DXM (1.27MM PITCH) SERIES HIGH-DENSITY I/O CONNECTOR

General

DXM series high-density I/O connectors with bellow contacts are perfect for tomorrow's miniaturized electronic devices. This new 1.27mm (0.050") interconnect design ensures positive locking, effortless coupling, terminal protection and EMI reduction in a miniaturized and rugged package. DXM series offer you one of the

most varied and complete lines of High-Density connectors in the world, i.e. IDC and Solder for the plug and right angle dip, straight dip, IDC and SMT for the receptacle. Available in 14, 20, 26, 36, 50, 68, 80, 100 and 110 way.



Features

- 1. 1.27mm (0.050") contact spacing conserves valuable board space and permits ultra-high density designs.
- 2. Bellow contacts create smooth and precise mating and unmating.
- 3. Unique shell design assures first make/last break grounding and overall noise protection.
- 4. IDC termination allows quick and low cost termination to AWG #28 wires.
- 5. Backshell and receptacle shell are made of diecast zinc alloy or stainless steel to reduce the

penetration of external EMI noise.

- 6. Ferrite added to DX Right Angle Dip Type for EMI Protection is available.
- Overmold backshell provided for ESD protection is available in 'One-Touch' locking and 'Screw' locking.
- 8. Termination methods are available in IDC, Soldering, Right Angle Dip, Straight Dip and SMT.

Application

Office Autmation, Computers, Measurement, Communication and Control Equipment, Factory Automation, Home Automation and other commercial applications needing high density interconnections.

Specifications

Items	Standard value
Current capacity	0.5A
Rated voltage	AC125V
Insulation resistance	250M Ω or more at DC100V
Contact resistance	35m Ω or less at DC100mA
Withstanding voltage	AC 300Vr.m.s. for 1 minute

DXM Series Variations

One-touch lock type (14, 20, 26, 36, 50, 68 pins)

Plug cover Plug **Receptacle** 2.1 IDC type 1.1 Over mold cover type 3.1 Right angle dip Board screw on type 3.2 Right angle dip Board lock pin harpoon type adalatichilitie 3.3 Right angle dip Board lock pin round type (round type) MALLELELEVILLA 5.1 Straight dip type 6.1 IDC type (68 pins)

•Screw lock type (68, 80, 100, 110 pins)

Overmold cover type (100, 110 pins)

Plug cover









Die cast cover (68, 80, 100 pins)

Plug cover



1. One Touch Lock Plug Cover

Ordering Information



- 1) Series number: DX30M
- 2) No. of pins: 14, 20, 26, 36, 50, 68
- 3) Cover case type

CV: Over mold cover case

Material Treatment

Item	Material	Remarks
Overmold cover case	Synthetic resin, Stainlless	Light beige

1.1 Overmold Cover



General List of Engagement Combinations

Cover case and plug unit	Receptacle		
	Right angle type	Straight type	IDC type
DX30M-14-CV (10) + DX30AM-14P	DX10M-14S (E), DX10GM-14SE	DX20M-14S	—
DX30M-20-CV (10) + DX30AM-20P	DX10M-20S (E), DX10GM-20SE	DX20M-20S	—
DX30M-26-CV (10) + DX30AM-26P	DX10M-26S (E), DX10GM-26SE	DX20M-26S	—
DX30M-36-CV (10) + DX30AM-36P	DX10M-36S (E), DX10GM-36SE	DX20M-36S	DX33AM-36S
DX30M-50-CV (10) + DX30AM-50P	DX10M-50S (E), DX10GM-50SE	DX20M-50S	DX33AM-50S
DX30M-68-CV (10) + DX30AM-68P	DX10M-68S (E), DX10GM-68SE	DX20M-68S	DX33AM-68S

2. Plug Unit (Interchangeable One Touch-Screw Lock Type)

Ordering Information



- 1) Series No.: DX--M
- 2) Wiring style 30: Discrete cable IDC
- (for fine wire use)
- 3) Applicable wire A: AWG#28
 - (Discrete cable press-fit type)
- 4) No. of pins: 14, 20, 26, 36, 50, 68, 80, 100, 110
- 5) Mating type P: Plug

Material Treatment

Item	Material	Remarks
Shell	Steel	Nickel plating
Insulator	PBT	Black (UL94V-0)
Male terminal	Copper alloy	Selective gold plating

Applicable

	Interface cable	
	Discrete cable fine wire type	
Conductor size	AGW#28	
Conductor composition	7/0.127	
o.d. of insulator	0.58	0.62
Cable style	UL20276 and UL2789	UL2990

2.1 Discrete Cable IDC Type (for Fine Wire)



3. One Touch Lock, Receptacle Right Angle Type

Ordering Information



- 1) Series No.: DX--M
- 2) Wiring style 10: Right angle type
- 3) Lock style (one touch lock type)
 - Blank : (Receptacle case material: zinc alloy die cast)
 - G : (Receptacle case material: steel)

3.1 Board Screw on Type

- 4) No. of pins: 14, 20, 26, 36, 50, 68
- 5) Mating type S: Receptacle
- Board-fitting type
 Blank : Screw on type
 E : Lock pin type
- 7) Individual specifications
- (50) :Dip portion gold plated

Material Treatment

Item	Material	Remarks
Receptacle case	Zinc alloy die cast or steel	Nickel plating
Shell	Steel	Nickel plating
Insulators	PBT	Black (UL94V-0)
Female terminal	Copper alloy	Selective gold plating



3.2 Board Lock Pin Harpoon Type



3.3 Board Lock Pin Round Type



PCB Layout (Recommended board thickness:1.6mm)



Panel-Fitting Dimensional Drawing (Recommended panel thickness:max. 1.6mm)



	U	nit: mm
No. of pin	А	В
14	23.64	19.99
20	27.45	23.80
26	31.26	27.60
36	37.61	33.90
50	46.50	42.80
68	57.93	54.23

5. One Touch Lock, Receptacle Straight Type

Ordering Information



- 1) Series number: DX-M
- 2) Wiring style
- 20: Straight dip
- 3) Lock style
 - Blank: One Touch Lock Type

5.1 Receptacle Straight Type

- 4) Number of positions: 14, 20, 26, 36, 50, 68
- 5) Type of aperture S: Receptacle connector
- 6) Individual specifications
 (50): Dip portion gold plated

Material Treatment

Item	Material	Remarks
Receptacle case	Zinc alloy die cast	Nickel plating
Shell	Steel	Nickel plating
Insulators	PBT resin	Black (UL94V-0)
Female terminal	Copper alloy	Selective gold plating



\$0.7+t

① Contact No.1

② Contact No.2

③ Contact No.3

Unit: mm

А

37.61 33.90

46.50 42.80

57.93 54.23

В

④ Contact No.(N-2)

Contact No.(N-1)
 Contact No.(N)

*N: Numbers of Pin

1.27

No. of pin

14

26

68

(14, 26, 50 pins)

PCB Layout (Recommended board thickness:1.6mm)



21.59 37.61

41.91 57.93

Panel-Fitting Dimensional Drawing (Recommended panel thickness:max. 1.6mm)



	U	nit: mm
No. of pin	А	В
14	23.64	19.99
20	27.45	23.8
26	31.26	27.6
36	37.61	33.9
50	46.50	42.8
68	57.93	54.23

36

68

6. One Touch Lock Receptacle Flat Ribbon Cable Type

Ordering Information



- 1) Series No.: DX--M
- Connector style
 33: Flat IDC type (for ribbon cable use)
 Applicable cable
- A: AWG#28

4) No. of pins 36, 50, 68

- 5) Mating type S: Receptacle
- 6) Individual specifications
 (50):Dip portion gold plated

Material Treatment

Item	Material	Remarks
Receptacle case	Zinc alloy die cast	Nickel plating
Shell	Steel	Nickel plating
Insulators	PBT resin	Black (UL94V-0)
Female terminal	Copper alloy	Selective gold plating

6.1 Receptacle, Flat Ribbon Cable Type



Panel-Fitting Dimensional Drawing (Recommended panel thickness:max. 1.6mm)



	U	nit: mm
No. of pin	А	В
36	37.61	33.90
50	46.50	42.80
68	57.93	54.23

7. Screw Lock Type, Plug Cover

Ordering Information



Material Treatment

Item	Material	Remarks
Overmold cover	Stainless steel, Synthetic resin	Dark grey
Die cast cover	Zinc alloy die cast	Silver coated

- 1) Series No.: DX30M
- 2) No. of pins: 68, 80, 100, 110
- 3) Cover case type
- CV1: Overmold cover case CV2: Die cast cover

1.1 Overmold Cover



List of Engagement Combinations

Cover case and plug unit	Receptacle		
Cover case and plug unit	Right angle type	Ferrite core type	
DX30M-100-CV1 + DX30AM-100P	DX10AM-100SE2 (50), DX10AM-100SE1 (50)	DX10AMF-100SE1 (50)	
DX30M-110-CV1 + DX30AM-110P	DX10AM-110SE2 (50), DX10AM-110SE1 (50)	—	

7.2 Die Cast Cover



List of Engagement Combinations

Cover case and plug unit	Receptacle		
Cover case and plug unit	Right angle type	Straight DIP type	Ribbon cable type
DX30M-68-CV2 + DX30AM-68P	DX10BM-68S (50), DX10BM-68SE (50)	DX20BM-68S (50)	DX33AM-68S-LNA (50)
DX30M-80-CV2 + DX30AM-80P	DX10BM-80S (50), DX10BM-80SE (50)	DX20BM-80S (50)	—
DX30M-100-CV2 + DX30AM-100P	DX10BM-100S (50), DX10BM-100SE (50)	DX20BM-100S (50)	—

8. Screw Lock, Receptacle Right Angle Type

Ordering Information



- 1) Series No.: DX--M
- 2) Connector style 10: Right angle type
- 3) Lock style (Screw lock type)
 A: Receptacle case material Steel
 B: Receptacle case material Zinc alloy die cast
- 4) No. of pins: 68, 80, 100, 110

8.1 Board Screw on Type

- 5) Mating type S: Receptacle
- Board fitting type
- Blank : Screw on type
 - E : Lock pin round type
 - E1 : Lock pin harpoon type (Board thickness 1.6mm)
 - E2 : Lock pin harpoon type (Board thickness 1.2mm)
- 7) Individual specifications
 - (50) :Dip portion gold plated

Material Treatment

Item	Material	Remarks
Receptacle case	Zinc alloy die cast or steel	Nickel plating
Shell	Steel	Nickel plating
Insulators	PBT resin	Black (UL94V-0)
Female terminal	Copper alloy	Selective gold plating



8.2 Board Lock Pin Harpoon Type



8.3 Board Lock Pin, Round Type



PCB Layout (Recommended Board Thickness:1.2mm, 1.6mm)



Panel-Fitting Dimensional Drawing



DX10BM

Panel thickness	No. of washers
0~t0.4	2
t0.8~1.2	1
t1.6~2	No washer

DX10AM
Panel thickness
t0.8~1.2

				Unit: mm
No. of Pin	А	В	С	Remarks
68	57.93	54.23	R1.85	DX10BM-68S(50)
80	65.55	61.85	R1.85	DX10BM-80S(50)
100	78.25	74.55	R1.85	DX10BM-100SE(50)
100	78.25	74.55	R1.5	DX10AM-100SE2(50)
100	10.23	74.55	K1.5	DX10BM-100SE1(50)
110	84.5	80.8	R1.5	DX10AM-110SE2(50)
110	04.0	00.0	к1.5	DX10AM-110SE1(50)

(8)

9. Screw Lock, Receptacle Ferrite Core Type

(5)

(6)

(7)

Ordering Information $\begin{array}{c|c} DX & 10 & A & M & F & -100 & S & E1 & (50) \\ \hline & & & & & & & \\ \end{array}$

(2) (3) (1) (4)

1) Series No.: DX--M

(1)

- Connector style
 10: Right angle type
- Lock style (Screw lock type)
 A: Receptacle case material-steel
- 4) Board mounting styleF: Ferrite core type

- 5) No. of pins: 100
- 6) Mating type S: Receptacle
- 7) Board fitting type
 - E1: Lock pin type (Board thickness 1.6mm)
- 8) Individual specifications
 (50): Dip portion gold plated

Material Treatment

Item	Material	Remarks
Receptacle case	Steel	Nickel plating
Insulator	PBT resin	Black (UL94V-0)
Female terminal	Copper alloy	Selective gold plating
Ferrite core	—	—

9.1 Right Angle Ferrite Core Type



PCB Layout (Recommended Board Thickness:1.6mm)



Panel-Fitting Dimensional Drawing



11. Screw Lock Receptacle Straight Type

Ordering Information



- 1) Series No.: DX--M
- Connector style
 20: Straight dip
- Lock style
 B: Screw lock type

- 4) No. of pins: 68, 80, 100
- 5) Mating type S: Receptacle
- 6) Individual specifications
 (50): Dip portion gold plated

Material Treatment

Item	Material	Remarks
Receptacle case	Zinc alloy die cast	Nickel plating
Shell	Steel	Nickel plating
Insulator	PBT resin	Black (UL94V-0)
Female terminal	Copper alloy	Selective gold plating

11.1 Receptacle Straight Type



PCB Layout (Recommended Board Thickness:1.6mm)



Panel-Fitting Dimensional Drawing



OX20BM

Panel thickness	No. of washers
0~t0.4	2
t0.8~1.2	1
t1.6~2	No washer

Unit: mm

No. of pin	А	В
68	57.93	54.23
80	65.55	61.85
100	78.25	74.55

12. Screw Lock Receptacle, Flat Ribbon Cable Type

Ordering Information



- 1) Series No.: DX--M
- Connector style
- 33: Flat IDC type (for ribbon cable)
- 3) Applicable wire
- A: AWG#28
- 4) No. of pins: 68

- 5) Mating type S: Receptacle
- 6) Board fitting typeLNA: Screw lock type
- 7) Individual specifications
 - (50) :Dip portion gold plated

Material Treatment

Item	Material	Remarks
Receptacle case	Zinc alloy die cast	Nickel plating
Shell	Steel	Nickel plating
Insulator	PBT resin	Black (UL94V-0)
Female terminal	Copper alloy	Selective gold plating

12.1 Receptacle, Flat Ribbon Cable Type



Panel-Fitting Dimensional Drawing



DX33AM

Panel thickness	No. of washers
0~t0.4	2
t0.8~1.2	1
t1.6~2	No washer

13. Plug Straight Type

Ordering Information



Series No.: DX--M
 Connector style

20E: Straight dip

- 3) No. of pins: 110
- Mating type
 P: Plug

Material Treatment

Item	Material	Remarks	
Shell	Steel	Nickel plating	
Insulator	PBT resin	Black (UL94V-0)	
Male contact	Copper alloy	Selective gold plating	



PCB Layout (Recommended Board Thickness:1.5mm)



Panel-Fitting Dimensional Drawing (Recommended Panel Thickness:Max.1.5mm)



Diagram of Mounting Conditions for DX20EM

Note: Secure the connectors and boards of this product to the panel.



List of Engagement Combinations

Plug straight type	Receptacle right angle type		
DX20EM-110P	DX10AM-110SE1 (50) or DX10AM-110SE2 (50)		

Connecting Method (Discrete Cable IDC Type)

Connecting Tools



Cable distribution jig



Cable shearing unit



Shield case fixing jig



IDC press



IDC guide plate unit



Hood insertion jig

List of Connecting Jigs and Accessories Plug Connector

Plug Connector

		Process						
Cable	Connector Name	Cable Distribution	Remaining part cutting		Crimping		Shield case fixing	Hood insertion
		Cable Distribution	Press	Unit	Press	Remaining Part cutting	Silleiu case fixing	11000 miser tion
	DX30AM-14P DX30AM-20P	By hand DX30AM-CAT1 CL902-2090-0	DX30AM-HP1 CL902-0210-0	DX30AM-CU1 CL902-0211-2	DX30AM-HP1 CL902-0210-0	DX30AM-GPT1 CL902-0214-0	Order attachments	Order attachments
							separately %1	separately %2
I/O Cable (Discrete wire)	DX30AM-26P						DX30AM-CCT1 CL902-0213-8	DX30AM-HPT1 CL902-0216-6
	DX30AM-36P							
	DX30AM-50P							
	DX30AM-68P							
	DX30AM-80P							
	DX30AM-100P							Order attachments separately #3
	DX30AM-110P							Order attachments separately %4

%1 DX30AM-CCT1 (61) CL902-0213-8 (61) DX30AM-CCT1 (62) CL902-0213-8 (62) *2 DX30AM-HPT1-14 CL902-0217-9 *4 DX30AM-HPT1-110 CL902-0219-4 *3 DX30AM-HPT1-100 CL902-0218-1

Receptacle Connector

Cable	Connector Name	Press	Guide plate
Ribbon Cable	DX33AM-68S-LNA (50)	Hi-Flex Connecting press HHP-502 CL550-0082-2	DX33AM-GPA (Come with pressure block) CL902-0233-5