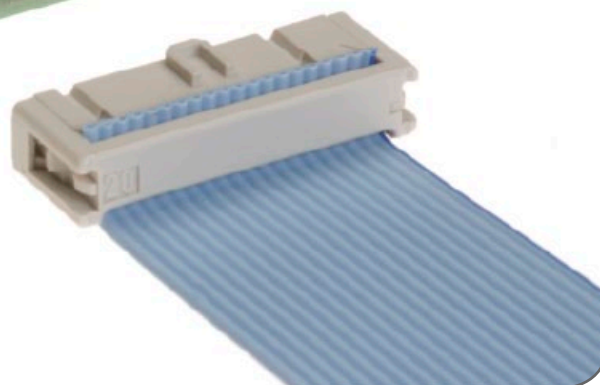
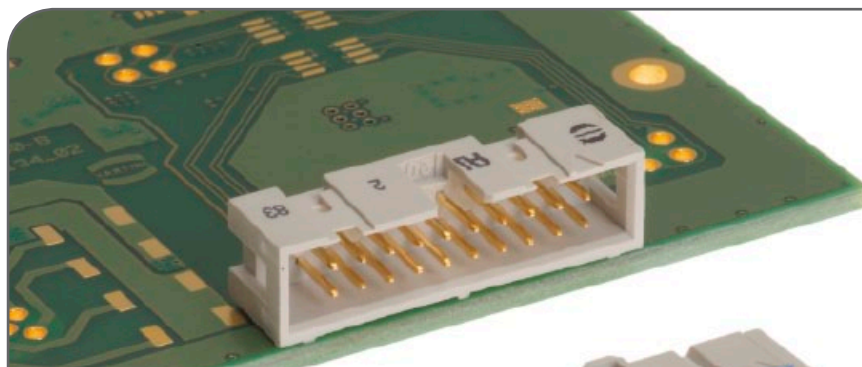




SEK connectors for flat cables enable simple and –, cost-optimized device configuration. SEK connectors are preferably used for connection within the device. HARTING offers a broad range of these cable-to-board connectors.

Assembly on the cable side takes place in one work step for all contacts via flat conductors. The SEK is an economical and reliable interface for data and signal applications in industry.

Application profile:

CONNECTION TYPE		ENVIRONMENT		APPLICATION											
Board to Board	Cable/Wire to Board	IP 20	IP 65 / IP 67	Data	Signal	Power	high performance								
							Data transfer rate	Shielding	Number of contacts, contact density	Voltage, working current					
Cable termination			PCB termination			Application standard									
<i>Han-Quick Lock®</i>	<i>IDC</i>	<i>Crimp</i>	<i>THT</i>	<i>SMC</i>	<i>SMT</i>										
<i>Screw</i>	<i>Cage clamp</i>	<i>Axial screw</i>	<i>Press-in</i>												
						Housing integration									
						<i>Separate housing</i>	<i>Integrated housing</i>								

CONTENTS	PAGE
SEK connector system – introduction	08.02
General information	08.05
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Male standard connectors	08.08
Male low-profile connectors	08.16
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Female connectors	08.23
Pcb transition connectors, 2 rows	08.26
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Press-in connectors	
Male standard connectors	08.34
Male low-profile connectors	08.38
SMC solder board connectors	
Male standard SMC connectors	08.40
Male low-profile SMC connectors	08.50
Accessories	08.52
Cables and cable assemblies	08.53

Tooling see chapter 20

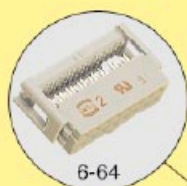
IDC CONNECTOR SYSTEM [2.54 mm X 2.54 mm PITCH] FOR FLAT CABLES

HARTING's product range of flat cable connectors is designed for various cable-to-PCB applications. The HARTING SEK insulation displacement connector technology meets all requirements of the IEC 60 603-13.

HARTING assembles each SEK connector with the matching cable type according to customer specifications in order to simplify customer installation and storage.

The different types of board connectors offer 6 to 64 pins in various terminations such as solder (manual, wave or reflow) or press-in.

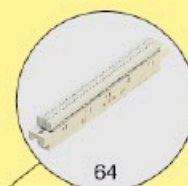
The cable connectors are equally suited for indoor use as well as for outdoor applications and harsh environments.



6-64



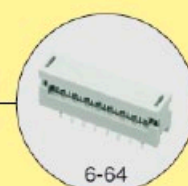
64



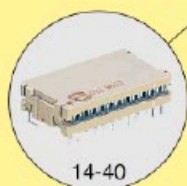
64



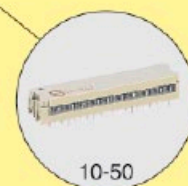
9-37



6-64



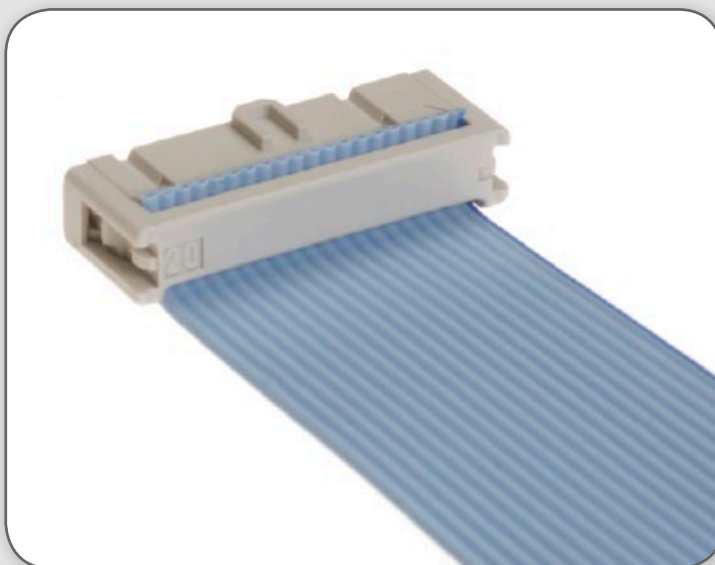
14-40



10-50

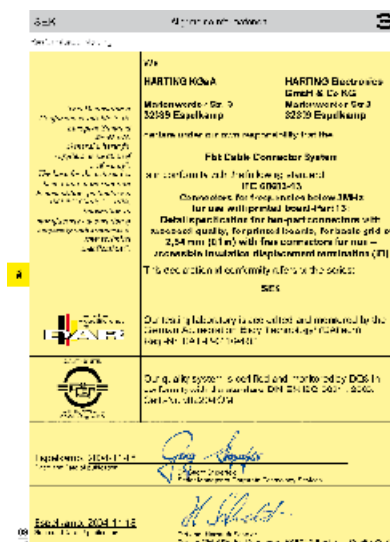
CABLE ASSEMBLIES

- HARTING can supply cable assemblies according to your specifications.
- A wide range of connector types available with various contact arrangements constitute the ideal solution to your wiring problems.
- Cables of all types in economic reel lengths are available.



QUALITY

- Cables professionally assembled on HARTING work stations ensure reliable connections.
- Finished harnesses are subject to 100% quality checks on a HARTING test device.
- Insulation test by 1000 V.
- Contact resistance test.



ECONOMY

- The tested assembly of connectors and flat cables from one manufacturer guarantees a high degree of economy and reliability.
- Investments for work stations and test devices are not required.
- Stocks of piece parts are reduced.



The HARTING Insulation Displacement Connector system

Economic and reliable connections

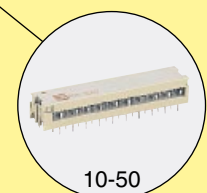
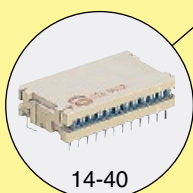
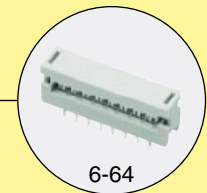
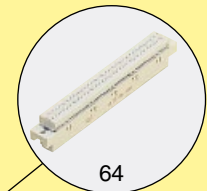
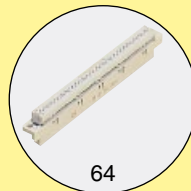
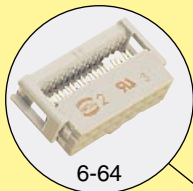
The flat cable and connector can be preassembled and used as a component with predetermined functional characteristics.

The HARTING insulation displacement contacts pierce the insulation on the flat cable to provide a durable gastight connection with the wire.

The HARTING insulation displacement technique constitutes the ideal solution to your wiring problems.

For "non standard applications" we can manufacture designs to match your requirements. Please discuss requirements with us.

HARTING SEK connectors incorporate the latest design features and provide the assurance of high quality and reliability with economy.



Cable assemblies

- HARTING can supply cable assemblies to customer specifications.
- A wide range of connector types available with various contact arrangements constitute the ideal solution to your wiring problems.
- Cables of all types in economic reel lengths are available.

Quality

- Cables professionally assembled on HARTING work stations ensure reliable connections.
- Finished harnesses are subject to 100% quality checks on a HARTING test device.
- Insulation test.
- Contact resistance test.

Economy

- The tested assembly of connectors and flat cables from one manufacturer guarantees a high degree of economy and reliability.
- Investment for work stations and test devices are not required.
- Stocks of piece parts are reduced.

Number of contacts 6, 10, 14, 16, 20, 24, 26, 30, 34, 40, 50, 60, 64

Contact arrangement straight, angled

Contact length 2.9 mm, 4.5 mm

Approvals IEC 60603-13
DIN EN 60603-13
D 2632
BT 224
NFC 93-428 (HE 10)
UL recognized: E102079



Pitch 2.54 mm [0.100"]

Working current 1 A

Working voltage 500 V
for pollution degree 1

Test voltage $U_{r.m.s.}$ 1 kV

Contact resistance $\leq 20 \text{ m}\Omega$
Insulation resistance $\geq 10^9 \Omega$

Temperature range -55 °C ... +125 °C
The maximum temperature includes heating of contacts and ambient temperature

Terminations For pcb hole $\varnothing 1 \pm 0.1 \text{ mm}$
DIN IEC 52 141
Diagonal: 0.79 mm

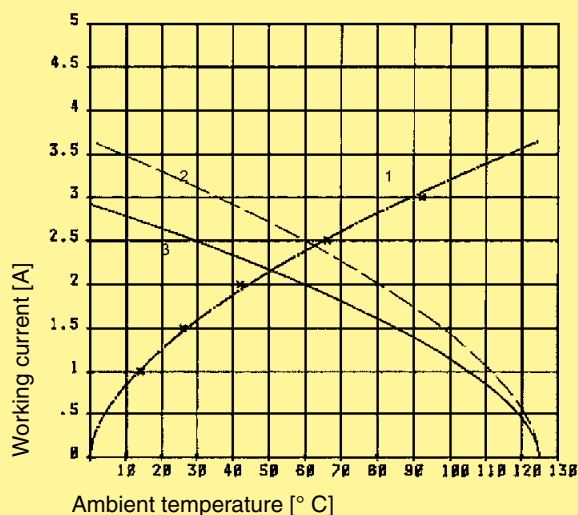
Materials Moulding Thermoplastic resin (PBT)
UL 94-V0

Contact surface Contact zone plated according to performance level¹⁾

Current carrying capacity

The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity-curve is valid for continuous, not interrupted current-loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60512.



Example: 50 way connector

- ① Temperature rise
- ② Derating
- ③ Derating curve at $I_{max} \times 0.8$ (IEC 60512-2)

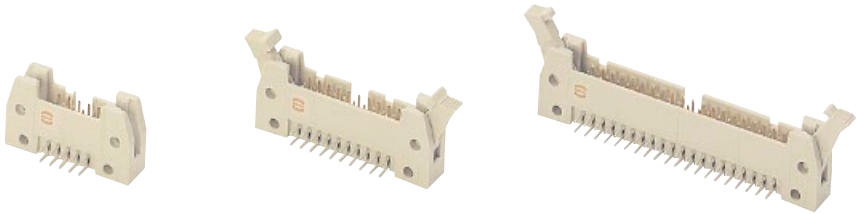
Insertion and withdrawal forces

Number of contacts	Maximum force [N]	
	Performance level 1 and 2	Performance level 3
6	12	18
10	20	30
14	28	42
16	32	48
20	40	60
24	48	72
26	52	78
30	60	90
34	68	102
40	80	120
50	100	150
60	120	180
64	128	192

¹⁾ Performance level 3 as per IEC 60603-13, ≥ 50 mating cycles, no gas test
Performance level 2 as per IEC 60603-13, ≥ 250 mating cycles, 4 days gas test
S4, plating = 0.76 μm (30 μinch) Au or PdNi equivalent

Number of contacts

6-64



Male header with angled solder pins

Identification	No. of contacts	Part No.					
		Without levers		With short levers		With long levers	
Male header with angled solder pins Length: 2.9 mm	6	09 18 506	└ 923	09 18 506	└ 913	09 18 506	└ 903
	10	09 18 510	└ 923	09 18 510	└ 913	09 18 510	└ 903
	14	09 18 514	└ 923	09 18 514	└ 913	09 18 514	└ 903
	16	09 18 516	└ 923	09 18 516	└ 913	09 18 516	└ 903
	20	09 18 520	└ 923	09 18 520	└ 913	09 18 520	└ 903
	24	09 18 524	└ 923	09 18 524	└ 913	09 18 524	└ 903
	26	09 18 526	└ 923	09 18 526	└ 913	09 18 526	└ 903
	30	09 18 530	└ 923	09 18 530	└ 913	09 18 530	└ 903
	34	09 18 534	└ 923	09 18 534	└ 913	09 18 534	└ 903
	40	09 18 540	└ 923	09 18 540	└ 913	09 18 540	└ 903
	50	09 18 550	└ 923	09 18 550	└ 913	09 18 550	└ 903
	60	09 18 560	└ 923	09 18 560	└ 913	09 18 560	└ 903
	64	09 18 564	└ 923	09 18 564	└ 913	09 18 564	└ 903
Kinked version on request							
Male header with angled solder pins Length: 4.5 mm	6	09 18 506	└ 921*	09 18 506	└ 911*	09 18 506	└ 901*
	10	09 18 510	└ 921*	09 18 510	└ 911*	09 18 510	└ 901*
	14	09 18 514	└ 921*	09 18 514	└ 911*	09 18 514	└ 901*
	16	09 18 516	└ 921*	09 18 516	└ 911*	09 18 516	└ 901*
	20	09 18 520	└ 921*	09 18 520	└ 911*	09 18 520	└ 901*
	24	09 18 524	└ 921*	09 18 524	└ 911*	09 18 524	└ 901*
	26	09 18 526	└ 921*	09 18 526	└ 911*	09 18 526	└ 901*
	30	09 18 530	└ 921*	09 18 530	└ 911*	09 18 530	└ 901*
	34	09 18 534	└ 921*	09 18 534	└ 911*	09 18 534	└ 901*
	40	09 18 540	└ 921*	09 18 540	└ 911*	09 18 540	└ 901*
	50	09 18 550	└ 921*	09 18 550	└ 911*	09 18 550	└ 901*
	60	09 18 560	└ 921*	09 18 560	└ 911*	09 18 560	└ 901*
	64	09 18 564	└ 921*	09 18 564	└ 911*	09 18 564	└ 901*
Kinked version on request							

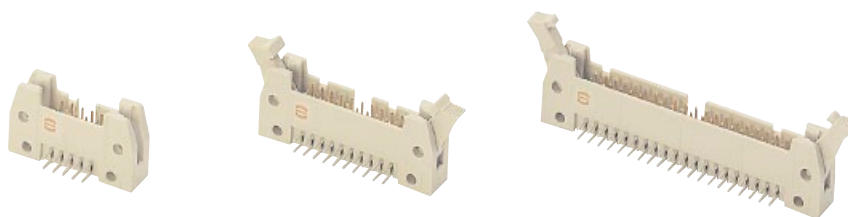
* Not normally kept in stock
For accessories see page 08.18
For dimensions see page 08.09

For performance level 3 please specify digit
For performance level 2 please specify digit
S4 = 0.76 µm (30 µinch) Au or PdNi equivalent



Number of contacts

6-64



Male header with angled solder pins

Identification

Drawing

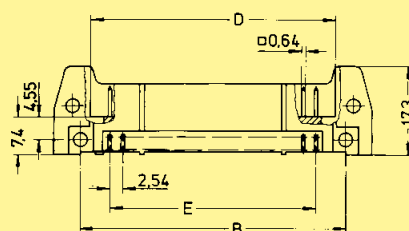
Dimensions in mm

Male header

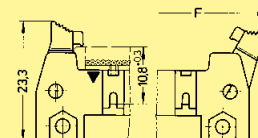
No. of contacts	A	B	D	E	F	G
6	26.9	16.76	12.45	2.54 x 2 = 5.08	36.9	40.3
10	32.0	21.84	17.53	2.54 x 4 = 10.16	42.0	45.4
14	37.1	26.92	22.61	2.54 x 6 = 15.24	47.1	50.4
16	39.6	29.46	25.15	2.54 x 7 = 17.78	49.6	53.0
20	44.7	34.54	30.23	2.54 x 9 = 22.86	54.7	58.1
24	49.8	39.62	35.91	2.54 x 11 = 27.94	59.8	63.2
26	52.3	42.16	37.85	2.54 x 12 = 30.48	62.3	65.7
30	57.7	47.24	43.83	2.54 x 14 = 35.56	68.2	68.6
34	62.5	52.32	48.01	2.54 x 16 = 40.64	72.5	75.8
40	70.1	59.94	55.63	2.54 x 19 = 48.26	80.1	83.5
50	82.8	72.64	68.33	2.54 x 24 = 60.96	92.8	96.2
60	95.5	85.34	81.03	2.54 x 29 = 73.66	105.5	108.9
64	100.6	90.42	86.11	2.54 x 31 = 78.74	110.6	113.9

Short levers

for use with female connector without strain relief clamp

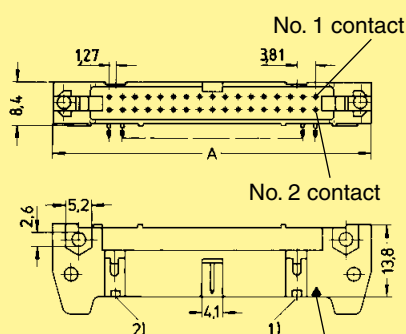


Center of gravity

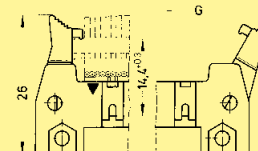


Long levers

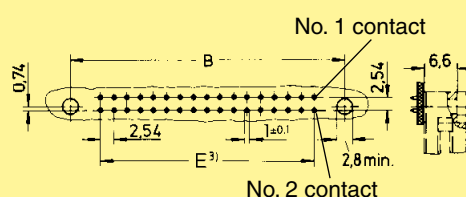
for use with female connector with strain relief clamp



a) Solder pins for 1 ± 0.1 mm dia. hole



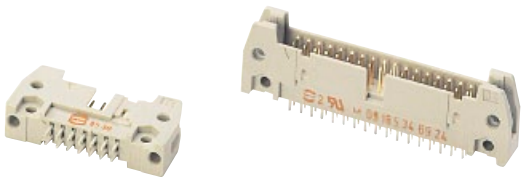
Marking No. 1 contact



Board drillings

Number of contacts

6-64



Male header with straight solder pins

Identification	No. of contacts	Part No.					
		Without levers		With short levers		With long levers	
Male header with straight solder pins Length: 2.9 mm	6	09 18 506	└ 924	09 18 506	└ 914	09 18 506	└ 904
	10	09 18 510	└ 924	09 18 510	└ 914	09 18 510	└ 904
	14	09 18 514	└ 924	09 18 514	└ 914	09 18 514	└ 904
	16	09 18 516	└ 924	09 18 516	└ 914	09 18 516	└ 904
	20	09 18 520	└ 924	09 18 520	└ 914	09 18 520	└ 904
	24	09 18 524	└ 924	09 18 524	└ 914	09 18 524	└ 904
	26	09 18 526	└ 924	09 18 526	└ 914	09 18 526	└ 904
	30	09 18 530	└ 924	09 18 530	└ 914	09 18 530	└ 904
	34	09 18 534	└ 924	09 18 534	└ 914	09 18 534	└ 904
	40	09 18 540	└ 924	09 18 540	└ 914	09 18 540	└ 904
	50	09 18 550	└ 924	09 18 550	└ 914	09 18 550	└ 904
	60	09 18 560	└ 924	09 18 560	└ 914	09 18 560	└ 904
	64	09 18 564	└ 924	09 18 564	└ 914	09 18 564	└ 904
Male header with straight solder pins Length: 4.5 mm	6	09 18 506	└ 922*	09 18 506	└ 912*	09 18 506	└ 902*
	10	09 18 510	└ 922*	09 18 510	└ 912*	09 18 510	└ 902*
	14	09 18 514	└ 922*	09 18 514	└ 912*	09 18 514	└ 902*
	16	09 18 516	└ 922*	09 18 516	└ 912*	09 18 516	└ 902*
	20	09 18 520	└ 922*	09 18 520	└ 912*	09 18 520	└ 902*
	24	09 18 524	└ 922*	09 18 524	└ 912*	09 18 524	└ 902*
	26	09 18 526	└ 922*	09 18 526	└ 912*	09 18 526	└ 902*
	30	09 18 530	└ 922*	09 18 530	└ 912*	09 18 530	└ 902*
	34	09 18 534	└ 922*	09 18 534	└ 912*	09 18 534	└ 902*
	40	09 18 540	└ 922*	09 18 540	└ 912*	09 18 540	└ 902*
	50	09 18 550	└ 922*	09 18 550	└ 912*	09 18 550	└ 902*
	60	09 18 560	└ 922*	09 18 560	└ 912*	09 18 560	└ 902*
	64	09 18 564	└ 922*	09 18 564	└ 912*	09 18 564	└ 902*
Kinked version on request							

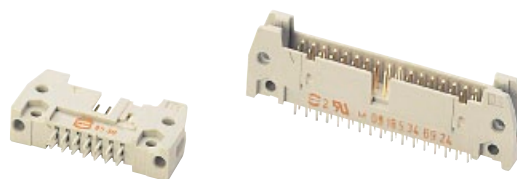
* Not normally kept in stock
For accessories see page 08.18
For dimensions see page 08.11

For performance level 3 please specify digit 7
For performance level 2 please specify digit 6
S4 = 0.76 µm (30 µinch) Au or PdNi equivalent



Number of contacts

6-64



Male header with straight solder pins

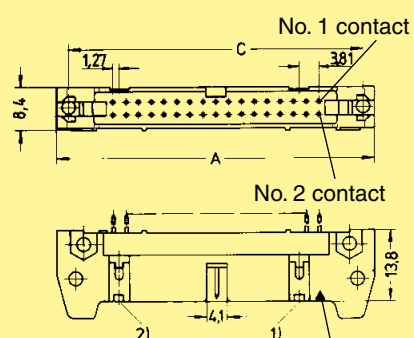
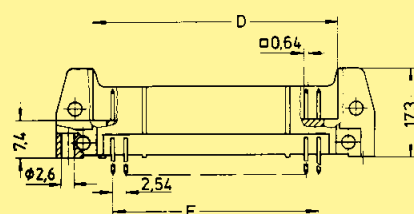
Identification

Drawing

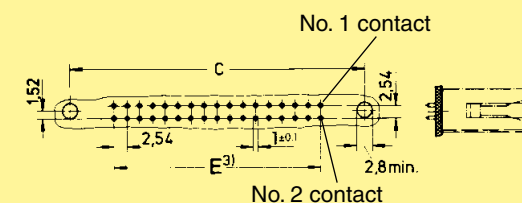
Dimensions in mm

Male header

No. of contacts	A	C	D	E	F	G
6	26.9	22.86	12.45	2.54 x 2 = 5.08	36.9	40.3
10	32.0	27.94	17.53	2.54 x 4 = 10.16	42.0	45.4
14	37.1	33.02	22.61	2.54 x 6 = 15.24	47.1	50.4
16	39.6	35.56	25.15	2.54 x 7 = 17.78	49.6	53.0
20	44.7	40.64	30.23	2.54 x 9 = 22.86	54.7	58.1
24	49.8	45.72	35.91	2.54 x 11 = 27.94	59.8	63.2
26	52.3	48.26	37.85	2.54 x 12 = 30.48	62.3	65.7
30	57.7	53.34	43.83	2.54 x 14 = 35.56	68.2	68.6
34	62.5	58.42	48.01	2.54 x 16 = 40.64	72.5	75.8
40	70.1	66.04	55.63	2.54 x 19 = 48.26	80.1	83.5
50	82.8	78.74	68.33	2.54 x 24 = 60.96	92.8	96.2
60	95.5	91.44	81.03	2.54 x 29 = 73.66	105.5	108.9
64	100.6	96.52	86.11	2.54 x 31 = 78.74	110.6	113.9

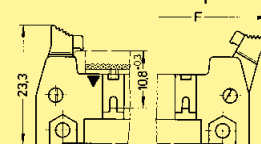


Marking No. 1 contact



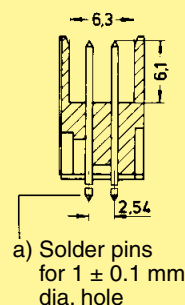
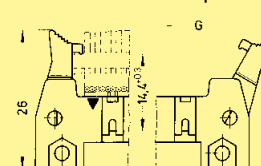
Short levers

for use with female connector without strain relief clamp



Long levers

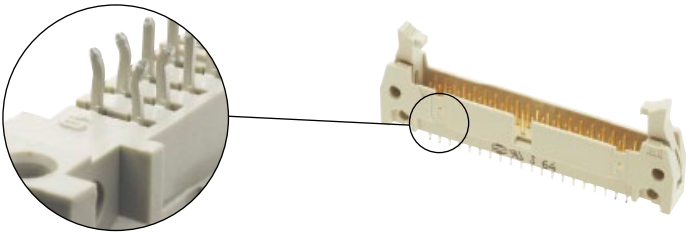
for use with female connector with strain relief clamp



Board drillings

Number of contacts

6-64



Male header with straight solder pins, kinked

Identification	No. of contacts	Part No.					
		Without levers		With short levers		With long levers	
Male header with straight solder pins, kinked Length: 2.9 mm	6	09 18 506	└ 024	09 18 506	└ 014	09 18 506	└ 004
	10	09 18 510	└ 024	09 18 510	└ 014	09 18 510	└ 004
	14	09 18 514	└ 024	09 18 514	└ 014	09 18 514	└ 004
	16	09 18 516	└ 024	09 18 516	└ 014	09 18 516	└ 004
	20	09 18 520	└ 024	09 18 520	└ 014	09 18 520	└ 004
	24	09 18 524	└ 024	09 18 524	└ 014	09 18 524	└ 004
	26	09 18 526	└ 024	09 18 526	└ 014	09 18 526	└ 004
	30	09 18 530	└ 024	09 18 530	└ 014	09 18 530	└ 004
	34	09 18 534	└ 024	09 18 534	└ 014	09 18 534	└ 004
	40	09 18 540	└ 024	09 18 540	└ 014	09 18 540	└ 004
	50	09 18 550	└ 024	09 18 550	└ 014	09 18 550	└ 004
	60	09 18 560	└ 024	09 18 560	└ 014	09 18 560	└ 004
	64	09 18 564	└ 024	09 18 564	└ 014	09 18 564	└ 004

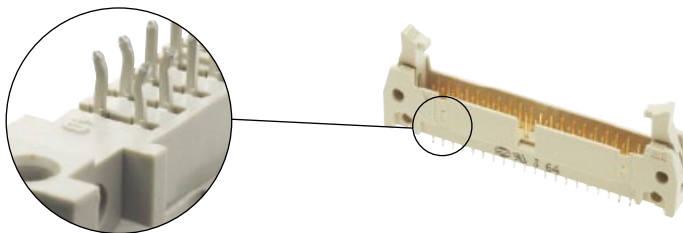
* Not normally kept in stock
For accessories see page 08.18
For dimensions see page 08.13

For performance level 3 please specify digit
For performance level 2 please specify digit
S4 = 0.76 µm (30 µinch) Au or PdNi equivalent



Number of contacts

6-64


Male header with straight solder pins, kinked

Identification

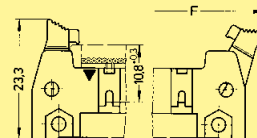
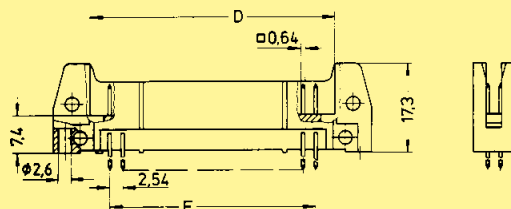
Drawing

Dimensions in mm

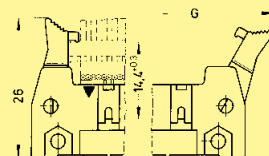
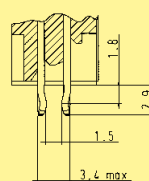
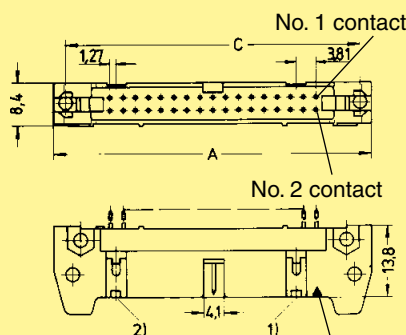
Male header

No. of contacts	A	C	D	E	F	G
6	26.9	22.86	12.45	2.54 x 2 = 5.08	36.9	40.3
10	32.0	27.94	17.53	2.54 x 4 = 10.16	42.0	45.4
14	37.1	33.02	22.61	2.54 x 6 = 15.24	47.1	50.4
16	39.6	35.56	25.15	2.54 x 7 = 17.78	49.6	53.0
20	44.7	40.64	30.23	2.54 x 9 = 22.86	54.7	58.1
24	49.8	45.72	35.91	2.54 x 11 = 27.94	59.8	63.2
26	52.3	48.26	37.85	2.54 x 12 = 30.48	62.3	65.7
30	57.7	53.34	43.83	2.54 x 14 = 35.56	68.2	68.6
34	62.5	58.42	48.01	2.54 x 16 = 40.64	72.5	75.8
40	70.1	66.04	55.63	2.54 x 19 = 48.26	80.1	83.5
50	82.8	78.74	68.33	2.54 x 24 = 60.96	92.8	96.2
60	95.5	91.44	81.03	2.54 x 29 = 73.66	105.5	108.9
64	100.6	96.52	86.11	2.54 x 31 = 78.74	110.6	113.9

Short levers

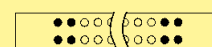
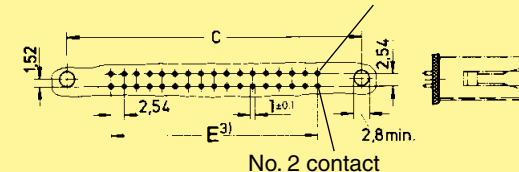
for use with female connector without strain relief clamp


Long levers

for use with female connector with strain relief clamp


Marking No. 1 contact

No. 1 contact



Board drillings

● Kinked contact: pcb thickness from 1.50 to 1.94 mm after Cu + Sn plating with non-remelted through holes $\varnothing$ 0.80 to $\varnothing$ 0.95 mm. Max. insertion force = 125 N. Min. retention force = 3 N.

○ Non-kinked contact: Solder pins for pcb connections $\varnothing$ 1 $\pm$ 0.1 mm as per IEC 60603-13.

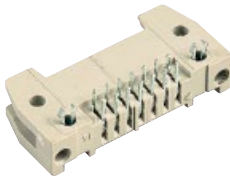
¹⁾ No polarization slot for 6, 10 or 14 way male header

²⁾ No polarization slot for 6 way male header

³⁾ Pitch tolerance: $\pm$ 0.1

Number of contacts

6-64



Male header with angled solder pins and board lock

Identification	No. of contacts	Part No.					
		Without levers		With short levers		With long levers	
Male header with angled solder pins and pcb board lock Length: 2.9 mm for 1.6 mm pcb thickness To hold the connector on the pcb before the soldering process, two board locks have been added on the male header with angled solder pins.	6	09 18 506	└ 973*	09 18 506	└ 963*	09 18 506	└ 953*
	10	09 18 510	└ 973*	09 18 510	└ 963*	09 18 510	└ 953*
	14	09 18 514	└ 973*	09 18 514	└ 963*	09 18 514	└ 953*
	16	09 18 516	└ 973*	09 18 516	└ 963*	09 18 516	└ 953*
	20	09 18 520	└ 973*	09 18 520	└ 963*	09 18 520	└ 953*
	24	09 18 524	└ 973*	09 18 524	└ 963*	09 18 524	└ 953*
	26	09 18 526	└ 973*	09 18 526	└ 963*	09 18 526	└ 953*
	30	09 18 530	└ 973*	09 18 530	└ 963*	09 18 530	└ 953*
	34	09 18 534	└ 973*	09 18 534	└ 963*	09 18 534	└ 953*
	40	09 18 540	└ 973*	09 18 540	└ 963*	09 18 540	└ 953*
	50	09 18 550	└ 973*	09 18 550	└ 963*	09 18 550	└ 953*
	60	09 18 560	└ 973*	09 18 560	└ 963*	09 18 560	└ 953*
	64	09 18 564	└ 973*	09 18 564	└ 963*	09 18 564	└ 953*

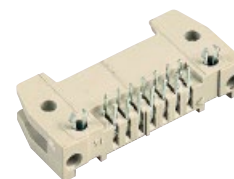
* Not normally kept in stock

For performance level 3 please specify digit
For performance level 2 please specify digit
S4 = 0.76 µm (30 µinch) Au or PdNi equivalent



Number of contacts

6-64



Male header with angled solder pins and board lock

Identification

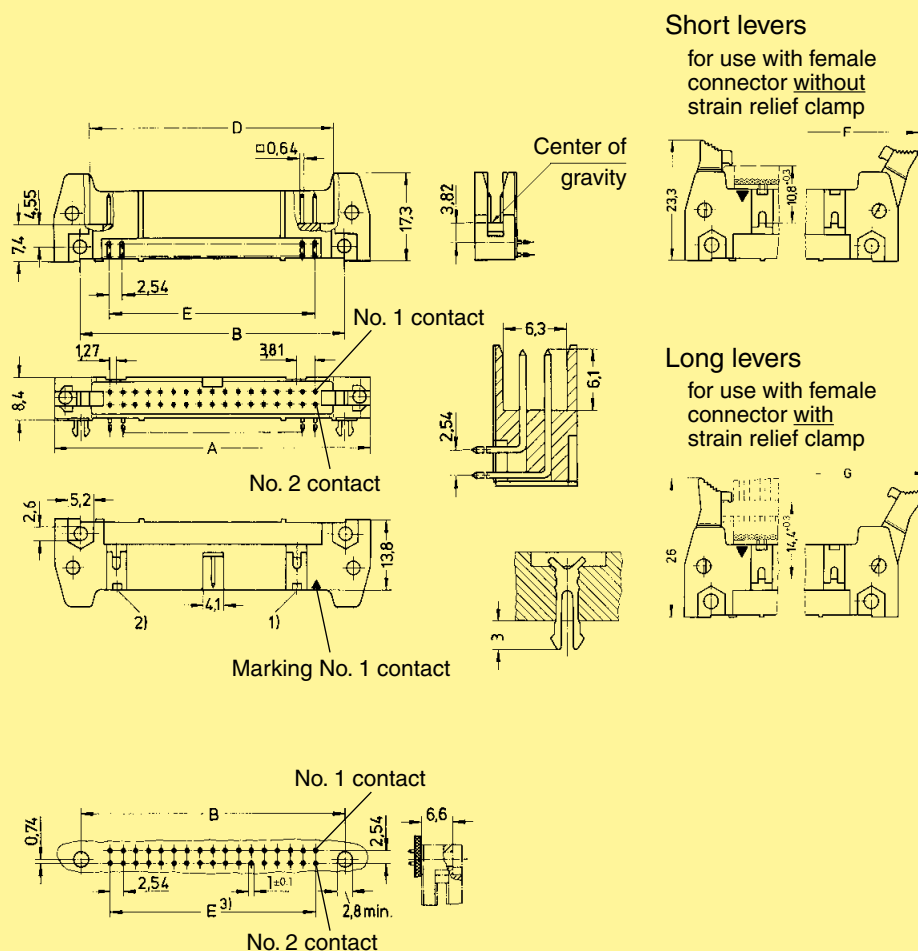
Drawing

Dimensions in mm

Male header

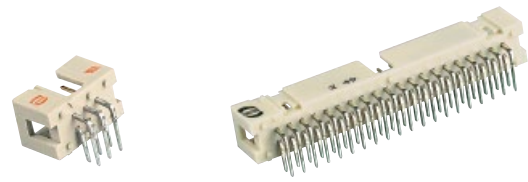
No. of contacts	A	B	D	E	F	G
6	26.9	16.76	12.45	2.54 x 2 = 5.08	36.9	40.3
10	32.0	21.84	17.53	2.54 x 4 = 10.16	42.0	45.4
14	37.1	26.92	22.61	2.54 x 6 = 15.24	47.1	50.4
16	39.6	29.46	25.15	2.54 x 7 = 17.78	49.6	53.0
20	44.7	34.54	30.23	2.54 x 9 = 22.86	54.7	58.1
24	49.8	39.62	35.91	2.54 x 11 = 27.94	59.8	63.2
26	52.3	42.16	37.85	2.54 x 12 = 30.48	62.3	65.7
30	57.7	47.24	43.83	2.54 x 14 = 35.56	68.2	68.6
34	62.5	52.32	48.01	2.54 x 16 = 40.64	72.5	75.8
40	70.1	59.94	55.63	2.54 x 19 = 48.26	80.1	83.5
50	82.8	72.64	68.33	2.54 x 24 = 60.96	92.8	96.2
60	95.5	85.34	81.03	2.54 x 29 = 73.66	105.5	108.9
64	100.6	90.42	86.11	2.54 x 31 = 78.74	110.6	113.9

Board drillings



Number of contacts

6-64



Low-profile male header, angled solder pins

Identification	No. of contacts	Part No.	Drawing	Dimensions in mm																																																			
Male header with angled solder pins Length: 2.9 mm	6	09 18 506	└ 323	Solder pins for 1 ± 0.1 mm dia. hole																																																			
	10	09 18 510	└ 323																																																				
	14	09 18 514	└ 323																																																				
	16	09 18 516	└ 323																																																				
	20	09 18 520	└ 323																																																				
	26	09 18 526	└ 323																																																				
	30	09 18 530	└ 323																																																				
	34	09 18 534	└ 323																																																				
	40	09 18 540	└ 323																																																				
	50	09 18 550	└ 323																																																				
	60	09 18 560	└ 323																																																				
	64	09 18 564	└ 323																																																				
	<table><tr><th>No. of contacts</th><th>A</th><th>B</th><th>E</th></tr><tr><td>6</td><td>15.2</td><td>12.78</td><td>2.54 x 2 = 5.08</td></tr><tr><td>10</td><td>20.3</td><td>17.86</td><td>2.54 x 4 = 10.16</td></tr><tr><td>14</td><td>25.4</td><td>22.94</td><td>2.54 x 6 = 15.24</td></tr><tr><td>16</td><td>27.9</td><td>25.48</td><td>2.54 x 7 = 17.78</td></tr><tr><td>20</td><td>33.0</td><td>30.56</td><td>2.54 x 9 = 22.86</td></tr><tr><td>26</td><td>40.6</td><td>38.18</td><td>2.54 x 12 = 30.48</td></tr><tr><td>30</td><td>45.72</td><td>43.26</td><td>2.54 x 14 = 35.56</td></tr><tr><td>34</td><td>50.8</td><td>48.34</td><td>2.54 x 16 = 40.64</td></tr><tr><td>40</td><td>58.4</td><td>55.96</td><td>2.54 x 19 = 48.26</td></tr><tr><td>50</td><td>71.3</td><td>68.66</td><td>2.54 x 24 = 60.96</td></tr><tr><td>60</td><td>84.0</td><td>81.36</td><td>2.54 x 29 = 73.66</td></tr><tr><td>64</td><td>89.1</td><td>86.44</td><td>2.54 x 31 = 78.74</td></tr></table>				No. of contacts	A	B	E	6	15.2	12.78	2.54 x 2 = 5.08	10	20.3	17.86	2.54 x 4 = 10.16	14	25.4	22.94	2.54 x 6 = 15.24	16	27.9	25.48	2.54 x 7 = 17.78	20	33.0	30.56	2.54 x 9 = 22.86	26	40.6	38.18	2.54 x 12 = 30.48	30	45.72	43.26	2.54 x 14 = 35.56	34	50.8	48.34	2.54 x 16 = 40.64	40	58.4	55.96	2.54 x 19 = 48.26	50	71.3	68.66	2.54 x 24 = 60.96	60	84.0	81.36	2.54 x 29 = 73.66	64	89.1	86.44
No. of contacts	A	B	E																																																				
6	15.2	12.78	2.54 x 2 = 5.08																																																				
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64	89.1	86.44	2.54 x 31 = 78.74																																																				
Marking No. 1 contact No. 2 contact No. 1 contact No. 2 contact No. 1 contact																																																							

For performance level 3 please specify digit 7
For performance level 2 please specify digit 6
S4 = 0.76 μm (30 μinch) Au or PdNi equivalent

7

6

5

*

Identification	Part No.	Drawing	Dimensions in mm
Locking lever for female connector with strain relief in conjunction with low-profile male header When the security of latching is required and space is a premium, these locking levers can be fitted onto the strain relief of the HARTING female connector.	09 18 000 9905 ⁴⁾		

* Not normally kept in stock

¹⁾ No polarization slot for 6, 10 or 14 way male header
²⁾ No polarization slot for 6 way male header

³⁾ Pitch tolerance: ± 0.1
⁴⁾ Order 2 per female connector

Number of contacts

6-64


Low-profile male header, straight solder pins

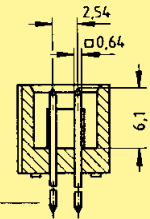
Identification	No. of contacts	Part No.	Drawing	Dimensions in mm
----------------	-----------------	----------	---------	------------------

Male header with straight solder pins

Length: 2.9 mm

6	09 18 506	324
10	09 18 510	324
14	09 18 514	324
16	09 18 516	324
20	09 18 520	324
26	09 18 526	324
30	09 18 530	324
34	09 18 534	324
40	09 18 540	324
50	09 18 550	324
60	09 18 560	324
64	09 18 564	324

No. of contacts	A	B	E
6	15.2	12.78	2.54 x 2 = 5.08
10	20.3	17.86	2.54 x 4 = 10.16
14	25.4	22.94	2.54 x 6 = 15.24
16	27.9	25.48	2.54 x 7 = 17.78
20	33.0	30.56	2.54 x 9 = 22.86
26	40.6	38.18	2.54 x 12 = 30.48
30	45.72	43.26	2.54 x 14 = 35.56
34	50.8	48.34	2.54 x 16 = 40.64
40	58.4	55.96	2.54 x 19 = 48.26
50	71.3	68.66	2.54 x 24 = 60.96
60	84.0	81.36	2.54 x 29 = 73.66
64	89.1	86.44	2.54 x 31 = 78.74

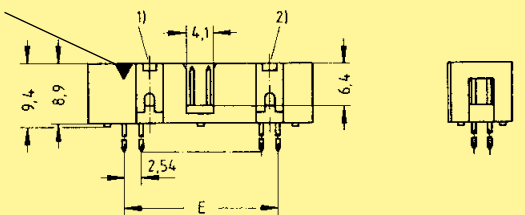

Solder pins for
1 ± 0.1 mm dia. hole

Male header with straight solder pins

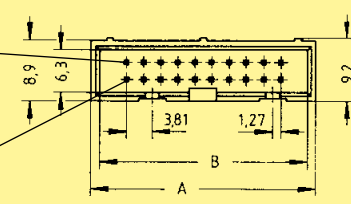
Length: 4.5 mm

6	09 18 506	322*
10	09 18 510	322*
14	09 18 514	322*
16	09 18 516	322*
20	09 18 520	322*
26	09 18 526	322*
30	09 18 530	322*
34	09 18 534	322*
40	09 18 540	322*
50	09 18 550	322*
60	09 18 560	322*
64	09 18 564	322*

Marking No. 1 contact

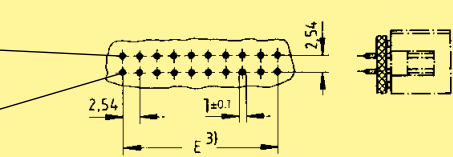


No. 2 contact



No. 1 contact

No. 2 contact



No. 1 contact

For performance level 3 please specify digit
For performance level 2 please specify digit
S4 = 0.76 µm (30 µinch) Au or PdNi equivalent

7
6
5 *

Identification

Part No.

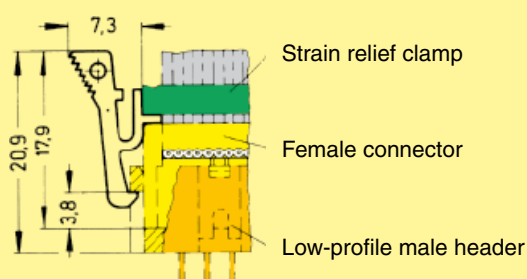
Drawing

Dimensions in mm

Locking lever for female connector with strain relief

in conjunction
with low-profile male header

When the security of latching is required and space is a premium, these locking levers can be fitted onto the strain relief of the HARTING female connector.

09 18 000 9905⁴⁾


* Not normally kept in stock

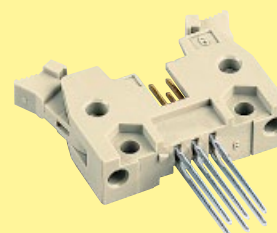
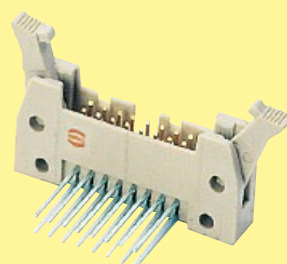
¹⁾ No polarization slot for 6, 10 or 14 way male header
²⁾ No polarization slot for 6 way male header

³⁾ Pitch tolerance: ± 0.1
⁴⁾ Order 2 per female connector

Accessories

Identification	Part No.	Drawing	Dimensions in mm
Polarization key	09 18 500 9902 ¹⁾		
¹⁾ Part No. comprises 2 keys			
Locking lever (snaps into place, can be fitted whenever required)	Long: 09 18 000 9903 ²⁾ Short: 09 18 000 9904 ²⁾	Long Short 	For use with female connector <u>with</u> strain relief clamp For use with female connector <u>without</u> strain relief clamp
²⁾ Order 2 per male header			
Fixing screws for 1.6 mm P.C. board	09 18 000 9906 ³⁾		For connectors with part numbers 09 18 5xx x9xx: screwing torque 0.2 Nm 09 19 5xx x9xx: screwing torque 0.4 – 0.5 Nm Screw material: Steel (Inox A2) Plating: Nickel
³⁾ Part No. comprises 50 pieces			
Coding system with loss of contact	Code pin 09 18 000 9901 ⁴⁾ Removal tool for male contacts 09 99 000 0133	To avoid cross-plugging adjacent connectors a coding system is required. A code pin is inserted into the appropriate cavity in the female connector. The corresponding male contact is removed by a special removal tool. 	
⁴⁾ Part No. comprises 6 code pins			

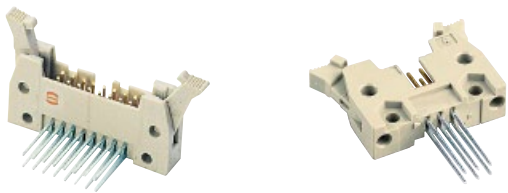
Number of contacts	6, 10, 14, 16, 20, 24, 26, 30, 34, 40, 50, 60, 64
Contact arrangement	straight, angled
Contact length	15 mm
Approvals	IEC 60603-13 DIN EN 60603-13 D 2632 BT 224 NFC 93-428 (HE 10)
Pitch	2.54 mm [0.100"]
Working current	1 A
Working voltage	500 V for pollution degree 1
Test voltage $U_{r.m.s.}$	1 kV
Contact resistance	$\leq 20 \text{ m}\Omega$
Insulation resistance	$\geq 10^9 \Omega$
Temperature range	-55 °C ... +125 °C The maximum temperature includes heating of contacts and ambient temperature
Terminations	0.6 mm x 0.6 mm Diagonal: 0.86 mm
Materials	
Moulding	Thermoplastic resin (PBT) UL 94-V0
Contact surface	
Contact zone	plated according to performance level ¹⁾



¹⁾ Performance level 3 as per IEC 60603-13, ≥ 50 mating cycles, no gas test
Performance level 2 as per IEC 60603-13, ≥ 250 mating cycles, 4 days gas test
S4, plating = 0.76 μm (30 μinch) Au or PdNi equivalent

Number of contacts

6-64



Male header with wrap posts

Identification	No. of contacts	Part No.					
		Without levers		With short levers		With long levers	
Male header with angled wrap posts Length: 15 mm □ 0.6 mm	6	09 18 506	└ 926*	09 18 506	└ 916*	09 18 506	└ 906*
	10	09 18 510	└ 926*	09 18 510	└ 916*	09 18 510	└ 906*
	14	09 18 514	└ 926*	09 18 514	└ 916*	09 18 514	└ 906*
	16	09 18 516	└ 926*	09 18 516	└ 916*	09 18 516	└ 906*
	20	09 18 520	└ 926*	09 18 520	└ 916*	09 18 520	└ 906*
	24	09 18 524	└ 926*	09 18 524	└ 916*	09 18 524	└ 906*
	26	09 18 526	└ 926*	09 18 526	└ 916*	09 18 526	└ 906*
	30	09 18 530	└ 926*	09 18 530	└ 916*	09 18 530	└ 906*
	34	09 18 534	└ 926*	09 18 534	└ 916*	09 18 534	└ 906*
	40	09 18 540	└ 926*	09 18 540	└ 916*	09 18 540	└ 906*
	50	09 18 550	└ 926*	09 18 550	└ 916*	09 18 550	└ 906*
	60	09 18 560	└ 926*	09 18 560	└ 916*	09 18 560	└ 906*
	64	09 18 564	└ 926*	09 18 564	└ 916*	09 18 564	└ 906*
Male header with straight wrap posts Length: 15 mm □ 0.6 mm	6	09 18 506	└ 927*	09 18 506	└ 917*	09 18 506	└ 907*
	10	09 18 510	└ 927*	09 18 510	└ 917*	09 18 510	└ 907*
	14	09 18 514	└ 927*	09 18 514	└ 917*	09 18 514	└ 907*
	16	09 18 516	└ 927*	09 18 516	└ 917*	09 18 516	└ 907*
	20	09 18 520	└ 927*	09 18 520	└ 917*	09 18 520	└ 907*
	24	09 18 524	└ 927*	09 18 524	└ 917*	09 18 524	└ 907*
	26	09 18 526	└ 927*	09 18 526	└ 917*	09 18 526	└ 907*
	30	09 18 530	└ 927*	09 18 530	└ 917*	09 18 530	└ 907*
	34	09 18 534	└ 927*	09 18 534	└ 917*	09 18 534	└ 907*
	40	09 18 540	└ 927*	09 18 540	└ 917*	09 18 540	└ 907*
	50	09 18 550	└ 927*	09 18 550	└ 917*	09 18 550	└ 907*
	60	09 18 560	└ 927*	09 18 560	└ 917*	09 18 560	└ 907*
	64	09 18 564	└ 927*	09 18 564	└ 917*	09 18 564	└ 907*

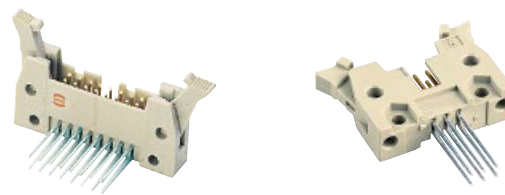
* Not normally kept in stock
For accessories see page 08.22
For dimensions see page 08.21

For performance level 3 please specify digit
For performance level 2 please specify digit
S4 = 0.76 µm (30 µinch) Au or PdNi equivalent



Number of contacts

6-64



Male header with wrap posts

Identification

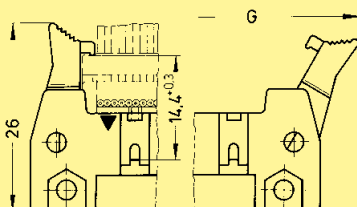
Drawing

Dimensions in mm

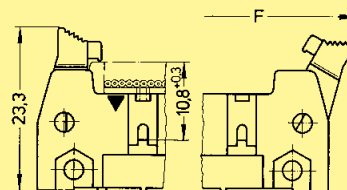
Male header

No. of contacts	A	B	C	D	E	F	G
6	26.9	16.76	22.86	12.45	2.54 x 2 = 5.08	36.9	40.3
10	32.0	21.84	27.94	17.53	2.54 x 4 = 10.16	42.0	45.4
14	37.1	26.92	33.02	22.61	2.54 x 6 = 15.24	47.1	50.4
16	39.6	29.46	35.56	25.15	2.54 x 7 = 17.78	49.6	53.0
20	44.7	34.54	40.64	30.23	2.54 x 9 = 22.86	54.7	58.1
24	49.8	39.62	45.72	35.91	2.54 x 11 = 27.94	59.8	63.2
26	52.3	42.16	48.26	37.85	2.54 x 12 = 30.48	62.3	65.7
30	57.7	47.24	53.43	43.83	2.54 x 14 = 35.56	68.2	68.6
34	62.5	52.32	58.42	48.01	2.54 x 16 = 40.64	72.5	75.8
40	70.1	59.94	66.04	55.63	2.54 x 19 = 48.26	80.1	83.5
50	82.8	72.64	78.74	68.33	2.54 x 24 = 60.96	92.8	96.2
60	95.5	85.34	91.44	81.03	2.54 x 29 = 73.66	105.5	108.9
64	100.6	90.42	96.52	86.11	2.54 x 31 = 78.74	110.6	113.9

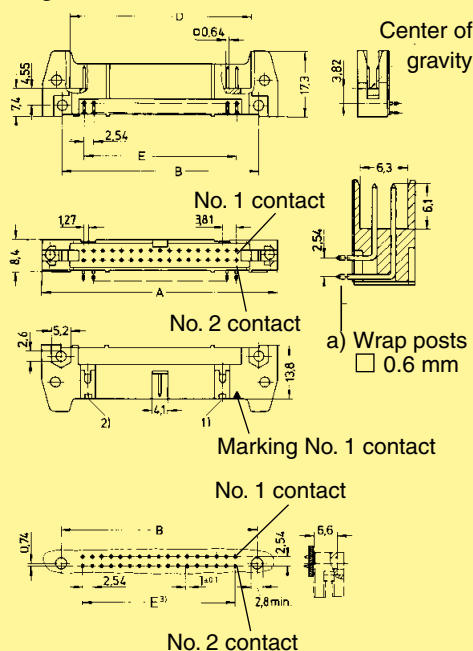
Long levers

for use with female connector
with strain relief clamp


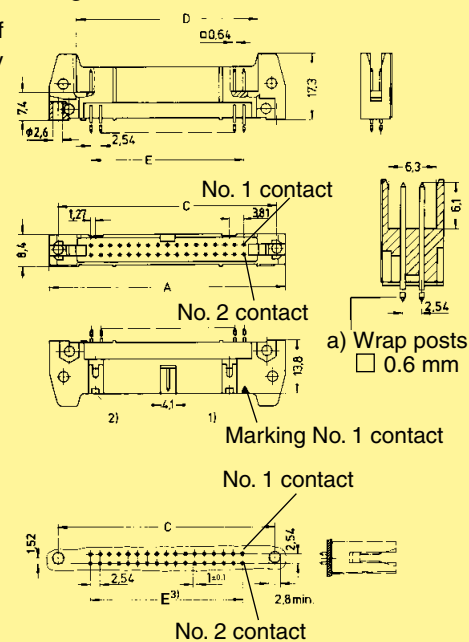
Short levers

for use with female connector
without strain relief clamp


Angled versions



Straight versions



Board drillings

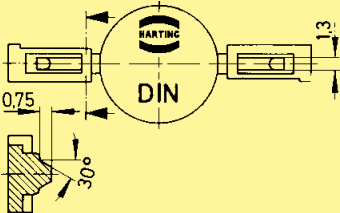
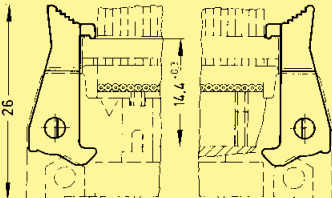
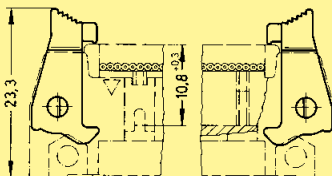
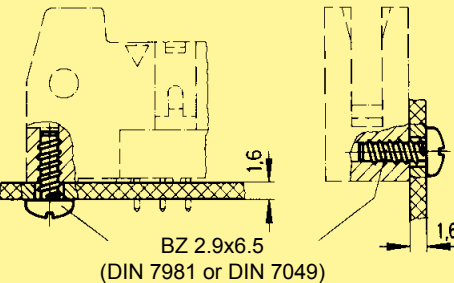
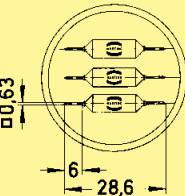
For accessories see page 08.22

¹⁾ No polarization slot
for 6, 10 or 14 way male header

²⁾ No polarization slot for 6 way male header

³⁾ Pitch tolerance: ± 0.1

Accessories

Identification	Part No.	Drawing	Dimensions in mm
Polarization key	09 18 500 9902 ¹⁾		
¹⁾ Part No. comprises 2 keys			
Locking lever (snaps into place, can be fitted whenever required)	Long: 09 18 000 9903 ²⁾ Short: 09 18 000 9904 ²⁾	Long  For use with female connector <u>with</u> strain relief clamp	Short  For use with female connector <u>without</u> strain relief clamp
²⁾ Order 2 per male header			
Fixing screws for 1.6 mm P.C. board	09 18 000 9906 ³⁾		For connectors with part numbers 09 18 5xx x9xx: screwing torque 0.2 Nm 09 19 5xx x9xx: screwing torque 0.4 – 0.5 Nm Screw material: Steel (Inox A2) Plating: Nickel
³⁾ Part No. comprises 50 pieces			
Coding system with loss of contact	Code pin 09 18 000 9901 ⁴⁾ Removal tool for male contacts 09 99 000 0133	To avoid cross-plugging adjacent connectors a coding system is required. A code pin is inserted into the appropriate cavity in the female connector. The corresponding male contact is removed by a special removal tool.  	
⁴⁾ Part No. comprises 6 code pins			

Number of contacts 6, 10, 14, 16, 20, 24, 26, 30, 34, 40, 50, 60, 64

Approvals



IEC 60603-13
DIN EN 60603-13
D 2632
BT 224
NFC 93-428 (HE 10)

UL recognized: E102079

Pitch 2.54 mm [0.100"]

Working current 1 A

Working voltage 320 V
for pollution degree 1

Test voltage $U_{r.m.s.}$ 1 kV

Contact resistance $\leq 20 \text{ m}\Omega$
Insulation resistance $\geq 10^9 \Omega$

Temperature range -55 °C ... +125 °C
The maximum temperature includes heating of contacts and ambient temperature

Terminations IDC flat cable
1.27 mm [0.050"] pitch:
AWG 26/7 – AWG 28/7

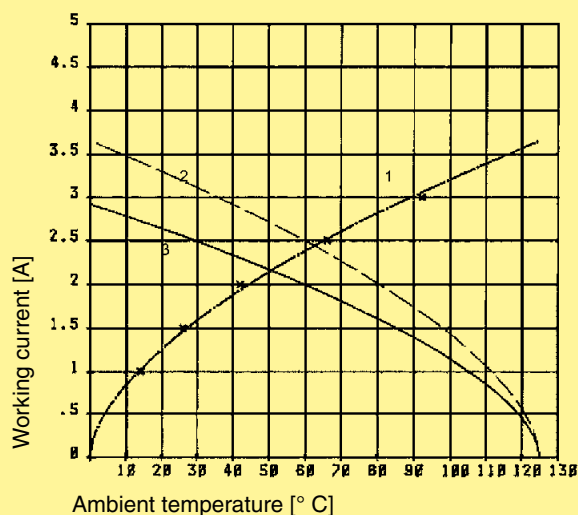
Materials
Moulding Thermoplastic resin (PBT)
UL 94-V0

Contact surface
Contact zone gold-plated according to
performance level¹⁾

Current carrying capacity

The current carrying capacity is limited by maximum temperature of materials for inserts and contacts including terminals. The current capacity-curve is valid for continuous, not interrupted current-loaded contacts of connectors when simultaneous power on all contacts is given, without exceeding the maximum temperature.

Control and test procedures according to DIN IEC 60512.



Example: 50 way connector

- ① Temperature rise
- ② Derating
- ③ Derating curve at $I_{max} \times 0.8$ (IEC 60512-2)

Insertion and withdrawal forces

Number of contacts	Maximum force [N]	
	Performance level 1 and 2	Performance level 3
6	12	18
10	20	30
14	28	42
16	32	48
20	40	60
24	48	72
26	52	78
30	60	90
34	68	102
40	80	120
50	100	150
60	120	180
64	128	192

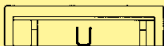
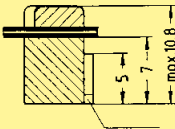
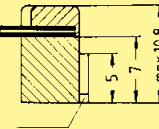
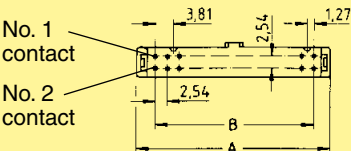
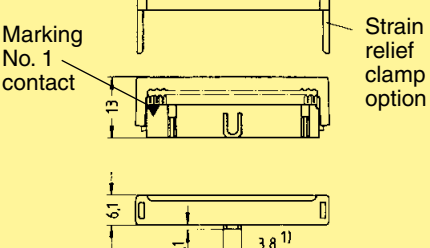
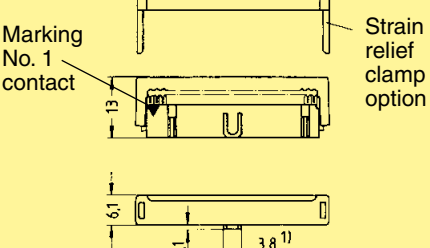
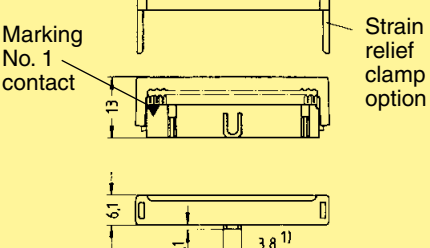
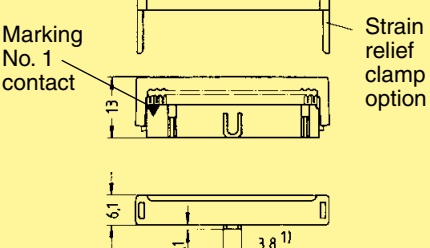
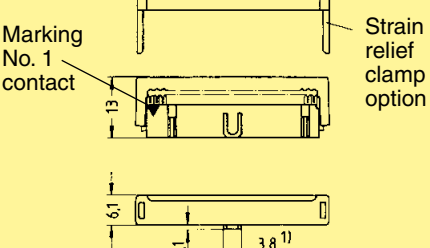
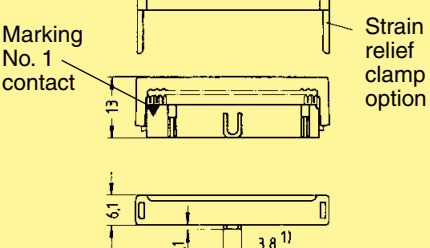
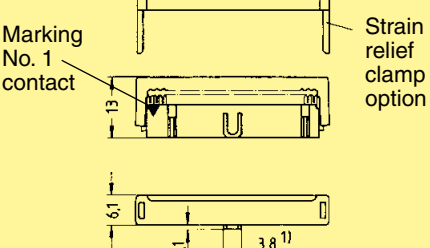
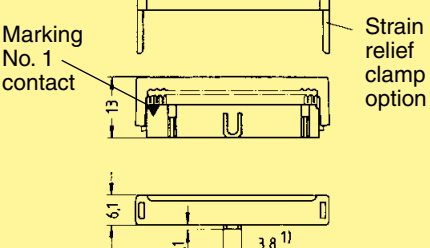
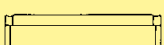
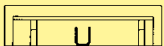
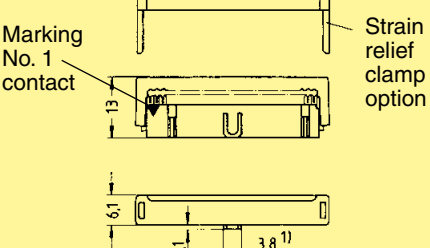
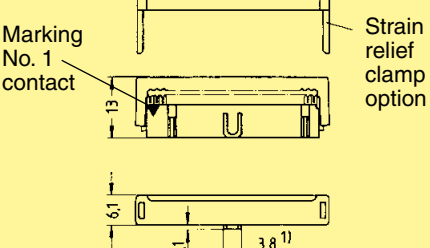
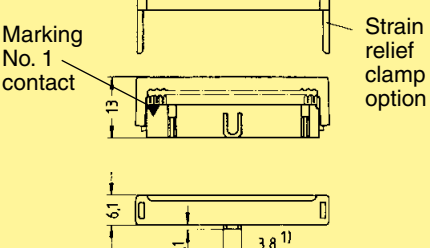
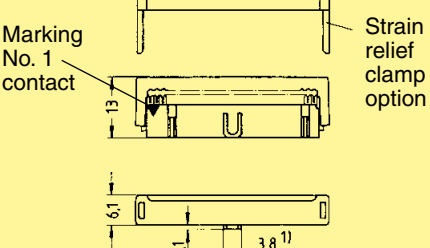
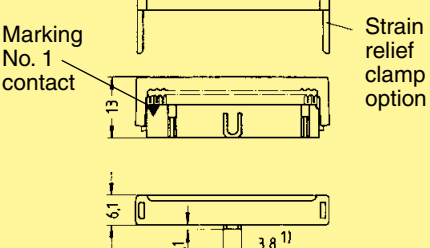
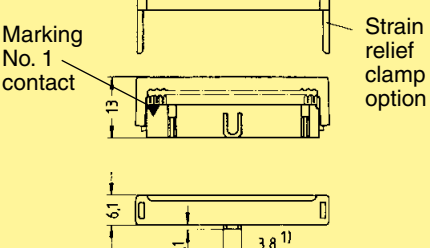
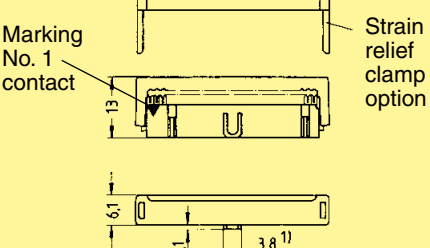
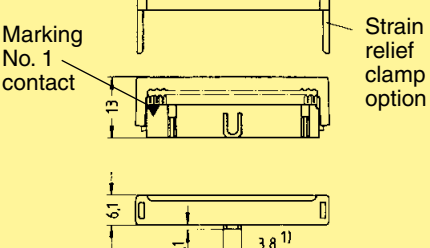
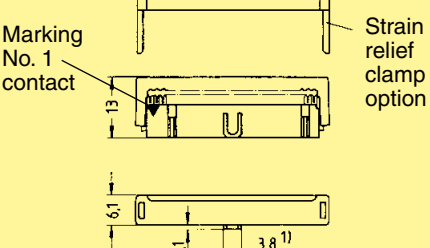
¹⁾ Performance level 3 as per IEC 60603-13, ≥ 50 mating cycles, no gas test
Performance level 2 as per IEC 60603-13, ≥ 250 mating cycles, 4 days gas test
S4, plating = 0.76 μm (30 μinch) Au or PdNi equivalent

Number of contacts

6-64

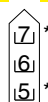


Female connector

Identification	No. of contacts	Part No.		Drawing	Dimensions in mm
Female connector <u>with</u> central polarization		open end cover		open end cover	closed end cover
		closed end cover			
<u>without</u> strain relief clamp 	6	09 18 506	803	09 18 506	804
	10	09 18 510	803	09 18 510	804
	14	09 18 514	803	09 18 514	804
	16	09 18 516	803	09 18 516	804
	20	09 18 520	803	09 18 520	804
	24	09 18 524	803		
	26	09 18 526	803		
	30	09 18 530	803		
	34	09 18 534	803		
	40	09 18 540	803		
	50	09 18 550	803		
	60	09 18 560	803		
	64	09 18 564	803		
				option	
				 	
					
					
<u>without</u> strain relief clamp with bulk packaging	6	09 18 506	803 58U ²⁾		
	10	09 18 510	803 58U ²⁾		
	14	09 18 514	803 58U ²⁾		
	16	09 18 516	803 58U ²⁾		
	20	09 18 520	803 58U ²⁾		
	26	09 18 526	803 58U ²⁾		
	30	09 18 530	803 58U ²⁾		
	34	09 18 534	803 58U ³⁾		
	40	09 18 540	803 58U ³⁾		
					
					
					
					
					
					
					
<u>with</u> strain relief clamp  	6	09 18 506	813	09 18 506	814*
	10	09 18 510	813	09 18 510	814*
	14	09 18 514	813	09 18 514	814*
	16	09 18 516	813	09 18 516	814*
	20	09 18 520	813	09 18 520	814*
	24	09 18 524	813		
	26	09 18 526	813	09 18 526	814*
	30	09 18 530	813	09 18 530	814*
	34	09 18 534	813	09 18 534	814*
	40	09 18 540	813	09 18 540	814*
	50	09 18 550	813	09 18 550	814*
	60	09 18 560	813	09 18 560	814*
	64	09 18 564	813	09 18 564	814*
					
					
<u>with</u> strain relief clamp with bulk packaging	6	09 18 506	813 58U ³⁾		
	10	09 18 510	813 58U ³⁾		
	14	09 18 514	813 58U ⁴⁾		
	16	09 18 516	813 58U ⁴⁾		
	20	09 18 520	813 58U ⁵⁾		
	26	09 18 526	813 58U ⁶⁾		
	30	09 18 530	813 58U ⁵⁾		
	34	09 18 534	813 58U ⁷⁾		
	40	09 18 540	813 58U ⁷⁾		
					
					
					
					
					
					
					

No. of contacts	6	10	14	16	20
A	12.20	17.30	22.40	24.90	30.00
B	5.08	10.16	15.24	17.78	22.86
No. of contacts	24	26	30	34	40
A	35.18	37.60	42.70	47.80	55.40
B	27.94	30.48	35.56	40.64	48.26
No. of contacts	50	60	64		
A	68.10	80.80	85.90		
B	60.96	73.66	78.74		

For performance level 3 please specify digit
 For performance level 2 please specify digit
 S4 = 0.76 µm (30 µinch) Au or PdNi equivalent



¹⁾ Pitch tolerance: ± 0.1
 * Not normally kept in stock

Number of contacts

6-64



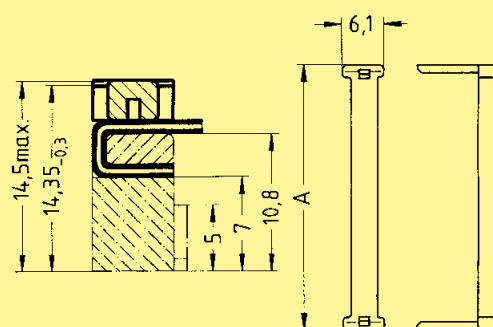
Strain relief clamp/Locking lever

Identification	No. of contacts	Part No.	Drawing	Dimensions in mm
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Strain relief clamp

6	09 18 506 9002
10	09 18 510 9002
14	09 18 514 9002
16	09 18 516 9002
20	09 18 520 9002
24	09 18 524 9002
26	09 18 526 9002
30	09 18 530 9002
34	09 18 534 9002
40	09 18 540 9002
50	09 18 550 9002
60	09 18 560 9002
64	09 18 564 9002

No. of contacts	A
6	12.2
10	17.3
14	22.4
16	24.9
20	30.0
24	35.18
26	37.6
30	42.7
34	47.8
40	55.4
50	68.1
60	80.8
64	85.9



with bulk packaging

6	09 18 506 9002 58U ³⁾
10	09 18 510 9002 58U ³⁾
14	09 18 514 9002 58U ³⁾
16	09 18 516 9002 58U ³⁾
20	09 18 520 9002 58U ³⁾
26	09 18 526 9002 58U ³⁾
30	09 18 530 9002 58U ³⁾
34	09 18 534 9002 58U ⁴⁾
40	09 18 540 9002 58U ⁴⁾

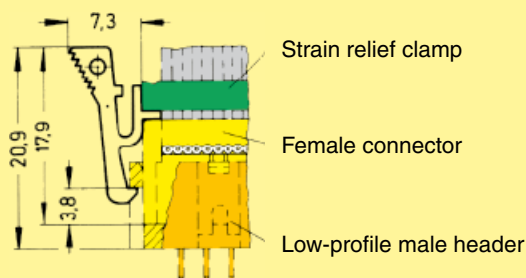
³⁾ Packaging unit
5,000 pieces

⁴⁾ Packaging unit
3,000 pieces

Locking lever for female connector

Only in conjunction
with low-profile male header
and strain relief

09 18 000 9905¹⁾⁵⁾
09 18 000 9905 58U¹⁾⁶⁾
⁵⁾ Packaging unit
100 pieces

⁶⁾ Packaging unit
5,000 pieces


When the security of latching is required and space is a premium, these locking levers can be fitted onto the strain relief of the HARTING female connector. This can then be used in conjunction with male low-profile headers (see pages 08.16 and 08.17).

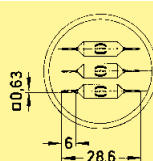
Coding system with loss of contact

Code pin

09 18 000 9901²⁾

Removal tool for
male contacts

09 99 000 0133



To avoid cross-plugging adjacent connectors a coding system is required. A code pin is inserted into the appropriate cavity in the female connector. The corresponding male contact is removed by a special removal tool.



¹⁾ Order 2 per female connector
²⁾ Part No. comprises 6 code pins

Number of contacts 4, 6, 8, 10, 14, 16, 20, 24, 26, 30, 34, 40, 50, 60, 64

Pitch
On pcb side: 2.54 mm [0.100"]
On cable side: 1.27 mm [0.050"]

Working current 1 A

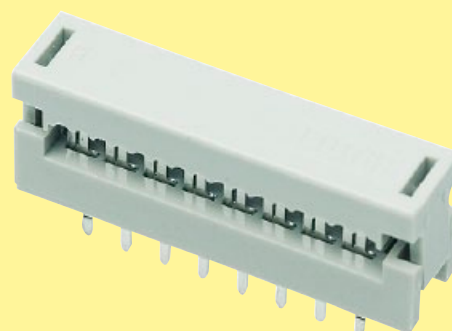
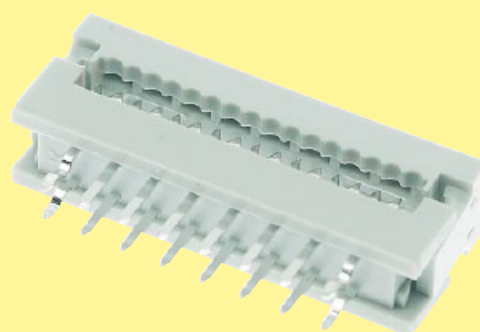
Test voltage $U_{r.m.s.}$ 1 kV AC – 1 minute

Contact resistance 35 m Ω max. mated
Insulation resistance $\geq 10^9 \Omega$

Temperature range -55 °C ... +105 °C
The maximum temperature includes heating of contacts and ambient temperature

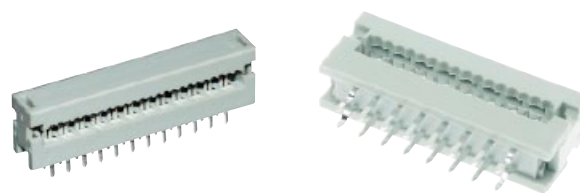
Terminations
Solder pins:
0.635 mm x 0.3 mm
Dimensions for pcb hole:
Standard version: $\varnothing 0.9 \pm 0.10$ mm
Kinked version: $\varnothing 1.0 \pm 0.05$ mm
Diagonal: 0.71 mm
IDC flat cable
1.27 mm [0.050"] pitch: AWG 28/7

Materials
Moulding Thermoplastic resin (PBT)
UL 94-V0



Number of contacts

4-64



Pcb transition connector, 2 rows, low-profile with 5.5 mm height

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

Pcb transition connector²⁾

2 rows
Standard low-profile version

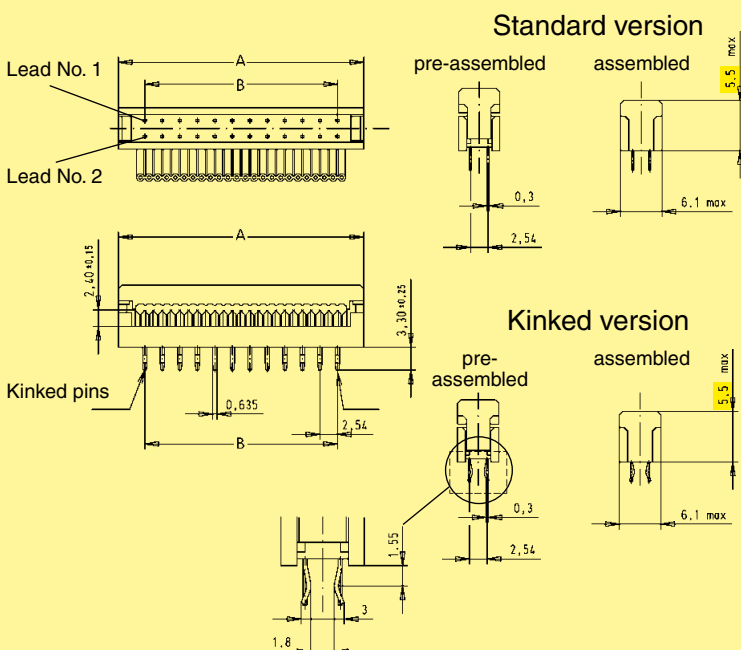
4	09 18 104 9622
6	09 18 106 9622
8	09 18 108 9622
10	09 18 110 9622
14	09 18 114 9622
16	09 18 116 9622
20	09 18 120 9622
24	09 18 124 9622
26	09 18 126 9622
30	09 18 130 9622
34	09 18 134 9622
40	09 18 140 9622
50	09 18 150 9622
60	09 18 160 9622
64	09 18 164 9622

No. of contacts	A±0.38	B±0.10
4	10.38	2.54 x 1 = 2.54
6	12.92	2.54 x 2 = 5.08
8	15.46	2.54 x 3 = 7.62
10	18.00	2.54 x 4 = 10.16
14	23.08	2.54 x 6 = 15.24
16	25.62	2.54 x 7 = 17.78
20	30.74	2.54 x 9 = 22.86
24	35.78	2.54 x 11 = 27.94
26	38.32	2.54 x 12 = 30.48
30	43.40	2.54 x 14 = 35.56
34	48.48	2.54 x 16 = 40.64
40	56.10	2.54 x 19 = 48.26
50	68.80	2.54 x 24 = 60.96
60	81.50	2.54 x 29 = 73.66
64	86.58	2.54 x 31 = 78.74

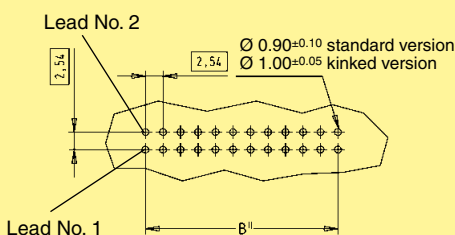
Pcb transition connector²⁾

2 rows
Kinked low-profile version
2 kinked pins at each extremity

4	09 18 104 9422
6	09 18 106 9422
8	09 18 108 9422
10	09 18 110 9422
14	09 18 114 9422
16	09 18 116 9422
20	09 18 120 9422
24	09 18 124 9422
26	09 18 126 9422
30	09 18 130 9422
34	09 18 134 9422
40	09 18 140 9422
50	09 18 150 9422
60	09 18 160 9422
64	09 18 164 9422



Board drillings



¹⁾ Pitch tolerance: ± 0.05

²⁾ Not released for halogen free flat cables

Number of contacts* 10, 16, 20, 26, 34, 40, 50

Pitch
On pcb side: 2.54 mm [0.100"]
On cable side: 1.27 mm [0.050"]

Working current 1 A

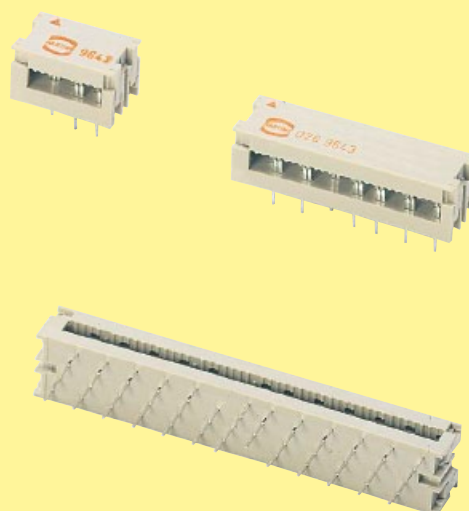
Test voltage $U_{r.m.s.}$ 500 V

Contact resistance $\leq 20 \text{ m}\Omega$
Insulation resistance $\geq 10^{12} \Omega$

Temperature range -40 °C ... +125 °C
The maximum temperature includes heating of contacts and ambient temperature

Terminations
Solder pins
0.45 mm x 0.35 mm
for pcb hole $\varnothing 0.8 \text{ mm}$
Diagonal: 0.58 mm
IDC flat cable
1.27 mm [0.050"] pitch:
AWG 28/7

Materials
Moulding Thermoplastic resin (PC)
UL 94-V0



Number of contacts

10–50

Pcb transition connector, 4 rows

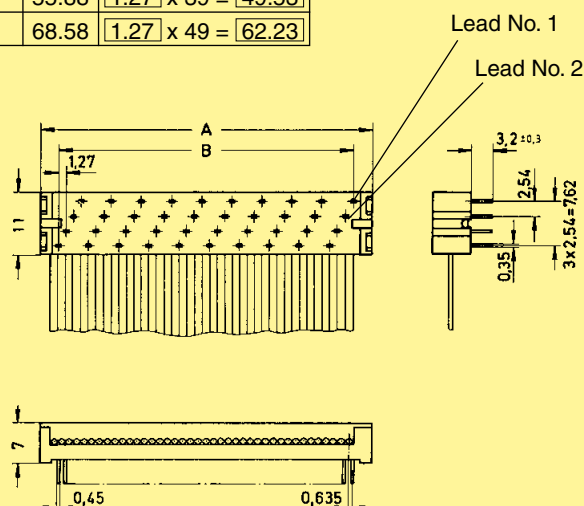
Identification	No. of contacts	Part No.	Drawing	Dimensions in mm
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Pcb transition connector²⁾

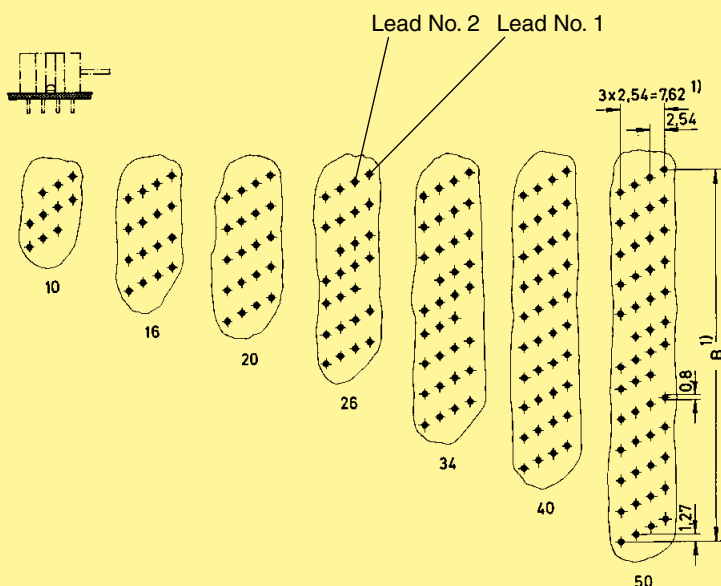
4 rows

10	09 19 010 9643*
16	09 19 016 9643*
20	09 19 020 9643*
26	09 19 026 9643*
34	09 19 034 9643*
40	09 19 040 9643*
50	09 19 050 9643*

No. of contacts	A	B
10	17.78	$1.27 \times 9 = 11.43$
16	25.40	$1.27 \times 15 = 19.05$
20	30.48	$1.27 \times 19 = 24.13$
26	38.10	$1.27 \times 25 = 31.75$
34	48.26	$1.27 \times 33 = 41.91$
40	55.88	$1.27 \times 39 = 49.53$
50	68.58	$1.27 \times 49 = 62.23$



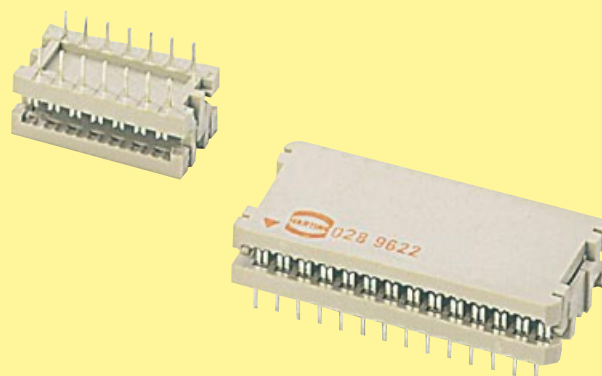
Board drillings



* Not normally kept in stock.

¹⁾ Pitch tolerance: ± 0.1 ²⁾ Not released for halogen free flat cables

Number of contacts*	14, 16, 24, 28, 40
Pitch	On pcb side: 2.54 mm [0.100"] On cable side: 1.27 mm [0.050"]
Working current	1 A
Test voltage $U_{r.m.s.}$	500 V
Contact resistance	$\leq 20 \text{ m}\Omega$
Insulation resistance	$\geq 10^{12} \Omega$
Temperature range	-40 °C ... +125 °C The maximum temperature includes heating of contacts and ambient temperature
Terminations	Solder pins 0.45 mm x 0.35 mm for pcb hole $\varnothing 0.8 \text{ mm}$ Diagonal: 0.58 mm IDC flat cable 1.27 mm [0.050"] pitch: AWG 28/7
Materials Moulding	Thermoplastic resin (PC) UL 94-V0



Number of contacts

14-40



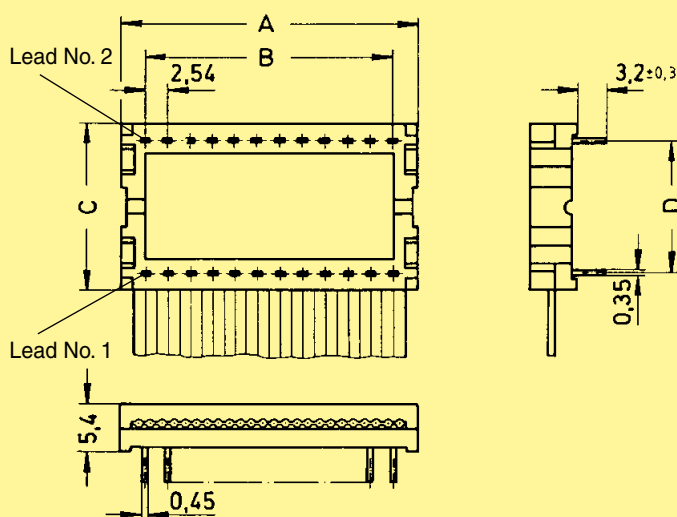
DIP connector for IC base or for soldering into pcb

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

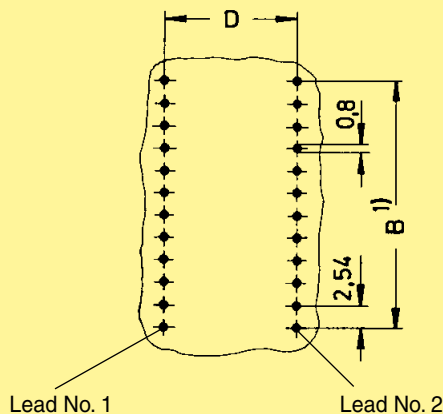
DIP connector²⁾

14	09 17 014 9622*
16	09 17 016 9622*
24	09 17 024 9622*
28	09 17 028 9622*
40	09 17 040 9622*

No. of contacts	A	B	C	D
14	20.5	2.54 x 6 = 15.24	11	7.62
16	23.0	2.54 x 7 = 17.78	11	7.62
24	33.0	2.54 x 11 = 27.94	18.7	15.24
28	38.1	2.54 x 13 = 33.02	18.7	15.24
40	53.3	2.54 x 19 = 48.26	18.7	15.24



Board drillings



* Not normally kept in stock

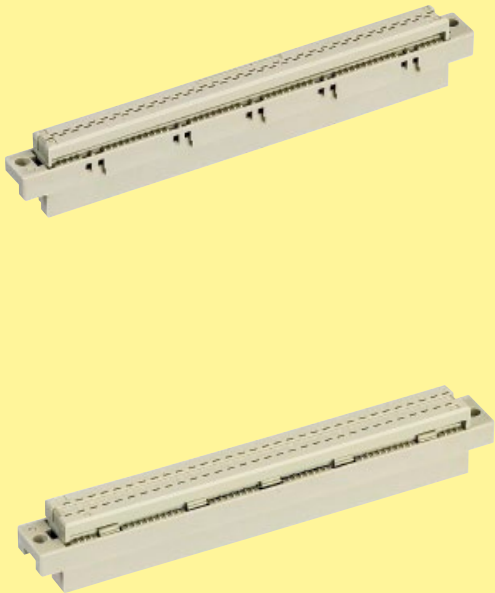
¹⁾ Pitch tolerance: ± 0.1

²⁾ Not released for halogen free flat cables

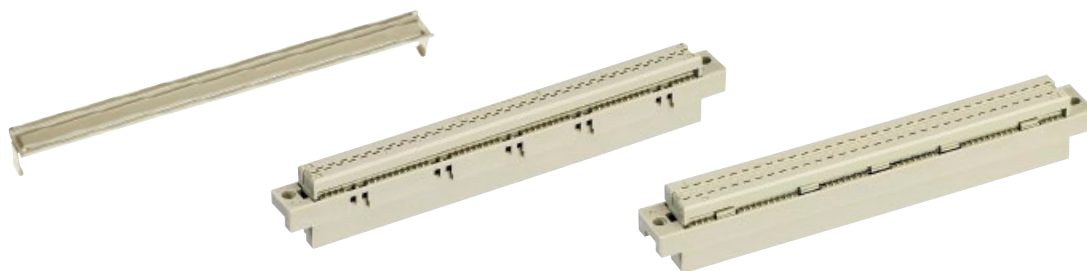


SEK

Number of contacts	64
Pitch	2.54 mm [0.100"]
Working current	1 A max.
Clearance Creepage	≥ 1.2 mm ≥ 1.2 mm
Working voltage The working voltage also depends on the clearance and creepage dimensions of the pcb itself, and the associated wiring	according to the safety regulations of the equipment
Test voltage $U_{r.m.s.}$	1 kV
Contact resistance Insulation resistance	≤ 20 m Ω $\geq 10^{12}$ Ω
Temperature range	-55 °C ... +125 °C The maximum temperature includes heating of contacts and ambient temperature
Termination Female connector	Insulation displacement: AWG 28/7
Insertion and withdrawal force	≤ 60 N
Materials Moulding Contacts Contact surface Contact zone	Thermoplastic resin, glass-fibre filled, UL 94-V0 Copper alloy selectively plated according to performance level



64



SEK

08
33

c) Connectors with coding

Number of contacts 10, 14, 16, 20, 26, 34, 40, 50, 60, 64

Contact arrangement straight

Contact length 4.5 mm

Approvals IEC 60 603-13

Design acc. to D 2632
BT 224
BS 9525
NFC 93-428 (HE 10)

Pitch 2.54 mm [0.100"]

Working current 1 A

Working voltage 350 V DC or AC peak

Test voltage $U_{r.m.s.}$ 1 kV

Contact resistance $\leq 20 \text{ m}\Omega$
Insulation resistance $\geq 10^9 \Omega$

Temperature range -55 °C ... +125 °C
The maximum temperature includes heating of contacts and ambient temperature

Materials
Moulding PBT
UL 94-V0
Contacts Phosphor bronze

Contact surface
Contact zone plated according to performance level¹⁾

Terminations Recommended PCB through holes

<i>Tin-lead plated PCB</i>	Hole	1.15 $\pm$ 0.025
	Cu	min. 25 μm
	Sn	max. 15 μm
	Plated hole	0.94-1.09 mm

<i>Chemical tin-plated PCB</i>	Hole	1.15 $\pm$ 0.025
	Cu	min. 25 μm
	Sn	min. 0.8 μm
	Plated hole	1.00-1.10 mm

<i>Au / Ni plated PCB</i>	Hole	1.15 $\pm$ 0.025
	Cu	min. 25 μm
	Ni	3-7 μm
	Au	0.05-0.12 μm
	Plated hole	1.00-1.10 mm

<i>Silver plated PCB</i>	Hole	1.15 $\pm$ 0.025
	Cu	min. 25 μm
	Ag	0.1-0.3 μm
	Plated hole	1.00-1.10 mm

<i>OSP copper plated PCB</i>	Hole	1.15 $\pm$ 0.025
	Cu	min. 25 μm
	Plated hole	1.00-1.10 mm

PCB board thickness: $\geq 1.6 \text{ mm}$

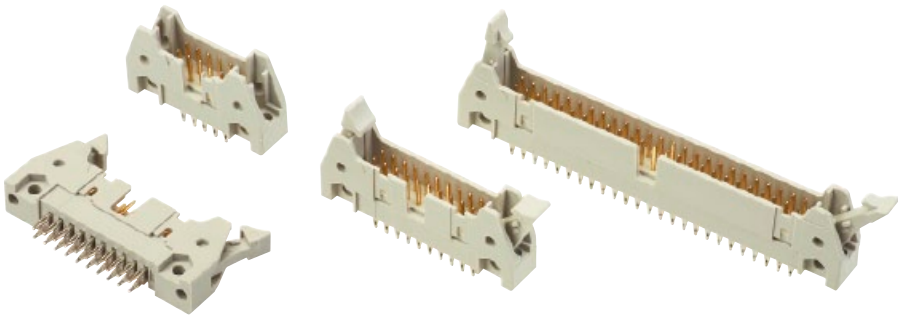
Insertion and withdrawal forces

Number of contacts	Maximum force [N]
	Performance level 1
10	20
14	28
16	32
20	40
26	52
34	68
40	80
50	100
60	120
64	128

Number of contacts

10-64

Male header,
straight press-in pins

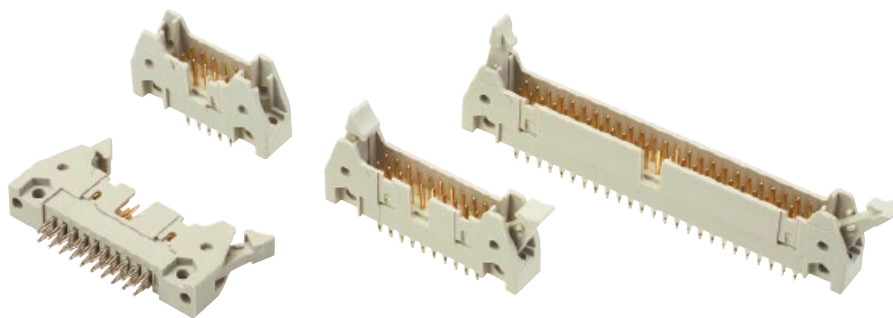


Identification	No. of contacts	Part No.		
		Without levers	With short levers	With long levers
Male header with straight press-in terminations Length: 4.5 mm	10	09 18 510 5929	09 18 510 5919	09 18 510 5909
	14	09 18 514 5929	09 18 514 5919	09 18 514 5909
	16	09 18 516 5929	09 18 516 5919	09 18 516 5909
	20	09 18 520 5929	09 18 520 5919	09 18 520 5909
	26	09 18 526 5929	09 18 526 5919	09 18 526 5909
	34	09 18 534 5929	09 18 534 5919	09 18 534 5909
	40	09 18 540 5929	09 18 540 5919	09 18 540 5909
	50	09 18 550 5929	09 18 550 5919	09 18 550 5909
	60	09 18 560 5929	09 18 560 5919	09 18 560 5909
	64	09 18 564 5929	09 18 564 5919	09 18 564 5909

Number of contacts

10-64

Male header,
straight press-in pins



Identification

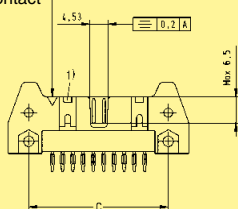
Drawing

Dimensions in mm

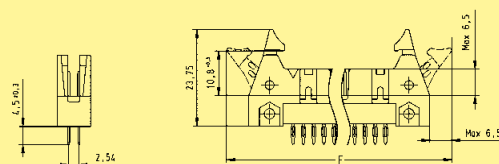
Male header

No. of contacts	A	C	D	E	F	G
10	32.11	21.84	17.91	2.54 x 4 = 10.16	45.11	50.11
14	37.19	26.92	22.99	2.54 x 6 = 15.24	50.19	55.19
16	39.73	29.46	25.53	2.54 x 7 = 17.78	52.73	57.73
20	44.81	34.54	30.61	2.54 x 9 = 22.86	57.81	62.81
26	52.43	42.16	38.23	2.54 x 12 = 30.48	65.43	70.43
34	62.59	52.32	48.39	2.54 x 16 = 40.64	75.59	80.59
40	70.21	59.94	56.01	2.54 x 19 = 48.26	83.21	88.21
50	82.91	72.64	68.71	2.54 x 24 = 60.96	95.91	100.91
60	95.61	85.34	81.41	2.54 x 29 = 73.66	108.61	113.61
64	100.69	90.42	86.49	2.54 x 31 = 78.74	113.69	118.69

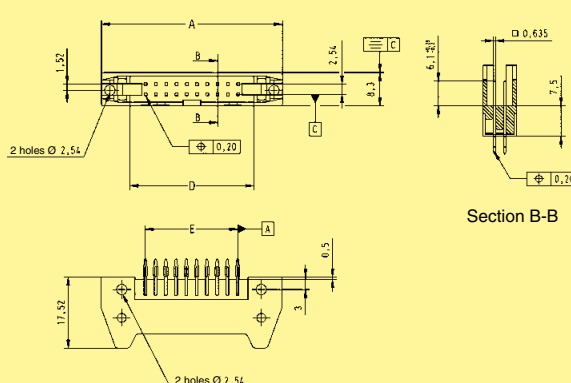
Marking
No. 1 contact



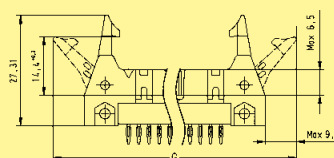
Short levers



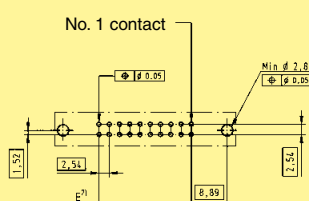
Long levers



Section B-B



Board drillings



¹⁾ No polarization slot
for 10 or 14 way male header

²⁾ Pitch tolerance: ± 0.1

Number of contacts 6, 10, 14, 16, 20, 26, 34, 40, 50, 60, 64

Contact arrangement straight

Contact length 5.5 mm

Approvals IEC 60 603-13
DIN EN 60 603-13
D 2632
BT 224
NFC 93-428 (HE 10)
UL recognized: E102079



Pitch 2.54 mm [0.100"]

Working current 1 A

Test voltage $U_{r.m.s.}$ 1 kV

Contact resistance $\leq 20 \text{ m}\Omega$
Insulation resistance $\geq 10^9 \Omega$

Temperature range -55 °C ... +105 °C
The maximum temperature includes heating of contacts and ambient temperature

Press-in

Diameter of pcb plated through holes $\varnothing 1.0^{+0.09}_{-0.06} \text{ mm}$

Recommended pcb holes for press-in process
Hole: $\varnothing 1.12 - 1.15 \text{ mm}$
Cu : 25 – 75 μm
Sn : 5 – 15 μm

Pcb thickness 1.6 – 3.2 mm

Materials
Moulding Thermoplastic resin (PBT)
UL 94-V0

Contact surface
Contact zone plated according to performance level¹⁾

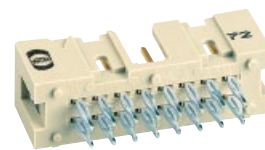
Insertion and withdrawal forces

Number of contacts	Maximum force [N]	
	Performance level 1 and 2	Performance level 3
6	12	18
10	20	30
14	28	42
16	32	48
20	40	60
26	52	78
34	68	102
40	80	120
50	100	150
60	120	180
64	128	192

¹⁾ Performance level 3 as per IEC 60 603-13, ≥ 50 mating cycles, no gas test
Performance level 2 as per IEC 60 603-13, ≥ 250 mating cycles, 4 days gas test
S4, plating = 0.76 μm (30 pinch) Au or PdNi equivalent

Number of contacts

6-64



Low-profile male header, straight press-in pins

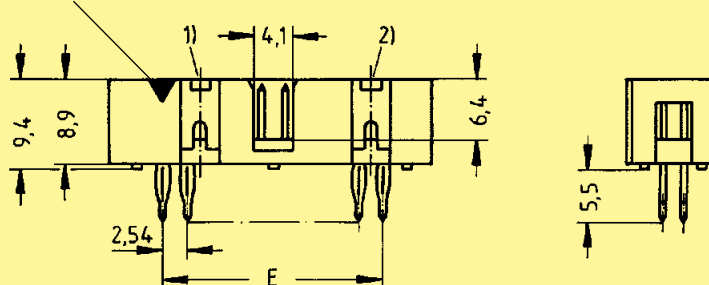
Identification	No. of contacts	Part No.	Drawing	Dimensions in mm
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Low-profile male header with straight press-in terminations
Length: 5.5 mm

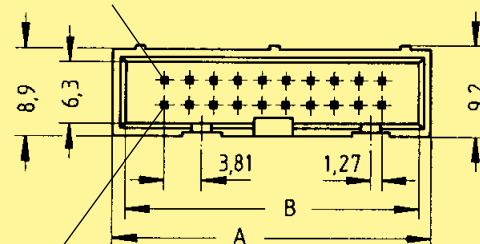
6	09 18 506	□ 329
10	09 18 510	□ 329
14	09 18 514	□ 329
16	09 18 516	□ 329
20	09 18 520	□ 329
26	09 18 526	□ 329
34	09 18 534	□ 329
40	09 18 540	□ 329
50	09 18 550	□ 329
60	09 18 560	□ 329
64	09 18 564	□ 329

No. of contacts	A	B	E
6	15.2	12.78	2.54 x 2 = 5.08
10	20.3	17.86	2.54 x 4 = 10.16
14	25.4	22.94	2.54 x 6 = 15.24
16	27.9	25.48	2.54 x 7 = 17.78
20	33.0	30.56	2.54 x 9 = 22.86
26	40.6	38.18	2.54 x 12 = 30.48
34	50.8	48.34	2.54 x 16 = 40.64
40	58.4	55.96	2.54 x 19 = 48.26
50	71.3	68.66	2.54 x 24 = 60.96
60	84.0	81.36	2.54 x 29 = 73.66
64	89.1	86.44	2.54 x 31 = 78.74

Marking No. 1 contact

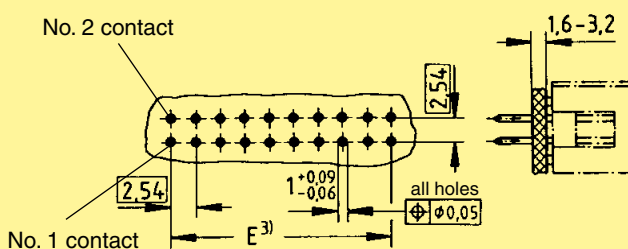


No. 2 contact



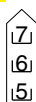
No. 1 contact

No. 2 contact



Board drillings

For Performance Level 3 please specify digit
For Performance Level 2 please specify digit
S4 = 0.76 µm (30 µinch) Au or PdNi equivalent



Not normally kept in stock

- 1) No polarization slot for 6, 10 or 14 way
- 2) No polarization slot for 6 way
- 3) Pitch tolerance: ± 0.1

SEK

Number of contacts 6, 10, 14, 16, 20, 24, 26, 30, 34, 40, 50, 60, 64

Contact arrangement straight, angled

Contact length 2.9 mm

Approvals IEC 60603-13
DIN EN 60603-13
D 2632
BT 224
NFC 93-428 (HE 10)

Pitch 2.54 mm [0.100"]

Working current 1 A

Working voltage 500 V
for pollution degree 1

Test voltage $U_{r.m.s.}$ 1 kV

Contact resistance $\leq 20 \text{ m}\Omega$
Insulation resistance $\geq 10^9 \Omega$

Temperature range -55 °C ... +125 °C
during reflow soldering max. + 240 °C for 60 s
The higher temperature limit includes the local ambient and heating effect of the contacts under load

Terminations For pcb hole $\varnothing 1 \pm 0.1 \text{ mm}$
DIN IEC 52 141
Diagonal: 0.79 mm

Materials
Moulding Thermoplastic resin (PCT)
UL 94-V0

Contact surface
Contact zone gold-plated according to performance level¹⁾

Options on request

Colour of connectors black

For pick & place process Tape & Reel packaging
with/without vacuum plate
Tube packaging
with/without vacuum plate

New

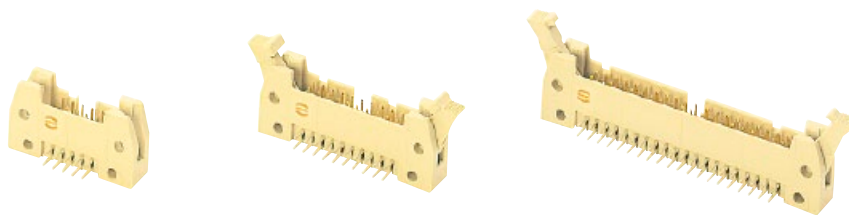
Insertion and withdrawal forces

Number of contacts	Maximum force [N]	
	Performance level 1 and 2	Performance level 3
6	12	18
10	20	30
14	28	42
16	32	48
20	40	60
24	48	72
26	52	78
30	60	90
34	68	102
40	80	120
50	100	150
60	120	180
64	128	192



¹⁾ Performance level 3 as per IEC 60603-13, ≥ 50 mating cycles, no gas test
Performance level 2 as per IEC 60603-13, ≥ 250 mating cycles, 4 days gas test
S4, plating = 0.76 μm (30 μinch) Au or PdNi equivalent

6-64



Identification

Part No.

Without levers

With short levers

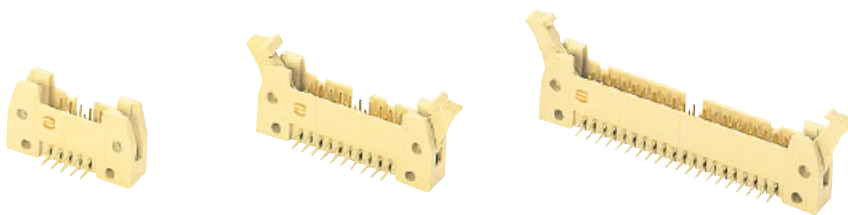
With long levers

Length: 2.9 mm

6	09 19 506	└ 923	09 19 506	└ 913	09 19 506	└ 903
10	09 19 510	└ 923	09 19 510	└ 913	09 19 510	└ 903
14	09 19 514	└ 923	09 19 514	└ 913	09 19 514	└ 903
16	09 19 516	└ 923	09 19 516	└ 913	09 19 516	└ 903
20	09 19 520	└ 923	09 19 520	└ 913	09 19 520	└ 903
24	09 19 524	└ 923	09 19 524	└ 913	09 19 524	└ 903
26	09 19 526	└ 923	09 19 526	└ 913	09 19 526	└ 903
30	09 19 530	└ 923	09 19 530	└ 913	09 19 530	└ 903
34	09 19 534	└ 923	09 19 534	└ 913	09 19 534	└ 903
40	09 19 540	└ 923	09 19 540	└ 913	09 19 540	└ 903
50	09 19 550	└ 923	09 19 550	└ 913	09 19 550	└ 903
60	09 19 560	└ 923	09 19 560	└ 913	09 19 560	└ 903
64	09 19 564	└ 923	09 19 564	└ 913	09 19 564	└ 903

Number of contacts

6-64


SMC male header with angled solder pins

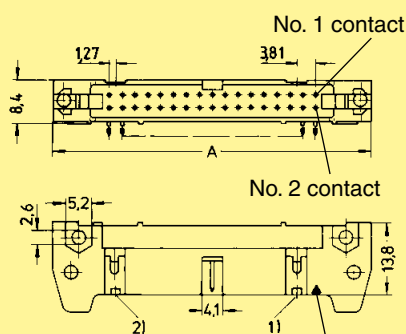
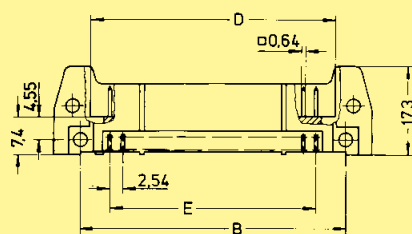
Identification

Drawing

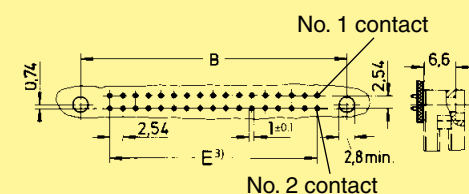
Dimensions in mm

SMC male header

No. of contacts	A	B	D	E	F	G
6	26.9	16.76	12.45	2.54 x 2 = 5.08	36.9	40.3
10	32.0	21.84	17.53	2.54 x 4 = 10.16	42.0	45.4
14	37.1	26.92	22.61	2.54 x 6 = 15.24	47.1	50.4
16	39.6	29.46	25.15	2.54 x 7 = 17.78	49.6	53.0
20	44.7	34.54	30.23	2.54 x 9 = 22.86	54.7	58.1
24	49.8	39.62	35.91	2.54 x 11 = 27.94	59.8	63.2
26	52.3	42.16	37.85	2.54 x 12 = 30.48	62.3	65.7
30	57.7	47.24	43.83	2.54 x 14 = 35.56	68.2	68.6
34	62.5	52.32	48.01	2.54 x 16 = 40.64	72.5	75.8
40	70.1	59.94	55.63	2.54 x 19 = 48.26	80.1	83.5
50	82.8	72.64	68.33	2.54 x 24 = 60.96	92.8	96.2
60	95.5	85.34	81.03	2.54 x 29 = 73.66	105.5	108.9
64	100.6	90.42	86.11	2.54 x 31 = 78.74	110.6	113.9



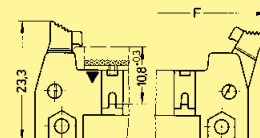
Marking No. 1 contact



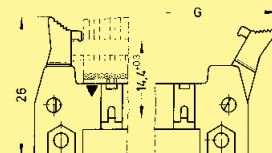
Short levers

for use with female connector without strain relief clamp

Center of gravity



Long levers

for use with female connector with strain relief clamp


Board drillings

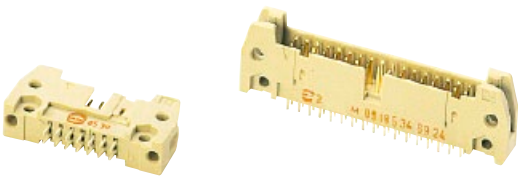
¹⁾ No polarization slot for 6, 10 or 14 way male header

²⁾ No polarization slot for 6 way male header

³⁾ Pitch tolerance: ± 0.1

Number of contacts

6-64



SMC male header with straight solder pins

Identification	No. of contacts	Part No.					
		Without levers		With short levers		With long levers	
SMC male header with straight solder pins Length: 2.9 mm	6	09 19 506	└ 924	09 19 506	└ 914	09 19 506	└ 904
	10	09 19 510	└ 924	09 19 510	└ 914	09 19 510	└ 904
	14	09 19 514	└ 924	09 19 514	└ 914	09 19 514	└ 904
	16	09 19 516	└ 924	09 19 516	└ 914	09 19 516	└ 904
	20	09 19 520	└ 924	09 19 520	└ 914	09 19 520	└ 904
	24	09 19 524	└ 924	09 19 524	└ 914	09 19 524	└ 904
	26	09 19 526	└ 924	09 19 526	└ 914	09 19 526	└ 904
	30	09 19 530	└ 924	09 19 530	└ 914	09 19 530	└ 904
	34	09 19 534	└ 924	09 19 534	└ 914	09 19 534	└ 904
	40	09 19 540	└ 924	09 19 540	└ 914	09 19 540	└ 904
	50	09 19 550	└ 924	09 19 550	└ 914	09 19 550	└ 904
	60	09 19 560	└ 924	09 19 560	└ 914	09 19 560	└ 904
	64	09 19 564	└ 924	09 19 564	└ 914	09 19 564	└ 904

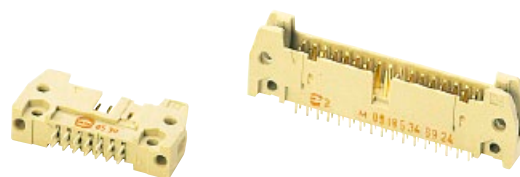
* Not normally kept in stock
For accessories see page 08.52
For dimensions see page 08.45

For performance level 3 please specify digit
For performance level 2 please specify digit
S4 = 0.76 µm (30 µinch) Au or PdNi equivalent



Number of contacts

6-64


SMC male header with straight solder pins

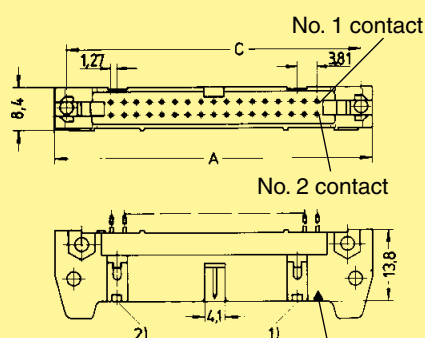
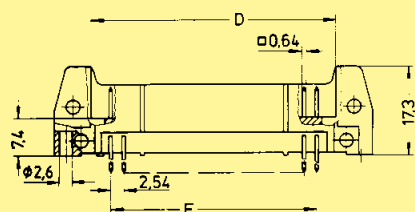
Identification

Drawing

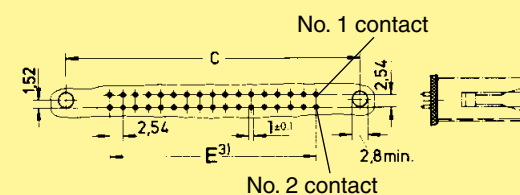
Dimensions in mm

SMC male header

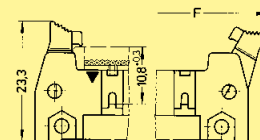
No. of contacts	A	C	D	E	F	G
6	26.9	22.86	12.45	2.54 x 2 = 5.08	36.9	40.3
10	32.0	27.94	17.53	2.54 x 4 = 10.16	42.0	45.4
14	37.1	33.02	22.61	2.54 x 6 = 15.24	47.1	50.4
16	39.6	35.56	25.15	2.54 x 7 = 17.78	49.6	53.0
20	44.7	40.64	30.23	2.54 x 9 = 22.86	54.7	58.1
24	49.8	45.72	35.91	2.54 x 11 = 27.94	59.8	63.2
26	52.3	48.26	37.85	2.54 x 12 = 30.48	62.3	65.7
30	57.7	53.34	43.83	2.54 x 14 = 35.56	68.2	68.6
34	62.5	58.42	48.01	2.54 x 16 = 40.64	72.5	75.8
40	70.1	66.04	55.63	2.54 x 19 = 48.26	80.1	83.5
50	82.8	78.74	68.33	2.54 x 24 = 60.96	92.8	96.2
60	95.5	91.44	81.03	2.54 x 29 = 73.66	105.5	108.9
64	100.6	96.52	86.11	2.54 x 31 = 78.74	110.6	113.9



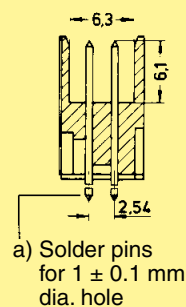
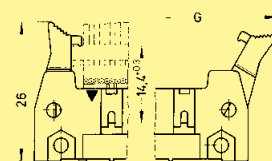
Marking No. 1 contact



Short levers

for use with female connector without strain relief clamp


Long levers

for use with female connector with strain relief clamp


Board drillings

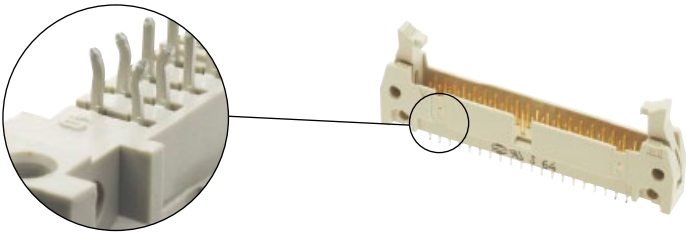
¹⁾ No polarization slot for 6, 10 or 14 way male header

²⁾ No polarization slot for 6 way male header

³⁾ Pitch tolerance: ± 0.1

Number of contacts

6-64



SMC male header with straight solder pins, kinked

Identification	No. of contacts	Part No.					
		Without levers		With short levers		With long levers	
SMC male header with straight solder pins, kinked Length: 2.9 mm	6	09 19 506	└ 024	09 19 506	└ 014	09 19 506	└ 004
	10	09 19 510	└ 024	09 19 510	└ 014	09 19 510	└ 004
	14	09 19 514	└ 024	09 19 514	└ 014	09 19 514	└ 004
	16	09 19 516	└ 024	09 19 516	└ 014	09 19 516	└ 004
	20	09 19 520	└ 024	09 19 520	└ 014	09 19 520	└ 004
	24	09 19 524	└ 024	09 19 524	└ 014	09 19 524	└ 004
	26	09 19 526	└ 024	09 19 526	└ 014	09 19 526	└ 004
	30	09 19 530	└ 024	09 19 530	└ 014	09 19 530	└ 004
	34	09 19 534	└ 024	09 19 534	└ 014	09 19 534	└ 004
	40	09 19 540	└ 024	09 19 540	└ 014	09 19 540	└ 004
	50	09 19 550	└ 024	09 19 550	└ 014	09 19 550	└ 004
	60	09 19 560	└ 024	09 19 560	└ 014	09 19 560	└ 004
	64	09 19 564	└ 024	09 19 564	└ 014	09 19 564	└ 004

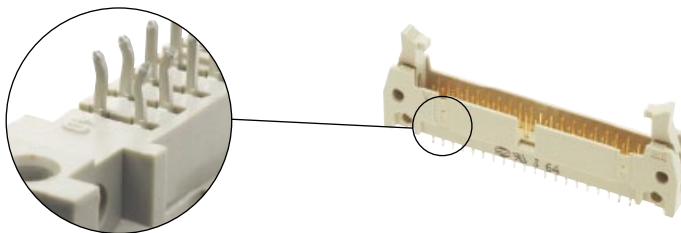
* Not normally kept in stock
For accessories see page 08.52
For dimensions see page 08.47

For performance level 3 please specify digit
For performance level 2 please specify digit
S4 = 0.76 µm (30 µinch) Au or PdNi equivalent



Number of contacts

6-64



SMC male header with straight solder pins, kinked

Identification

Drawing

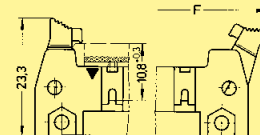
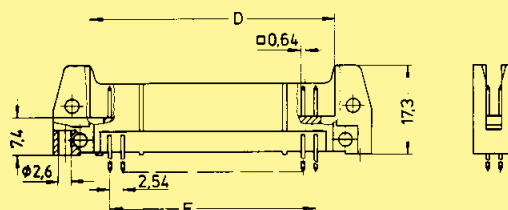
Dimensions in mm

SMC male header

No. of contacts	A	C	D	E	F	G
6	26.9	22.86	12.45	2.54 x 2 = 5.08	36.9	40.3
10	32.0	27.94	17.53	2.54 x 4 = 10.16	42.0	45.4
14	37.1	33.02	22.61	2.54 x 6 = 15.24	47.1	50.4
16	39.6	35.56	25.15	2.54 x 7 = 17.78	49.6	53.0
20	44.7	40.64	30.23	2.54 x 9 = 22.86	54.7	58.1
24	49.8	45.72	35.31	2.54 x 11 = 27.94	59.8	63.2
26	52.3	48.26	37.85	2.54 x 12 = 30.48	62.3	65.7
30	57.7	53.34	43.83	2.54 x 14 = 35.56	68.2	68.6
34	62.5	58.42	48.01	2.54 x 16 = 40.64	72.5	75.8
40	70.1	66.04	55.63	2.54 x 19 = 48.26	80.1	83.5
50	82.8	78.74	68.33	2.54 x 24 = 60.96	92.8	96.2
60	95.5	91.44	81.03	2.54 x 29 = 73.66	105.5	108.9
64	100.6	96.52	86.11	2.54 x 31 = 78.74	110.6	113.9

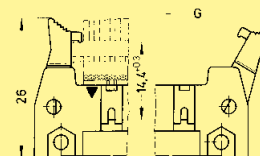
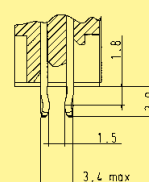
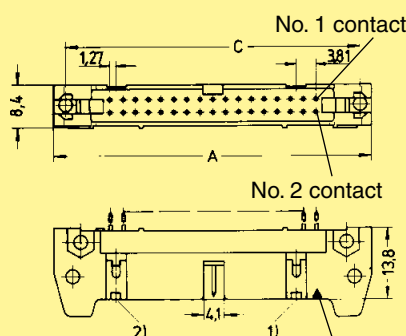
Short levers

for use with female connector without strain relief clamp



Long levers

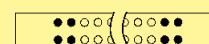
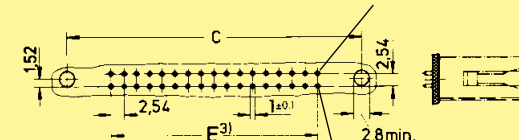
for use with female connector with strain relief clamp



Marking No. 1 contact

No. 1 contact

No. 2 contact



Board drillings

● Kinked contact: pcb thickness from 1.50 to 1.94 mm after Cu + Sn plating with non-remelted through holes $\varnothing$ 0.80 to $\varnothing$ 0.95 mm. Max. insertion force = 125 N. Min. retention force = 6 N.

○ Non-kinked contact: Solder pins for pcb connections $\varnothing$ 1 ± 0.1 mm as per IEC 60603-13.

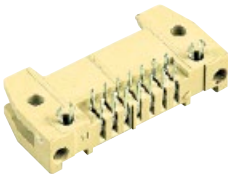
¹⁾ No polarization slot for 6, 10 or 14 way male header

²⁾ No polarization slot for 6 way male header

³⁾ Pitch tolerance: ± 0.1

Number of contacts

6-64



SMC male header with angled solder pins and board lock

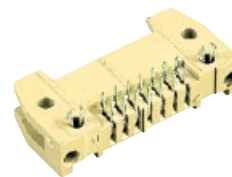
Identification	No. of contacts	Part No.					
		Without levers		With short levers		With long levers	
SMC male header with angled solder pins and pcb board lock Length: 2.9 mm for 1.6 mm pcb thickness To hold the connector on the pcb before the soldering process, two board locks have been added on the male header with angled solder pins.	6	09 19 506	└ 973*	09 19 506	└ 963*	09 19 506	└ 953*
	10	09 19 510	└ 973*	09 19 510	└ 963*	09 19 510	└ 953*
	14	09 19 514	└ 973*	09 19 514	└ 963*	09 19 514	└ 953*
	16	09 19 516	└ 973*	09 19 516	└ 963*	09 19 516	└ 953*
	20	09 19 520	└ 973*	09 19 520	└ 963*	09 19 520	└ 953*
	24	09 19 524	└ 973*	09 19 524	└ 963*	09 19 524	└ 953*
	26	09 19 526	└ 973*	09 19 526	└ 963*	09 19 526	└ 953*
	30	09 19 530	└ 973*	09 19 530	└ 963*	09 19 530	└ 953*
	34	09 19 534	└ 973*	09 19 534	└ 963*	09 19 534	└ 953*
	40	09 19 540	└ 973*	09 19 540	└ 963*	09 19 540	└ 953*
	50	09 19 550	└ 973*	09 19 550	└ 963*	09 19 550	└ 953*
	60	09 19 560	└ 973*	09 19 560	└ 963*	09 19 560	└ 953*
	64	09 19 564	└ 973*	09 19 564	└ 963*	09 19 564	└ 953*

* Not normally kept in stock

For performance level 3 please specify digit
For performance level 2 please specify digit
S4 = 0.76 µm (30 µinch) Au or PdNi equivalent



Number of contacts

6-64SMC male header with angled solder pins and board lock

Identification

Drawing

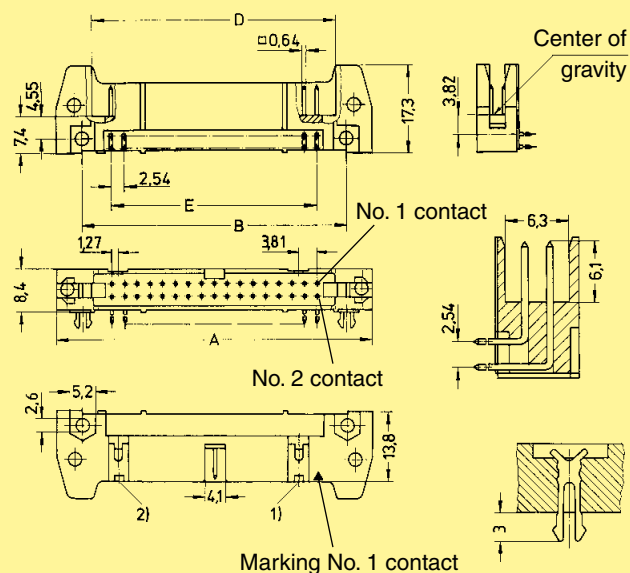
Dimensions in mm

SMC male header

No. of contacts	A	B	D	E	F	G
6	26.9	16.76	12.45	2.54 x 2 = 5.08	36.9	40.3
10	32.0	21.84	17.53	2.54 x 4 = 10.16	42.0	45.4
14	37.1	26.92	22.61	2.54 x 6 = 15.24	47.1	50.4
16	39.6	29.46	25.15	2.54 x 7 = 17.78	49.6	53.0
20	44.7	34.54	30.23	2.54 x 9 = 22.86	54.7	58.1
24	49.8	39.62	35.91	2.54 x 11 = 27.94	59.8	63.2
26	52.3	42.16	37.85	2.54 x 12 = 30.48	62.3	65.7
30	57.7	47.24	43.83	2.54 x 14 = 35.56	68.2	68.6
34	62.5	52.32	48.01	2.54 x 16 = 40.64	72.5	75.8
40	70.1	59.94	55.63	2.54 x 19 = 48.26	80.1	83.5
50	82.8	72.64	68.33	2.54 x 24 = 60.96	92.8	96.2
60	95.5	85.34	81.03	2.54 x 29 = 73.66	105.5	108.9
64	100.6	90.42	86.11	2.54 x 31 = 78.74	110.6	113.9

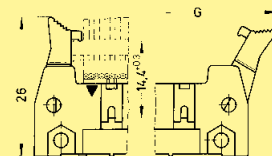
Short levers

for use with female connector without strain relief clamp

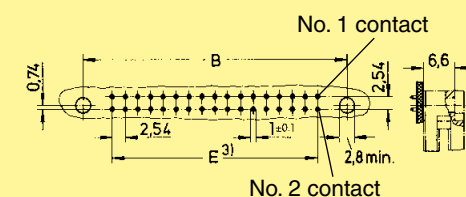


Long levers

for use with female connector with strain relief clamp



Board drillings



For accessories see page 08.52

¹⁾ No polarization slot for 6, 10 or 14 way male header

²⁾ No polarization slot for 6 way male header

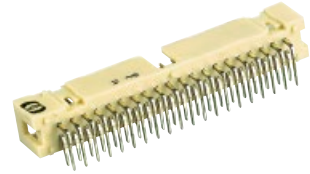
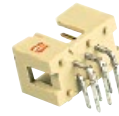
³⁾ Pitch tolerance: ± 0.1

Number of contacts

6-64



Tape & Reel packaging



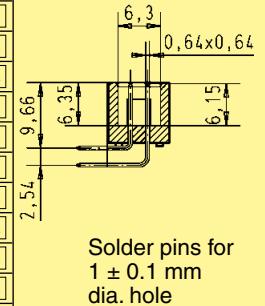
SMC low-profile male header, angled solder pins

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

SMC male header with angled solder pins
Length: 2.9 mm
Colour: Beige
Packaging: Carton

6	09 19 506	323
10	09 19 510	323
14	09 19 514	323
16	09 19 516	323
20	09 19 520	323
26	09 19 526	323
30	09 19 530	323
34	09 19 534	323
40	09 19 540	323
50	09 19 550	323
60	09 19 560	323
64	09 19 564	323

No. of contacts	A	B	E
6	15.2	12.78	2.54 x 2 = 5.08
10	20.3	17.86	2.54 x 4 = 10.16
14	25.4	22.94	2.54 x 6 = 15.24
16	27.9	25.48	2.54 x 7 = 17.78
20	33.0	30.56	2.54 x 9 = 22.86
26	40.6	38.18	2.54 x 12 = 30.48
30	45.72	43.26	2.54 x 14 = 35.56
34	50.8	48.34	2.54 x 16 = 40.64
40	58.4	55.96	2.54 x 19 = 48.26
50	71.3	68.66	2.54 x 24 = 60.96
60	84.0	81.36	2.54 x 29 = 73.66
64	89.1	86.44	2.54 x 31 = 78.74



Colour: Beige
Packaging: Tape & Reel
Vacuum plate for pick & place process

6	09 19 506	323 740
10	09 19 510	323 740
14	09 19 514	323 740
16	09 19 516	323 740
20	09 19 520	323 740
26	09 19 526	323 740
30	09 19 530	323 740
34	09 19 534	323 740
40	09 19 540	323 740

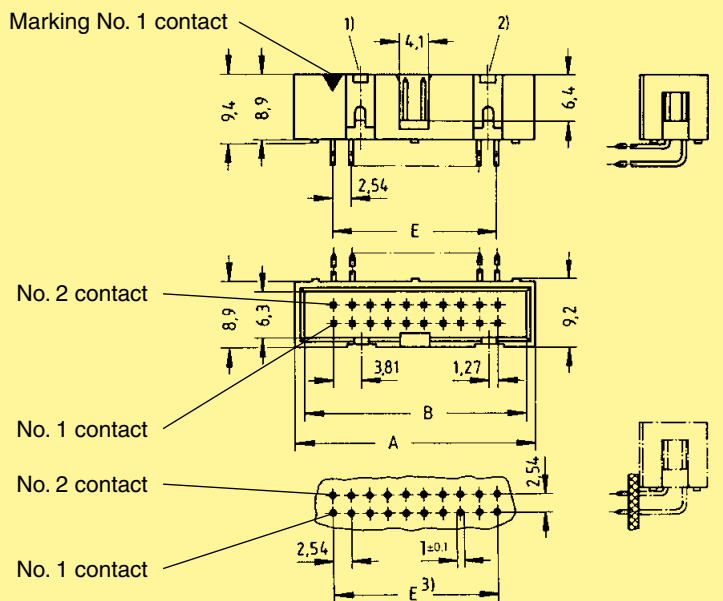
Colour: Black
Packaging: Tape & Reel
Vacuum plate for pick & place process

6	09 19 506	323 741
10	09 19 510	323 741
14	09 19 514	323 741
16	09 19 516	323 741
20	09 19 520	323 741
26	09 19 526	323 741
30	09 19 530	323 741
34	09 19 534	323 741
40	09 19 540	323 741

For performance level 3 please specify digit
For performance level 2 please specify digit
S4 = 0.76 µm (30 µinch) Au or PdNi equivalent



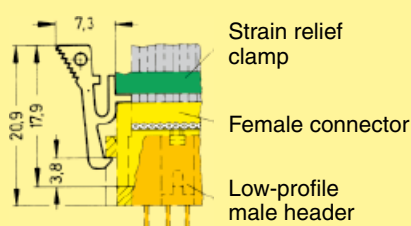
Marking No. 1 contact



Identification Part No. Drawing Dimensions in mm

Locking lever for female connector with strain relief in conjunction with low-profile male header

09 18 000 99054)



When the security of latching is required and space is a premium, these locking levers can be fitted onto the strain relief of the HARTING female connector.

* Not normally kept in stock

1) No polarization slot for 6, 10 or 14 way male header
2) No polarization slot for 6 way male header

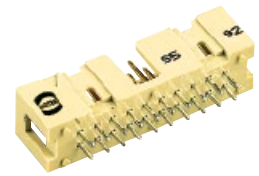
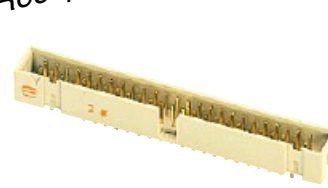
3) Pitch tolerance: ± 0.1
4) Order 2 per female connector

Number of contacts

6-64



Tape & Reel packaging



SMC low-profile male header, straight solder pins

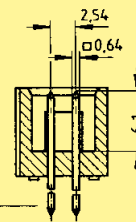
Identification No. of contacts Part No. Drawing Dimensions in mm

SMC male header with straight solder pins

Length: 2.9 mm
Colour: Beige
Packaging: Carton

6	09 19 506	324
10	09 19 510	324
14	09 19 514	324
16	09 19 516	324
20	09 19 520	324
26	09 19 526	324
30	09 19 530	324
34	09 19 534	324
40	09 19 540	324
50	09 19 550	324
60	09 19 560	324
64	09 19 564	324

No. of contacts	A	B	E
6	15.2	12.78	2.54 x 2 = 5.08
10	20.3	17.86	2.54 x 4 = 10.16
14	25.4	22.94	2.54 x 6 = 15.24
16	27.9	25.48	2.54 x 7 = 17.78
20	33.0	30.56	2.54 x 9 = 22.86
26	40.6	38.18	2.54 x 12 = 30.48
30	45.72	43.26	2.54 x 14 = 35.56
34	50.8	48.34	2.54 x 16 = 40.64
40	58.4	55.96	2.54 x 19 = 48.26
50	71.3	68.66	2.54 x 24 = 60.96
60	84.0	81.36	2.54 x 29 = 73.66
64	89.1	86.44	2.54 x 31 = 78.74



Solder pins for 1 ± 0.1 mm dia. hole

Colour: Beige
Packaging: Tape & Reel

Vacuum plate for pick & place process

6	09 19 506	324 740
10	09 19 510	324 740
14	09 19 514	324 740
16	09 19 516	324 740
20	09 19 520	324 740
26	09 19 526	324 740
30	09 19 530	324 740
34	09 19 534	324 740
40	09 19 540	324 740

Colour: Black
Packaging: Tape & Reel

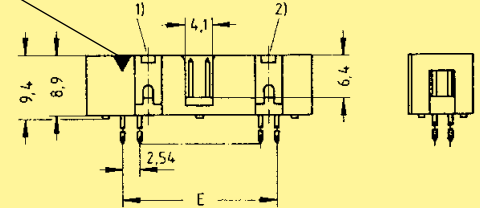
Vacuum plate for pick & place process

6	09 19 506	324 741
10	09 19 510	324 741
14	09 19 514	324 741
16	09 19 516	324 741
20	09 19 520	324 741
26	09 19 526	324 741
30	09 19 530	324 741
34	09 19 534	324 741
40	09 19 540	324 741

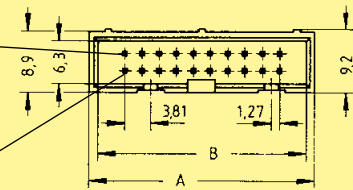
For performance level 3 please specify digit
For performance level 2 please specify digit
S4 = 0.76 µm (30 pinch) Au or PdNi equivalent



Marking No. 1 contact

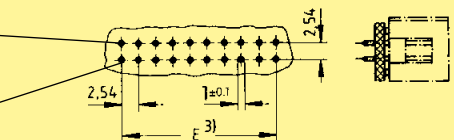


No. 2 contact



No. 1 contact

No. 2 contact



No. 1 contact

Identification

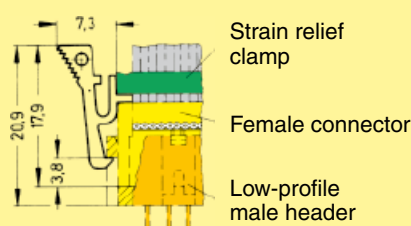
Part No.

Drawing

Dimensions in mm

Locking lever for female connector with strain relief in conjunction with low-profile male header

09 18 000 99054)



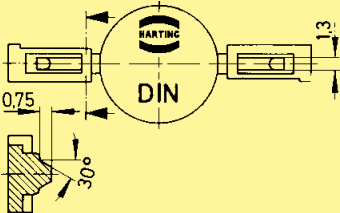
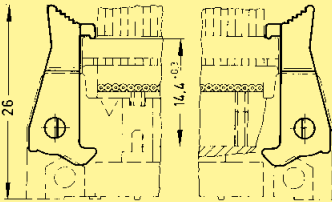
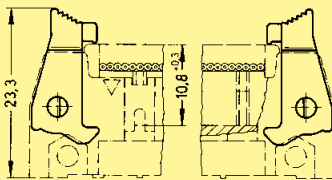
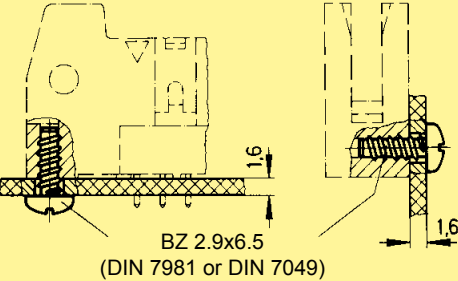
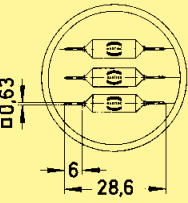
When the security of latching is required and space is a premium, these locking levers can be fitted onto the strain relief of the HARTING female connector.

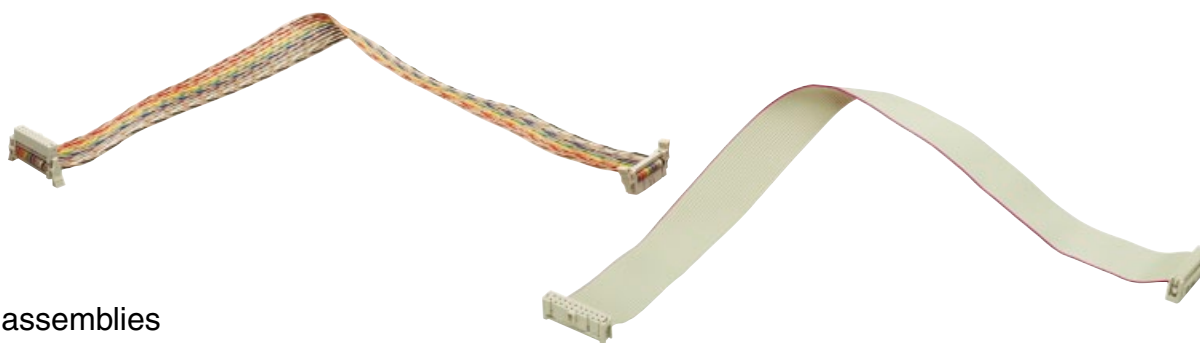
* Not normally kept in stock

1) No polarization slot for 6, 10 or 14 way male header
2) No polarization slot for 6 way male header

3) Pitch tolerance: ± 0.1
4) Order 2 per female connector

Accessories

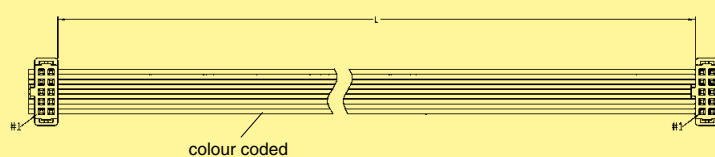
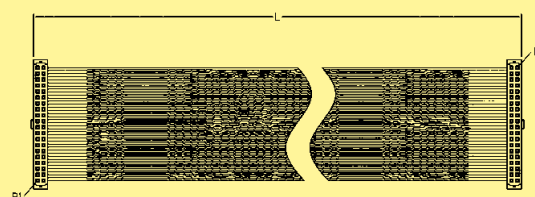
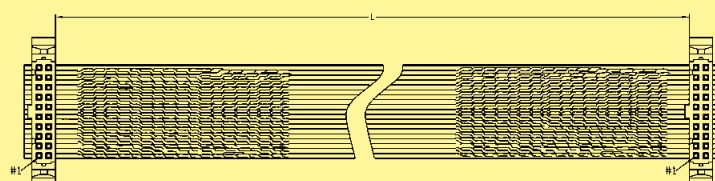
Identification	Part No.	Drawing	Dimensions in mm
Polarization key	09 18 500 9902 ¹⁾		
¹⁾ Part No. comprises 2 keys			
Locking lever (snaps into place, can be fitted whenever required)	Long: 09 19 000 9903 ²⁾ Short: 09 19 000 9904 ²⁾	Long  Short 	For use with female connector <u>with</u> strain relief clamp For use with female connector <u>without</u> strain relief clamp
²⁾ Order 2 per male header			
Fixing screws for 1.6 mm P.C. board	09 18 000 9906 ³⁾		For connectors with part numbers 09 18 5xx x9xx: screwing torque 0.2 Nm 09 19 5xx x9xx: screwing torque 0.4 – 0.5 Nm Screw material: Steel (Inox A2) Plating: Nickel
³⁾ Part No. comprises 50 pieces			
Coding system with loss of contact	Code pin 09 18 000 9901 ⁴⁾ Removal tool for male contacts 09 99 000 0133	To avoid cross-plugging adjacent connectors a coding system is required. A code pin is inserted into the appropriate cavity in the female connector. The corresponding male contact is removed by a special removal tool.  	
⁴⁾ Part No. comprises 6 code pins			



Identification

Drawing

Dimensions in mm



Cables for insulation displacement termination

Identification	No. of contacts	Part No.	Drawing	Dimensions in mm
Flat cable grey UL AWM-style 2651 CSA	6 9 10 14 15 16 18 20 24 25 26 28 30 34 37 40 50 60 64	09 18 006 700 09 18 009 700 09 18 010 700 09 18 014 700 09 18 015 700 09 18 016 700 09 18 018 700 09 18 020 700 09 18 024 700 09 18 025 700 09 18 026 700 09 18 028 700 09 18 030 700 09 18 034 700 09 18 037 700 09 18 040 700 09 18 050 700 09 18 060 700 09 18 064 700		Conductor material _____ Copper tinned Gauge _____ AWG 28/7 0.089 mm ² Voltage rating _____ 300 V _{r.m.s.} Current rating at 25 °C _____ 2.1 A max. Capacity unbalanced _____ 45.9 pF/m Impedance unbalanced _____ 105 Ω Propagation delay _____ 4.9 ns/m nominal Insulation material _____ PVC Temperature rating (operating) _____ -20 °C ... +105 °C Temperature rating (static) _____ -30 °C ... +105 °C Flammability rating _____ UL: VW-1 Insulation resistance _____ > 100 MΩ/km
Length per reel 30.48 m (100 feet) 100 m (328 feet)	1 4			
Flat cable grey non-halogenated UL style 21447 for VW-1	6 9 10 14 15 16 18 20 24 25 26 28 34 37 40 50 60 64	09 18 006 700 09 18 009 700 09 18 010 700 09 18 014 700 09 18 015 700 09 18 016 700 09 18 018 700 09 18 020 700 09 18 024 700 09 18 025 700 09 18 026 700 09 18 028 700 09 18 034 700 09 18 037 700 09 18 040 700 09 18 050 700 09 18 060 700 09 18 064 700		Conductor material _____ Copper tinned Gauge _____ AWG 28/7 0.089 mm ² Voltage rating _____ 300 V _{r.m.s.} Current rating _____ 1.3 A Capacity unbalanced _____ 42.6 pF/m at 1 MHz Impedance unbalanced _____ 100 Ω Inductance _____ 0.56 μH/m Propagation delay _____ 4.8 ns/m Insulation material _____ Non-halogenated flame retardent Polyolefin Temperature rating _____ -40 °C ... +80 °C Insulation resistance _____ 10000 MΩ/km
Length per reel 30.48 m (100 feet)	1			

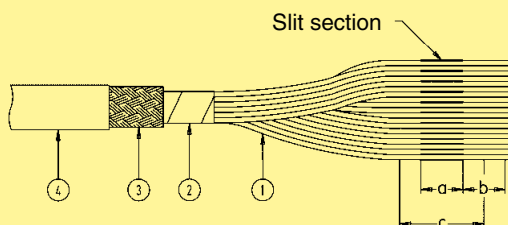
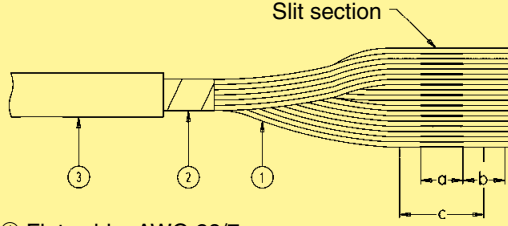
Important: always store reel vertically

Cables for insulation displacement termination

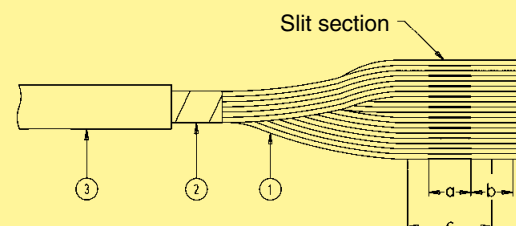
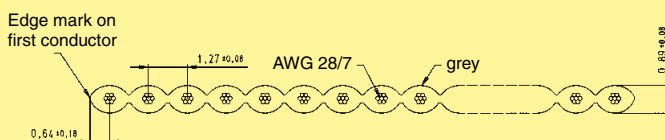
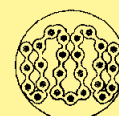
Identification	No. of contacts	Part No.	Drawing	Dimensions in mm
Flat cable colour coded Length per reel 30.48 m (100 feet) UL AWM-style 2651				Colour code sequence (in 10 steps) brown, red, orange, yellow, green, blue, violet, grey, white, black
	6	09 18 006 7005		
	9	09 18 009 7005		
	10	09 18 010 7005		
	14	09 18 014 7005		
	15	09 18 015 7005		
	16	09 18 016 7005		
	18	09 18 018 7005		
	20	09 18 020 7005		
	24	09 18 024 7005		
	25	09 18 025 7005		
	26	09 18 026 7005		
	28	09 18 028 7005		
	30	09 18 030 7005		
	34	09 18 034 7005		
	37	09 18 037 7005		
	40	09 18 040 7005		
	50	09 18 050 7005		
	60	09 18 060 7005		
	64	09 18 064 7005		
Flat cable twisted pair Length per reel 30.48 m (100 feet) UL AWM-style 20 130				
	10	09 18 010 7006		
	14	09 18 014 7006		
	16	09 18 016 7006		
	20	09 18 020 7006		
	26	09 18 026 7006		
	34	09 18 034 7006		
	40	09 18 040 7006		
	50	09 18 050 7006		
	60	09 18 060 7006		
	64	09 18 064 7006		
			Conductor material _____ Copper tinned Gauge _____ AWG 28/7 0.089 mm ² Voltage rating _____ 300 V _{r.m.s.} Conductor resistance _____ 221 mΩ/m Capacity unbalanced _____ 49 pF/m Impedance unbalanced _____ 105 Ω Signal delay _____ 5.2 ns/m Insulation material _____ PVC Temperature rating _____ -20 °C ... +105 °C Flammability rating _____ UL: VW 1 Insulation resistance _____ 10 ⁴ MΩ/km	

Important: always store reel vertically

Cables for insulation displacement termination

Identification	No. of contacts	Part No.	Drawing	Dimensions in mm
Round flat cable				ø max.
with screening (shielding) UL listed PLCC CL2 CSA certified AWM FT-1	9	09 18 009 70		6.86
	10	09 18 010 70		6.86
	14	09 18 014 70		7.37
	15	09 18 015 70		7.62
	16	09 18 016 70		7.87
	20	09 18 020 70		8.38
	25	09 18 025 70		9.14
	26	09 18 026 70		9.14
	34	09 18 034 70		10.16
	37	09 18 037 70		10.41
	40	09 18 040 70		10.92
	50	09 18 050 70		12.19
	60	09 18 060 70		13.21
	64	09 18 064 70		13.46
Length per reel				
30.48 m (100 feet)	07			
100 m (328 feet)	10 *			
without screening (shielding) UL listed PLCC CL2 CSA certified AWM FT-1	9	09 18 009 70		6.35
	10	09 18 010 70		6.35
	14	09 18 014 70		6.60
	15	09 18 015 70		6.86
	16	09 18 016 70		7.11
	20	09 18 020 70		7.62
	25	09 18 025 70		8.38
	26	09 18 026 70		8.38
	34	09 18 034 70		9.40
	37	09 18 037 70		9.65
	40	09 18 040 70		10.16
	50	09 18 050 70		11.43
	60	09 18 060 70		12.45
	64	09 18 064 70		12.70
Length per reel				
30.48 m (100 feet)	08			
100 m (328 feet)	11 *			

- ① Flat cable, AWG 28/7
② Aluminium / Polyester tape (spiral wrap)
③ 85 % minimum coverage tinned copper braid
④ Outer jacket: black PVC



- ① Flat cable, AWG 28/7
② Clear polyester
③ Outer jacket: black PVC

No. of contacts	a	b	c
9 to 26	19.05	19.05	38.10
34 to 64	38.10	19.05	57.15

Conductor material _____ Copper tinned
Gauge _____ AWG 28/7 0.089 mm²
Voltage rating _____ 300 V_{r.m.s.}
Conductor resistance _____ 225 mΩ/m
Capacity unbalanced _____ 78.7 pF/m
Impedance unbalanced _____ 75 Ω
Signal delay _____ 5.25 ns/m nom.
Insulation material _____ PVC
Temperature rating _____ -20 °C ... +105 °C
Flammability rating _____ UL: VW 1
Insulation resistance _____ 10⁴ MΩ/km

* Not normally kept in stock
Important: always store reels vertically

