,</b> Patch cable FL CAT5 FLEX, 2 x 2-pair, shielded, preassembled, connection not crossed (Line), Length: 5 m	VS-RJ45/IP67 – VS-RJ45/IP67	<b>VS-08-LI-VSIP67-VSIP67-CF-5,0</b>	<b>16 89 57 2</b>	1
	VS-RJ45/IP67 – VS-RJ45/IP20	<b>VS-08-LI-VSIP67-VSIP20-CF-5,0</b>	<b>16 89 58 5</b>	
	VS-RJ45/IP67 – RJ45	<b>VS-08-LI-VSIP67-RJ45-CF-5,0</b>	<b>16 89 59 8</b>	
	VS-RJ45/IP20 – VS-RJ45/IP20	<b>VS-08-LI-VSIP20-VSIP20-CF-5,0</b>	<b>16 89 60 8</b>	
	VS-RJ45/IP20 – RJ45	<b>VS-08-LI-VSIP20-RJ45-CF-5,0</b>	<b>16 89 61 1</b>	
	RJ45 – RJ45	<b>VS-08-LI-RJ45-RJ45-CF-5,0</b>	<b>16 89 62 4</b>	