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HARTING

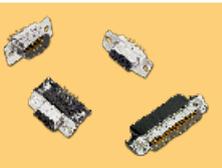
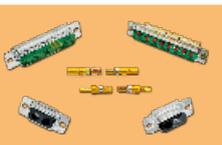
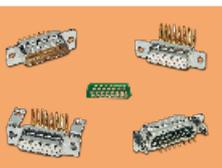
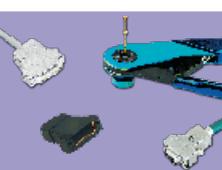
D-Sub Selection Guide

HARTING D-Sub Device Connectivity

HARTING Connectivity & Networks generates solutions throughout the triad of Installation Technology, Device Connectivity, and Smart Network Infrastructure for all automation lifelines – namely data, signals and power. In line with this strategic course, the HARTING D-Sub connectors provide universal solutions for specific user

applications. A consistent, ongoing innovation process ensures that users of HARTING’s continuously expanding D-Sub product range always benefit from the latest interface technology.

The HARTING D-Sub range consists of:

<p>D-Sub Standard connectors</p>		<p>HARTING’s D-Sub Standard connectors’ range includes connectors with 9 to 50 straight, right-angled, right-angled low profile or US foot print style contacts. Most connectors are offered alternatively with turned or stamped contacts.</p>
<p>D-Sub High Density connectors</p>		<p>The main benefit of HARTING’s D-Sub High Density connectors is to provide a higher density within the standard D-Sub shell pattern. It allows design engineers to enhance their equipment by including more data paths with the same panel cut out. 15, 26, 44, 62 and 78 pins are respectively designed in a 9, 15, 25, 37 and 50 pin standard D-Sub size shell.</p>
<p>D-Sub Mixed connectors</p>		<p>HARTING’s D-Sub Mixed connector range combines the advantages of an industry standard I/O interconnect product with the customisation flexibility for any application.</p>
<p>D-Sub Filter connectors</p>		<p>HARTING’s range of D-Sub Filter connectors offers complete flexibility in filtering capability through the use of a unique technology. The filter elements are mounted on a PCB integrated into the connector allowing the combination of different filters in one connector. The complete D-Sub Filter connector range can be used with reflow soldering processes (Surface Mount Compatible / SMC).</p>
<p>D-Sub Waterproof IP 67 connectors</p>		<p>HARTING’s D-Sub IP 67 connector series is fully dedicated to water resistant applications and fulfils the rigorous requirements of IP 67. This product family is aimed at equipment placed in harsh environments, indoors and outdoors, where connectors are exposed to moisture, dust and dirt.</p>
<p>D-Sub SMT connectors</p>		<p>HARTING has added an entire series of rectangular D-Sub SMT connectors to its product range. This new series allows customers to use both the reflow process and the standard vacuum pick-and-place systems. The design has been optimized with a view to a reliable processing and a long service life.</p>
<p>D-Sub accessories</p>		<p>Accessories like hoods and tools</p>

All part numbers listed in the selection guide refer to connectors in performance level 2 (performance level 3 for High Density connectors) and are only a small extract of our huge D-Sub range. You can find more detailed information at www.HARTING.com.

Pictures	Characteristics	No. of contacts	male	female	
	Turned solder pins, straight	9 15 25 37 50	09 67 009 5655 09 67 015 5655 09 67 025 5655 09 67 037 5655 09 67 050 5655	09 67 009 4755 09 67 015 4755 09 67 025 4755 09 67 037 4755 09 67 050 4755	
		Stamped solder pins, straight without grounding board locks	9 15 25 37	09 65 121 670x 09 65 221 670x 09 65 321 670x 09 65 421 670x	09 66 111 650x 09 66 211 650x 09 66 311 650x 09 66 411 650x
Stamped solder pins, straight with grounding board locks		9 15 25 37	09 65 161 671x 09 65 261 671x 09 65 361 671x 09 65 461 671x	09 66 151 651x 09 66 251 651x 09 66 351 651x 09 66 451 651x	
Please insert digit x for flange thread or fitted female screw locks			for M3 for 4-40 UNC for fitted screw locks 4-40 UNC	x = 1 x = 2 x = 3	
Please insert digit x for flange thread or fitted female screw locks			for M3 for 4-40 UNC for fitted screw locks 4-40 UNC	x = 1 x = 2 x = 3	
	Stamped solder pins, angled without grounding board locks	9 15 25 37	09 65 122 680x 09 65 222 680x 09 65 322 680x 09 65 422 680x	09 66 112 660x 09 66 212 660x 09 66 312 660x 09 66 412 660x	
	Stamped solder pins, angled with grounding board locks	9 15 25 37	09 65 162 681x 09 65 262 681x 09 65 362 681x 09 65 462 681x	09 66 152 661x 09 66 252 661x 09 66 352 661x 09 66 452 661x	
	Please insert digit x for flange thread or fitted female screw locks			for M3 for 4-40 UNC for fitted screw locks 4-40 UNC	x = 1 x = 2 x = 3
	Please insert digit x for flange thread or fitted female screw locks			for M3 for 4-40 UNC for fitted screw locks 4-40 UNC	x = 1 x = 2 x = 3
	Low profile stamped solder pins, angled without grounding board locks	9 15 25 37	09 65 122 680x 09 65 222 680x 09 65 322 680x 09 65 422 680x	09 66 112 660x 09 66 212 660x 09 66 312 660x 09 66 412 660x	
	Low profile stamped solder pins, angled with grounding board locks	9 15 25 37	09 65 162 681x 09 65 262 681x 09 65 362 681x 09 65 462 681x	09 66 152 661x 09 66 252 661x 09 66 352 661x 09 66 452 661x	
	Please insert digit x for flange thread or fitted female screw locks			for M3 for 4-40 UNC for fitted screw locks 4-40 UNC	x = 5 x = 6 x = 7
	Please insert digit x for flange thread or fitted female screw locks			for M3 for 4-40 UNC for fitted screw locks 4-40 UNC	x = 5 x = 6 x = 7
	US footprint stamped solder pins with board locks	9 15 25 37	09 68 163 581x 09 68 263 581x 09 68 363 581x 09 68 463 581x	09 68 153 561x 09 68 253 561x 09 68 353 561x 09 68 453 561x	
	Please insert digit x for flange thread or fitted female screw locks			for M3 for 4-40 UNC for fitted screw locks 4-40 UNC	x = 1 x = 2 x = 3
	Press-fit stamped, straight without board locks, flange height 5.7 mm	9 15 25 37 50	09 66 124 670x 09 66 224 670x 09 66 324 670x	09 66 114 650x 09 66 214 650x 09 66 314 650x 09 66 414 650x 09 66 514 650x	
	Press-fit stamped, straight with board locks, flange height 5.7 mm	9 15 25 37 50	09 66 164 671x 09 66 264 671x 09 66 364 671x	09 66 154 651x 09 66 254 651x 09 66 354 651x 09 66 454 651x 09 66 554 651x	
	Please insert digit x for flange thread or fitted female screw locks			for M3 for 4-40 UNC for fitted screw locks 4-40 UNC	x = 5 x = 6 x = 7
	Please insert digit x for flange thread or fitted female screw locks			for M3 for 4-40 UNC for fitted screw locks 4-40 UNC	x = 5 x = 6 x = 7
	IDC termination	9 15 25 37	09 66 128 670x 09 66 228 670x 09 66 328 670x 09 66 428 670x	09 67 118 650x 09 67 218 650x 09 67 318 650x 09 67 418 650x	
	Please insert digit x for flange thread or fitted female screw locks			for through holes for M3 for 4-40 UNC	x = 0 x = 1 x = 2
	Cable clamp	9 15 25 37	09 66 108 0001 09 66 208 0001 09 66 308 0001 09 66 408 0001	09 66 108 0001 09 66 208 0001 09 66 308 0001 09 66 408 0001	

D-SUB STANDARD

Pictures	Characteristics	No. of contacts	male	female
	Crimp terminal	9 15 25 37 50	09 67 009 5601 09 67 015 5601 09 67 025 5601 09 67 037 5601 09 67 050 5601	09 67 009 4701 09 67 015 4701 09 67 025 4701 09 67 037 4701 09 67 050 4701
	Stamped crimp contacts  AWG 24-20 AWG 28-24		09 67 000 81x8 09 67 000 71x8	09 67 000 82x8 09 67 000 72x8
	Please insert digit x		for 500 pieces bulk for 500 pieces / reel for 10,000 pieces / reel	x = 7 x = 6 x = 5
	Turned crimp contacts, performance level 1  AWG 22-18 AWG 24-20 AWG 26-22 AWG 28-24		09 67 000 3576 09 67 000 8576 09 67 000 5576 09 67 000 7576	09 67 000 3476 09 67 000 8476 09 67 000 5476 09 67 000 7476
	Turned solder cups	9 15 25 37 50	09 67 009 5615 09 67 015 5615 09 67 025 5615 09 67 037 5615 09 67 050 5615	09 67 009 4715 09 67 015 4715 09 67 025 4715 09 67 037 4715 09 67 050 4715

D-SUB HIGH DENSITY

	High Density, solder pins, straight	15 26 44 62 78	09 56 161 7700 09 56 261 7700 09 56 361 7700 09 56 461 7700 09 56 561 7700	09 56 151 7500 09 56 251 7500 09 56 351 7500 09 56 451 7500 09 56 551 7500
	High Density, solder pins, straight with spacer and board locks	15 26 44 62 78	09 56 161 771x 09 56 261 771x 09 56 361 771x 09 56 461 771x 09 56 561 771x	09 56 151 751x 09 56 251 751x 09 56 351 751x 09 56 451 751x 09 56 551 751x
Please insert digit x for flange thread or fitted female screw locks			for 4-40 UNC for fitted screw locks 4-40 UNC	x = 2 x = 3
	High Density, solder pins, angled with board locks	15 26 44 62 78	09 56 162 781x 09 56 262 781x 09 56 362 781x 09 56 462 781x	09 56 152 761x 09 56 252 761x 09 56 352 761x 09 56 452 761x 09 56 552 761x
	Please insert digit x for flange thread or fitted female screw locks			for 4-40 UNC for fitted screw locks 4-40 UNC
	High Density, crimp terminal	15 26 44 62 78	09 56 100 5601 09 56 200 5601 09 56 300 5601 09 56 400 5601 09 56 500 5601	09 56 100 4701 09 56 200 4701 09 56 300 4701 09 56 400 4701 09 56 500 4701
	High Density, stamped crimp contacts  AWG 26-24		09 56 000 81x7	09 67 000 82x7
	Please insert digit x			for 500 pieces bulk for 500 pieces / reel for 10,000 pieces / reel
	High Density, solder cups	15 26 44 62 78	09 56 100 5604 09 56 200 5604 09 56 300 5604 09 56 400 5604 09 56 500 5604	09 56 100 4704 09 56 200 4704 09 56 300 4704 09 56 400 4704 09 56 500 4704

D-SUB MIXED

	Mixed shells with signal solder cup contacts	5W1 7W2 9W4 11W1 13W3 13W6 17W2 21W1 21WA4 24W7 25W3 27W2 36W4 43W2	09 69 111 5051 09 69 211 5072 09 69 311 5094 09 69 211 5111 09 69 311 5133 09 69 411 5136 09 69 311 5172 09 69 311 5211 09 69 411 5214 09 69 511 5247 09 69 411 5253 09 69 411 5272 09 69 511 5364 09 69 511 5432	09 69 101 5051 09 69 201 5072 09 69 301 5094 09 69 201 5111 09 69 301 5133 09 69 401 5136 09 69 301 5172 09 69 301 5211 09 69 401 5214 09 69 501 5247 09 69 401 5253 09 69 401 5272 09 69 501 5364 09 69 501 5432
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Pictures	Characteristics	No. of contacts	male	female
	Mixed shells for signal crimp contacts and special contacts Signal crimp contacts see page 3	5W1 7W2 11W1 13W3 17W2 21W1 21WA4 36W4	09 69 112 0051 09 69 212 0072 09 69 212 0111 09 69 312 0133 09 69 312 0172 09 69 312 0211 09 69 412 0214 09 69 512 0364	09 69 102 0051 09 69 202 0072 09 69 202 0111 09 69 302 0133 09 69 302 0172 09 69 302 0211 09 69 402 0214 09 69 502 0364
	Mixed shells for special contacts	2W2 2W2C 3W3 3W3C 5W5 7W7 8W8	09 69 110 0522 09 69 110 0022 09 69 210 0033 09 69 210 0633 09 69 310 0055 09 69 410 0077 09 69 410 0088	09 69 100 0522 09 69 100 0022 09 69 200 0033 09 69 200 0633 09 69 300 0055 09 69 400 0077 09 69 400 0088

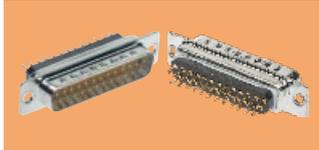
Pictures	Characteristics	Rating	male	female
	Power contacts, solder cup	10 A 20 A 30 A 40 A	09 69 281 5420 09 69 281 5421 09 69 281 5422 09 69 281 5423	09 69 181 5420 09 69 181 5421 09 69 181 5422 09 69 181 5423
	Power contacts, crimp	10 A 20 A 30 A 40 A	09 69 282 5420 09 69 282 5421 09 69 282 5422 09 69 282 5423	09 69 182 5420 09 69 182 5421 09 69 182 5422 09 69 182 5423
	High voltage contacts, solder version		09 69 281 2550	09 69 181 2550
	High voltage contacts, crimp		09 69 282 2550	09 69 182 2550

Pictures	Characteristics	for cables	male	female
	Coaxial contacts for 50 Ω Many other coaxial contacts are available on request	RG 174 RG 178 RG 58	09 69 281 5140 09 69 281 5141 09 69 281 5143	09 69 181 5140 09 69 181 5141 09 69 181 5143
	Coaxial contacts for 75 Ω Many other coaxial contacts are available on request	RG 179 RG 59 RGD 179	09 69 282 5230 09 69 282 5232 09 69 282 5233	09 69 182 5230 09 69 182 5232 09 69 182 5233

Pictures	Characteristics	inner Ø air tube	male	female
	Pneumatic contacts	2 mm 2.6 mm 3 mm 4 mm	09 69 287 0060 09 69 287 0061 09 69 287 0062 09 69 287 0063	09 69 187 0060 09 69 187 0061 09 69 187 0062 09 69 187 0063

SPECIAL CONTACTS

D-SUB FILTER

Pictures	Characteristics	No. of contacts	male	female	
FERRITE-FILTER		Filter, turned solder pins, straight with through holes	9 15 25	09 64 122 7800 09 64 222 7800 09 64 322 7800	09 64 112 7800 09 64 212 7800 09 64 312 7800
		Filter, turned solder buckets with through holes	9 15 25 37	09 64 121 7800 09 64 221 7800 09 64 321 7800 09 64 421 7800	09 64 111 7800 09 64 211 7800 09 64 311 7800 09 64 411 7800
		Filter, turned solder pins, right angled, with 4-40 UNC flange thread	9 15 25 37	09 64 123 7802 09 64 223 7802 09 64 323 7802 09 64 423 7802	09 64 113 7802 09 64 213 7802 09 64 313 7802 09 64 413 7802
D-SUB FILTER		Male / female filter adapters	9 15 25 37	09 64 100 72xx 09 64 200 72xx 09 64 300 72xx 09 64 400 72xx	
		Please insert digits xx	for 47 pF for 470 pF for 1000 pF for 3900 pF	xx = 10 xx = 20 xx = 30 xx = 40	
		Filter, turned solder buckets with through holes / clinch nut	9 15 25 37	09 64 121 72xy 09 64 221 72xy 09 64 321 72xy 09 64 421 72xy	09 64 111 72xy 09 64 211 72xy 09 64 311 72xy 09 64 411 72xy
C-FILTER		Please insert digits x and y	for 47 pF for 470 pF for 1000 pF for 3900 pF	x = 1 x = 2 x = 3 x = 4	for through holes y = 0 for 4-40 UNC y = 7 for M3 y = 8
		Filter, turned solder pins, straight, with grounding board locks	9 15 25 37	09 64 122 72xy 09 64 222 72xy 09 64 322 72xy 09 64 422 72xy	09 64 112 72xy 09 64 212 72xy 09 64 312 72xy 09 64 412 72xy
		Please insert digits x and y	for 47 pF for 470 pF for 1000 pF for 3900 pF	x = 1 x = 2 x = 3 x = 4	for 4-40 UNC y = 5 for M3 y = 6
C-FILTER		Filter, turned solder pins, right angled, with brackets and board locks	9 15 25 37	09 64 124 72xy 09 64 224 72xy 09 64 324 72xy 09 64 424 72xy	09 64 114 72xy 09 64 214 72xy 09 64 314 72xy 09 64 414 72xy
		Please insert digits x and y	for 47 pF for 470 pF for 1000 pF for 3900 pF	x = 1 x = 2 x = 3 x = 4	for through holes y = 1 for 4-40 UNC y = 2 for M3 y = 3 for 4-40 UNC female screw locks y = 4 for M3 female screw locks y = 5

Pictures	Characteristics	No. of contacts	male	female		
	IP 67, turned solder cups	9	09 67 409 5615	09 67 409 4715		
		15	09 67 415 5615	09 67 415 4715		
		25	09 67 425 5615	09 67 425 4715		
		37	09 67 437 5615	09 67 437 4715		
		50	09 67 450 5615	09 67 450 4715		
	IP 67, turned solder cups with rear plastic mounting frame	9	09 67 509 x615	09 67 509 y715		
		15	09 67 515 x615	09 67 515 y715		
		25	09 67 525 x615	09 67 525 y715		
		IP 67, turned solder cups with rear metal mounting frame		9	09 67 609 x615	09 67 609 y715
		15	09 67 615 x615	09 67 615 y715		
25	09 67 625 x615	09 67 625 y715				
37	09 67 637 x615	09 67 637 y715				
50	09 67 650 x615	09 67 650 y715				
Please insert digits x and y		for 4-40 UNC for M3	x = 7; y = 6 x = 9; y = 8			
	IP 67, turned solder cups with front plastic mounting frame	9	09 67 709 x615	09 67 709 y715		
		15	09 67 715 x615	09 67 715 y715		
		25	09 67 725 x615	09 67 725 y715		
		IP 67, turned solder cups with front metal mounting frame		9	09 67 809 x615	09 67 809 y715
		15	09 67 815 x615	09 67 815 y715		
25	09 67 825 x615	09 67 825 y715				
37	09 67 837 x615	09 67 837 y715				
50	09 67 850 x615	09 67 850 y715				
Please insert digits x and y		for 4-40 UNC for M3	x = 7; y = 6 x = 9; y = 8			
	IP 67, turned straight to PCB, spacer and board lock rear plastic mounting frame	9	09 67 509 x675	09 67 509 y775		
		15	09 67 515 x675	09 67 515 y775		
		25	09 67 525 x675	09 67 525 y775		
		IP 67, turned straight to PCB, spacer and board lock rear metal mounting frame		9	09 67 609 x675	09 67 609 y775
		15	09 67 615 x675	09 67 615 y775		
25	09 67 625 x675	09 67 625 y775				
37	09 67 637 x675	09 67 637 y775				
50	09 67 650 x675	09 67 650 y775				
Please insert digits x and y		for 4-40 UNC for M3	x = 7; y = 6 x = 9; y = 8			
	IP 67, turned angled to PCB, spacer and board lock rear plastic mounting frame	9	09 67 509 x658	09 67 509 y758		
		15	09 67 515 x658	09 67 515 y758		
		25	09 67 525 x658	09 67 525 y758		
		IP 67, turned angled to PCB, spacer and board lock rear metal mounting frame		9	09 67 609 x658	09 67 609 y758
		15	09 67 615 x658	09 67 615 y758		
25	09 67 625 x658	09 67 625 y758				
37	09 67 637 x658	09 67 637 y758				
50	09 67 650 x658	09 67 650 y758				
Please insert digits x and y		for 4-40 UNC for M3	x = 7; y = 6 x = 9; y = 8			
	IP 67, black plastic hood	9	09 67 009 043x			
		15	09 67 015 043x			
		25	09 67 025 043x			
		37	09 67 037 043x			
		50	09 67 050 043x			
	IP 67, metallized plastic hood	9	09 67 009 053x			
		15	09 67 015 053x			
		25	09 67 025 053x			
		37	09 67 037 053x			
		50	09 67 050 053x			
Please insert digit x		for locking screws 4-40 UNC for locking screws M3	x = 8 x = 9			

D-SUB SMT

Pictures	Characteristics	No. of contacts	male	female
	SMT standard, stamped solder pins, angled with grounding board locks	9 15 25 37	09 55 166 68xx 741 09 55 266 68xx 741 09 55 366 68xx 741 09 55 466 68xx 741	09 55 156 66xx 741 09 55 256 66xx 741 09 55 356 66xx 741 09 55 456 66xx 741
	Please insert digits xx		for M3 nut for 4-40 UNC nut for fitted M3 female screw locks for fitted 4-40 UNC female screw locks	xx = 11 xx = 12 xx = 21 xx = 22
	SMT low profile, stamped solder pins, angled with grounding board locks	9 15 25 37	09 55 166 68xx 741 09 55 266 68xx 741 09 55 366 68xx 741 09 55 466 68xx 741	09 55 156 66xx 741 09 55 256 66xx 741 09 55 356 66xx 741 09 55 456 66xx 741
	Please insert digits xx		for M3 nut for 4-40 UNC nut for fitted M3 female screw locks for fitted 4-40 UNC female screw locks	xx = 15 xx = 16 xx = 19 xx = 20
	SMT standard, stamped solder pins, straight without grounding board locks	9 15 25 37	09 55 129 68xx 741 09 55 229 68xx 741 09 55 329 68xx 741 09 55 429 68xx 741	09 55 115 66xx 741 09 55 215 66xx 741 09 55 315 66xx 741 09 55 415 66xx 741
	Please insert digits xx		for M3 nut for 4-40 UNC nut for fitted M3 female screw locks for fitted 4-40 UNC female screw locks	xx = 11 xx = 12 xx = 21 xx = 22

D-SUB ACCESSORIES

Pictures	Characteristics	No. of contacts	Screws 4-40 UNC	Screws M3
	Plastic hood top and side entry black	9 15 25 37	09 67 009 0434 09 67 015 0434 09 67 025 0434 09 67 037 0434	09 67 009 0430 09 67 015 0430 09 67 025 0430 09 67 037 0430
	Plastic hood top and side entry metallized	9 15 25 37	09 67 009 0435 09 67 015 0435 09 67 025 0435 09 67 037 0435	09 67 009 0431 09 67 015 0431 09 67 025 0431 09 67 037 0431
	Plastic hood top entry black	9 15 25 37 50	09 67 009 0442 09 67 015 0442 09 67 025 0442 09 67 037 0442 09 67 050 0442	
	Plastic hood top entry metallized	9 15 25 37 50	09 67 009 0443 09 67 015 0443 09 67 025 0443 09 67 037 0443 09 67 050 0443	
	Plastic hood side entry grey, with internal metal screening	9 15 25 37 50	09 67 009 0573 09 67 015 0573 09 67 025 0573 09 67 037 0573 09 67 050 0573	
	Knurled screw with grey head thread M3 thread 4-40 UNC			09 67 001 9965 09 67 000 9971

Pictures	Characteristics	No. of contacts	Screws 4-40 UNC	Screws M3
	Metal hood top entry with grommet	9 15 25 37 50	09 67 009 0343 09 67 015 0343 09 67 025 0343 09 67 037 0343 09 67 050 0343	09 67 009 0348 09 67 015 0348 09 67 025 0348 09 67 037 0348 09 67 050 0348
	Metal hood side entry with grommet	9 15 25 37 50	09 67 009 0333 09 67 015 0333 09 67 025 0333 09 67 037 0333 09 67 050 0333	09 67 009 0336 09 67 015 0336 09 67 025 0336 09 67 037 0336 09 67 050 0336
	Metal hood top entry with cable clamp	9 15 25 37 50	09 67 009 0344 09 67 015 0344 09 67 025 0344 09 67 037 0344 09 67 050 0344	09 67 009 0349 09 67 015 0349 09 67 025 0349 09 67 037 0349 09 67 050 0349
	Metal hood side entry with cable clamp	9 15 25 37 50	09 67 009 0334 09 67 015 0334 09 67 025 0334 09 67 037 0334 09 67 050 0334	09 67 009 0335 09 67 015 0335 09 67 025 0335 09 67 037 0335 09 67 050 0335
	Metal hood top and side entry with different screw options	9 15 25 37 50	61 03 001 x010 61 03 001 x016 61 03 001 x017 61 03 001 x018 61 03 001 x019	61 03 001 y010 61 03 001 y016 61 03 001 y017 61 03 001 y018 61 03 001 y019
	Metal hood side entry with different screw options	9 15 25	61 03 001 x013 61 03 001 x014 61 03 001 x015	61 03 001 y013 61 03 001 y014 61 03 001 y015
	Please insert digits x and y for knurled screw for hexagonal screw with captive washer			x = 0; y = 3 x = 2; y = 1
	Cable clamp Cable diameter 5 - 7 mm Cable diameter 7 - 10 mm Cable diameter 10 - 12 mm Cable diameter 11 - 14 mm	9 - 37 9 - 37 9 - 37 50	61 03 000 0141 61 03 000 0144 61 03 000 0143 61 03 000 0145	
SIGNAL		Hand crimp tool for the standard contacts Hand crimp tool for the high density contacts Hand crimp tool for turned signal contacts Locator for turned signal contacts Insertion / Removal tool for the standard contacts Insertion / Removal tool for the high density contacts		09 99 000 0175 09 99 000 0535 09 99 000 0501 09 99 000 0531 09 99 000 0171 09 99 000 0513
POWER		Hand crimp tool for the power contacts Locator for the power contacts 10 A to 40 A Insertion / Removal tool		09 99 000 0509 09 99 000 0504 09 99 000 0512
COAXIAL		Hand crimp tool for the inner contact Locator for the inner coaxial contact Hand crimp tool for the outer ferrule Die for the outer ferrule Die for the outer ferrule Die for the outer ferrule Die for the outer ferrule		09 99 000 0501 09 99 000 0507 09 99 000 0503 09 99 000 0508 09 99 000 0515 09 99 000 0518 09 99 000 0519



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