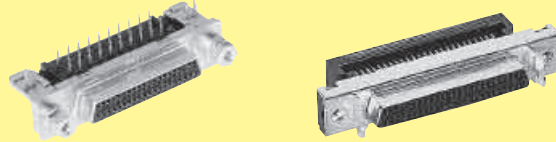


harmik[®] Miniature D connectors, 1.27 mm pitch

Page

I/O connectors **01.02**

Pin and socket



Technical characteristics	01.04
Connectors with straight solder pins	01.05
Connectors with right angled solder pins	01.07
Connectors with IDC flat cable termination	01.09
Connectors with IDC discrete wire termination	01.10

Bellows



Technical characteristics	01.12
Connectors with straight solder pins	01.13
Connectors with right angled solder pins	01.14
Connectors with IDC discrete wire termination	01.15

Hoods

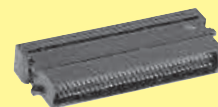


Technical characteristics	01.16
Hoods for pin and socket male connectors	01.17
Hoods for bellows male connectors	01.19

Accessories **01.20**

Intra cabinet connectors **01.21**

Pin and socket



Technical characteristics	01.22
Connectors with straight solder pins	01.23
Connectors with IDC flat cable termination	01.24

for economical and reliable connections

harmik

A comprehensive range of high density interface connectors based on two mating design concepts:

- Blade and fork contact in the Pin/Socket range.
- Leaf contact in the Bellows range.

Available in a various number of contacts with options for secure locking of mated connectors in accordance with the following international standards:

- Small Computer System Interface
SCSI-2
SCSI-2 wide
SCSI-3
- Intelligent Peripheral Interface
IPI
- High Performance Peripheral Interface
HIPPI
- High Speed Serial Interface
HSSI
- Media Independent Interface
MII
- Bi-directional Parallel Interface
IEEE – 1284-C
- EIA – TIA
232-E
- IEC
61 076-3-100
for bellows connectors
- IEC
61 076-3-101
for pin and socket connectors

UL recognised

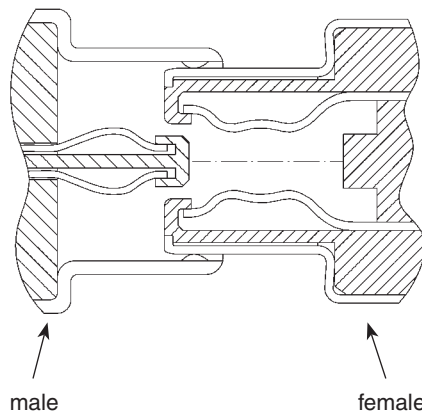
For customer specific applications we can design and manufacture solutions to match your requirement.

Sales department
HARTING components

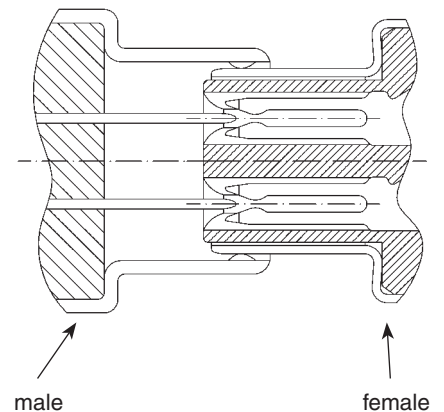


Certified according to EN ISO 9001
in design/development, production,
installation and servicing

Bellows
with leaf contact design



Pin and socket
with blade and fork contact design



Number of contacts 20, 26, 50, 68, 100

Pitch 1.27 mm

Working current 1 A

Working voltage 240 V ~

Test voltage $U_{r.m.s.}$ 750 V

Contact resistance $\leq 30 \text{ m}\Omega$

Insulation resistance $\geq 10^3 \text{ M}\Omega$

Temperature range -55 °C ... + 105 °C

Terminations

Solder pins Straight for pcb holes
min. $\varnothing 0.74 \text{ mm}$
Angled 90° for pcb holes
min. $\varnothing 0.74 \text{ mm}$

Insulation displacement Discrete wire
AWG 28 to AWG 30
max. section: 0.089 mm^2
min. section: 0.050 mm^2
Insulation \varnothing min. 0.50 mm
 \varnothing max. 0.88 mm
Flat cable
AWG 30 pitch 0.635 mm

Materials

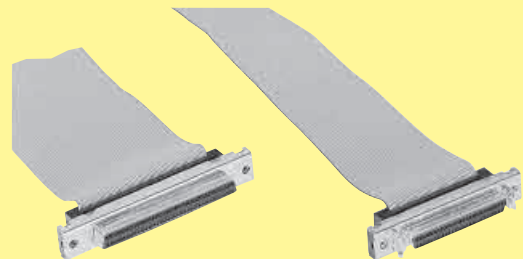
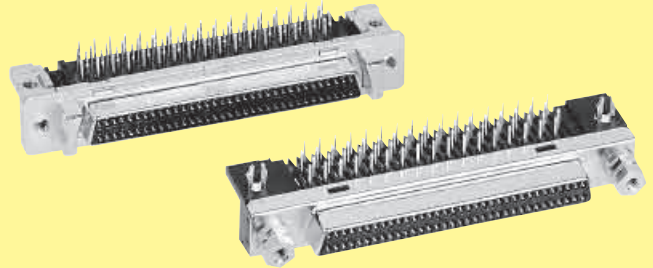
Moulding Thermoplastic resin
glass-fibre filled UL 94-V0

Contacts Copper alloy

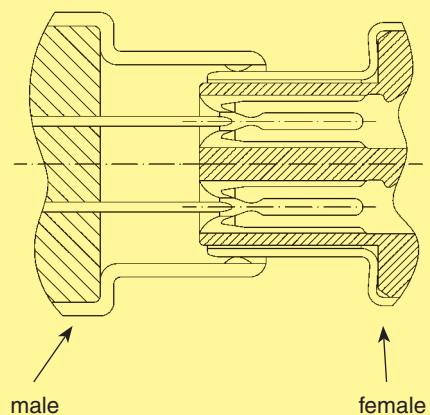
Contact surface

Contact zone Selectively gold plated
according to performance level

Metal shell Die cast zamac or stamped
steel, nickel-plated



Pin and socket
with blade and fork contact design



Number of contacts

20–68

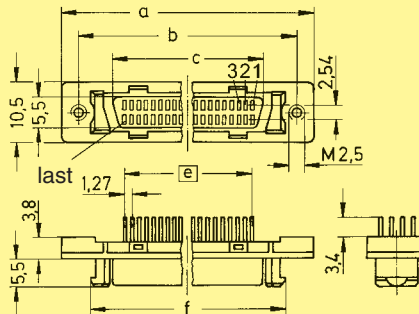


Female connectors, straight

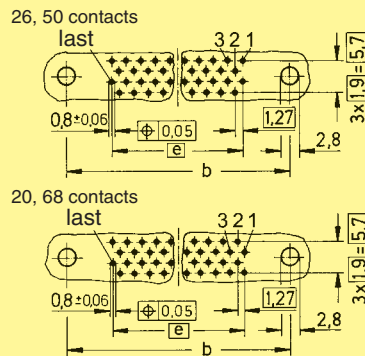
Identification	No. of contacts	Part No.
Female connectors with straight solder pins	20	60 01 020 5102
	26	60 01 026 5102
	50	60 01 050 5102
	68	60 01 068 5102

Dimensions

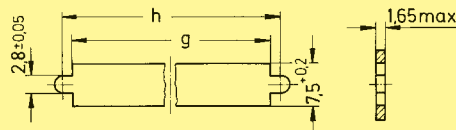
	a	b _{±0.1}	c	e	f	g	h
20	33.40	27.43	15.60	9 x 1.27 = 11.43	23.24	23.70	27.45
26	37.21	31.24	19.41	12 x 1.27 = 15.24	27.05	27.50	31.25
50	52.45	46.48	34.65	24 x 1.27 = 30.48	42.29	42.80	46.50
68	63.88	57.91	46.08	33 x 1.27 = 41.91	53.72	54.20	57.90



Board drillings



Panel cut out

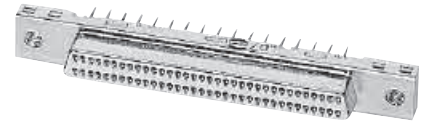


Dimensions in mm

har-mik

Number of contacts

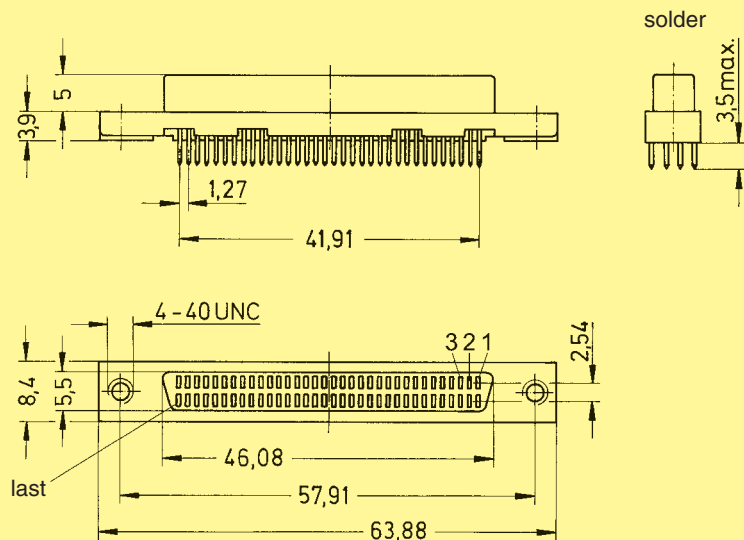
68



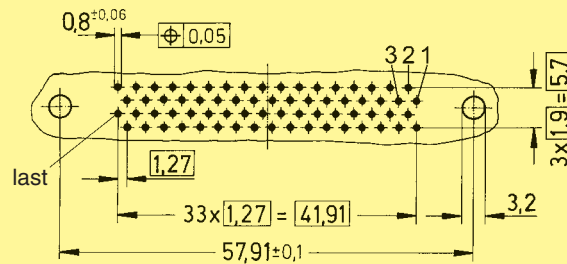
Female connectors, straight

Identification	No. of contacts	Part No.
Female connector with straight solder pins	68	60 02 068 5120

Dimensions



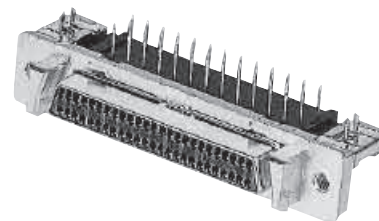
Board drillings
(Components side)



Dimensions in mm

Number of contacts

20–68



Female connectors, angled

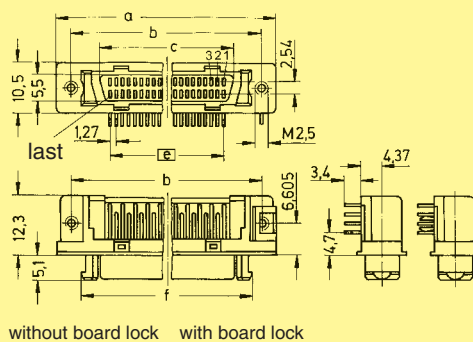
har-mik

Identification	No. of contacts	Part No.
Female connectors with angled solder pins	20	60 01 020 51 ...
	26	60 01 026 51 ...
	50	60 01 050 51 ...
	68	60 01 068 51 ...

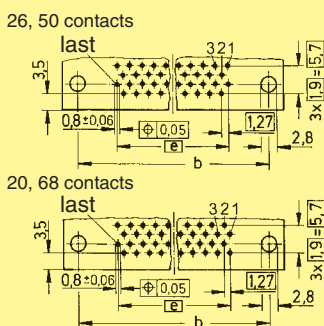
Panel fixing	Board fixing	
M 2.5	M 2.5	32
M 2.5	Board lock	40

Dimensions

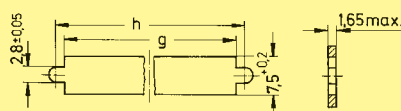
	a	b _{±0.1}	c	e	f	g	h
20	33.40	27.40	15.60	9 x 1.27 = 11.43	23.24	23.70	27.45
26	37.21	31.24	19.41	12 x 1.27 = 15.24	27.05	27.50	31.25
50	52.45	46.45	34.65	24 x 1.27 = 30.48	42.29	42.80	46.50
68	63.88	57.88	46.08	33 x 1.27 = 41.91	53.72	54.20	57.90



Board drillings



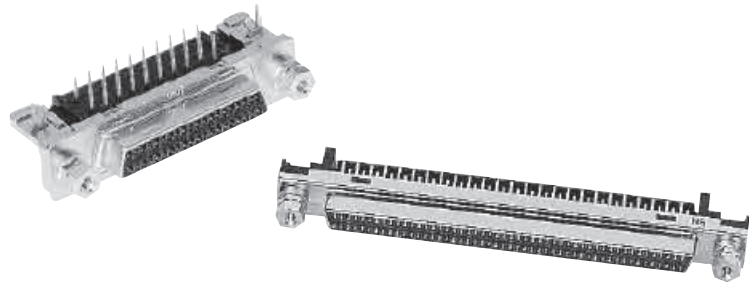
Panel cut out



Dimensions in mm

Number of contacts

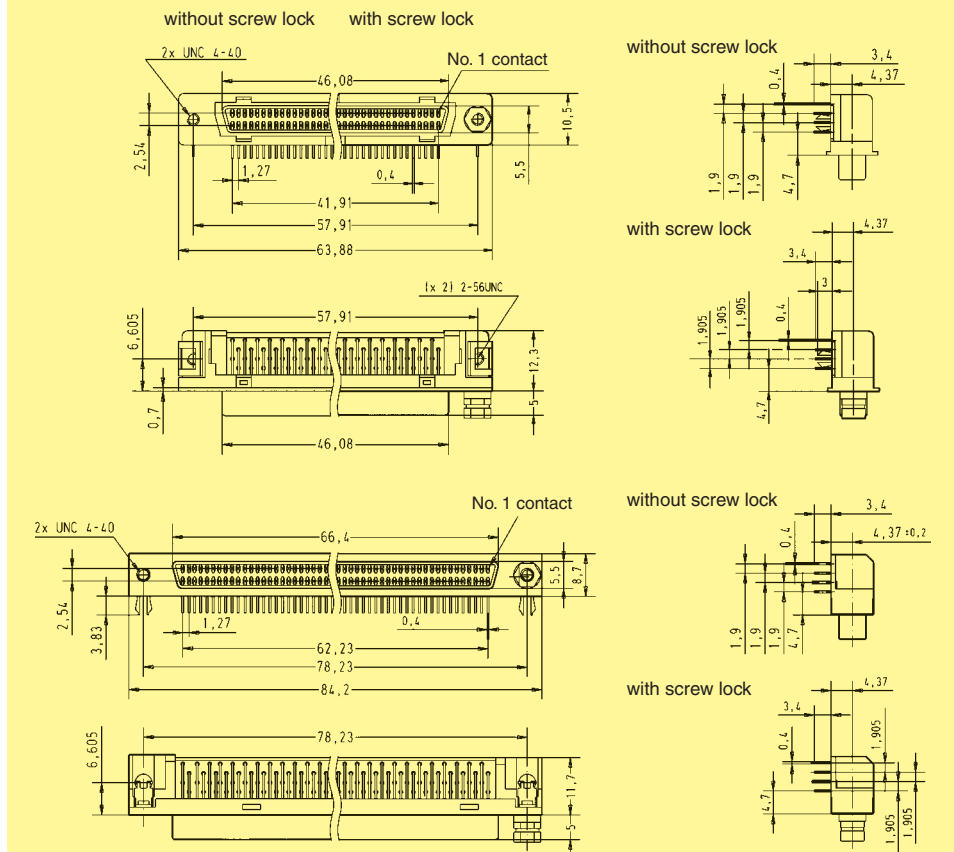
68-100



Female connectors, angled

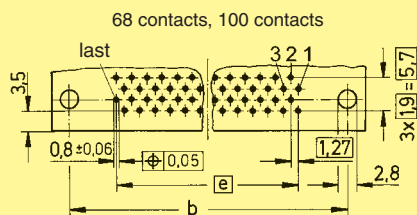
Identification	No. of contacts	Part No.
Female connectors with angled solder pins	68	60 02 068 51 ...
	100	60 02 100 51 ...
With female screw lock	41	
Without female screw lock	50	

Dimensions



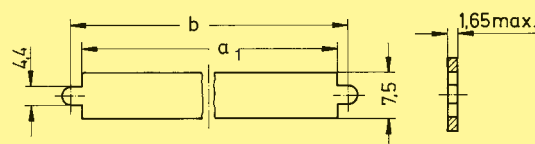
Board drillings

(Components side)



	a ₁	b	e
68	54.22	57.91	33 x 1.27 = 41.91
100	74.53	78.23	49 x 1.27 = 62.23

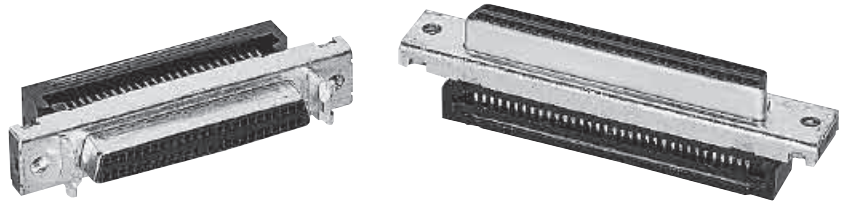
Panel cut out



Dimensions in mm

Number of contacts

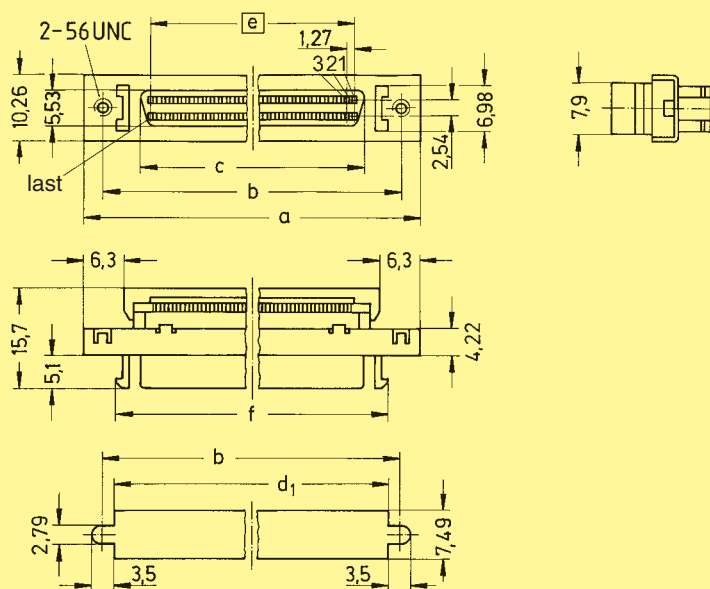
50-68



Female connectors for IDC flat cable, straight

Identification	No. of contacts	Part No.	
		with latch system	with screw lock system
Female panel connectors with insulation displacement termination for IDC flat cable pitch 0.635 mm AWG 30	50	60 04 050 5343	60 04 050 5344
	68	60 04 068 5343	60 04 068 5344

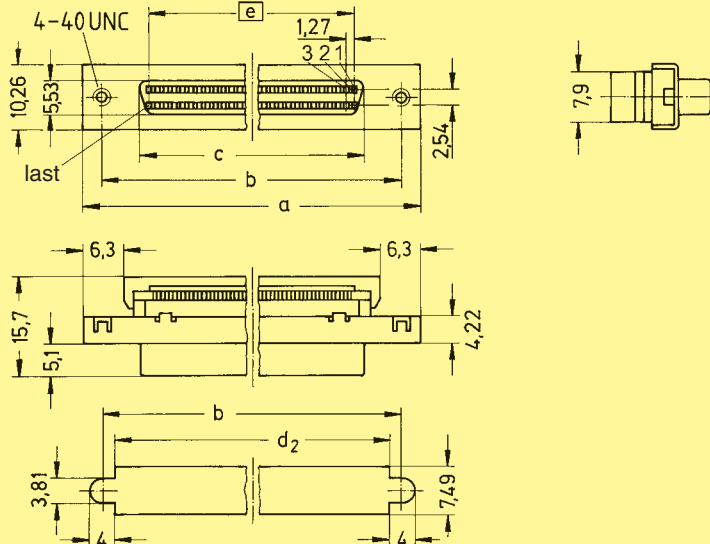
Dimensions for connectors with latch system



	a	b	c	d ₁	d ₂	e	f
50	52.45	46.48	34.70	42.80	42.30	30.48	42.30
68	63.88	57.91	46.13	54.23	53.72	41.91	53.72

Panel cut out

Dimensions for connectors with screw lock system



Panel cut out

Dimensions in mm

Number of contacts

20–100



Male connectors for IDC discrete wire, straight

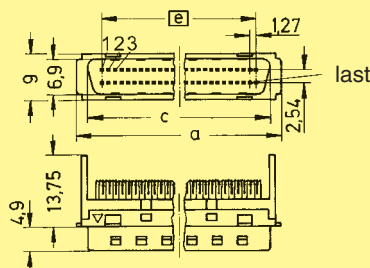
Identification	No. of contacts	Part No.
Male connectors with insulation displacement termination for discrete wire AWG 28/30	20	60 03 020 52 . . .
	26	60 03 026 52 . . .
	50	60 03 050 52 . . .
	68	60 03 068 52 . . .
	100	60 03 100 52 . . .
Insulation diameter (mm)		
	∅ = 0.50–0.65	00
	∅ = 0.65–0.80	10
	∅ = 0.80–0.88	20

Available sizes

	Part No.	∅	20	26	50	68	100
Male	60 03 . . . 5200	0.50–0.65	●	●	●	●	
	60 03 . . . 5210	0.65–0.80	●		●	●	●
	60 03 . . . 5220	0.80–0.88	●	●	●		

● = Available sizes

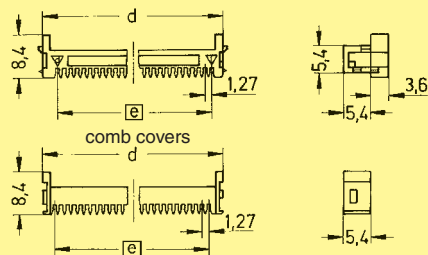
Dimensions



	a	c	d	e
20	21.25	17.00	16.75	11.43
26	25.06	20.81	20.56	15.24
50	40.30	36.05	35.80	30.48
68	51.73	47.48	47.23	41.91
100	72.05	67.80	67.55	62.23

Comb cover

(delivered with connectors)



Dimensions in mm



High quality contact surfaces require expertise and latest technological equipment.

Technology at HARTING preserves natural resources thus improving the environment

Number of contacts 20, 26, 28, 36, 50, 68

Pitch 1.27 mm

Working current 1 A

Working voltage 240 V ~

Test voltage $U_{r.m.s.}$ 750 V

Contact resistance $\leq 40 \text{ m}\Omega$

Insulation resistance $\geq 10^3 \text{ M}\Omega$

Temperature range -55 °C ... + 105 °C

Terminations

Solder pins Straight for pcb holes
min. $\varnothing 0.74 \text{ mm}$
Angled 90° for pcb holes
min. $\varnothing 0.74 \text{ mm}$

Insulation displacement AWG 28 to AWG 30
max. section: 0.089 mm^2
min. section: 0.050 mm^2
Insulation \varnothing min. 0.50 mm
 \varnothing max. 0.65 mm

Materials

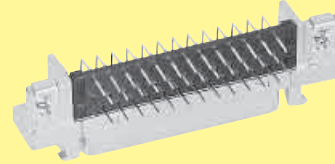
Moulding Thermoplastic resin
glass-fibre filled UL 94-V0

Contacts Copper alloy

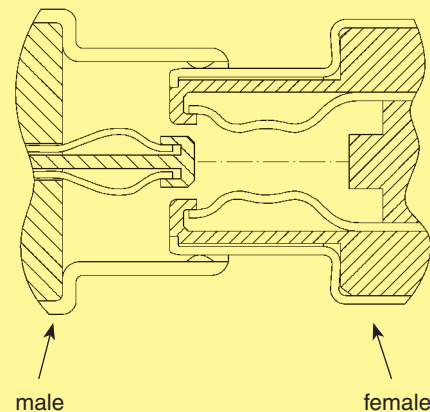
Contact surface

Contact zone Selectively gold plated
according to performance level

Metal shell Die cast zamac or stamped
steel, nickel-plated

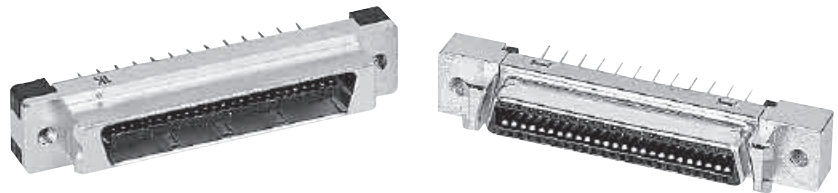


Bellows
with leaf contact design



Number of contacts

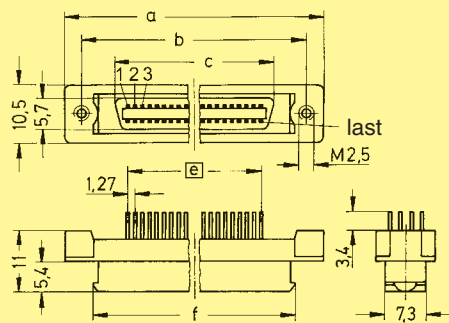
26-68



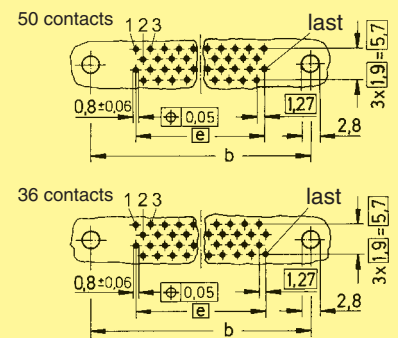
Male and female connectors, straight

Identification	No. of contacts	Part No.	
		Male connector	Female connector
Male and female connectors with straight solder pins	26		60 11 026 5102
	36	60 11 036 5202	60 11 036 5102
	50	60 11 050 5202	60 11 050 5102
	68		60 11 068 5102

Dimensions for male connectors

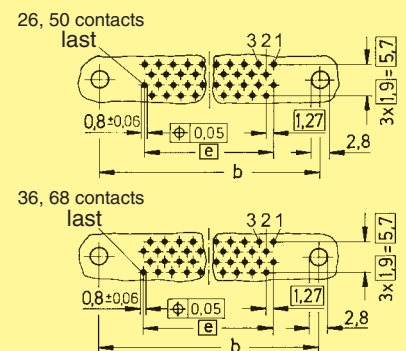
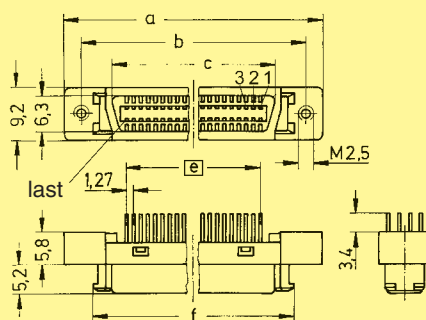


Board drillings

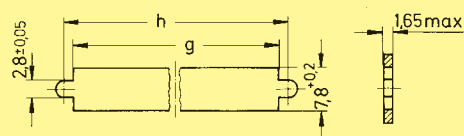


	a	b _{±0.1}	c	e	f	g	h
26	37.16	31.26	20.26	12 x 1.27 = 15.24	27.11	27.50	31.25
36	43.51	37.61	26.61	17 x 1.27 = 21.59	33.46	33.90	37.60
50	52.40	46.50	35.50	24 x 1.27 = 30.48	42.35	42.80	46.50
68	63.83	57.93	46.93	33 x 1.27 = 41.91	53.78	54.20	57.90

Dimensions for female connectors



Panel cut out

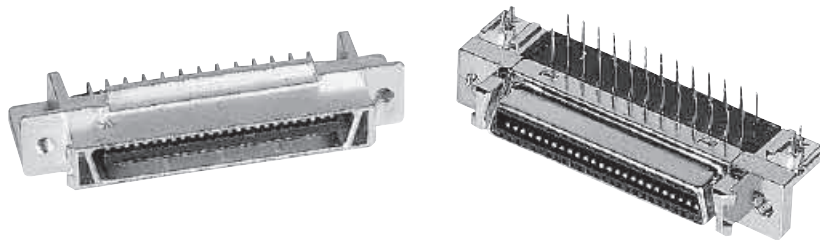


Dimensions in mm

har-mik

Number of contacts

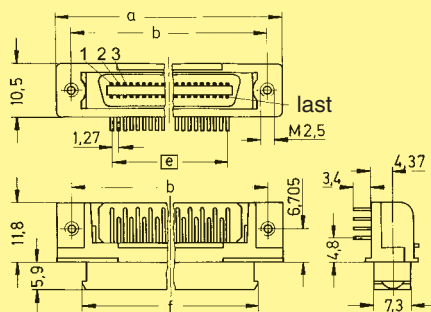
20-68



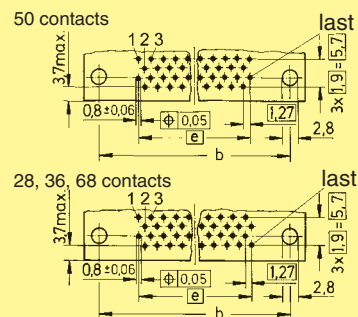
Male and female connectors, angled

Identification	No. of contacts	Part No.
Male and female connectors with angled solder pins		Male connector
		Female connector
	20	60 11 020 5232
	26	60 11 026 5232
	28	60 11 028 5232
	36	60 11 036 5232
	50	60 11 050 5232
68	60 11 068 5232	
Without board lock	32	
With board lock	40	

Dimensions for male connectors

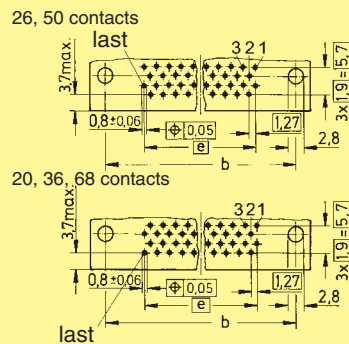
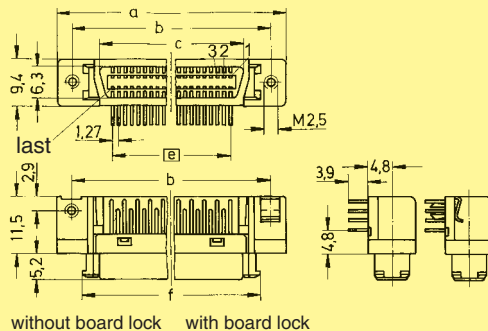


Board drillings

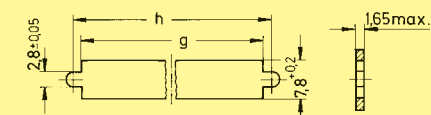


	a	b _{±0.1}	c	e	f	g	h
20	33.40	27.40	16.45	9 x 1.27 = 11.43	23.30	23.70	27.45
26	37.16	31.26	20.26	12 x 1.27 = 15.24	27.11	27.50	31.25
28	38.48	32.48	—	13 x 1.27 = 16.51	28.38	28.80	32.50
36	43.56	37.56	26.61	17 x 1.27 = 21.59	33.46	33.90	37.60
50	52.45	46.45	35.50	24 x 1.27 = 30.48	42.35	42.80	46.50
68	63.88	57.88	46.93	33 x 1.27 = 41.91	53.78	54.20	57.90

Dimensions for female connectors



Panel cut out



Dimensions in mm

Number of contacts

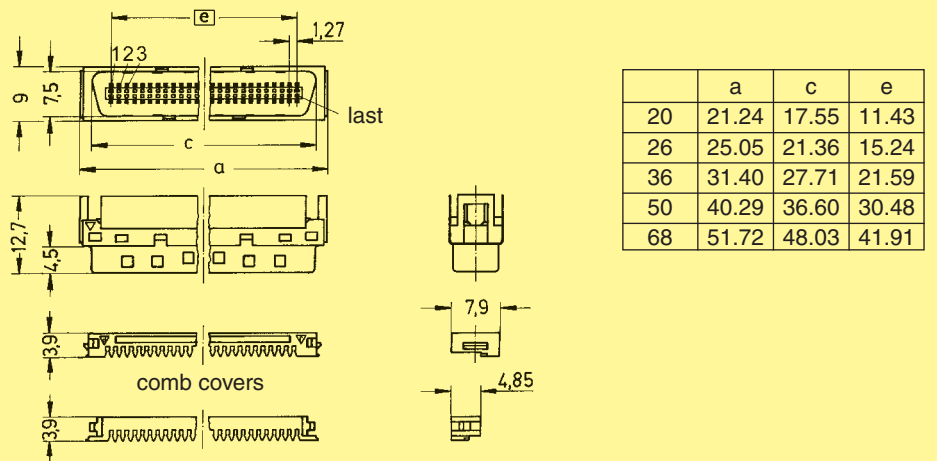
20–68



Male connectors for IDC discrete wire, straight

Identification	No. of contacts	Part No.
Male connectors with insulation displacement termination for discrete wire AWG 28/30 Insulation diameter (mm) $\varnothing = 0.50-0.65$		Male connector
	20	60 13 020 5200
	26	60 13 026 5200
	36	60 13 036 5200
	50	60 13 050 5200
	68	60 13 068 5200

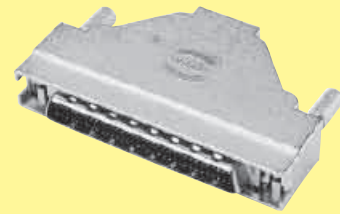
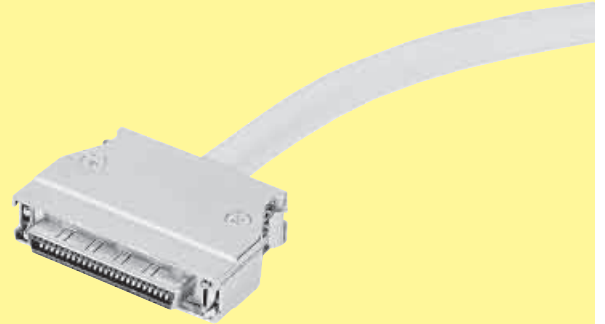
Dimensions for male connectors



Hoods for pin and socket male connectors

Number of contacts 20, 26, 36, 50, 68, 100

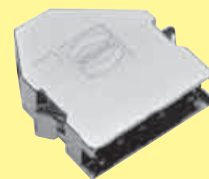
Surface Die cast zamac, nickel-plated
Thermoplastic resin, nickel-plated, steel insert

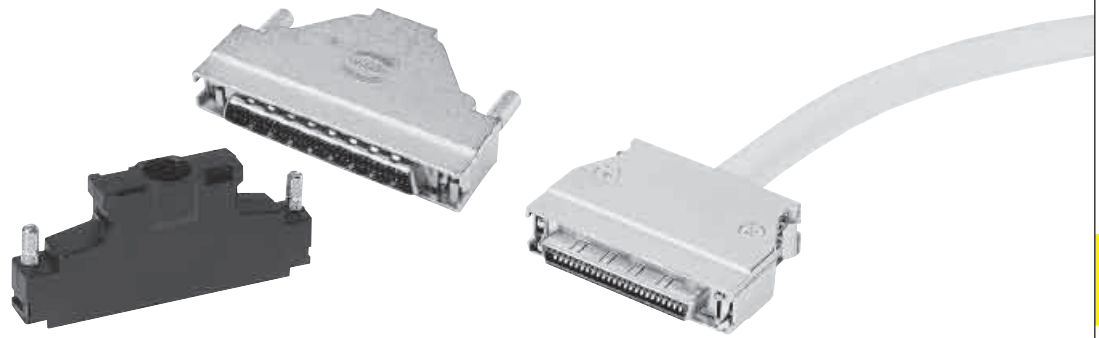


Hoods for bellows male connectors

Number of contacts 20, 26, 36, 50, 68

Surface Die cast zamac, nickel-plated
Thermoplastic resin, nickel-plated, steel insert





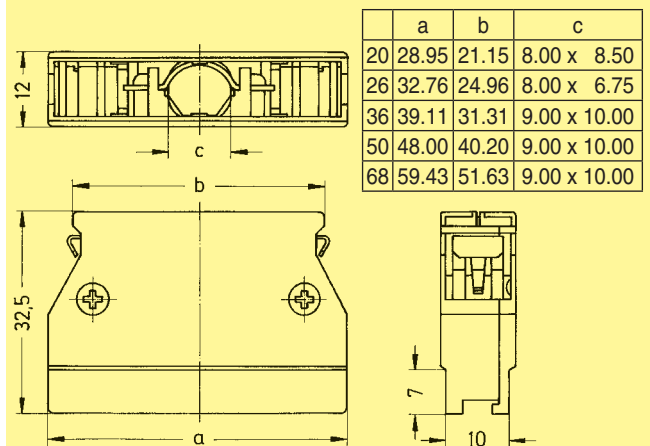
Top entry hoods

har-mik

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

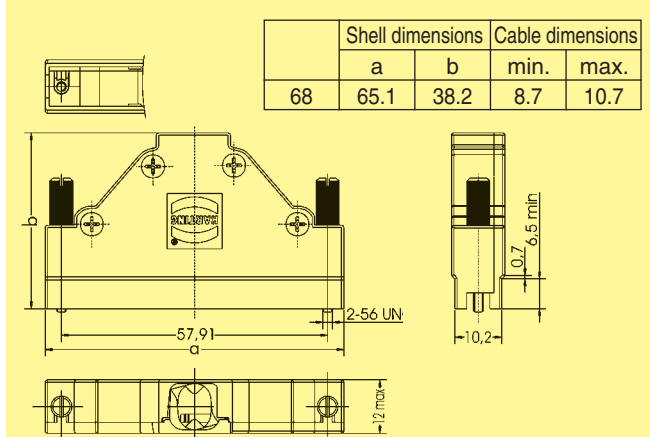
Metal hood
Large cable entry

20	60 03 020 0255
26	60 03 026 0255
36	60 03 036 0255
50	60 03 050 0255
68	60 03 068 0255



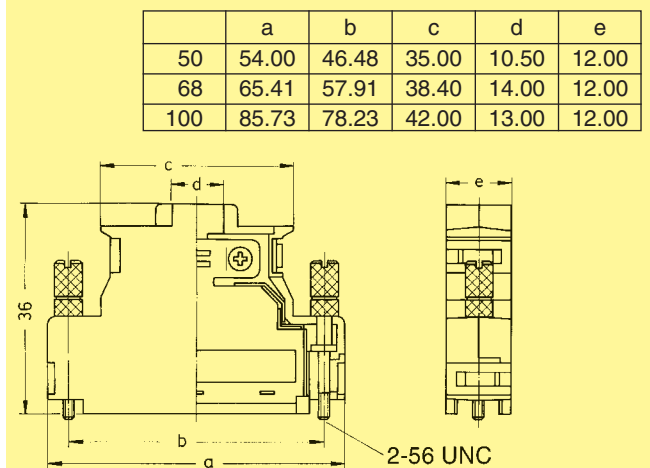
Metal hood
Top cable entry

68	60 03 068 0145
----	----------------



Plastic hood
with internal screen¹⁾

50	60 03 050 0143
68	60 03 068 0143
100	60 03 100 0143



For other size, please consult us.
¹⁾ Temperature range: - 55 °C ... + 60 °C



Side entry hoods

Identification

No. of contacts

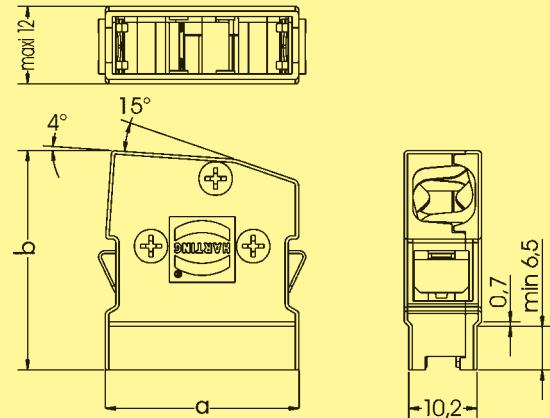
Part No.

Drawing

Dimensions in mm

Metal hood
Cable side entry

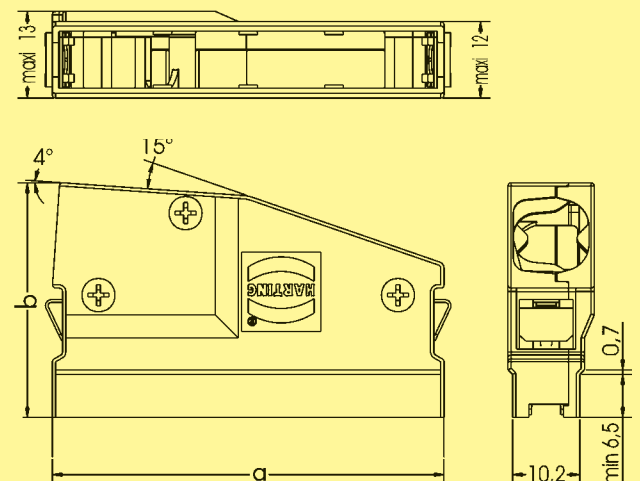
20 60 03 020 0555
26 60 03 026 0555
50 60 03 050 0555
68 60 03 068 0555



	Shell dimensions		Cable dimensions	
	a	b	min.	max.
20	29.0	32.9	6.2	8.0
26	32.8	32.9	6.5	8.5
50	48.0	35.6	8.3	10.3
68	59.4	35.6	8.7	10.7

Large cable side entry

68 60 03 068 0655



	Shell dimensions		Cable dimensions	
	a	b	min.	max.
68	59.4	35.6	10.0	12.0



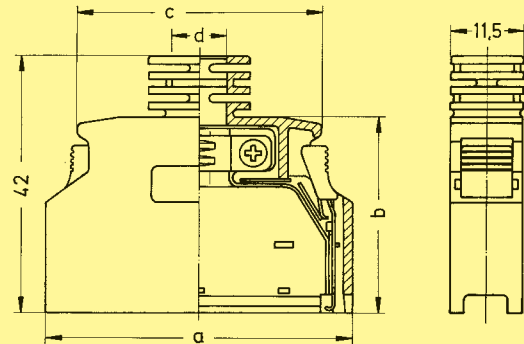
har-mik

Top or side entry hoods

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

Plastic hood with internal screen¹⁾

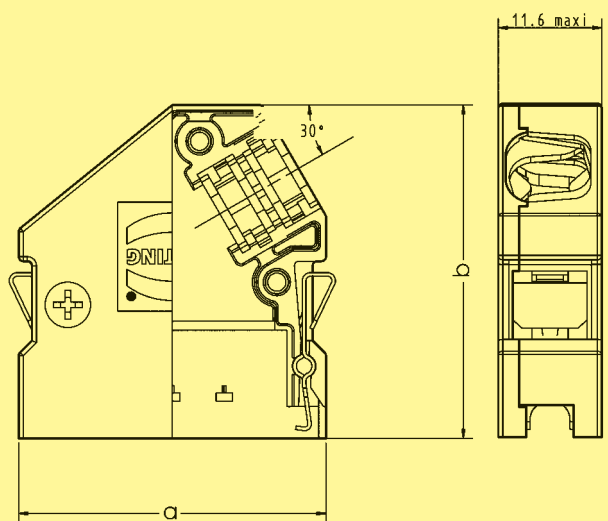
20	60 13 020 0153
26	60 13 026 0153
36	60 13 036 0153
50	60 13 050 0153
68	60 13 068 0153



	a	b	c	d
20	29.65	34.50	19.95	6.80
26	33.46	38.31	23.76	7.10
36	39.81	32.00	30.11	8.20
50	48.70	32.00	39.00	8.70
68	60.13	32.00	50.43	9.10

Metal hood
Cable side entry

26	60 13 026 0555
----	----------------



	Shell dimensions		Cable dimensions	
	a	b	min.	max.
26	33.8	36.8	6.5	8.5

¹⁾ Temperature range: - 55 °C ... + 60 °C



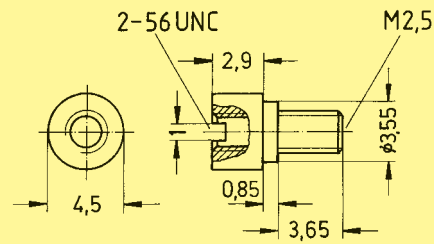
Female screw lock

Identification Part No. Drawing Dimensions in mm

Screw lock

Thread: M 2.5 / 2-56 UNC
Height: 2.9 mm

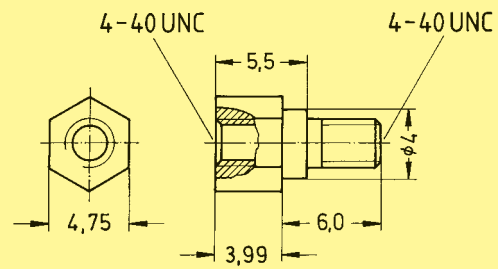
60 01 000 9013



Screw lock

Thread: 4-40 UNC / 4-40 UNC
Height: 3.99 mm

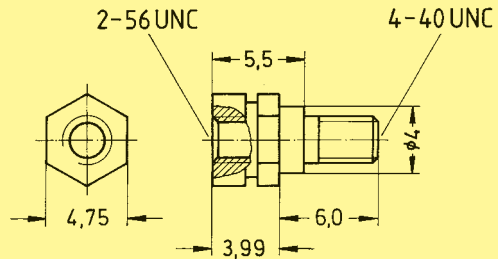
60 01 000 9018



Screw lock

Thread: 4-40 UNC / 2-56 UNC
Height: 3.99 mm

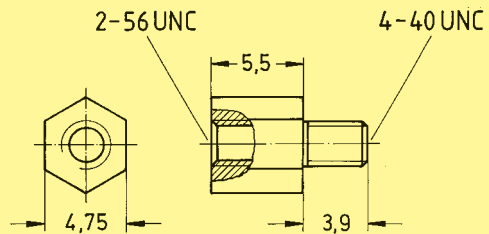
60 01 000 9019



Screw lock

Thread: 4-40 UNC / 2-56 UNC
Height: 5.5 mm

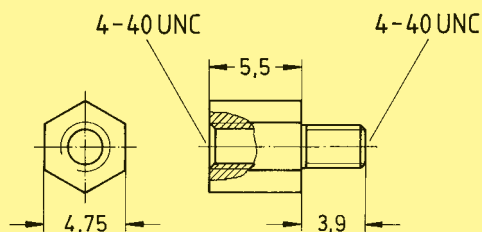
60 01 000 9020



Screw lock

Thread: 4-40 UNC / 4-40 UNC
Height: 5.5 mm

60 01 000 9021



for economical and reliable connections

A comprehensive range of high density intra cabinet connectors based on blade and fork contacts.

Available in a various number of contacts according to the following international standards and applications:

- Small Computer System Interface
SCSI-2
SCSI-2 wide
SCSI-3

- Internal Bus extension through "Daisy chain" inter-linking via 0.635 mm pitch flat cable. The 4-point design of the IDC contact provides accurate and reliable termination even with teflon cable.

UL recognised

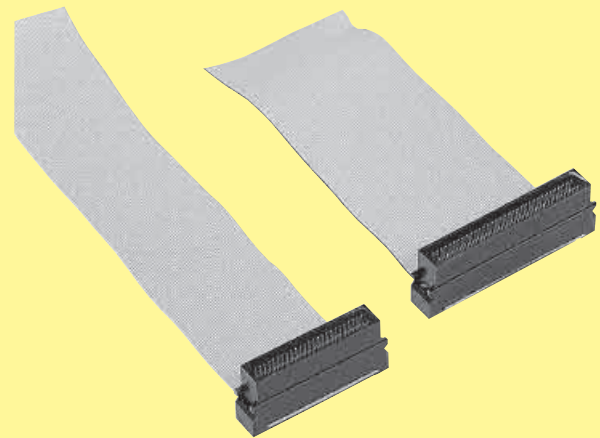
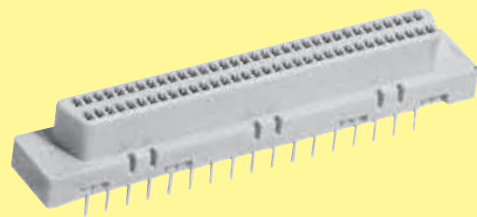
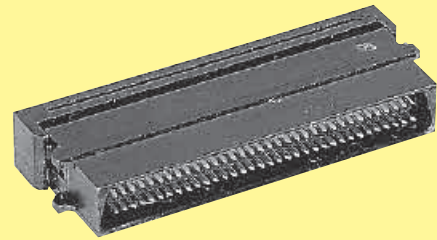
For customer specific applications we can design and manufacture solutions to match your requirement.

Sales department
HARTING components



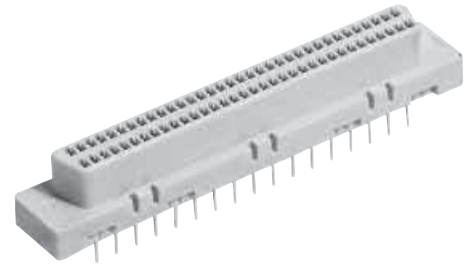
Certified according to EN ISO 9001
in design/development, production,
installation and servicing

Pitch	1.27 mm
Working current	
pcb connector	1 A
Flat cable connector	0.5 A
Working voltage	
pcb connector	240 V ~
Flat cable connector	100 V ~
Test voltage $U_{r.m.s.}$	
pcb connector	750 V
Flat cable connector	500 V
Contact resistance	$\leq 25 \text{ m}\Omega$
Insulation resistance	$\geq 10^3 \text{ M}\Omega$
Temperature range	-55 °C ... + 105 °C
Terminations	
Solder pins	Straight for pcb holes min. $\varnothing 0.74 \text{ mm}$
Insulation displacement	Flat cable AWG 30 pitch 0.635 mm
Materials	
Moulding	Thermoplastic resin glass-fibre filled UL 94-V0
Contacts pcb connector Flat cable connector	Copper alloy Nickel
Contact surface	
Contact zone	Selectively gold plated according to performance level



Number of contacts

68

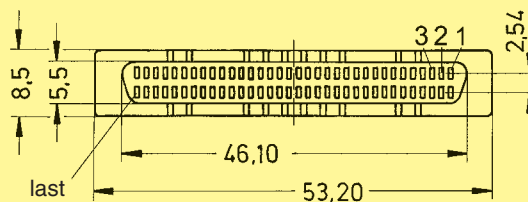
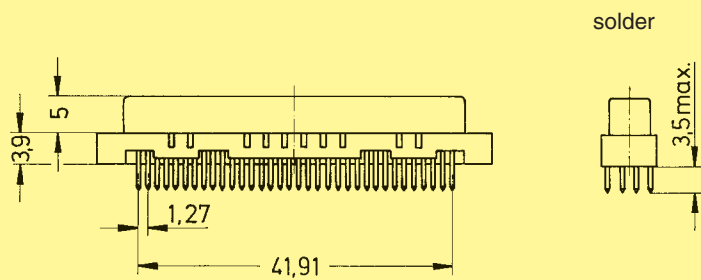


Female connectors, straight

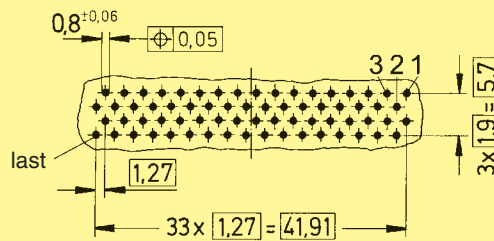
har-mik

Identification	No. of contacts	Part No.
Female connector with straight solder pins	68	60 05 068 5100

Dimensions

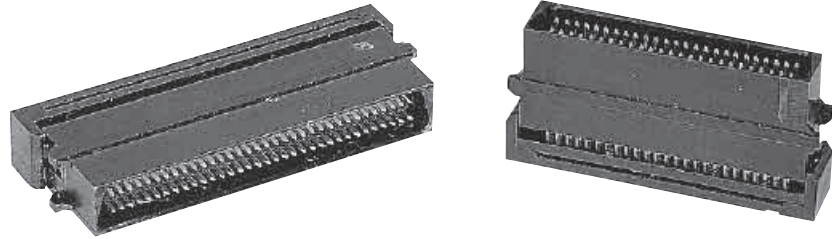


Board drillings
(Components side)



Number of contacts

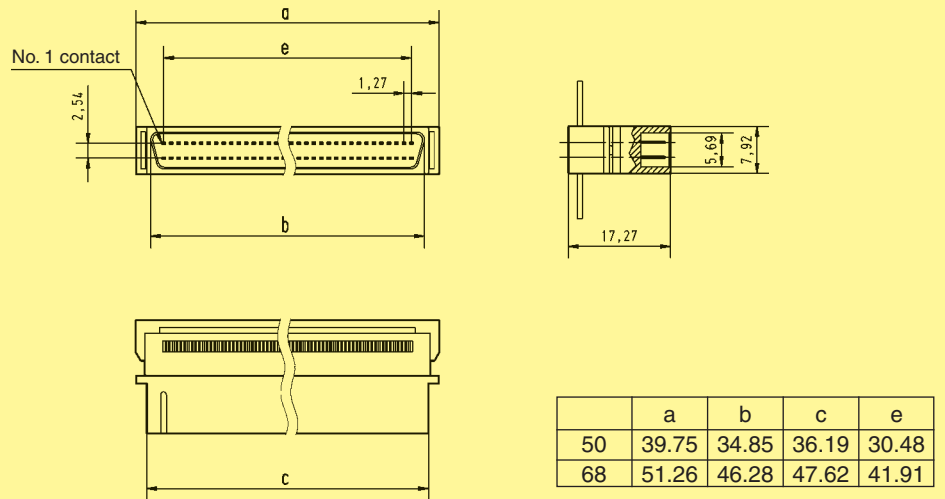
50–68



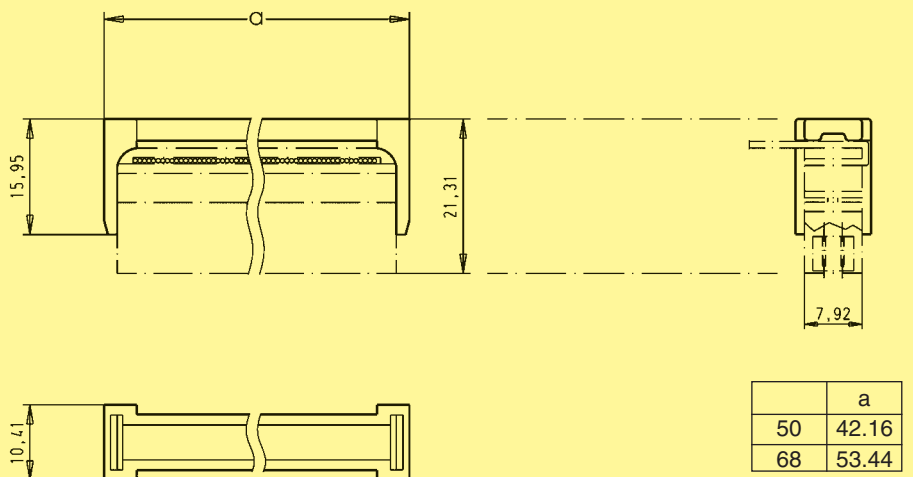
Male connectors for IDC flat cable, straight

Identification	No. of contacts	Part No.
Male connectors with insulation displacement termination for IDC flat cable pitch 0.635 mm AWG 30 Strain relief order separately		Male connector
		Strain relief
	50	60 06 050 5440
	68	60 06 068 5440

Dimensions



Strain relief



Dimensions in mm