

Series A 3: Connectors with Insulation Displacement Technique

The convenience of the insulation displacement connection can now be utilized with a classic square connector – a 4 pole (3+PE) industrial plug connector of series A. Male and female versions are available in hoods and coupler hoods made of plastic.



Thanks to insulation displacement technique it now only takes a few seconds to connect the 4-pole round conductor: Only the sleeve nut has to be slid onto the conductor – since splicing ring, seal and strain relief are included in the sleeve nut.

Assembly

Slide the sleeve nut of the insulation displacement connection onto the stripped conductor.



Lead the cores into the marked core entries and cut off the projecting core ends flush, i.e. so that there is no overhang.



Screw the sleeve nut onto the plug connector – and the round conductor connection is ready.



If you need to undo the connection, then just unscrew the sleeve nut.

Insulation displacement technique is tested on the basis of:

EN 60 352-4:
solder-free and inaccessible insulation displacement terminal blocks

EN 50 262:
entries for cables and conductors

DIN EN 60 998-2-3:
equipment for insulation displacement terminal points

DIN VDE 0627:
connectors and plug-in socket devices.



Housings of **series A 3 - A 16** have the normal single locking system. Housings of **series A 32** have the double locking system.



Series **A 3** connectors are available both with screw terminals and insulation displacement technique. Series **A 4**, however, is only available with screw terminals. Housings in plastic, aluminium or zinc die-casting acc. to your requirements.



Series **A 10**, **A 16** and **A 32** are available with screw terminal inserts as well as with crimp-type contact carriers. The crimp contacts snap into the contact carrier and can be removed with removal tool. Please order crimp contacts separately according to required conductor sizes.

Snap-on mounting adapters are ideal for mounting into switch cabinets. The clearly arranged swing-type insertion plate allows easy wiring.



The screw terminal inserts are equipped with a wire protection saddle. Saddles save time when mounting crimp-type pin terminals. All Walther contacts have open, captive screws.



Series A

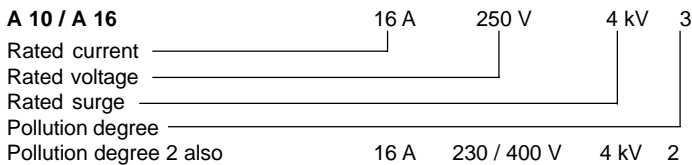
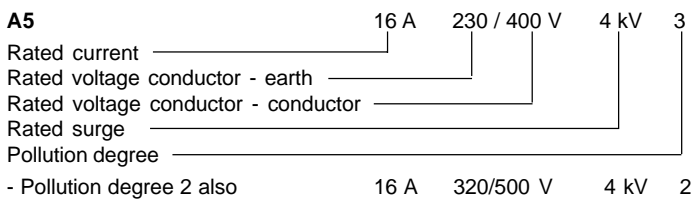
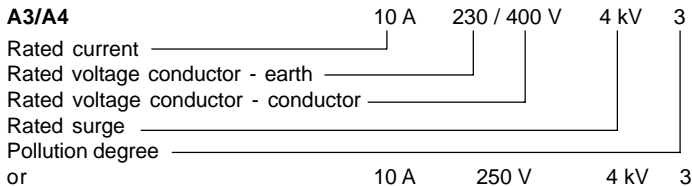
Specifications

Regulations: DIN VDE 0627, DIN VDE 0110, DIN EN 61 984

Approvals: UR, CSA, MEIE, EZÚ, GOST

Number of poles: 3, 4, 5, 10, 16, 32 (2 x 16) + PE

Electrical Data acc. to DIN EN 61 984:



Rated voltage acc. to UL/CSA: 600 V

Material: Glass-fibre reinforced polyamide
 Temperature range: - 40 °C up to + 125 °C
 Flame class rating acc. to UL 94: V 0
 Mechanical operating life: ≥ 500 mating cycles

Contacts

Material: copper alloy
 Surface: • hard silver plated: 3 µm Ag
 • hard gold plated: 2 µm Au

over 3 µm Ni

Contact resistance: ≤ 1 m Ω

A 10, A 16: Crimp type terminal mm² (AWG): 0.5 - 4.0 mm² (20-12 AWG)

Screw type terminal mm² (AWG): 2.5 mm² (14 AWG)

A 3 / A 4: Only screw type mm² (AWG): 1.5 mm² (16 AWG)

Torque/testing torque: A 3 and A 4: 0.25 Nm

A 10 and A 16: 0.5 Nm

A 5: Only crimp type terminal mm² (AWG): 0.5 - 2.5 mm² (20-14 AWG)

Wire stripping length:

A 3 and A 4: 5 mm
 A 5, A 10 and A 16: 7 mm with screw and crimping contacts

Application hint:

Heavy duty connectors are electrical devices which under proper use - under load - should not be inserted or separated.

Page

A 3 pole + PE

Inserts 14

- Short overview see page 88 -
 - Matching housings see page 89 - 90 -



A 4 pole + PE

Inserts 15

- Short overview see page 88 -
 - Matching housings see page 89 - 90 -



A 5 pole + PE

Inserts 15

- Short overview see page 88 -
 - Matching housings see page 89 - 90 -



A 10 pole + PE

Inserts 16

- Short overview see page 92 -
 - Matching housings see page 93 - 94 -



A 16 pole + PE

Inserts 17

- Short overview see page 96 -
 - Matching housings see page 97 - 98 -



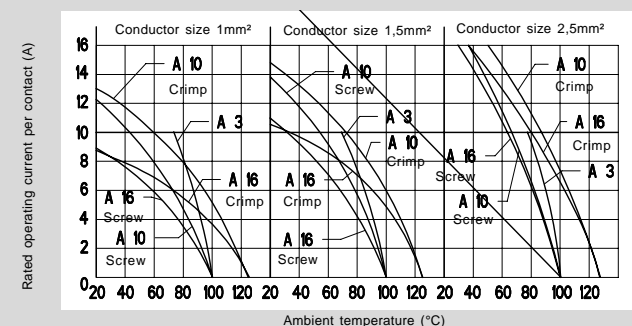
A 32 pole + PE




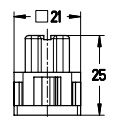

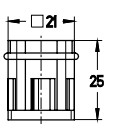



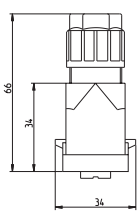
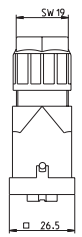

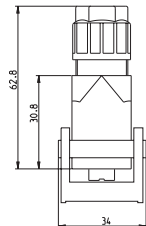
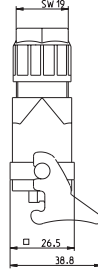
Inserts 18

- Short overview see page 100 -
 - Matching housings see page 101 - 103 -



The derating diagram (corrected current capacity curve) acc. to DIN IEC 60 512 applies to such current which can - depending on ambient temperature and conductor size - circulate through each contact without exceeding the upper limiting temperature.



Description	Part No.	Series A	3 P + \oplus 10 A / 230/400 V UL/CSA: 600 V	 	EAN-No. 4015609...
Screw terminal inserts					
Female insert screw terminal without wire protection 0.5 - 1.5 mm ² (20-16 AWG)	700 103			10 14	025428
Male insert screw terminal without wire protection 0.5 - 1.5 mm ² (20-16 AWG)	700 203			10 14	025497
Contact arrangement					
view from termination side					
<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Female insert</p>  </div> <div style="text-align: center;"> <p>Male insert</p>  </div> </div>					
Connectors with insulation displacement technique					
Hood with female insert Height 66 mm for single locking system	700 724			10 25	426812
Hood with male insert Height 66 mm for single locking system	700 725			25	426829
Coupler hood with female insert Height 63 mm with single locking system	700 726			28	426805
Coupler hood with male insert Height 63 mm with single locking system	700 727			28	426799

Specifications of insulation displacement connectors:

General:

Key width of sleeve nut	19 mm
Torque of sleeve nut	3 Nm
Mating cycles	≥ 500

Cables for insulation displacement technique:




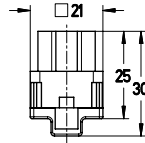

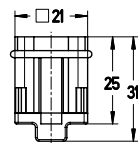




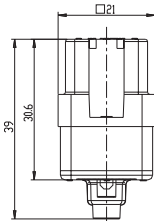

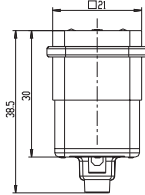



Conductor size:	0.75 - 1.5 mm ² / 18 -16 AWG
Stranded cable / smallest wire diameter:	VDE 0295 class 2 up to 5/0.2 mm
Core insulating material:	PVC/PE
External cable diameter:	6 - 12 mm
Wire diameter (incl. isolation)	≤ 3

Mechanical data:





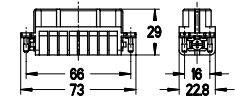

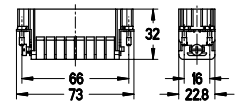

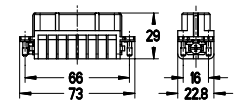

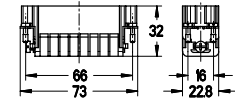
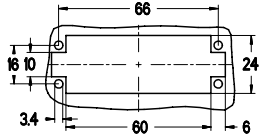
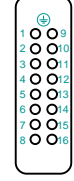
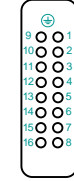

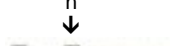
Frequency of connection of cables with equal diameter: 10




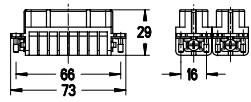

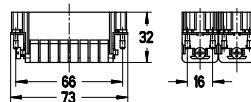

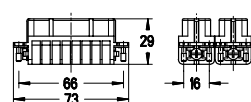

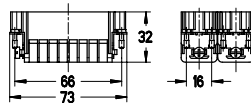
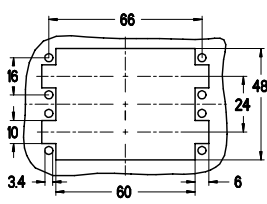
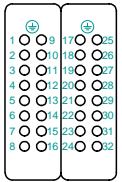
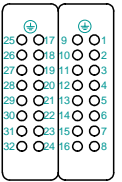
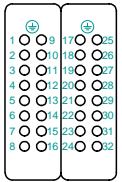
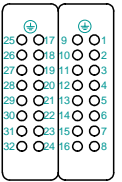
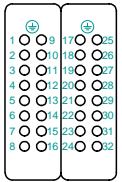
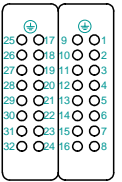


Material:

Contact material / contact surface: copper alloy / nickel base coat, silver-plated
Insulating material / flammability acc. to UL 94: PA / V0
Approvals: UL/CSA

Description	Part No.		Series A	4 P + \oplus 10 A / 230/400 V UL/CSA: 600 V	 	EAN No. 4015609...
Screw terminal inserts						
Female insert screw terminal without wire protection 0.5 - 1.5 mm ² (20-16 AWG)	700 104				10 17	025435
Male insert screw terminal without wire protection 0.5 - 1.5 mm ² (20-16 AWG)	700 204				10 18	025503
Contact arrangement			<p>Series A 4 Series A 5</p> <p>Female insert Male insert Female insert Male insert</p>  <p>- View from termination side -</p>			
Description	Part No.		Series A	5 P + \oplus 16 A / 400 V UL/CSA: 600 V	 	EAN No. 4015609...
Crimp contact carriers						
Contact carrier for sleeve contacts	700 105				10 18	025503
- Please order crimp contacts separately -						
Contact carrier for pin contacts	700 205				14	517220
- Please order crimp contacts separately -						
Coding pin	700 734				10	526093
Contacts for A5 inserts						
Sleeve contact (copper alloy) crimp-type solid, drilled	silver-plated 710 504 710 500 710 501 710 502	gold-plated 710 842 710 843 710 844 710 845	Number of grooves = n 	<u>conductor size and reference to the number of n-grooves:</u> n 0 0.5 mm ² 20 AWG 1 0.75 - 1 mm ² 18 AWG 2 1.5 mm ² 16 AWG 3 2.5 mm ² 14 AWG	100 160 171 173 168	027583 027545 027552 027569
Pin contact (copper alloy) crimp-type solid, drilled	silver-plated 710 514 710 510 710 511 710 512	gold-plated 710 847 710 848 710 849 710 850	n 	0 0.5 mm ² 20 AWG 1 0.75 - 1 mm ² 18 AWG 2 1.5 mm ² 16 AWG 3 2.5 mm ² 14 AWG	100 130 124 128 129	027637 027590 027606 027613

Description	Part No.	Series A	10 P +		EAN No.	
			16 A / 250 V UL/CSA: 600 V		4015609...	
Screw terminal inserts						
Female insert screw terminal with wire protection 0.5 - 2.5 mm ² (20-14 AWG)	700 110			10 46	025442	
Male insert screw terminal with wire protection 0.5 - 2.5 mm ² (20-14 AWG)	700 210			10 47	025510	
Crimp contact carriers						
Contact carrier for sleeve contacts	700 310			10 26	025565	
<i>- Please order crimp contacts separately -</i>						
Contact carrier for pin contacts	700 410			10 27	025619	
<i>- Please order crimp contacts separately -</i>						
Contact arrangement		panel cut out	view from termination side			
			female insert 	male insert 		
Contacts						
Sleeve contacts	silver-plated gold-plated					
crimp-type	710 504 710 842	 Number of grooves = n	conductor size and reference to the number of n-grooves:	100		
solid, drilled	710 500 710 843					0 0.5 mm ² 20 AWG 160 027583
weight per 100	710 501 710 844					1 0.75 - 1 mm ² 18 AWG 171 027545
	710 502 710 845					2 1.5 mm ² 16 AWG 173 027552
	710 503 710 846					3 2.5 mm ² 14 AWG 168 027569
		0 4.0 mm ² 12 AWG 163 027576				
Pin contacts	silver-plated gold-plated					
crimp-type	710 514 710 847	 n	conductor size and reference to the number of n-grooves:	100		
solid, drilled	710 510 710 848					0 0.5 mm ² 20 AWG 130 027637
weight per 100	710 511 710 849					1 0.75 - 1 mm ² 18 AWG 124 027590
	710 512 710 850					2 1.5 mm ² 16 AWG 128 027606
	710 513 710 851					3 2.5 mm ² 14 AWG 129 027613
		0 4.0 mm ² 12 AWG 125 027620				

Description	Part No.	Series A	16 P + 	 	EAN No. 4015609...	
Screw terminal inserts						
Female insert screw terminal with wire protection 0.5 - 2.5 mm ² (20-14 AWG)	700 116			10 65	025459	
Male insert screw terminal with wire protection 0.5 - 2.5 mm ² (20-14 AWG)	700 216			10 63	025527	
Crimp contact carriers						
Contact carrier for sleeve contacts - Please order crimp contacts separately -	700 316			10 32	025572	
Contact carrier for pin contacts - Please order crimp contacts separately -	700 416			10 31	025626	
Contact arrangement						
		panel cut out	view from termination side			
			female insert 	male insert 		
Contacts						
Sleeve contacts	silver-plated	gold-plated	Number of grooves = n	conductor size and reference to the number of n-grooves:		
crimp-type	710 504	710 842		0 0.5 mm ² 20 AWG	100 160 027583	
solid, drilled	710 500	710 843		1 0.75 - 1 mm ² 18 AWG	171 027545	
weight per 100	710 501	710 844		2 1.5 mm ² 16 AWG	173 027552	
	710 502	710 845		3 2.5 mm ² 14 AWG	168 027569	
	710 503	710 846		0 4.0 mm ² 12 AWG	163 027576	
Pin contacts	silver-plated	gold-plated	n			
crimp-type	710 514	710 847		0 0.5 mm ² 20 AWG	100 130 027637	
solid, drilled	710 510	710 848		1 0.75 - 1 mm ² 18 AWG	124 027590	
weight per 100	710 511	710 849		2 1.5 mm ² 16 AWG	128 027606	
	710 512	710 850		3 2.5 mm ² 14 AWG	129 027613	
	710 513	710 851		0 4.0 mm ² 12 AWG	125 027620	

Description	Part No.	Series A	32 P + \oplus	 	EAN No 4015609...										
Screw terminal inserts															
Female inserts															
screw terminal with wire protection 1 - 16 0.5 - 2.5 mm ² (20-14 AWG)	700 116			10 69	025459										
with wire protection 17 - 32 0.5 - 2.5 mm ² (20-14 AWG)	700 132			69	025466										
Male inserts															
screw terminal with wire protection 1 - 16 0.5 - 2.5 mm ² (20-14 AWG)	700 216			10 64	025527										
with wire protection 17 - 32 0.5 - 2.5 mm ² (20-14 AWG)	700 232			64	025534										
Crimp contact carriers															
Contact carriers															
for sleeve contacts 1 - 16	700 316			10 38	025572										
for sleeve contacts 17 - 32	700 332			38	025589										
- Please order crimp contacts separately -															
Contact carriers															
for pin contacts 1 - 16	700 416			10 36	025626										
for pin contacts 17 - 32	700 432			36	025633										
- Please order crimp contacts separately -															
Contact arrangement															
panel cut out		view from termination side													
		<table border="0"> <tr> <td></td> <td>female insert</td> <td>male insert</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					female insert	male insert							
	female insert	male insert													
															
Contacts															
Sleeve contacts		silver-plated	gold-plated	 Number of grooves = n 0 1 2 3 0	conductor size and reference to the number of n-grooves: 0.5 mm ² 20 AWG 0.75 - 1 mm ² 18 AWG 1.5 mm ² 16 AWG 2.5 mm ² 14 AWG 4.0 mm ² 12 AWG	100 160 171 173 168 163	027583 027545 027552 027569 027576								
crimp-type	710 504	710 842													
solid, drilled	710 500	710 843													
weight per 100	710 501	710 844													
	710 502	710 845													
	710 503	710 846													
Pin contacts		silver-plated	gold-plated	 n 0 1 2 3 0	conductor size and reference to the number of n-grooves: 0.5 mm ² 20 AWG 0.75 - 1 mm ² 18 AWG 1.5 mm ² 16 AWG 2.5 mm ² 14 AWG 4.0 mm ² 12 AWG	100 130 124 128 129 125	027637 027590 027606 027613 027620								
crimp-type	710 514	710 847													
solid, drilled	710 510	710 848													
weight per 100	710 511	710 849													
	710 512	710 850													
	710 513	710 851													