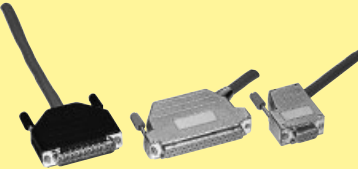

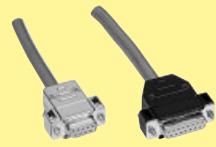
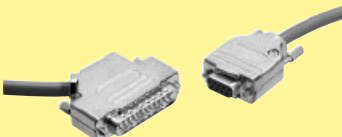

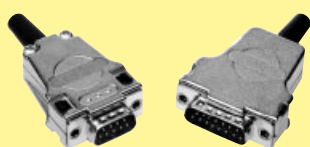
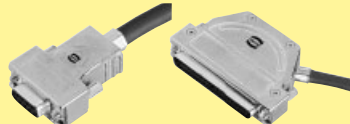
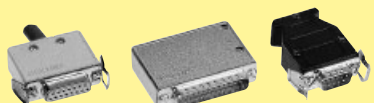
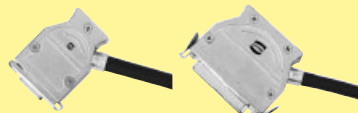



D-Sub – Housing range for subminiature D connectors

Page

General information – hoods for screw locking		07.02
Thermoplastic top and side entry hoods with knurled or short screws		07.04
Thermoplastic side entry hoods with knurled screws		07.06
Thermoplastic top entry hoods with knurled or locking screws		07.07
Full metal top and side entry hoods with knurled screws		07.08
Full metal top and side entry hoods with short screws		07.09
Full metal top entry hoods with premounted threaded inserts		07.10
Full metal top and side entry hoods with different screw options		07.11
General information – hoods for spring or slide locking		07.12
Thermoplastic top and side entry hoods for spring or slide locking		07.13
Full metal top and side entry hoods for spring or slide locking		07.14
InduCom 9 – Industrial bus interface system		07.18

D-Sub - H

HARTING – Guarantee a secure connection

Modern electronic applications demand a high degree of mechanical and electrical security. To meet these requirements, continuous screening from the cable to the PCB via the connector is achieved by using state of the art components to DIN 41 652.

utilise various combinations of male and female connectors with hoods, featuring either screw locking or latching facilities.

Only 2 examples are shown:

- Continuous security screening and grounding with screw locking and metallized hood.
- Continuous grounding and vibration proof latching system with metallized hood.

HARTING offer many solutions. These

Male connector with dimples

Screw lock

Cable with protective screen

Strain relief

Metallized hood

Female connector with protective metal shell

Grounding contact between protective metal shell and PCB

Female connector with protective metal shell

Spring latch

Strain relief

Cable with protective screen

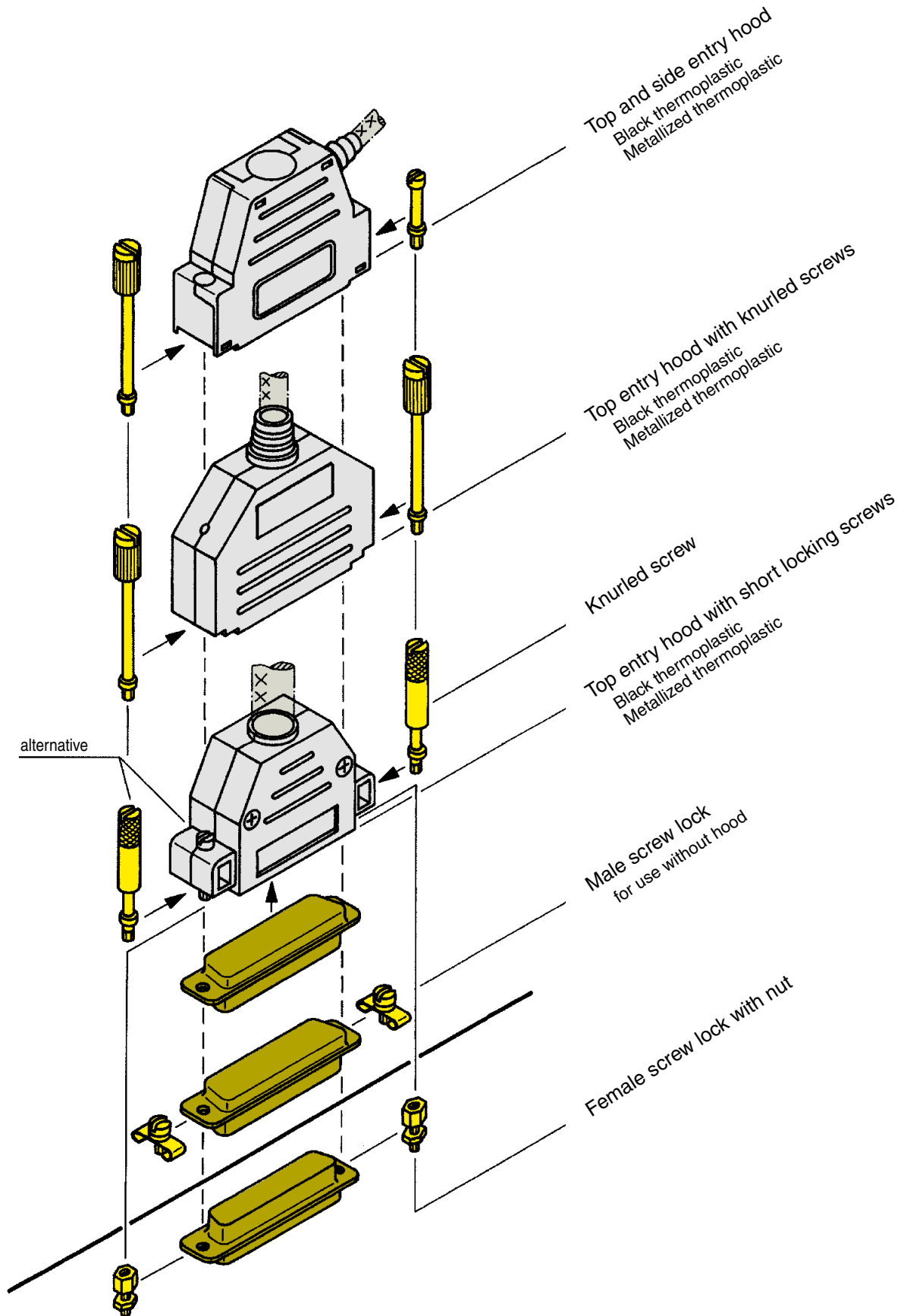
Metallized hood

Male connector with dimples

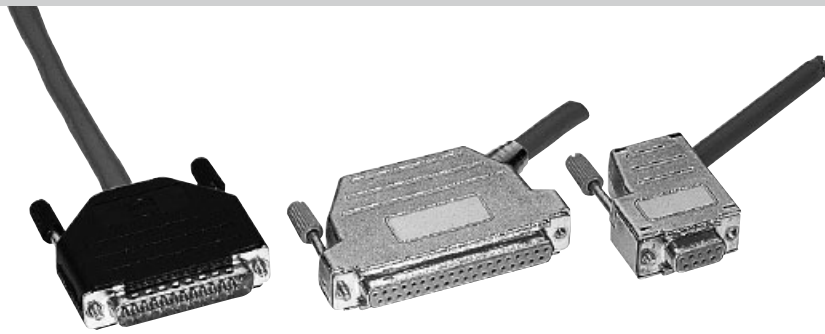
Number of contacts in the D-Sub standard/D-Sub high density range related to the shell size.

Shell size	D-Sub standard	D-Sub high density
1	9	15
2	15	26
3	25	44
4	37	62
5	50	78

Connector hoods for screw locking



D-Sub - H



Top and side entry hoods with knurled screws

Identification No. of contacts Part No. Drawing Dimensions in mm

Top entry hood Black thermoplastic	9	09 67 009 042
Please insert digit for screw option	15	09 67 015 042
	25	09 67 025 042
	37	09 67 037 042
	50	09 67 050 042
Knurled screw, thread 4-40 UNC ▶ 4		
Knurled screw, thread M3 ▶ 6		

	A1	A2	B	C1	C2	max. Ø 1	max. Ø 2
9	31.5	32.5	15	34	38	8.0	11.5
15	40.0	41.0	15	34	38	11.5	11.5
25	53.5	54.5	15	40	40	11.5	11.5
37	71.0	71.0	15	40	40	11.5	11.5
50	67.5		19	40		14.0	

C1: non-metallized C2: metallized

D-Sub - H

Top entry hood Metallized thermoplastic	9	09 67 009 042
Please insert digit for screw option	15	09 67 015 042
	25	09 67 025 042
	37	09 67 037 042
Knurled screw, thread 4-40 UNC ▶ 5		
Knurled screw, thread M3 ▶ 7		

max. Ø

- 3.3
- 4.3
- 5.3
- 6.3

max. Ø

- 7.3
- 8.3
- 9.3
- 10.3

Cut appropriate cable entry to fit actual cable diameter

Top and side entry hood Black thermoplastic	9 ³⁾	09 67 009 043
Please insert digit for screw option	15	09 67 015 043
	25	09 67 025 043
	37 ¹⁾	09 67 037 043
Knurled screw, thread 4-40 UNC ▶ 4		
Knurled screw, thread M3 ▶ 0		

Optional jack screw Cable diameters

- Ø 3.3
- Ø 4.3
- Ø 5.3
- Ø 6.3
- Ø 7.3
- Ø 8.3
- Ø 9.3
- Ø 10.3

Cover in place of grommet

Top and side entry hood Metallized thermoplastic	9 ³⁾	09 67 009 043
Please insert digit for screw option	15	09 67 015 043
	25 ²⁾	09 67 025 043
	37 ¹⁾	09 67 037 043
Knurled screw, thread 4-40 UNC ▶ 5		
Knurled screw, thread M3 ▶ 1		

	A	B
9	31.5	40
15	40.0	40
25	53.5	43
37	71.3	40

1) 37 pole is only available with side entry and with knurled screw, thread 4-40 UNC

2) Cable clamp kit for two outputs is available as accessories (it includes: screw, metal clamp, plastic insert and grommet). With Part No. 09 67 001 9988 ten of these kits are delivered.

3) 9 pole hood provided with only one screw on the opposite side of the cable entry.



Top and side entry hoods with short screws

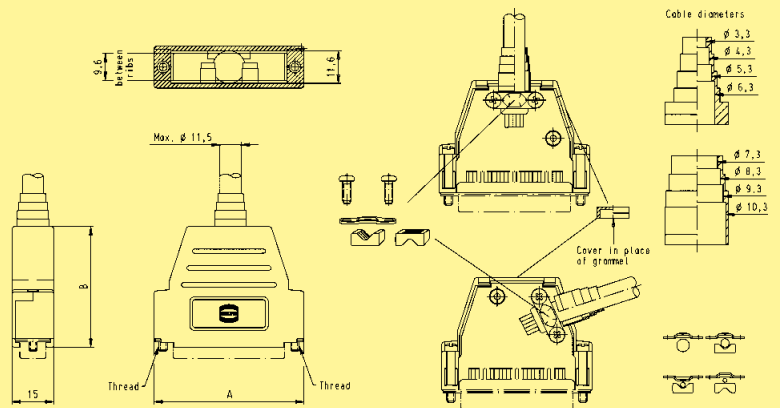
Identification No. of contacts Part No. Drawing Dimensions in mm

Top and side entry hood Black thermoplastic

9 ¹⁾	09 67 009 046 .
15	09 67 015 046 .
25	09 67 025 046 .
37	09 67 037 046 .

Please insert digit for screw option

- Short screw, thread 4-40 UNC ▶ 3
- Short screw, thread M3 ▶ 2



Top and side entry hood Metallized thermoplastic

9 ¹⁾	09 67 009 046 .
15	09 67 015 046 .
25	09 67 025 046 .
37	09 67 037 046 .

Please insert digit for screw option

- Short screw, thread 4-40 UNC ▶ 5
- Short screw, thread M3 ▶ 4

	A	B
9	31.5	40
15	40.0	40
25	53.5	43
37	71.3	40

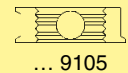
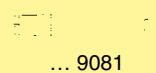
Spares

Knurled screw, thread 4-40 UNC

9-25	09 67 002 9081
------	----------------

Insert for metallized hoods

9-15	09 67 002 9103
25-37	09 67 002 9105

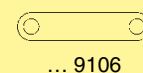
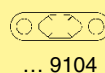


Cable clamp

9-15	09 67 002 9104
25-37	09 67 002 9106

Cable clamp screw

9-37	09 67 002 9102
------	----------------



Grommet for black thermoplastic hood

09 67 001 9968

for metallized hood

09 67 002 9075

max. Ø		max. Ø	
... 9968	... 9075	... 9968	... 9075
3.3	3.5	7.3	7.5
4.3	4.5	8.3	8.5
5.3	5.5	9.3	9.5
6.3	6.5	10.3	10.5

¹⁾ 9 pole hood provided with only one screw on the opposite side of the cable entry.
Operating temperature for all hoods on this page: -55 °C ... +110 °C



Side entry hoods with knurled screws

Identification No. of contacts Part No. Drawing Dimensions in mm

Hood ¹⁾ grey thermoplastic RAL 7032	9	09 67 009 0571	<p>Upper hood part</p> <p>9 contacts</p>	<p>Lower hood part</p>																																		
	15	09 67 015 0571																																				
	25	09 67 025 0571																																				
	37	09 67 037 0571																																				
	50	09 67 050 0571																																				
grey thermoplastic with internal tin-plate screening	9	09 67 009 0573	<p>15 – 50 contacts</p>																																			
	15	09 67 015 0573																																				
	25	09 67 025 0573																																				
	37	09 67 037 0573																																				
	50	09 67 050 0573																																				
9-37 way for packaging density of 3 TE (15.24 mm)			<table border="1"> <thead> <tr> <th></th> <th>a max.</th> <th>b min.</th> <th>c</th> <th>d</th> <th>e</th> <th>f</th> </tr> </thead> <tbody> <tr> <td>15</td> <td>39.62</td> <td>28.40</td> <td>13.00</td> <td>14.00</td> <td>1.00</td> <td>7.50</td> </tr> <tr> <td>25</td> <td>53.52</td> <td>42.20</td> <td>13.00</td> <td>14.00</td> <td>1.00</td> <td>7.50</td> </tr> <tr> <td>37</td> <td>69.80</td> <td>58.65</td> <td>13.00</td> <td>14.00</td> <td>1.00</td> <td>7.50</td> </tr> <tr> <td>50</td> <td>67.41</td> <td>56.18</td> <td>16.00</td> <td>17.50</td> <td>1.50</td> <td>9.50</td> </tr> </tbody> </table>		a max.	b min.	c	d	e	f	15	39.62	28.40	13.00	14.00	1.00	7.50	25	53.52	42.20	13.00	14.00	1.00	7.50	37	69.80	58.65	13.00	14.00	1.00	7.50	50	67.41	56.18	16.00	17.50	1.50	9.50
	a max.	b min.	c	d	e	f																																
15	39.62	28.40	13.00	14.00	1.00	7.50																																
25	53.52	42.20	13.00	14.00	1.00	7.50																																
37	69.80	58.65	13.00	14.00	1.00	7.50																																
50	67.41	56.18	16.00	17.50	1.50	9.50																																

Knurled screw	9-50	09 67 000 9971 ²⁾ 09 67 001 9965*	<p>Grey head / Nickel plated steel</p>
Thread UNC Thread M3	9-50	09 67 001 9978 09 67 001 9977	<p>Full metal part</p>

Tooling ⁴⁾ for assembly of hoods			

* Not normally kept in stock
¹⁾ Order knurled screw separately
²⁾ 9 way 1 per hood – 15-50 way 2 per hood

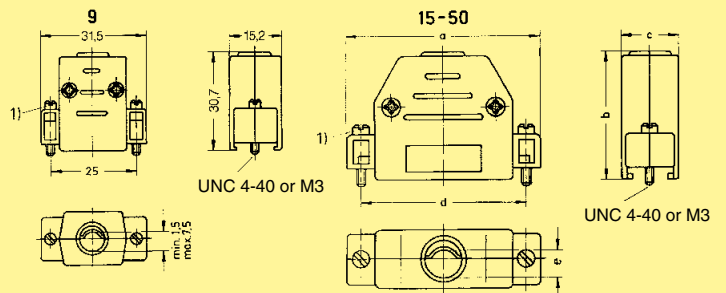
³⁾ Screw driver type ISO PH 1 for philips screw No 1 ISO norm 4757
⁴⁾ Additional tooling (bench press) see chapter 32
 Operating temperature for all hoods on this page: -30 °C ... +100 °C



Top entry hoods with knurled or locking screws

Identification No. of contacts Part No. Drawing Dimensions in mm

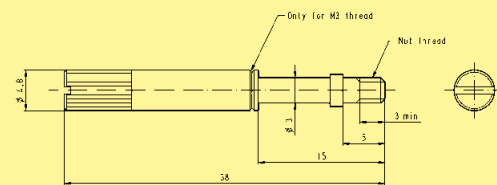
Hood³⁾ Black thermoplastic with short locking screws	9	09 67 009 0442
	15	09 67 015 0442
	25	09 67 025 0442
	37	09 67 037 0442
	50	09 67 050 0442



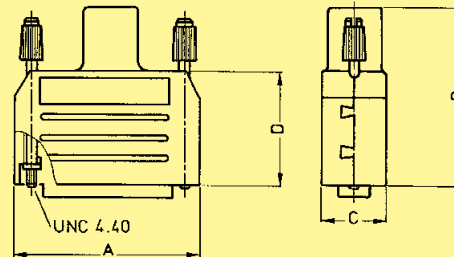
Hood³⁾ Metallized thermoplastic with short locking screws Please insert digit for screw option Thread 4-40 UNC ▶ 4 Thread M3 ▶ 2	9	09 67 009 04 . 3
	15	09 67 015 04 . 3
	25	09 67 025 04 . 3
	37	09 67 037 04 . 3
	50	09 67 050 04 . 3

	a	b	c	d	e	
					min.	max.
15	40.0	34.7	15.2	33.3	3.3	8.5
25	53.2	39.7	15.2	47.0	3.5	11.0
37	70.0	39.7	15.2	63.5	3.5	11.0
50	67.5	39.7	18.2	61.1	9.3	12.0

Knurled screw for metallized hood Thread UNC Thread M3	9-50	09 67 000 9925 ²⁾
	9-50	09 67 000 9930 ²⁾

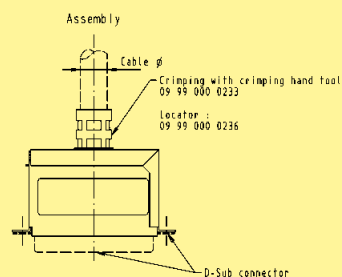


Screened hood Order cover and internal metal screen separately Cover⁴⁾ Black thermoplastic with knurled screws	9	09 67 009 0422
	15	09 67 015 0422
	25	09 67 025 0422
	37	09 67 037 0422



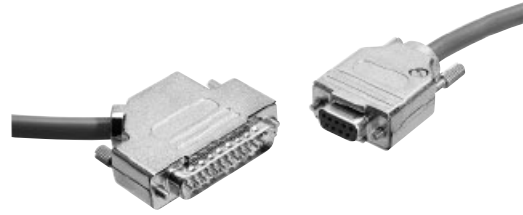
	A	B	C	D
9	35.0	54	19.1	34
15	43.0	54	19.1	34
25	57.5	54	19.1	34
37	74.0	54	19.1	34

Internal metal screen⁴⁾ metallized (Crimp tool see chapter 31)	9	09 67 009 0421
	15	09 67 015 0421
	25	09 67 025 0421
	37	09 67 037 0421



	Cable Ø (mm)	
	min.	max.
9	6.1	8.8
15	6.1	8.8
25	8.0	10.3
37	9.5	11.5

1) Use of knurled screws is possible. Please order separately
 2) Order 2 for each hood
 3) Operating temperature: -20 °C ... +90 °C
 4) Operating temperature: -55 °C ... +110 °C



Full metal top and side entry hoods with knurled screws

Identification No. of contacts Part No. Drawing Dimensions in mm

Top entry hood incl. grommet set halves

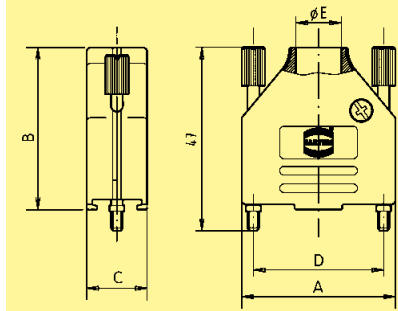
Please insert digit for screw option

Knurled screw, thread 4-40 UNC ▶ 3

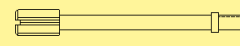
Knurled screw, thread M3 ▶ 8

Spare knurled screw thread 4-40 UNC thread M3

No. of contacts	Part No.
9	09 67 009 034 .
15	09 67 015 034 .
25	09 67 025 034 .
37	09 67 037 034 .
50	09 67 050 034 .



Poles	A	B	C	D	E
9	31.0	39.5	14.8	25.0	11.7
15	39.5	41.5	14.8	33.3	11.7
25	53.5	48.5	14.8	47.0	11.7
37	71.0	53.0	14.8	63.5	11.7
50	67.5	54.0	18.7	61.1	17.0



Side entry hood incl. grommet set halves

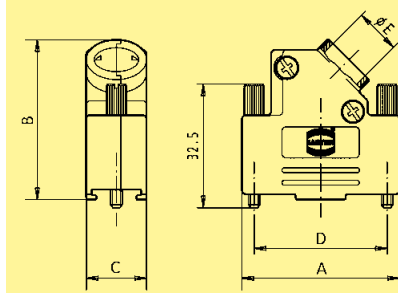
Please insert digit for screw option

Knurled screw, thread 4-40 UNC ▶ 3

Knurled screw, thread M3 ▶ 8

Spare knurled screw thread 4-40 UNC thread M3

No. of contacts	Part No.
9 ¹⁾	09 67 009 033 .
15	09 67 015 033 .
25	09 67 025 033 .
37	09 67 037 033 .
50	09 67 050 033 .



Poles	A	B	C	D	E
9	31.0	37.7	14.7	—	11.7
15	39.5	42.0	14.7	33.3	11.7
25	53.2	41.3	14.7	47.0	11.7
37	69.7	41.8	14.7	63.7	11.7
50	67.4	44.9	17.4	61.1	17.0

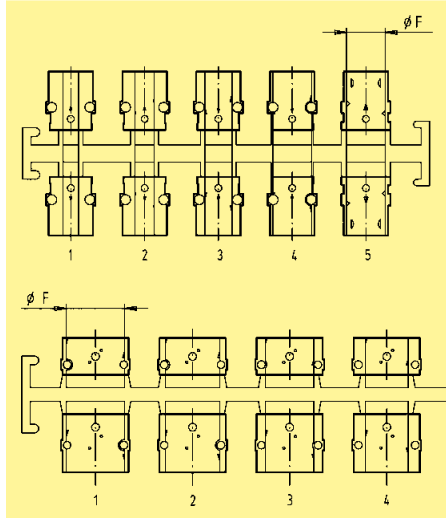


Spare grommet set halves

9-37 poles

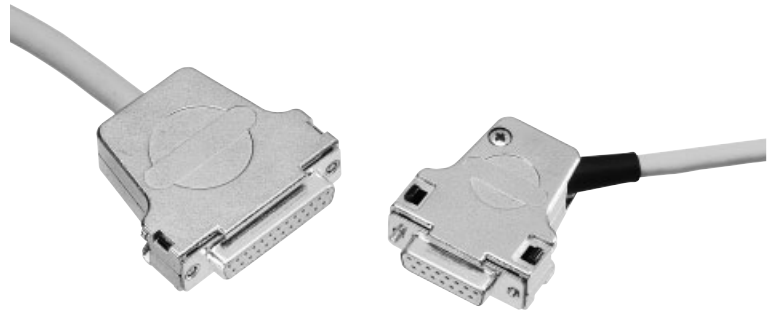
50 poles

Part No.
09 67 002 9092
09 67 002 9094



Grommet dimensions		
Number	Diameter F	
	9-37 poles	50 poles
1	4.0	15.0
2	5.0	14.0
3	7.0	12.5
4	9.0	11.0
5	10.2	—

¹⁾ 9 pole hood provided with only one screw on the opposite side of the cable entry.
Operating temperature for all hoods on this page: -40 °C ... +120 °C



Full metal top and side entry hoods with short screws

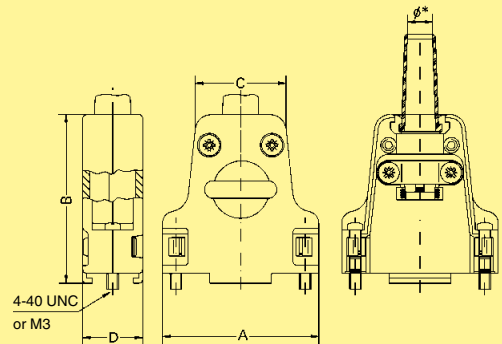
Identification No. of contacts Part No. Drawing Dimensions in mm

Top entry hood

9	09 67 009 034
15	09 67 015 034
25	09 67 025 034
37	09 67 037 034
50	09 67 050 034

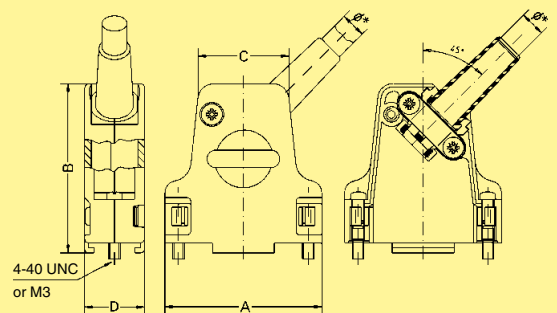
Please insert digit for screw option

- Locking screw, thread 4-40 UNC ▶ 4
- Locking screw, thread M3 ▶ 9



Poles	A	B	C	D	Ø F1		Ø F2	Ø F3
					Min.	Max.		
9	31.8	42.4	20.8	15.4	3.0	9.5	6.5	—
15	40.3	43.5	23.3	15.4	3.0	8.5	6.5	12.5
25	54.0	47.7	31.7	15.4	3.0	8.5	8.0	12.5
37	70.2	50.4	48.2	18.4	3.0	12.0	9.0	15.0
50	67.8	50.5	45.8	18.2	3.0	12.0	9.7	15.0

* Cable diameter without rubber bushing = Ø F1
 Cable diameter with rubber bushing = Ø F2
 Cable diameter without rubber bushing and without cable reduction plate = Ø F3



Side entry hood

9	09 67 009 033
15	09 67 015 033
25	09 67 025 033
37	09 67 037 033
50	09 67 050 033

Please insert digit for screw option

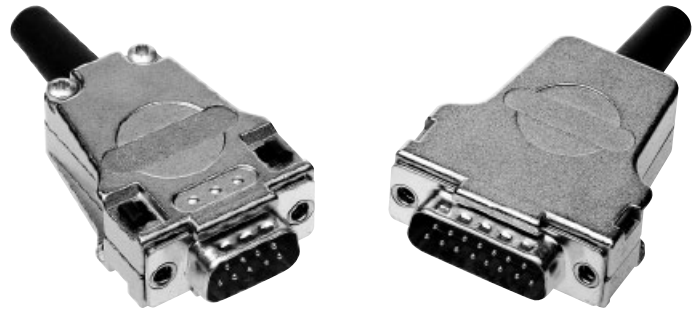
- Locking screw, thread 4-40 UNC ▶ 4
- Locking screw, thread M3 ▶ 5

Spare short locking screw

thread 4-40 UNC
 thread M3

09 67 002 9090
09 67 002 9091





Full metal top entry hoods
with premounted threaded inserts

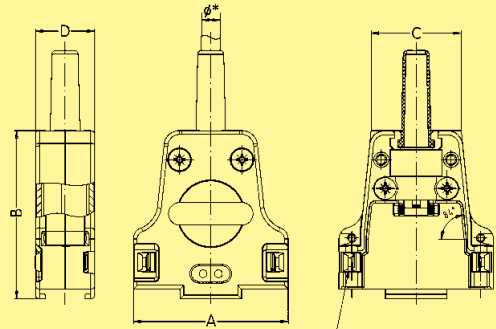
Identification No. of contacts Part No. Drawing Dimensions in mm

Top entry hood

9	09 67 009 032
15	09 67 015 032
25	09 67 025 032
37	09 67 037 032
50	09 67 050 032

Please insert digit
for premounted insert

thread 4-40 UNC ▶	2
thread M3 ▶	3



threaded insert

Poles	A	B	C	D	Ø F1		Ø F2	Ø F3
					Min.	Max.		
9	31.6	42.0	20.8	15.2	3.0	9.5	6.5	–
15	40.0	43.5	23.3	15.2	3.0	8.5	6.5	12.5
25	53.7	47.5	31.7	15.2	3.0	8.5	8.0	12.5
37	70.2	50.5	48.2	18.2	3.0	12.0	9.0	15.0
50	67.8	50.5	45.8	18.2	3.0	12.0	9.7	15.0

* Cable diameter without rubber bushing = Ø F1
 Cable diameter with rubber bushing = Ø F2
 Cable diameter without rubber bushing
 and without cable reduction plate = Ø F3

Locking hook

09 67 002 9031¹⁾

Latch lock bolt

Front mount

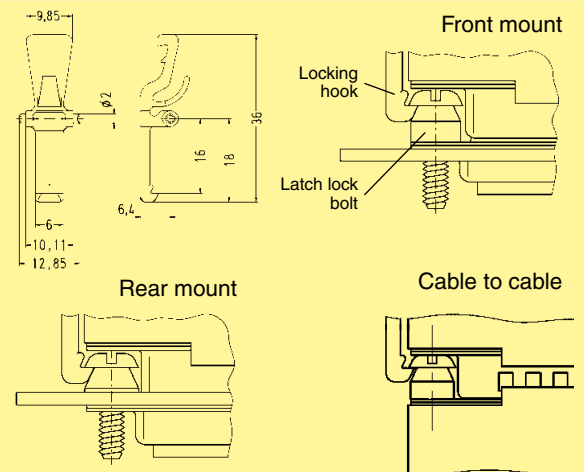
thread 4-40 UNC 09 67 002 9041¹⁾
 thread M3 09 67 002 9042¹⁾

Rear mount

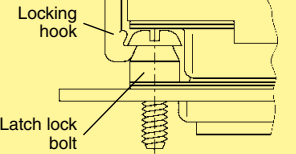
thread 4-40 UNC 09 67 002 9032¹⁾
 thread M3 09 67 002 9040¹⁾

Cable to cable

thread 4-40 UNC 09 67 002 9044¹⁾
 thread M3 09 67 002 9045¹⁾

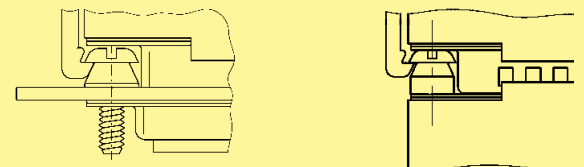


Front mount



Rear mount

Cable to cable



D-Sub - H

¹⁾ Order 2 for each hood
 Operating temperature for all hoods on this page: -35 °C ... +100 °C



Full metal top and side entry hoods with different screw options

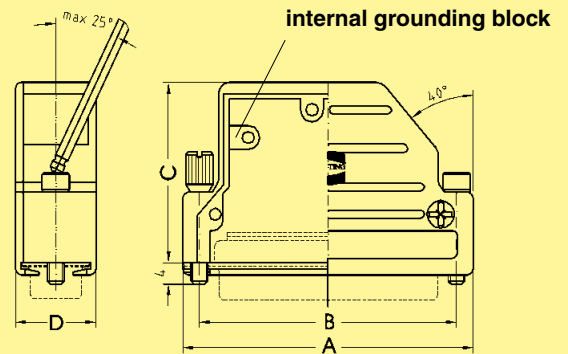
Identification No. of contacts Part No. Drawing Dimensions in mm

40° side entry hood
with internal grounding block

9	61 03 001	013
15	61 03 001	014
25	61 03 001	015

without internal grounding block

9	61 03 001	013 010
---	-----------	---------



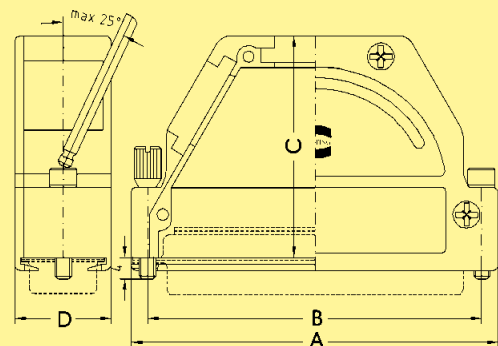
No. of contacts	A	B	C	D
9	31.0	25.0	35.0	15.0
15	39.3	33.3	35.0	15.0
25	53.0	47.0	35.0	15.0

Top/side entry hood
with internal grounding block

9	61 03 001	010
15	61 03 001	016
25	61 03 001	017 ¹⁾
37	61 03 001	018 ¹⁾
50	61 03 001	019 ¹⁾

without internal grounding block

9	61 03 001	010 010
---	-----------	---------



No. of contacts	No. of cable entries	A	B	C	D
9	1 (top)	31.0	25.0	38.0	15.0
15	1 (top)	39.5	33.3	35.0	15.0
25	3	53.0	47.0	43.0	15.0
37	3	69.5	63.5	43.0	15.0
50	3	67.2	61.6	43.0	17.8

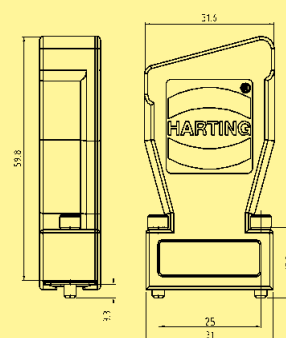
Please insert digit for screw option

- Knurled screw, thread 4-40 UNC ▶ 0
- Hexagonal screw, thread M3 with captive washer ▶ 1
- Hexagonal screw, thread 4-40 UNC with captive washer ▶ 2
- Knurled screw, thread M3 ▶ 3

Top entry hood for InduCom 9

Hexagonal screw, thread 4-40 UNC 9 66 67 009 0346

Hexagonal screw, thread M3 9 66 67 009 0347

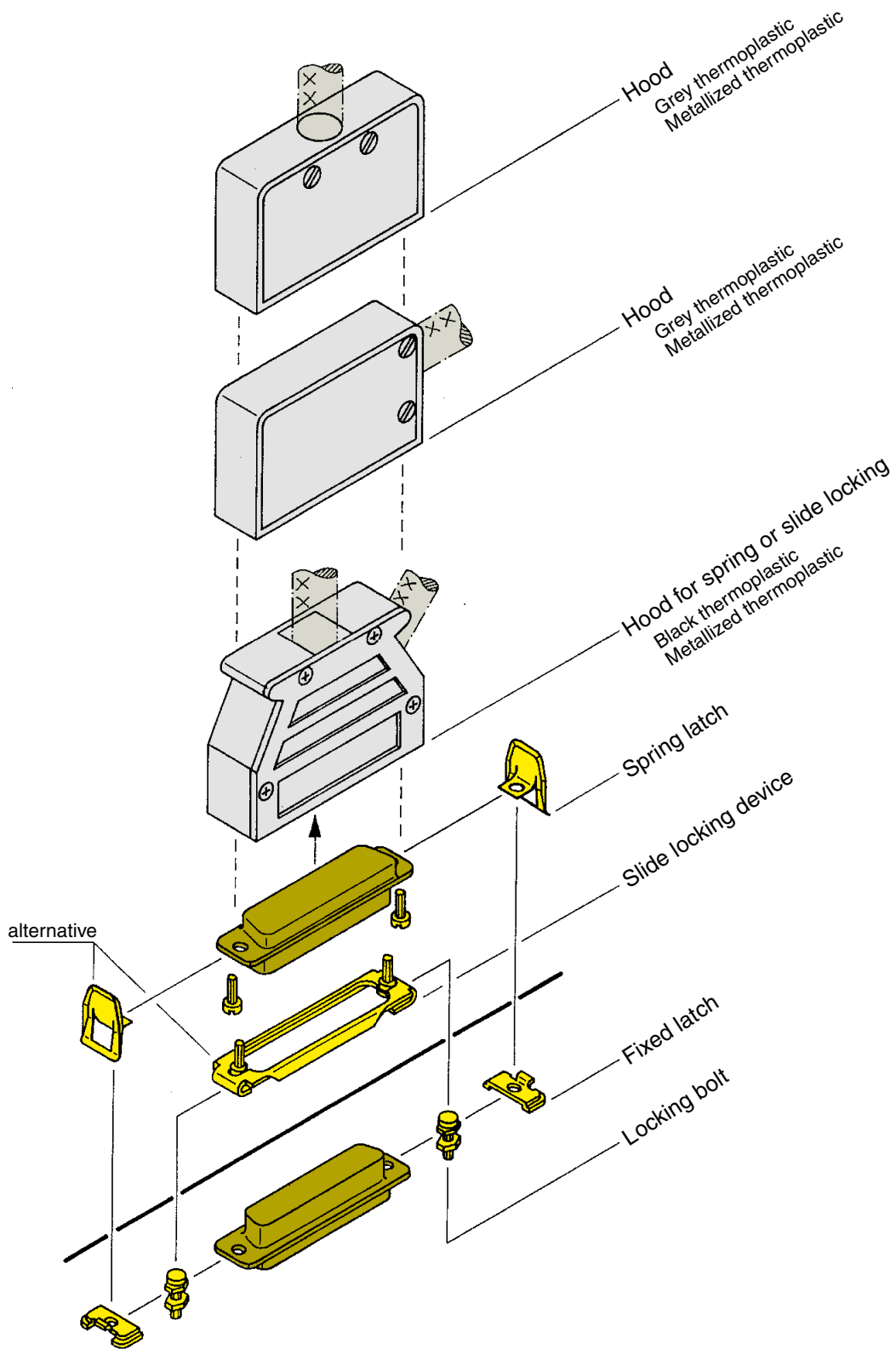


2 cable entries

¹⁾ Part No. contains two blanking pieces
Operating temperature for all hoods on this page: -20 °C ... +90 °C

Accessories see page 07.16

Connector hoods for spring or slide locking



D-Sub - H



Thermoplastic top and side entry hoods for spring or slide locking

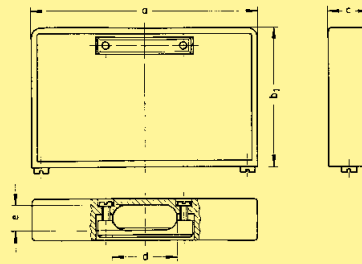
Identification No. of contacts Part No. Drawing Dimensions in mm

Top entry hood

9
15
25
37
50

Thermoplastic grey²⁾
09 67 009 0411
09 67 015 0411
09 67 025 0411
09 67 037 0411
09 67 050 0411

Thermoplastic metallized³⁾
09 67 009 0413
09 67 015 0413
09 67 025 0413
09 67 037 0413
09 67 050 0413



9-37 way for packaging density of 3 TE (15.24 mm)

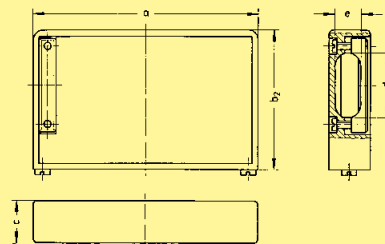
	a	b ₁	b ₂	c	d	e	
						min.	max.
9	31.0	23	28	12.8	10	5.75	9.0
15	39.4	28	28	12.8	10	5.75	9.0
25	53.3	34	34	12.8	14	5.75	9.0
37	69.7	43	43	12.8	20	5.75	9.0
50	67.1	41	41	15.8	20	5.75	11.6

Side entry hood

9
15
25
37
50

Thermoplastic grey²⁾
09 67 009 0511
09 67 015 0511
09 67 025 0511
09 67 037 0511
09 67 050 0511

Thermoplastic metallized³⁾
09 67 009 0513
09 67 015 0513
09 67 025 0513
09 67 037 0513
09 67 050 0513



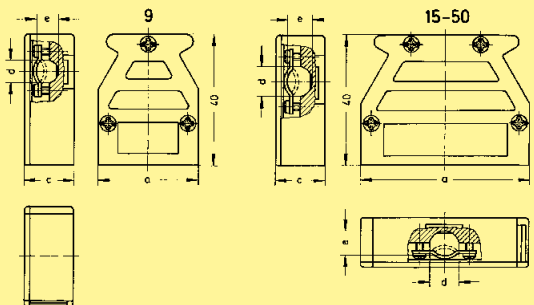
9-37 way for packaging density of 3 TE (15.24 mm)

Top and side entry hood¹⁾

9
15
25
37
50

Thermoplastic black⁴⁾
09 67 009 0452
09 67 015 0452
09 67 025 0452
09 67 037 0452
09 67 050 0452

Thermoplastic metallized⁴⁾
09 67 009 0453
09 67 015 0453
09 67 025 0453
09 67 037 0453
09 67 050 0453



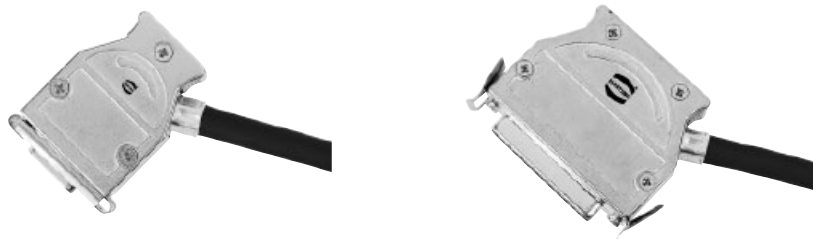
	a	c	d	e	
				min.	max.
9	31.0	15.4	7	1.7	7.5
15	39.4	15.4	7	1.7	8.0
25	53.2	15.4	9	1.5	8.0
37	69.5	15.4	9	1.5	8.0
50	67.0	17.9	9	1.5	8.0

¹⁾ 9 poles is only side entry

²⁾ Operating temperature: -55 °C ... +120 °C

³⁾ Operating temperature: -35 °C ... +60 °C

⁴⁾ Operating temperature: -20 °C ... +90 °C

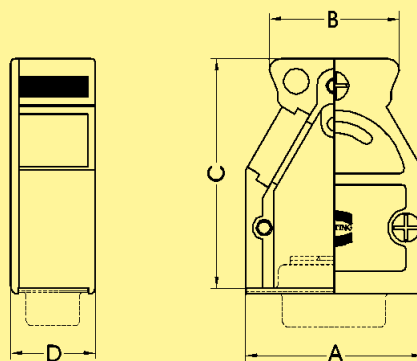


Full metal top and side entry hoods for spring or slide locking

Identification No. of contacts Part No. Drawing Dimensions in mm

Top/side entry hood with spring/
slide locking

9	61 03 001 0022 ¹⁾
15	61 03 001 0011 ²⁾
25	61 03 001 0012 ²⁾
37	61 03 001 0021 ²⁾
50	61 03 001 0020 ²⁾



No. of contacts	No. of cable entries	A	B	C	D
9	2	31.0	22.6	40.0	14.8
15	3	39.0	30.6	40.0	14.8
25	3	53.0	42.6	40.0	14.8
37	3	69.5	59.2	40.0	14.8
50	3	67.0	55.0	40.0	17.6

D-Sub - H

¹⁾ Part No. contains one blanking piece
²⁾ Part No. contains two blanking pieces

Accessories for spring or slide locking hoods

Identification	No. of contacts	Part No.	Drawing	Dimensions in mm																														
Spring latch	9-50	corrosion resistant steel 09 67 000 9907 ¹⁾																																
Fixed latch ²⁾	9-37 50	corrosion resistant steel 09 67 001 9971 ¹⁾ 09 67 001 9972 ¹⁾																																
Slide locking device	9 15 25 37 50	corrosion resistant steel 09 67 000 9914 09 67 000 9915 09 67 000 9916 09 67 000 9917 09 67 000 9918	 <table border="1"> <thead> <tr> <th></th> <th>a</th> <th>b</th> <th>c</th> <th>d</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>35.0</td> <td>25.0</td> <td>11.7</td> <td>8.6</td> </tr> <tr> <td>15</td> <td>43.3</td> <td>33.3</td> <td>11.5</td> <td>8.6</td> </tr> <tr> <td>25</td> <td>57.0</td> <td>47.0</td> <td>11.7</td> <td>8.6</td> </tr> <tr> <td>37</td> <td>74.3</td> <td>63.5</td> <td>11.7</td> <td>8.6</td> </tr> <tr> <td>50</td> <td>72.0</td> <td>61.1</td> <td>14.7</td> <td>11.2</td> </tr> </tbody> </table>		a	b	c	d	9	35.0	25.0	11.7	8.6	15	43.3	33.3	11.5	8.6	25	57.0	47.0	11.7	8.6	37	74.3	63.5	11.7	8.6	50	72.0	61.1	14.7	11.2	
	a	b	c	d																														
9	35.0	25.0	11.7	8.6																														
15	43.3	33.3	11.5	8.6																														
25	57.0	47.0	11.7	8.6																														
37	74.3	63.5	11.7	8.6																														
50	72.0	61.1	14.7	11.2																														
Locking bolt	9-50	tinned 09 67 001 9973 ¹⁾																																

¹⁾ Order 2 for each connector

²⁾ Screws are not supplied with a fixed latch

Accessories for full metal hoods

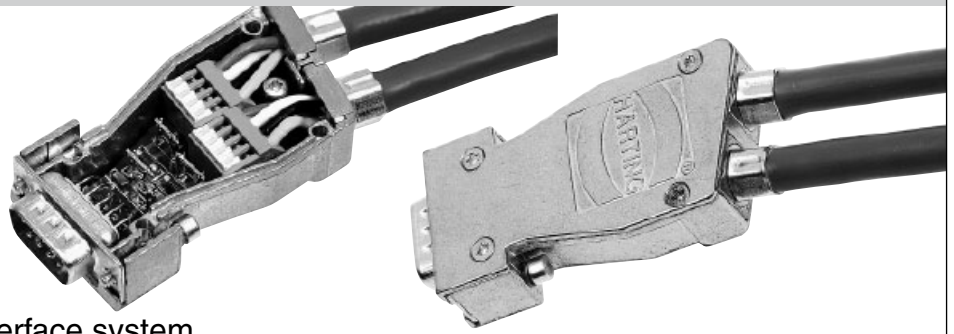
Identification	Part No.		Drawing	Dimensions in mm																																																								
Crimp flange	Hoods for 9-37 pole D-Sub	Hoods for 50 pole D-Sub	<table border="1"> <thead> <tr> <th>D1</th> <th>D2</th> </tr> </thead> <tbody> <tr><td>3.0</td><td>4.0</td></tr> <tr><td>3.5</td><td>4.5</td></tr> <tr><td>4.0</td><td>5.0</td></tr> <tr><td>4.5</td><td>5.5</td></tr> <tr><td>5.0</td><td>6.0</td></tr> <tr><td>5.5</td><td>6.5</td></tr> <tr><td>6.0</td><td>7.0</td></tr> <tr><td>6.5</td><td>7.5</td></tr> <tr><td>7.0</td><td>8.0</td></tr> <tr><td>7.5</td><td>8.5</td></tr> <tr><td>8.0</td><td>9.0</td></tr> <tr><td>8.5</td><td>9.5</td></tr> <tr><td>9.0</td><td>10.0</td></tr> </tbody> </table>	D1	D2	3.0	4.0	3.5	4.5	4.0	5.0	4.5	5.5	5.0	6.0	5.5	6.5	6.0	7.0	6.5	7.5	7.0	8.0	7.5	8.5	8.0	9.0	8.5	9.5	9.0	10.0	<table border="1"> <thead> <tr> <th>D1</th> <th>D2</th> </tr> </thead> <tbody> <tr><td>3.0</td><td>4.0</td></tr> <tr><td>3.5</td><td>4.5</td></tr> <tr><td>4.0</td><td>5.0</td></tr> <tr><td>4.5</td><td>5.5</td></tr> <tr><td>5.0</td><td>6.0</td></tr> <tr><td>5.5</td><td>6.5</td></tr> <tr><td>6.0</td><td>7.0</td></tr> <tr><td>6.5</td><td>7.5</td></tr> <tr><td>7.0</td><td>8.0</td></tr> <tr><td>7.5</td><td>8.5</td></tr> <tr><td>8.0</td><td>9.0</td></tr> <tr><td>8.5</td><td>9.5</td></tr> <tr><td>9.0</td><td>10.0</td></tr> </tbody> </table>	D1	D2	3.0	4.0	3.5	4.5	4.0	5.0	4.5	5.5	5.0	6.0	5.5	6.5	6.0	7.0	6.5	7.5	7.0	8.0	7.5	8.5	8.0	9.0	8.5	9.5	9.0	10.0
	D1	D2																																																										
	3.0	4.0																																																										
	3.5	4.5																																																										
	4.0	5.0																																																										
	4.5	5.5																																																										
	5.0	6.0																																																										
	5.5	6.5																																																										
	6.0	7.0																																																										
	6.5	7.5																																																										
	7.0	8.0																																																										
	7.5	8.5																																																										
	8.0	9.0																																																										
	8.5	9.5																																																										
9.0	10.0																																																											
D1	D2																																																											
3.0	4.0																																																											
3.5	4.5																																																											
4.0	5.0																																																											
4.5	5.5																																																											
5.0	6.0																																																											
5.5	6.5																																																											
6.0	7.0																																																											
6.5	7.5																																																											
7.0	8.0																																																											
7.5	8.5																																																											
8.0	9.0																																																											
8.5	9.5																																																											
9.0	10.0																																																											
Crimp ferrule	61 03 000 0045 61 03 000 0046 61 03 000 0047 61 03 000 0048 61 03 000 0049 61 03 000 0050 61 03 000 0051 61 03 000 0052 61 03 000 0053 61 03 000 0054 61 03 000 0055 61 03 000 0056 61 03 000 0057 61 03 000 0058 61 03 000 0142 61 03 000 0059 61 03 000 0127 61 03 000 0060 61 03 000 0061		<table border="1"> <thead> <tr> <th>D3</th> <th>D4</th> </tr> </thead> <tbody> <tr><td>5.0</td><td>6.0</td></tr> <tr><td>5.5</td><td>6.5</td></tr> <tr><td>6.0</td><td>7.0</td></tr> <tr><td>6.5</td><td>7.5</td></tr> <tr><td>7.0</td><td>8.0</td></tr> <tr><td>7.5</td><td>8.5</td></tr> <tr><td>8.0</td><td>9.0</td></tr> <tr><td>8.5</td><td>9.5</td></tr> <tr><td>9.0</td><td>10.0</td></tr> <tr><td>9.5</td><td>10.5</td></tr> <tr><td>10.0</td><td>11.0</td></tr> <tr><td>10.5</td><td>11.5</td></tr> <tr><td>11.0</td><td>12.0</td></tr> <tr><td>11.5</td><td>12.5</td></tr> <tr><td>12.0</td><td>13.0</td></tr> <tr><td>12.5</td><td>13.5</td></tr> <tr><td>13.0</td><td>14.0</td></tr> <tr><td>13.7</td><td>15.0</td></tr> <tr><td>14.0</td><td>15.0</td></tr> </tbody> </table>	D3	D4	5.0	6.0	5.5	6.5	6.0	7.0	6.5	7.5	7.0	8.0	7.5	8.5	8.0	9.0	8.5	9.5	9.0	10.0	9.5	10.5	10.0	11.0	10.5	11.5	11.0	12.0	11.5	12.5	12.0	13.0	12.5	13.5	13.0	14.0	13.7	15.0	14.0	15.0																	
	D3	D4																																																										
	5.0	6.0																																																										
	5.5	6.5																																																										
	6.0	7.0																																																										
	6.5	7.5																																																										
	7.0	8.0																																																										
	7.5	8.5																																																										
	8.0	9.0																																																										
	8.5	9.5																																																										
	9.0	10.0																																																										
	9.5	10.5																																																										
	10.0	11.0																																																										
	10.5	11.5																																																										
	11.0	12.0																																																										
	11.5	12.5																																																										
	12.0	13.0																																																										
	12.5	13.5																																																										
	13.0	14.0																																																										
	13.7	15.0																																																										
14.0	15.0																																																											
Cable clamp	cable-Ø appr. 5- 7 mm	61 03 000 0141																																																										
	cable-Ø appr. 7-10 mm	61 03 000 0044																																																										
	cable-Ø appr. 10-12 mm	61 03 000 0143																																																										
	cable-Ø appr. 11-14 mm	61 03 000 0145																																																										
Blanking piece for hoods	61 03 000 0042	61 03 000 0041																																																										
Hexagonal screw	thread 4-40 UNC x 17.5-8.8 with captive washer	09 67 002 9020																																																										
	thread M3 x 17.5-8.8 with captive washer	09 67 002 9019																																																										
Knurled screw	thread 4-40 UNC	09 67 002 9018																																																										
	thread M3	09 67 002 9017																																																										

Crimp flange termination instruction

1. Strip the cable sheath to the correct length (approx. 35 to 40 mm, depending on interface type).
2. Place the crimp ferrule over the cable sheath. Bend the outer screen backwards over the cable sheath. Cut screen approx. 2 mm from the end of the cable sheath.
3. Place the crimp flange over the wires covered by the remaining foil shield. Push and twist the crimp flange under the outer screen and cable sheath until the end of the cable sheath touches the crimp flange. HARTING has developed a special tool for optimised installation of the shielding over the crimp flange, part number 61 03 600 0017.
4. Move the crimp ferrule back onto the crimp flange and crimp the two parts together with the special service crimp tool part number 61 03 600 0020. For an optimised crimp process the tool should be positioned as close as possible to the crimp flange shoulder.
5. Cut off the internal screen foil and push the crimp flange inside the metal hood.

HARTING offers to test and define the best crimp flange and ferrule combination for customer specific cables.





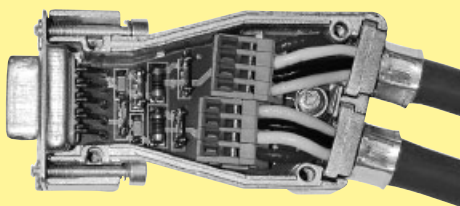
InduCom 9 – Industrial bus interface system

Identification

Part No.

General information

MVB Interface



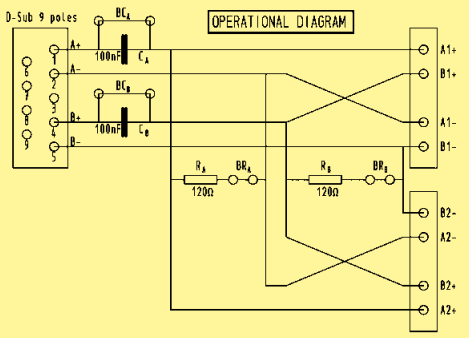
66 63 009 5013

MVB backbone interface set

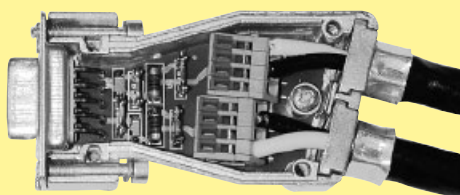
The Multifunctional Vehicle Bus (MVB) backbone interface is specially designed for communication cables in Train Control Networks (TCN). With this interface it is possible to realise a T-bus structure with MVB-cable with which you can disconnect the bus interface from the control unit without any interruption of the complete bus communication. On the PCB you will have load resistors and test capacitors which can be activated with solder bridges. The wires are terminated with the proven vibration resistant cage clamp technology.*

Components of the MVB interface set:

- 1 metal housing with 2 cable entries
- 2 hexagonal screws with UNC 4-40 threads
- 1 PCB with 9 way D-Sub male connector and cage clamps
- 2 crimp flanges for the MVB cable
- 2 crimp ferrules for the MVB cable
- 1 blanking piece



WTB Interface



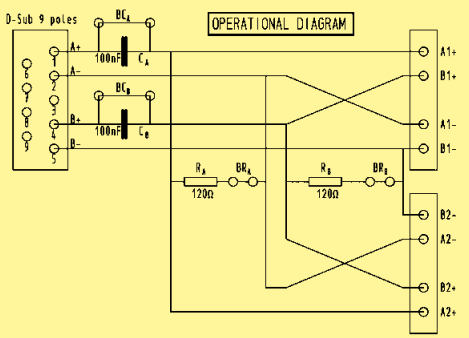
66 63 009 5014

WTB backbone interface set

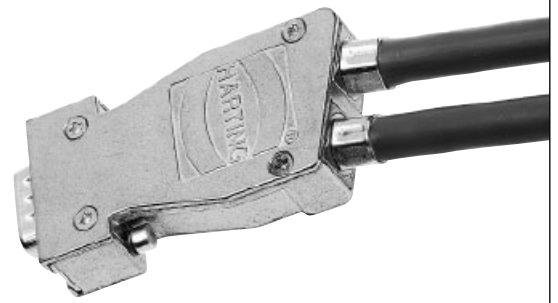
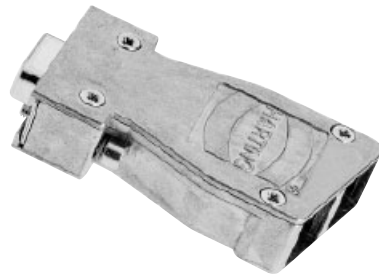
The Wired Train Bus (WTB) backbone interface is specially designed for backbone cables in Train Control Networks (TCN). With this interface it is possible to realise a T-bus structure with WTB-cable with which you can disconnect the bus interface from the control unit without any interruption of the complete bus communication. On the PCB you will have load resistors and test capacitors which can be activated with solder bridges. The wires are terminated with the proven vibration resistant cage clamp technology.*

Components of the MVB interface set:

- 1 metal housing with 2 cable entries
- 2 hexagonal screws with UNC 4-40 threads
- 1 PCB with 9 way D-Sub male connector and cage clamps
- 2 crimp flanges for the WTB cable
- 2 crimp ferrules for the WTB cable
- 1 blanking piece



D-Sub - H



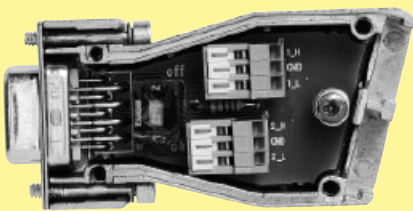
InduCom 9 – Industrial bus interface system

Identification

Part No.

General information

CAN Interface

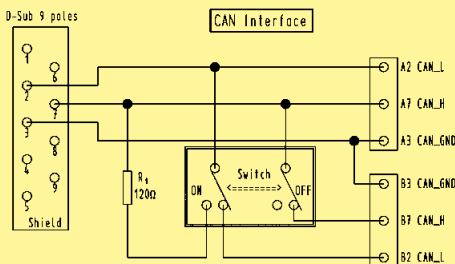


66 63 009 6016

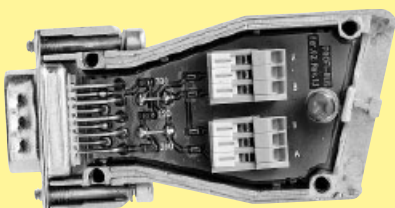
The Controller Area Network (CAN)-Interface is specially designed for usage in trains. With this interface it is possible to realise a T-bus structure with which you can disconnect the bus interface from the control unit without any interruption of the complete bus communication. On the PCB you will have a load resistor which can be activated with the switch.*

Components of the interface set:

- 1 metal housing with 2 cable entries
- 2 hexagonal screws with UNC 4-40 threads
- 1 PCB with 9 way D-Sub female connector and 2 cage clamps
- 1 blanking piece
- 2 crimp flanges
- 2 crimp ferrules



Profibus Interface



66 63 009 6004

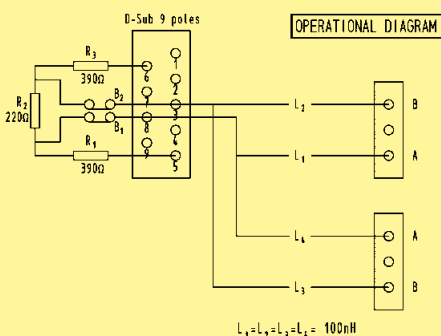
The Profibus Interface is specially designed for usage in trains and in challenging engineering applications.

On the PCB you will have SMD parts which can be activated with solder bridges.

The wires are assembled with the proven vibration resistant cage clamp technology.*

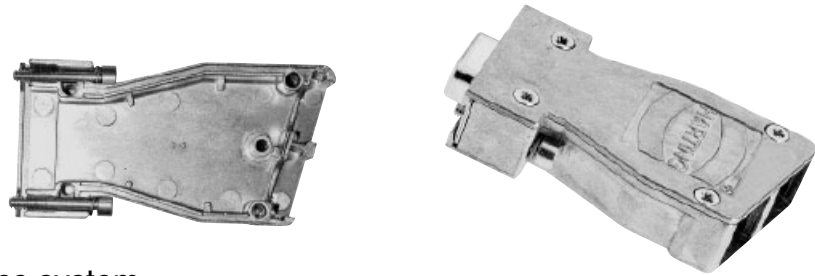
Components of the interface set:

- 1 metal housing with 2 cable entries
- 2 hexagonal screws with UNC 4-40 threads
- 1 PCB with 9 way D-Sub female connector and 2 cage clamps
- 1 blanking piece



Further bus PCBs on request

* To check compatibility with cable types and manufacturers, please contact your local HARTING representative.



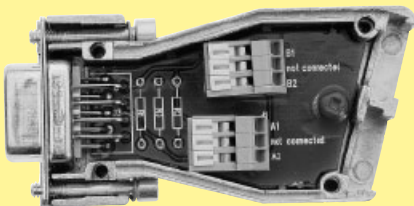
InduCom 9 – Industrial bus interface system

Identification

Part No.

General information

FIP Interface middle of the line



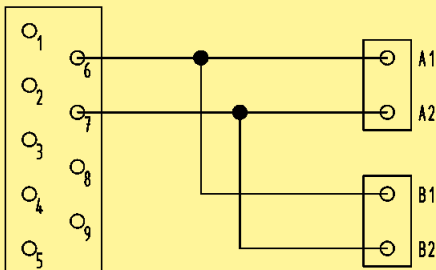
66 63 009 5017

The FIP (Factory Installation Protocol) Interface is specially designed for applications in trains. It is connected via the D-Sub. The wires are assembled with the proven vibration resistant cage clamp technology.*

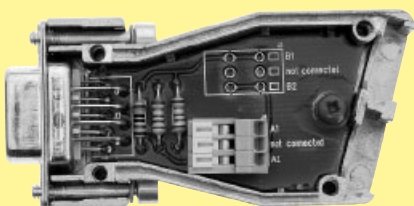
Components of the interface set:

- 1 metal housing with 2 cable entries
- 2 hexagonal screws with UNC 4-40 threads
- 1 pcb with 9 way D-Sub female connector and cage clamps

FIP interface



FIP Interface end of the line



66 63 009 5018

The FIP (Factory Installation Protocol) Interface is specially designed for applications in trains. It is connected via the D-Sub. On the pcb you will have load resistors. The wires are assembled with the proven vibration resistant cage clamp technology.*

Components of the interface set:

- 1 metal housing with 2 cable entries
- 2 hexagonal screws with UNC 4-40 threads
- 1 pcb with 9 way D-Sub female connector and cage clamps
- 1 blanking piece

FIP interface

