

DX Series

Connector for Half-Pitch Interface

P=
Half
P=Half

P
Positive-Lock



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Overview

DX series connectors are designed with a focus on EMI prevention and compact, high-density interfaces, featuring a pitch of 1.27 mm between contacts. This design supports the high-density mounting needs of increasingly compact electronic equipment. The plug side offers IDC options, while the device side is available in right-angle THT, straight THT, and IDC. The series comes in various positions: 20, 28, 36, 50, 68, 80, 100.

Features

1. Compact size with a 1.27mm pitch.
2. To prevent damage to the set from static electricity during mating, the shell is designed to make contact before the contacts do.
3. The cable termination is IDC, compatible with 28 and 30 AWG.
4. Features a one-touch lock and screw lock mechanism.
5. Constructed using die casting for robustness and effective electromagnetic wave shielding.

Product Specifications

Rated Current	0.5A	Operating Temperature	-55 to +85°C
Rated Voltage	125V AC		

Insulation Resistance	250M Ω Min. at 100V DC
Contact Resistance	50m Ω Max. at 100mA DC
Withstanding Voltage	300Vr.m.s AC for 1min.

Materials / Finish

Part	Materials	Color / Finish	RoHS2
Plug Case	Zinc Alloy Die-cast	Silver finish	Yes
Receptacle Case	Zinc Alloy Die-cast	Nickel Plated	
Insulator	PBT Resin or equivalent or higher (Note 1)	Black (Note 2)	
Male Contact	Copper Alloy	Partially Gold Plated	
Female Contact	Copper Alloy	Partially Gold Plated	

Note 1 : UL94V-0

Note 2 : To identify 30A, 31A, 32A and 33A type for 28AWG, natural color is partially used in the insulator.

● Applicable Cable

I/O Cable		
Conductor Size	30 AWG	28 AWG
Conductor Information	7/0.1	7/0.127
Insulator Outer Dia.	ϕ 0.5	ϕ 0.58
Cable UL Style	UL20276 and UL2789	

Ribbon, Flat Cable	
Conductor Size	28 AWG
Conductor Information	19/0.08
Cable Thickness	0.9
Cable UL Style	UL2651, UL2734, UL20012

Product Number Structure

Refer to the chart below when determining the product specifications from the product number.
Please select from the product numbers listed in this catalog when placing orders.

■ Receptacle Connector

DX 10 # - 50 S - # (50)

① ② ③ ⑤ ⑥ ⑦ ⑨

■ Plug Connector

DX 30 A - 50 P - # (50)

① ② ④ ⑤ ⑥ ⑦ ⑨

■ Accessories

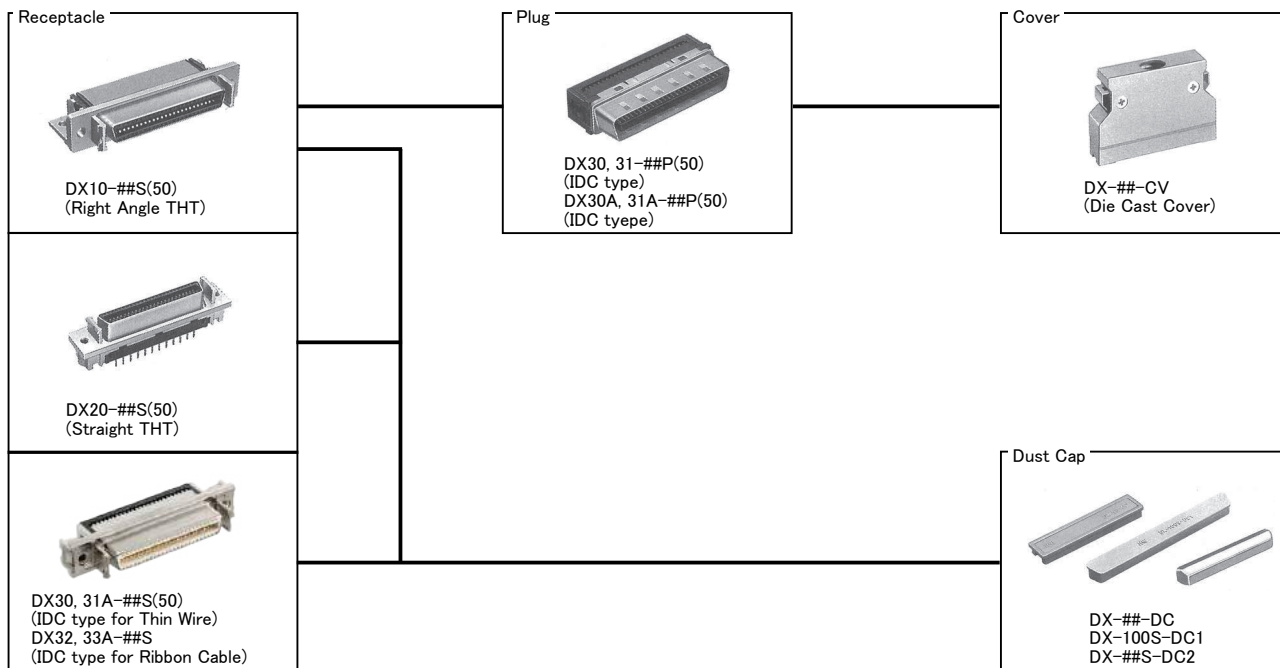
DX - 50 - CV

① ⑤ ⑧

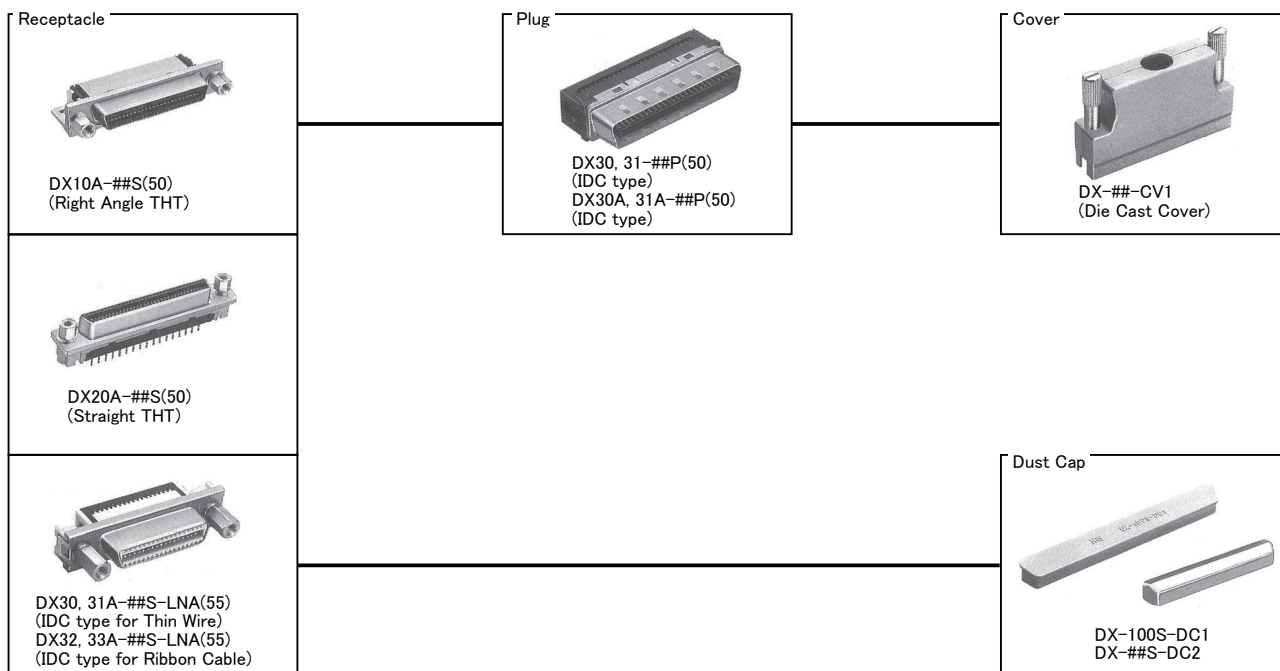
① Series Name	DX	⑦ Variation	Blank : Standard LNA : With Screw Lock (Receptacle) PG : Plug-in (Plug) SG : Plug-in (Receptacle)
② Connection Type	10 : Right Angle THT 20 : Straight THT 30 : IDC for Discrete Type (Thin Wire) 31 : IDC for Thin Wire 33 : IDC for Flat Ribbon Wire	⑧ Accessories	CV : Straight Cable Cover Case (OneTouch Lock Type) CV1 : Straight Cable Cover Case (Screw Lock Type) CV3 : Straight Cable Cover Case (Over Mode Type) CV4 : Straight Cable Cover Case (applicable for Thick Cable) DC : Dust Cap (Semi-hard, for One Touch Lock) DC1 : Dust Cap (Semi-hard, for Screw Lock) DC2 : Dust Cap (Soft for Screw Lock)
③ Lock Type	Blank : One Touch Lock Type A : Screw Lock Type	⑨ RoHS	(50), (55)
④ Applicable Wire	Blank : 30 AWG A : 28 AWG		
⑤ No. of pos.	20, 28, 36, 50, 68, 80, 100		
⑥ Connector Type	P : Plug Connector S : Receptacle Connector SE : Receptacle Connector with Lock Pin		

DX Series Variations

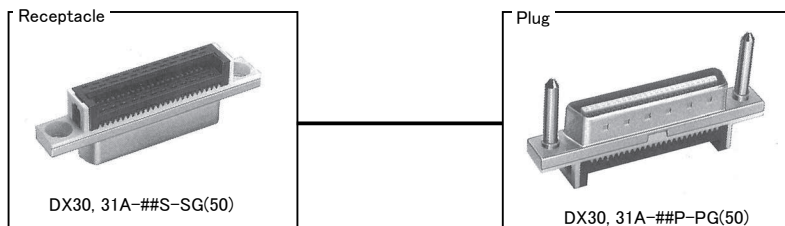
● One-Touch Lock Interface Connector



● Screw Lock Interface Connector



● Plug-in Connector



Plug Connector

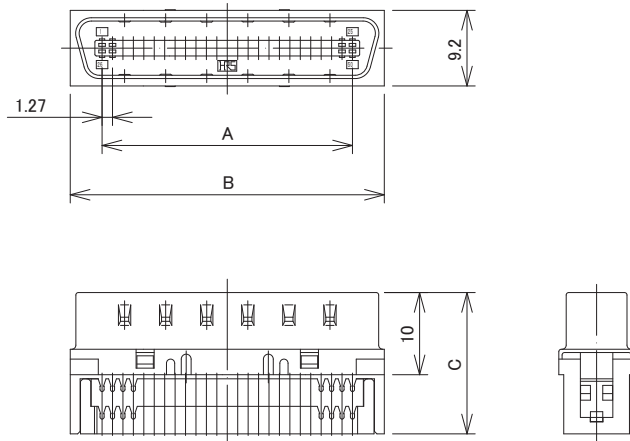
●DX30, DX30A-##P(50) (IDC for Discrete, Thin Wire) Type



DX30-50P(50)



DX30A-50P(50)



Unit : mm

Part No.	HRS No.	No. of Pos.	Applicable Cable (AWG)	A	B	C	Purchase Unit
DX30A-20P(50)	CL0230-0022-1-50	20	28	11.43	19.18	17.2	80pcs per tray
DX30A-28P(50)	CL0230-0023-4-50	28	28	16.51	24.26	17.2	60pcs per tray
DX30A-36P(50)	CL0230-0024-7-50	36	28	21.59	29.34	17.2	50pcs per tray
DX30-50P(50)	CL0230-0011-5-50	50	30	30.48	38.23	17.2	40pcs per tray
DX30A-50P(50)	CL0230-0025-0-50		28				
DX30A-68P(50)	CL0230-0026-2-50	68	28	41.91	49.66	17.2	30pcs per tray
DX30A-80P(50)	CL0230-0027-5-50	80	28	49.53	57.28	17.2	20pcs per tray
DX30-100P(50)	CL0230-0014-3-50	100	30	62.23	69.98	18.2	
DX30A-100P(50)	CL0230-0028-8-50		28				

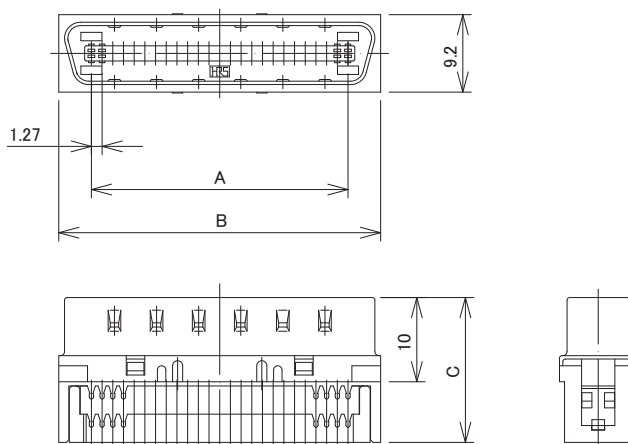
●DX31, DX31A-##P(50)
(IDC for Thin Wire) Type



DX31-80P(50)



DX31A-80P(50)



Unit : mm

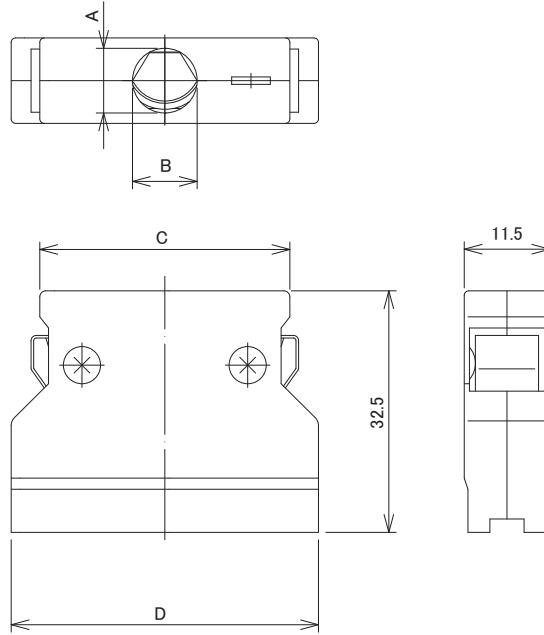
Part No.	HRS No.	No. of Pos.	Applicable Cable (AWG)	A	B	C	Purchase Unit
DX31A-80P(50)	CL0230-0034-0-50	80	28	49.53	57.28	17.2	20pcs per tray
DX31-100P(50)	CL0230-0021-9-50	100	30	62.23	69.98	18.2	
DX31A-100P(50)	CL0230-0035-3-50		28				

Plug Cover Case

●DX-##-CV (One Touch Lock) Type



DX-50-CV



Unit : mm

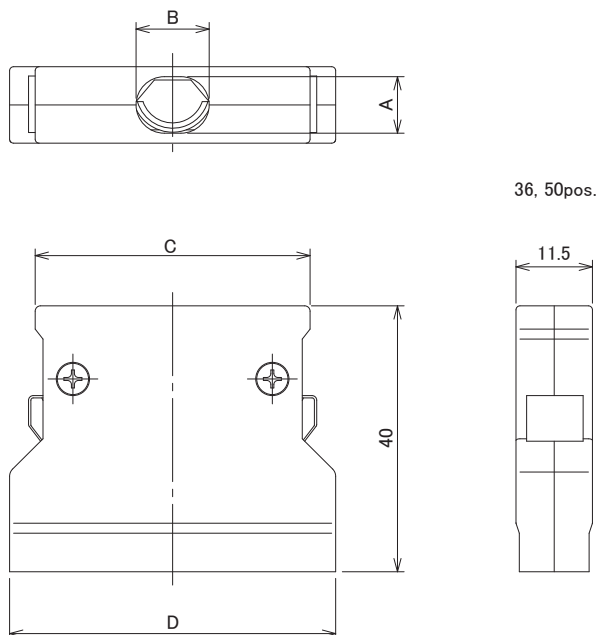
Part No.	HRS No.	No. of Pos.	A	B	C	D	Purchase Unit
DX-20-CV	CL0230-0036-6-00	20	ϕ 6.7	ϕ 6.7	22.3	30	25pcs per tray
DX-28-CV	CL0230-0037-9-00	28	ϕ 7.5	ϕ 7.5	27.38	35.08	
DX-36-CV	CL0230-0038-1-00	36	ϕ 8.7	ϕ 8.7	32.46	40.16	
DX-50-CV	CL0230-0039-4-00	50	8.5	10	41.35	49.05	20pcs per tray
DX-68-CV	CL0230-0040-3-00	68		11	52.78	60.48	
DX-80-CV	CL0230-0041-6-00	80		12.5	60.4	68.1	15pcs per tray

●DX-##-CV4

(One Touch Lock, Thick Cable) Type



DX-50-CV4



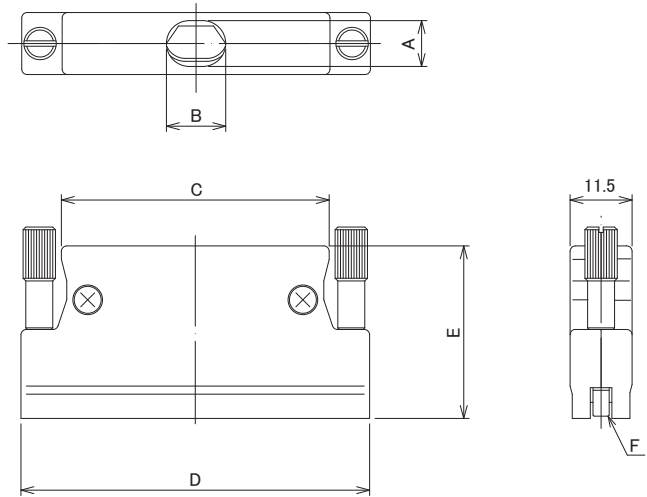
Unit : mm

Part No.	HRS No.	No. of Pos.	A	B	C	D	Purchase Unit
DX-36-CV4	CL0230-0226-1-00	36	8.5	11	32.46	40.16	25pcs per tray
DX-50-CV4	CL0230-0227-4-00	50			41.35	49.05	

●DX-##-CV1 (Screw Lock) Type



DX-68-CV1



Unit : mm

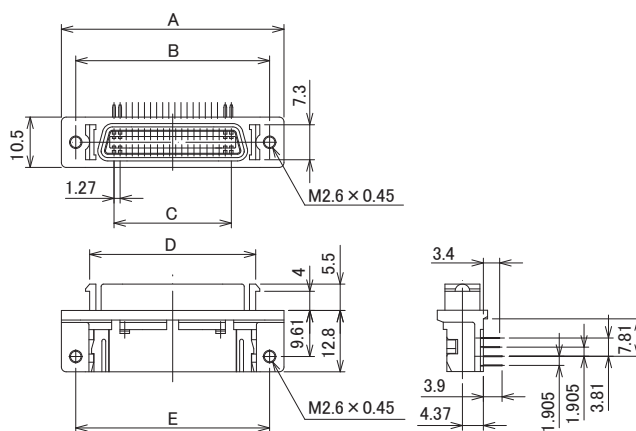
Part No.	HRS No.	No. of Pos.	A	B	C	D	E	F	Purchase Unit
DX-20-CV1	CL0230-0054-8-00	20	6	8	19.2	34.2	32	M3 × 0.5	25pcs per tray
DX-28-CV1	CL0230-0055-0-00	28	6.5	8.5	24.28	39.28			
DX-36-CV1	CL0230-0056-3-00	36	7.5	9	29.36	44.36			
DX-50-CV1	CL0230-0057-6-00	50	8.5	10	38.25	53.25			15pcs per tray
DX-68-CV1	CL0230-0058-9-00	68		11	49.68	64.68			
DX-80-CV1	CL0230-0059-1-00	80	12.5	57.3	72.3	38.9	M2.6 × 0.45	15pcs per tray	
DX-100-CV1	CL0230-0044-4-00	100	14	60	85				

Receptacle Connector

●DX10-##S(50) (Right Angle THT, One touch Lock) Type



DX10-50S(50)



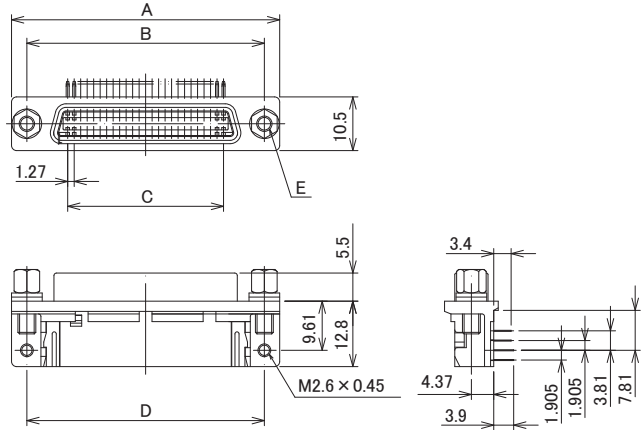
Unit : mm

Part No.	HRS No.	No. of Pos.	A	B	C	D	E	Purchase Unit
DX10-20S(50)	CL0230-0001-1-50	20	33.4	27.4	11.43	21.6	27.4	60pcs per tray
DX10-28S(50)	CL0230-0002-4-50	28	38.48	32.48	16.51	26.68	32.48	
DX10-36S(50)	CL0230-0003-7-50	36	43.56	37.56	21.59	31.76	37.56	45pcs per tray
DX10-50S(50)	CL0230-0004-0-50	50	52.45	46.45	30.48	40.65	46.45	30pcs per tray
DX10-68S(50)	CL0230-0005-2-50	68	63.88	57.88	41.91	52.08	57.88	
DX10-80S(50)	CL0230-0006-5-50	80	71.5	65.5	49.53	59.7	65.5	

●DX10A-##S(50) (Right Angle THT, Screw Lock) Type



DX10A-50S(50)



Panel Thickness	No. of Washer
t=0.7-1.0	Each 2 pieces
t=1.5-1.8	Each 1 piece

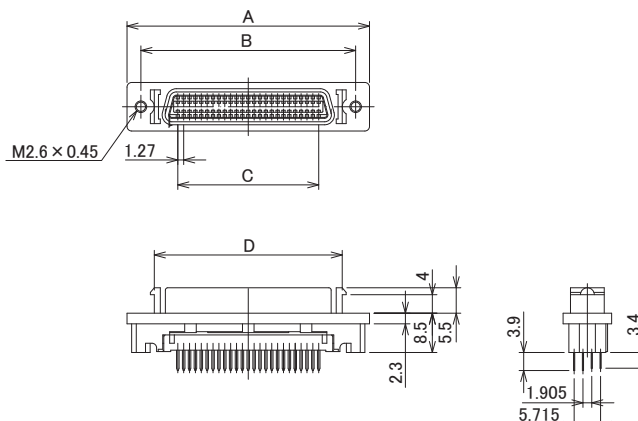
Unit : mm

Part No.	HRS No.	No. of Pos.	A	B	C	D	E	Purchase Unit
DX10A-20S(50)	CL0230-0047-2-50	20	33.4	27.4	11.43	27.4	M3 × 0.5	60pcs per tray
DX10A-28S(50)	CL0230-0048-5-50	28	38.48	32.48	16.51	32.48		45pcs per tray
DX10A-36S(50)	CL0230-0049-8-50	36	43.56	37.56	21.59	37.56		30pcs per tray
DX10A-50S(50)	CL0230-0050-7-50	50	52.45	46.45	30.48	46.45		20pcs per tray
DX10A-68S(50)	CL0230-0051-0-50	68	63.88	57.88	41.91	57.88		
DX10A-80S(50)	CL0230-0052-2-50	80	71.5	65.5	49.53	65.5	M2.6 × 0.45	
DX10A-100S(50)	CL0230-0043-1-50	100	84.2	78.2	62.23	78.2		

●DX20-##S(50) (Straight THT, One Touch Lock) Type



DX20-50S(50)



Note : Fasten the printed circuit board with screws using a tightening torque of 0.3 to 0.4N · m.

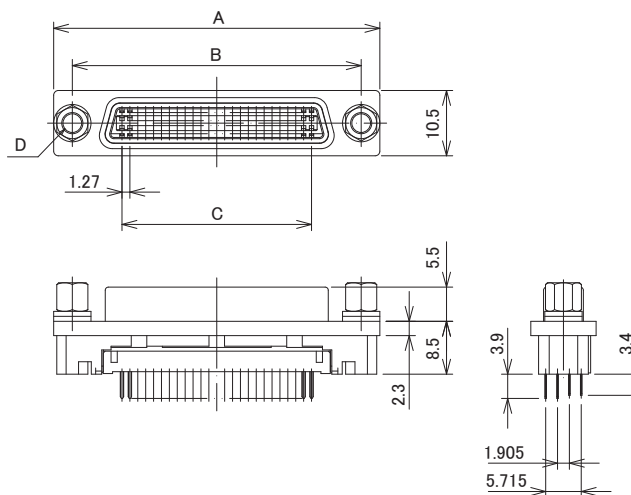
Unit : mm

Part No.	HRS No.	No. of Pos.	A	B	C	D	Purchase Unit
DX20-36S(50)	CL0230-0081-0-50	36	43.56	37.56	21.59	31.76	45pcs per tray
DX20-50S(50)	CL0230-0068-2-50	50	52.45	46.45	30.48	40.65	30pcs per tray
DX20-80S(50)	CL0230-0083-6-50	80	71.5	65.5	49.53	59.7	

●DX20A-##S(50) (Straight THT, Screw Lock) Type



DX20A-50S(50)



Note : Fasten the printed circuit board with screws using a tightening torque of 0.3 to 0.4N · m.

Unit : mm

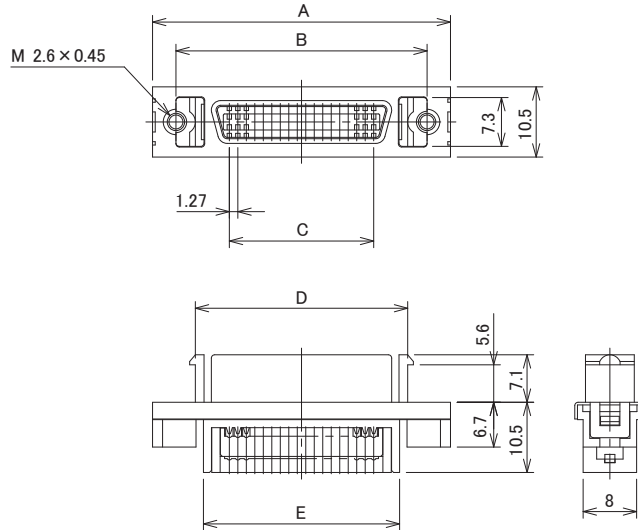
Part No.	HRS No.	No. of Pos.	A	B	C	D	Purchase Unit
DX20A-36S(50)	CL0230-0156-8-50	36	43.56	37.56	21.59	M3 x 0.5	45pcs per tray
DX20A-50S(50)	CL0230-0272-9-50	50	52.45	46.45	30.48		30pcs per tray
DX20A-68S(50)	CL0230-0144-9-50	68	63.88	57.88	41.91		
DX20A-80S(50)	CL0230-0158-3-50	80	71.5	65.5	49.53		
DX20A-100S(50)	CL0230-0084-9-50	100	84.2	78.2	62.23	M2.6 x 0.45	15pcs per tray

Panel In-Line Connector

●DX31A-##S(50) (IDC, Thin Wire, One Touch Lock) Type



DX31A-50S(50)



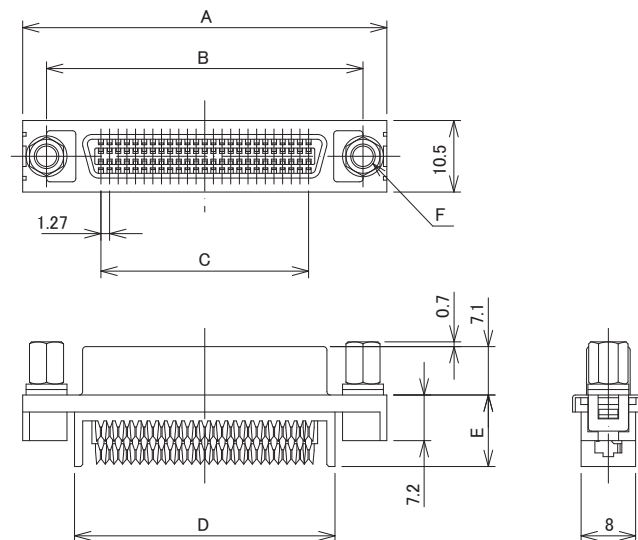
Unit : mm

Part No.	HRS No.	No. of Pos.	A	B	C	D	E	Purchase Unit
DX31A-20S(50)	CL0230-0101-6-50	20	33.4	27.4	11.43	21.6	19.18	60pcs per tray

●DX30A-##S-LNA(5#) (IDC for Discrete Thin Wire, Screw Lock) Type



DX30A-50S-LNA(55)



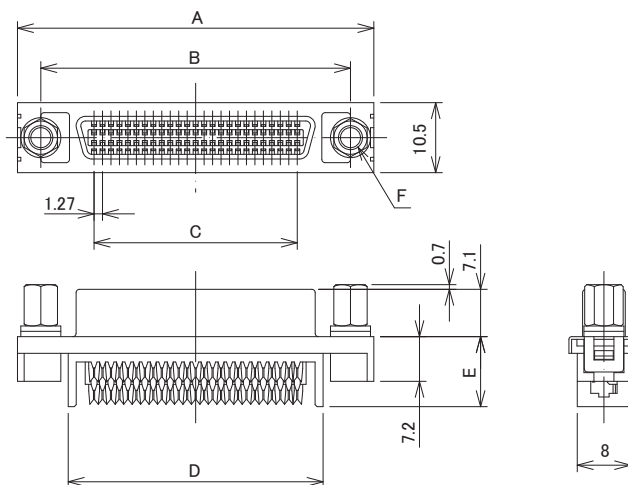
Unit : mm

Part No.	HRS No.	No. of Pos.	A	B	C	D	E	F	Purchase Unit
DX30A-36S-LNA(55)	CL0230-0167-4-55	36	44.56	37.56	21.59	29.34	10.5	M3 x 0.5	45pcs per tray
DX30A-100S-LNA(50)	CL0230-0168-7-50	100	86.82	78.2	62.23	69.98	11.5	M2.6 x 0.45	15pcs per tray

●DX31A-##S-LNA(5#) (IDC, Thin Wire, Screw Lock) Type



DX31A-50S-LNA(55)



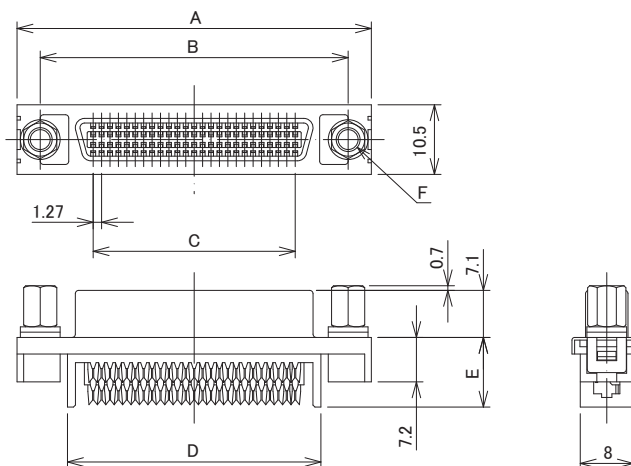
Unit : mm

Part No.	HRS No.	No. of Pos.	A	B	C	D	E	F	Purchase Unit
DX31A-50S-LNA(55)	CL0230-0193-4-55	50	53.45	46.45	30.48	38.23	10.5	M3 × 0.5	30pcs per tray
DX31A-100S-LNA(50)	CL0230-0086-4-50	100	86.82	78.2	62.23	69.98	11.5	M2.6 × 0.45	15pcs per tray

●DX33A-##S-LNA(55) (IDC, Ribbon Cable, Screw Lock) Type



DX33A-50S-LNA(55)



Unit : mm

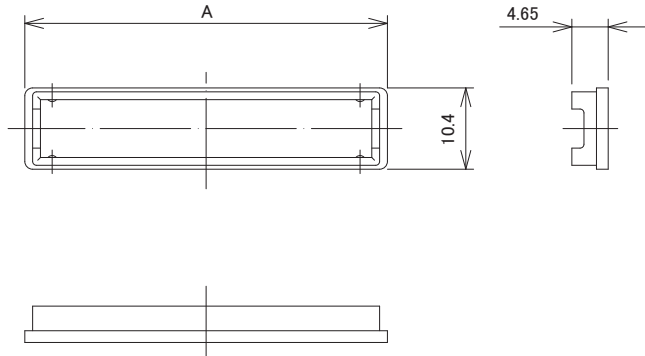
Part No.	HRS No.	No. of Pos.	A	B	C	D	E	F	Purchase Unit
DX33A-50S-LNA(55)	CL0230-0206-4-55	50	53.45	46.45	30.48	38.23	10.5	M3 × 0.5	30pcs per tray

Dust Cap

●DX-##-DC (Semi-hard, One Touch) Lock



DX-50-DC



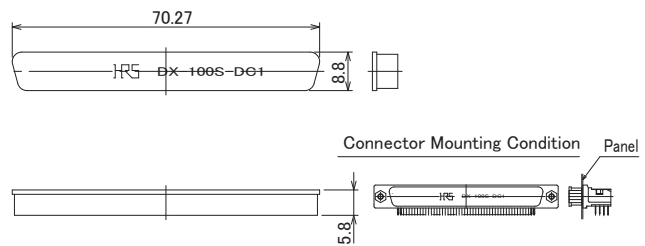
Unit : mm

Part No.	HRS No.	No. of Pos.	A	Purchase Unit
DX-20-DC	CL0230-0103-1-00	20	27.35	100pcs per bag
DX-28-DC	CL0230-0045-7-00	28	32.43	
DX-36-DC	CL0230-0241-5-00	36	37.51	
DX-50-DC	CL0230-0104-4-00	50	46.4	
DX-68-DC	CL0230-0078-6-00	68	57.83	

●DX-100S-DC1 (Semi-hard, Screw Lock) Type



DX-100S-DC1

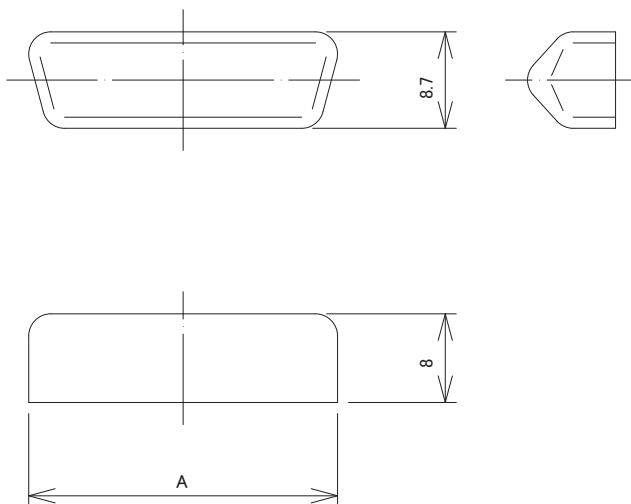


Part No.	HRS No.	No. of Pos.	Purchase Unit
DX-100S-DC1	CL0230-0114-8-00	100	100pcs per bag

●DX-##S-DC2
(Soft, One Touch Lock, Screw Lock) Type



DX-36S-DC2(50)

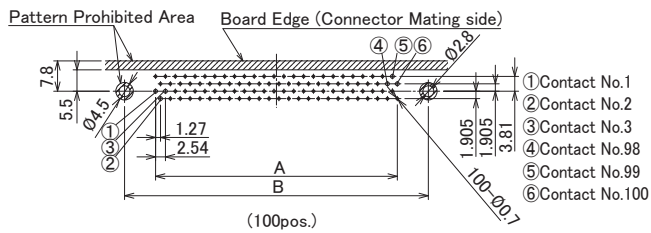
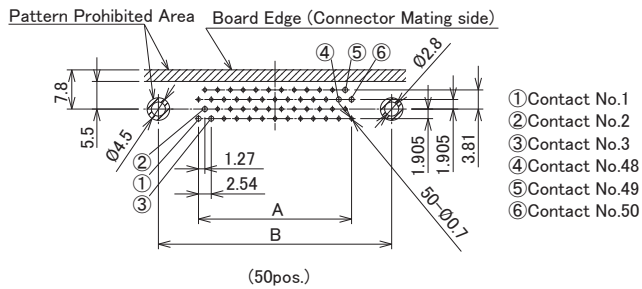
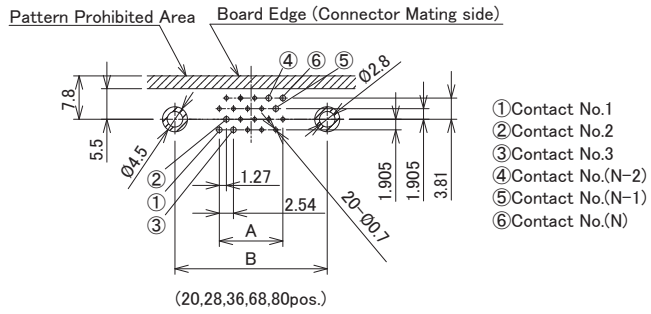


Unit : mm

Part No.	HRS No.	No. of Pos.	A	Purchase Unit
DX-36S-DC2(16)	CL0230-0105-7-16	36	28.1	100pcs per bag
DX-50S-DC2(16)	CL0230-0264-0-16	50	37	
DX-68S-DC2(16)	CL0230-0106-0-16	68	48.4	

Board Mounting Diagram (Recommended Board Thickness : 1.6mm)

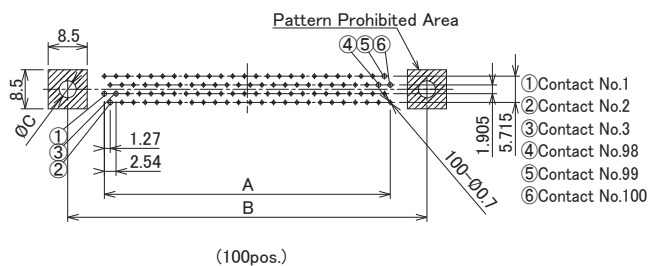
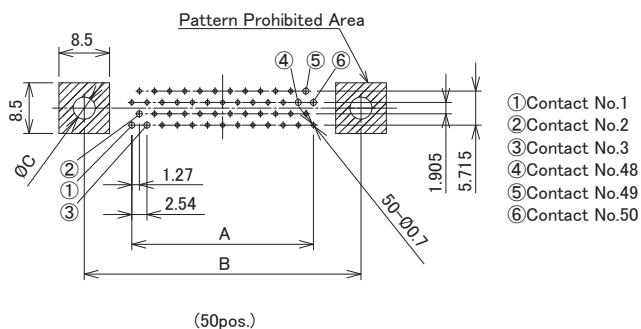
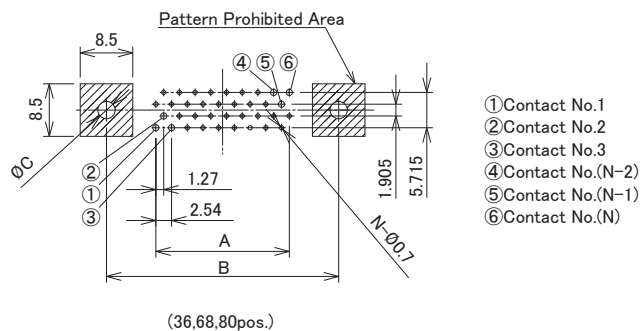
●DX10、DX10A-##S(50)



Unit : mm

Part No.	HRS No.	No. of Pos.	A	B
DX10-20S(50)	CL0230-0001-1-50	20	11.43	27.4
DX10A-20S(50)	CL0230-0047-2-50			
DX10-28S(50)	CL0230-0002-4-50	28	16.51	32.48
DX10A-28S(50)	CL0230-0048-5-50			
DX10-36S(50)	CL0230-0003-7-50	36	21.59	37.56
DX10A-36S(50)	CL0230-0049-8-50			
DX10-50S(50)	CL0230-0004-0-50	50	30.48	46.45
DX10A-50S(50)	CL0230-0050-7-50			
DX10-68S(50)	CL0230-0005-2-50	68	41.91	57.88
DX10A-68S(50)	CL0230-0051-0-50			
DX10-80S(50)	CL0230-0006-5-50	80	49.53	65.5
DX10A-80S(50)	CL0230-0052-2-50			
DX10A-100S(50)	CL0230-0043-1-50	100	62.23	78.2

●DX20、DX20A-##S(50)



●One Touch Lock Type

Unit : mm

Part No.	HRS No.	No. of Pos.	A	B	C
DX20-36S(50)	CL0230-0081-0-50	36	21.59	37.56	2.8
DX20-50S(50)	CL0230-0068-2-50	50	30.48	46.45	
DX20-80S(50)	CL0230-0083-6-50	80	49.53	65.5	

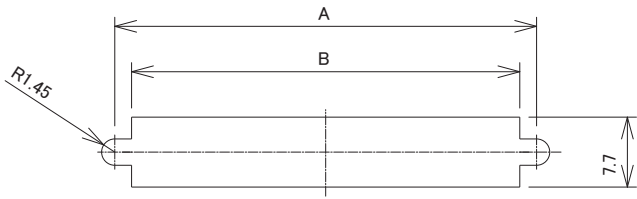
●Screw Lock Type

Unit : mm

Part No.	HRS No.	No. of Pos.	A	B	C
DX20A-36S(50)	CL0230-0156-8-50	36	21.59	37.56	3.7
DX20A-50S(50)	CL0230-0272-9-50	50	30.48	46.45	
DX20A-68S(50)	CL0230-0144-9-50	68	41.91	57.88	
DX20A-80S(50)	CL0230-0158-3-50	80	49.53	65.5	
DX20A-100S(50)	CL0230-0084-9-50	100	62.23	78.2	

Panel Mounting Diagram (Recommended Panel Thickness : 1.6mm Max.)

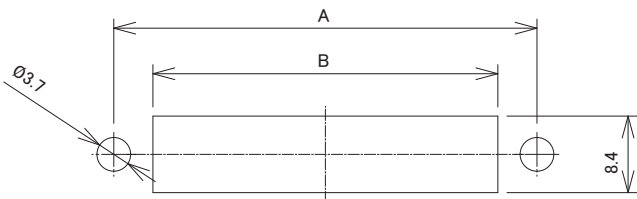
● One Touch Lock Type



Unit : mm

No. of Pos.	A	B
20	27.4	23.7
28	32.48	28.78
36	37.56	33.86
50	46.45	42.75
68	57.88	54.18
80	65.5	61.8

● Screw Lock Type



Unit : mm

No. of Pos.	A	B
20	27.4	18.81
28	32.48	23.89
36	37.56	28.97
50	46.45	37.86
68	57.88	49.29
80	65.5	56.91
100	78.2	69.61

Connecting Method (For Discrete Cable)

●Connecting Tools



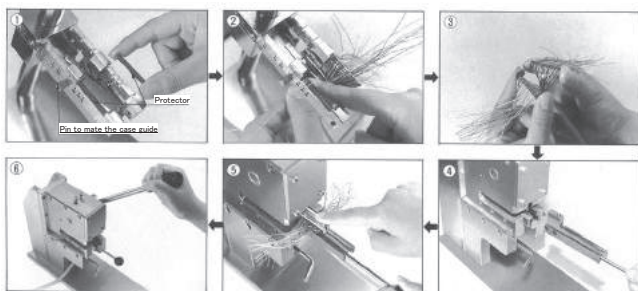
DX30 Cable Distribution Jig

Guide Plate
DX30-##GP
: (20, 28, 36, 50, 68, 80)

Connecting Press DX30-HP

●Connecting Order

1. Match the case guide of the distribution jig to the No. of pos. of the connector and set the protector.
2. Clamp the cable and distribute every one of the signal wires.
3. Combine the two protectors and temporarily fix it to the connector unit.
4. Set the guide plate (DX30-##GP) to the connecting press DX30-HP.
5. Set the connector to the guide plate and insert the guide plate in the connecting press DX30-HP.
6. Depress the handle. (Connection and cutting of a remaining part of cable have been completed.)



Connecting Method (1.27mm Pitch Fusion Welding Cable)

●Connecting Tools



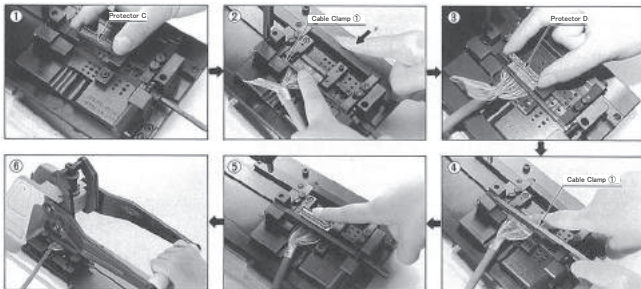
Connecting Press
Hi-Flex Connecting Press



Guide Plate
DX31-2080GPA(For 20pos. to 80pos.)
DX31-100GPA(For 100pos.)
Note : Comes with a pressure block

●Connecting Order

1. Set the guide plate in the connecting press and set the Protector C in the guide plate.
2. Set the first cable. (Fix the first cable with the cable clamp ① of the guide plate.)
3. Combine the Protector D with the Protector C.
4. Set the second cable. (Fix the second cable with the cable clamp ② of the guide plate.)
5. Plate the connector body over the protector.
6. Shift the slide base to the position to press and depress the handle. (Connection has been completed.)



List of Connecting jigs and Accessories

● Plug Connector

Cable	Connector	Wire Configuration	Insulation Displacement Connection	
			Press	Guide Plate
I/O Cable (Discrete Cable)	DX30A-20P(50)	DX30 Manual Cable Distribution Tool CL0902-0116-1-00	Connecting Press DX30-HP CL0902-0117-4-00	DX30-20GP CL0902-0118-7-00
	DX30A-28P(50)			DX30-28GP CL0902-0119-0-00
	DX30A-36P(50)			DX30-36GP CL0902-0120-9-00
	DX30-50P(50) DX30A-50P(50)			DX30-50GP CL0902-0121-1-00
	DX30A-68P(50)			DX30-68GP CL0902-0122-4-00
	DX30A-80P(50)			DX30-80GP CL0902-0123-7-00
	DX30-100P(50) DX30A-100P(50)			DX30-100GP CL0902-2031-1-00
I/O Cable (1.27mm Pitch Fusion Welding Cable)	DX31-20P(50) DX31A-20P(50)		Hi-Flex Connecting Press HHP-502 CL0550-0082-2-00	DX31-2080GPA (Common to 20pos. to 80pos.) CL0902-2003-6-00 (Comes with Pressure Block)
	DX31-28P(50) DX31A-28P(50)			
	DX31-36P(50) DX31A-36P(50)			
	DX31-50P(50)			
	DX31-68P(50) DX31A-68P(50)			
	DX31A-80P(50)			
	DX31-100P(50) DX31A-100P(50)			DX31-100GPA CL0902-0125-2-00 (100pos. only) (Comes with Pressure Block)

● In-line Connector

Cable	Connector	Wire Configuration	Insulation Displacement Connection	
			Press	Guide Plate
I/O Cable (Discrete Cable) Ribbon Cable (IDC)	DX30A-20S(50)	DX30 Manual Cable Distribution Tool CL0902-0116-1-00	DX30-SHP CL0902-0229-8-00	DX30-20SGP CL0902-0292-4-00
	DX30A-36S-LNA(55)			DX30-36SGP CL0902-0234-8-00
	DX30A-50S(50) DX30A-50S-LNA(55) DX32A-50S-LNA(55)			DX30-50SGP CL0902-0235-0-00
	DX30A-100S-LNA(50)			DX30-100SGP CL0902-0230-7-00
I/O Cable (1.27mm Pitch Fusion Welding Cable) Ribbon Cable	DX31A-20S(50)		Hi-Flex Connecting Press HHP-502 CL0550-0082-2-00	DX31-2080GPA (Common to 20pos. to 80pos.) CL0902-2003-6-00 (Comes with Pressure Block)
	DX31A-36S(50)			
	DX31A-50S-LNA(55) DX33A-50S-LNA(55)			DX31A-100SGPA CL0902-0246-7-00 (100pos. only) (Comes with Pressure Block)
	DX31A-100S-LNA(50)			

Note : Please assembly cable without lock screws (LNA type).

● Plug in Connector

Cable	Connector	Wire Configuration	Insulation Displacement Connection		Cable Ends Trimming	
			Press	Unit	Press	Unit
I/O Cable (Discrete Cable)	DX30A-28P-PG(50)	By Hand DX30 Cable Distribution Tool CL0902-0116-1-00	DX30AM-HP1 CL0902-0210-0-00	DX30A-PG-GPT	DX30AM-HP1 CL0902-0210-0-00	DX30A-PSG-C
	DX30A-36P-PG(50)					
	DX30A-50P-PG(50)					
	DX30A-28S-SG(50)					
	DX30A-36S-SG(50)					
	DX30A-50S-SG(50)					

Cable	Connector	Wire Configuration	Insulation Displacement Connection		
			Press	Unit	Pressure Block
I/O Cable (1.27mm Pitch Fusion Welding Cable)	DX31A-28P-PG(50)		Hi-Flex Connecting Press HHP-502 CL0550-0082-2-00	DX31A-PSG-GPA CL0902-2024-6-00	DX31A-PG-PB CL0902-2025-9-00
	DX31A-36P-PG(50)				
	DX31A-50P-PG(50)				DX31A-SG-PB CL0902-2026-1-00
	DX31A-28S-SG(50)				
	DX31A-36S-SG(50)				
	DX31A-50S-SG(50)				

While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please review the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, the warranty of the product may be affected.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/defense etc. Hirose must review before assurance of reliability can be given.

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