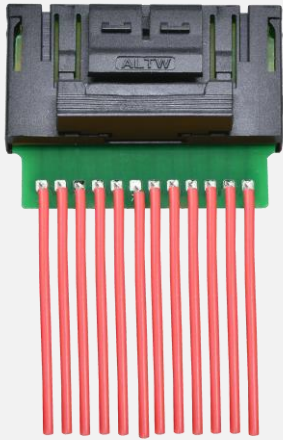


Amphenol LTW

ZConnect Connector

**Low-Profile
LV214-Compliant**

- Anti-Vibration and audible feedback
- Wire-to-Board, FPC, FFC
- 2nd lock design for high security & reliable mating
- Quick lock
- CPA (Connector Position Assurance)
- Cost and space-saving



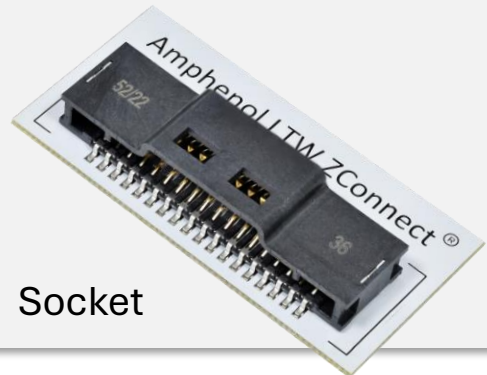
Wires



FFC



FPC



Socket

Unrivaled InterConnects for Harsh Environments

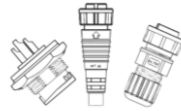
About ALTW

**3**

Production Sites
(Taiwan, China, Mexico)

**30+**

Market Applications

**90,000+**

Products

Since 1993, Amphenol LTW Technology “ALTW” lives and breathes to create, innovate, design and produce “***unrivaled interconnects for harsh environments***”. With over 300 worldwide patents, not only does ALTW offer the broadest and widest range of rugged interconnects in the industry but also customization with the mission of “Customer Satisfaction First”. Undoubtedly, ALTW is the leader in rugged interconnects, highly recognized for its uncompromising quality, short lead time, fast and tailored service and its very competitive pricing.

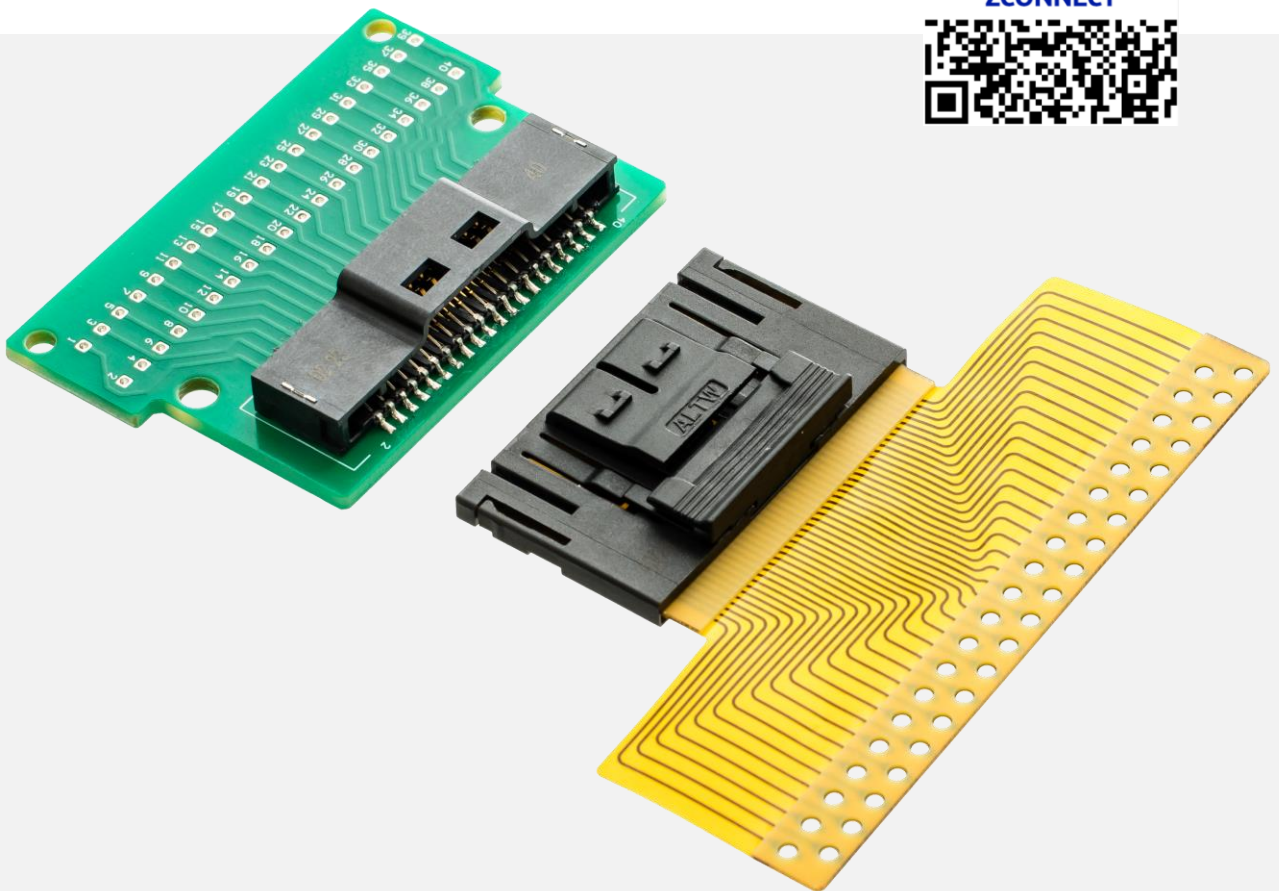
Regardless of the challenging environments that your products will be subject to; there is a very good chance that you will find what you are looking for with ALTW.

Unrivaled InterConnects for Harsh Environments

ZConnect Connector

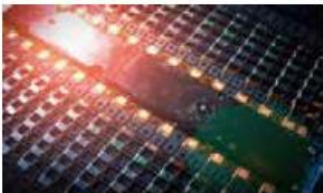
Amphenol LTW ZConnect® Low-Profile LV214-Compliant Connectors are low-profile connectors (8mm maximum mated height) for space-saving along with providing a more secure mating with 2nd lock design. ZConnect® Connectors are robust enough to meet the automotive requirements of LV214 (VW75174). The series ranges from 8 to 40 contacts at 1A up to 120VDC with 0.9mm / 1.8mm / 2.7mm pitch.

- ❖ Audible feedback
- ❖ Connector Position Assurance
- ❖ Hot Plugging
- ❖ Low profile (8mm max mated)
- ❖ Flammability UL94V-0
- ❖ RoHS & REACH compliant



Product Range Overview

SUB SERIES	Plug	Socket
Mating Style	Quick Lock	Quick Lock
Plastic Version	✓	✓
Metal Version	-	-
No. of Contacts	12 ~ 40	12 ~ 40
Plating of Contacts	Gold Plated	Gold Plated
Operating Voltage (AC/DC)	120V	120V
Nominal Current	1A	1A
Operating Temperature	Receptacle: -40°C ~ 105°C Plug: -40°C ~ 105°C	
Fasten Style of Nut	-	-
Receptacle	✓	✓
Overmolded with Cable	-	-
Accessories	-	-
Mating Cycles (Pin Contact)	10	10
IP Rating	-	-
Salt Spray (Connector, Mated)	48h	48h
UV Resistant	-	-
Flammability Rating	UL94V-0	UL94V-0
Vibration Resistant	Frequency range 20-200-20Hz, acceleration of 88m/s2	
RoHS Compliant	✓	✓
REACH Compliant	✓	✓
Certifications	LV214	LV214



Battery Management System



Automotive



Energy Storage System



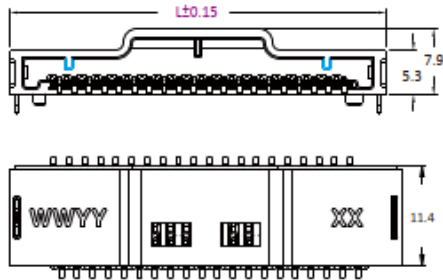
Industrial Automation

Served Markets & Applications

Market	Application	
LED Lighting	- Architectural Lighting - Residential, Medical, and Commercial Lighting - Street, Parking, Park, and Tunnel Lighting - Entertainment and Signage Lighting	- Horticulture, Grow, & Warehouse Lighting - Mass Transportation and Vehicles - Appliances and Equipment Lighting
Marine	- Navigation System: Radar, GPS, Sonar, Fish-finder - Communication: Radio, AIS, SCS	- Instrumentation & Monitoring: MFD, CCTV, Sensors - Entertainment: Video, Audio, Decorative
Broadband Wireless Access	- Access Point: LTE, 5G - Cellular, Subscriber, and Mobile Station	- Wireless Router and Mobile Backhaul - Other Communication Equipment
Industrial Automation	- Data Communication: Router, Switches - Robotic Arms, Packaging, and Conveyor System - Controller: Machine Vision, AVI, Sensors	- Autonomous Robots, Forklifts, Power Tools - Industrial PC, Counters, and Display
Renewable Energy	- Photo Voltaic (PV), Concentrated Solar Power (CSP) - Power Distribution and Control: ESS	Device Communication and Tracker
Heavy Equipment	- Navigation System: GPS, Lidar, Radar, Ultrasonic - Instrumentation, Control, and Diagnostic Systems - Monitoring: Display, Camera, Imaging	- Safety System: Sensor, ADAS, Telematics & Tracking - Communication and Electronic Toll Systems
Autometer	- Metering: Water, Electric, & Gas Meter - Power and Control: Drone, Security Alarm	Monitoring: Sewage, Telemetry, and Vehicle Tracking
Test Equipment	- Measuring Device: Air, Humidity, Light, Sound, Water, Image, Weight, Height - Detectors: Gas, Fire, Leak, Motion, Heat - Monitoring: Seismic (earthquake), Climatic	- Weighing: Weigh, In-motion - Geodetic System: Surveying, Laser Marking, Borrescope
Hybrid Electric Vehicles	- Motor Module: Scooter, Hoover board, Wheelchair - Safety System: Speed, Brake, Throttle, Gear - Power System: Charging, Controller, Battery	- Sensors: Speedometer, Fuel, Cleaning - Device Communication: CAN, In-vehicle Info - Lighting: Interior and Exterior LED
Railway Mass Transit	- Navigation: GPS, Radar, Lidar, Ultrasonic - Infotainment: Display, Sound, Broadcasting, Monitor - Sensors: Speedometer, Fuel, Cleaning	- Communication: Main Controller, In-vehicle Info - Lighting: Interior and Exterior
Mobile Devices	- Drone Remote Controller - Measurement: Altimeter, Gesture, Piezoelectric	Handheld: Barcode, Scanner, Portable Lamp, GPS
Transpo	- Monitoring: Display, CCTV, Lidar, Surveillance Cam - Communication: Wifi, router, Fleet Management	Navigation: GPS, Radar
Medical Equipment	- Patient Care: Electric Beds, Wheelchair Lift & Stair, Rehabilitation System, Mobile Carts - Visualization: Display and Monitors	- Diagnostic: MRI, CT Scan, Ultrasound, X-ray - Monitoring: ECG, Holter, Blood Pressure, Sugar
Automotive Diagnostics	- Auto-crash Detection & Notification System - Vehicle Tracking and Roadside Assistance System	Remote Diagnostics
UAV	Drone: Commercial, Consumer, & Military	
Lifts & Materials Handling	Forklift, Industrial Lift, Material Handling	
Remote Video Response Center	- Monitoring: Display, CCTV, Dome, IP Camera - Detection: Auto-License Plate Recognition, Alarm - Identification: Fingerprint, Face Detection, Encoders	- Remote Control Devices and Sensors - Peripherals: Junction Boxes and Cabling System - Lighting: Interior and Exterior
Autonomous	- Navigation & Sensor: GPS, Lidar, Radar, Ultrasonic, IMU - Imaging: Cameras, Monitors, Infotainment Display	Controller: Inertial Measurement Unit & Navigation System, Central Computer
Communication	- Transmitter and Receiver Equipment - Data: Router and Switches	- Base Station and Access Point - Audio: VoIP, Telephone
Rugged IT	- Communication Equipment - Military Notebook & Tablet	- Rugged Military AR & VR - Imaging: Night Vision Googles, mini-Camera, Thermal Camera

ZConnect (Hot plugging)

> SMD Socket



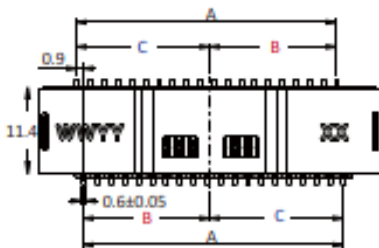
Pin(n)	Pitch	L	A	B	C	D
18	1.8	-	30.6	14.85	15.75	39.95
19*		-	32.4	16.65	15.75	41.75
20		-	34.2	16.65	17.55	43.55
36	0.9	41.6	30.6	14.85	15.75	-
38*		43.4	32.4	16.65	15.75	-
40		45.2	34.2	16.65	17.55	-

* Upon Request

Pin (n)	Pitch	A	B	C	D	E	F	H
12	2.7	27.0	13.05	13.95	15.75	11.25	39.95	39.6

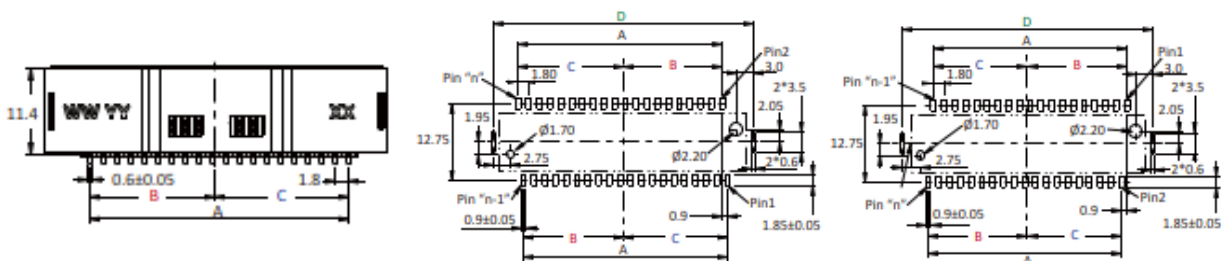
0.9mm Pitch

- Part Number: Z2A1-③AFRS-BA0001



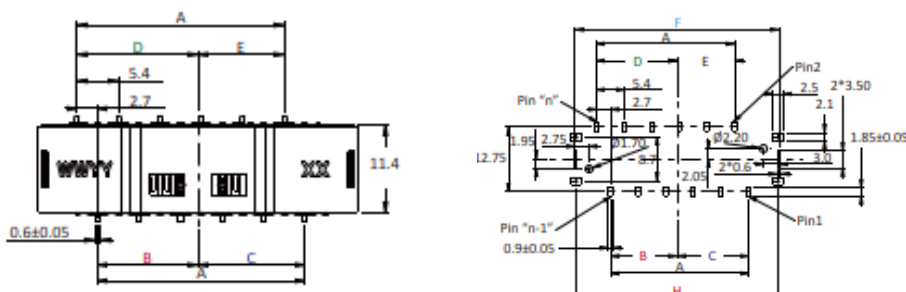
1.8mm Pitch

- Part Number: Z2A1-③AFRS-BA0001



2.7mm Pitch

- Part Number: Z2A1-③CFRS-BA0001



ZConnect (CPA Version)

> Plug

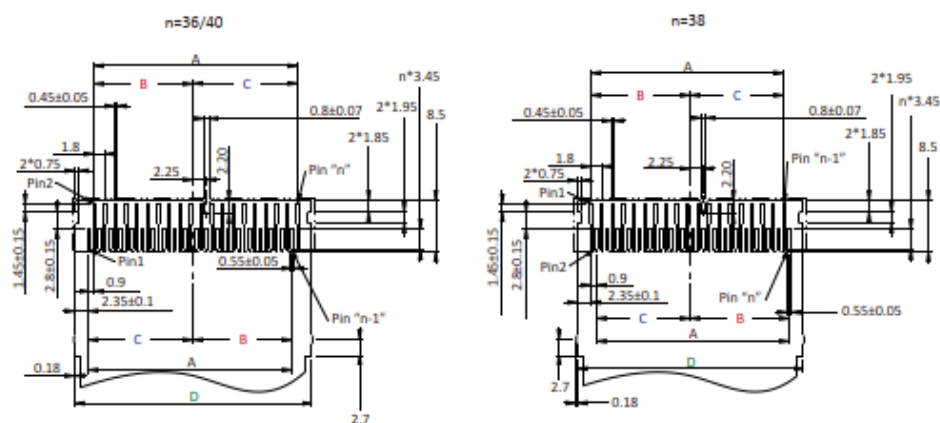
• Part Number: ZA-③NMAN-BN0001



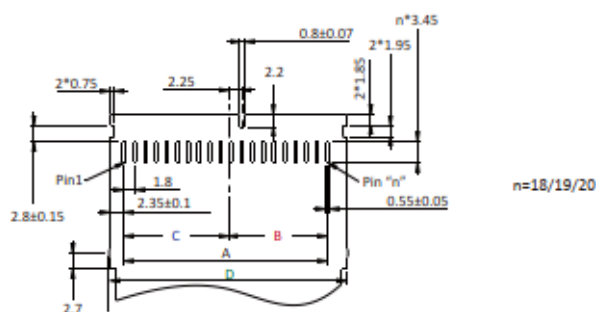
③ Pin (n)	Pitch	L	A	B	C	D
18	1.8	38.1	30.6	14.85	15.75	36.2
19		39.9	32.4	16.65	15.75	38.0
20		41.7	34.2	16.65	17.55	39.8
36	0.9	38.1	30.6	14.85	15.75	36.2
38		39.9	32.4	16.65	15.75	38.0
40		41.7	34.2	16.65	17.55	39.8

③ Pin (n)	Pitch	L	F	A	B	C	D	E
12	2.7	38.1	36.2	27.0	13.05	13.95	15.75	11.25

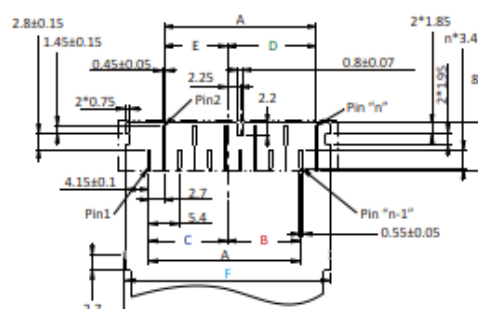
0.9mm Pitch



1.8mm Pitch



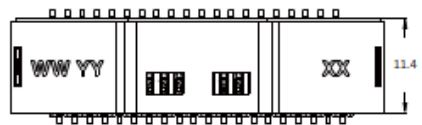
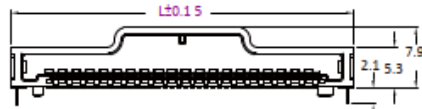
2.7mm Pitch



(unit: mm)

ZConnect (Hot plugging is not applicable)

> SMT Socket

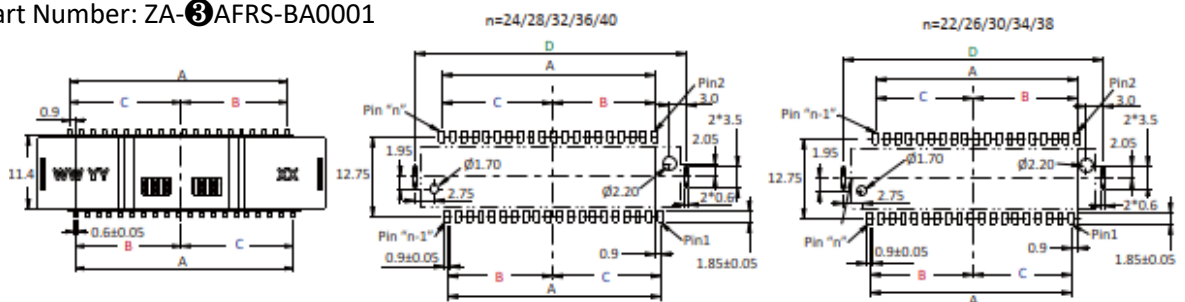


Pin (n)	Pitch	L	E	H	I	F	G	D
8	2.7	30.8	16.2	7.65	8.55	10.35	5.85	29.13
10		36.2	21.6	13.05	8.55	10.35	11.25	32.75
12		41.6	27.0	13.05	13.95	15.75	11.25	39.95

Pin(n)	Pitch	L	A	B	C	D
11	1.8	29.0	18.0	9.45	8.55	27.35
12		30.8	19.8	9.45	10.35	29.15
13		32.6	21.6	11.25	10.35	30.95
14		34.4	23.4	11.25	12.15	32.75
15		36.2	25.2	13.05	12.15	34.55
16		38.0	27.0	13.05	13.95	36.35
17		39.8	28.8	14.85	13.95	38.15
18		41.6	30.6	14.85	15.75	39.95
19		43.4	32.4	16.65	15.75	41.75
20		45.2	34.2	16.65	17.55	43.55
22	0.9	29.0	18.0	9.45	8.55	27.35
24		30.8	19.8	9.45	10.35	29.15
26		32.6	21.6	11.25	10.35	30.95
28		34.4	23.4	11.25	12.15	32.75
30		36.2	25.2	13.05	12.15	34.55
32		38.0	27.0	13.05	13.95	36.35
34		39.8	28.8	14.85	13.95	38.15
36		41.6	30.6	14.85	15.75	39.95
38		43.4	32.4	16.65	15.75	41.75
40		45.2	34.2	16.65	17.55	43.55

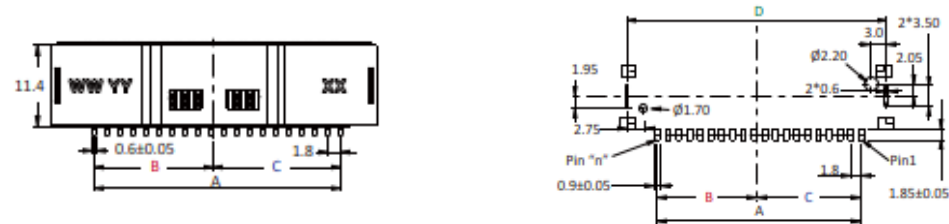
0.9mm Pitch

- Part Number: ZA-**3**AFRS-BA0001



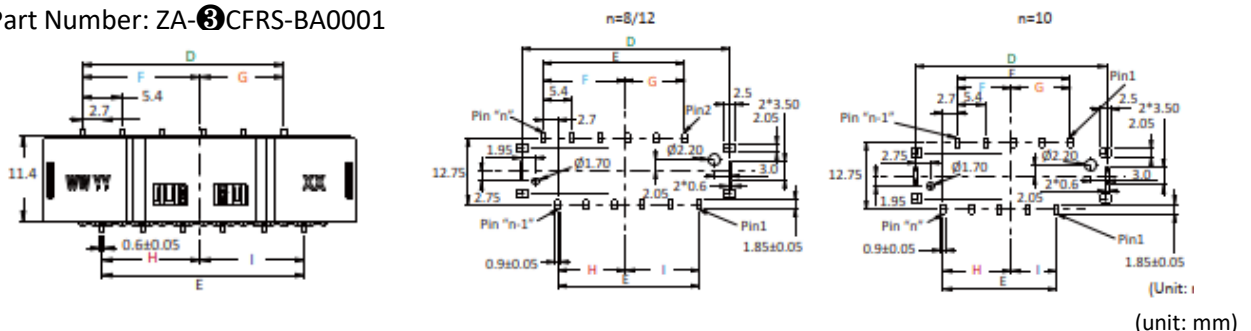
1.8mm Pitch

- Part Number: ZA-**3**BFRS-BA0001



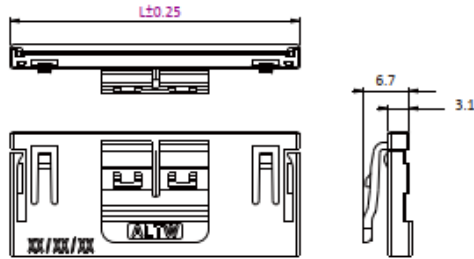
2.7mm Pitch

- Part Number: ZA-**3**CFRS-BA0001



ZConnect (Hot plugging is not applicable)

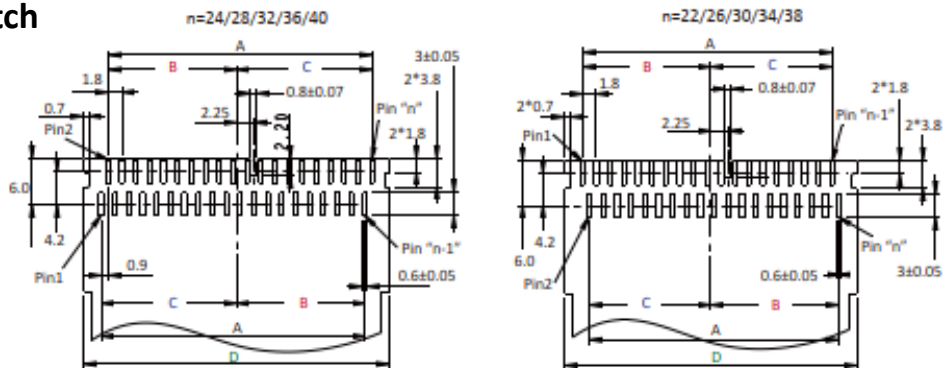
> Plug • Part Number: ZA-③NMAN-BN0001



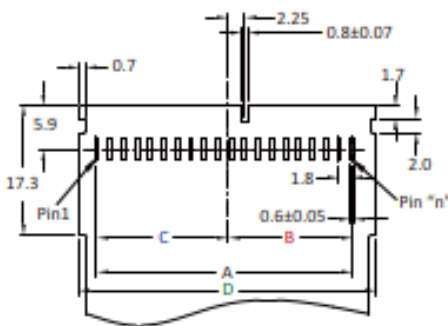
Pin (n)	Pitch	L	G	H	I	E	D	F
8	2.7	30.8	16.2	16.2	8.55	10.35	5.85	29.13
10		36.2	21.6	13.05	8.55	10.35	11.25	32.75
12		41.6	27.0	13.05	13.95	15.75	11.25	39.95

Pin (n)	Pitch	L	A	B	C	D
11	1.8	25.5	18.0	9.45	8.55	23.5
12		27.3	19.8	9.45	10.35	25.3
13		29.1	21.6	11.25	10.35	27.1
14		30.9	23.4	11.25	12.15	28.9
15		32.7	25.2	13.05	12.15	30.7
16		34.5	27.0	13.05	13.95	32.5
17		36.3	28.8	14.85	13.95	34.3
18		38.1	30.6	14.85	15.75	36.1
19		39.9	32.4	16.65	15.75	37.9
20		41.7	34.2	16.65	17.55	39.7
22	0.9	25.5	18.0	9.45	8.55	23.5
24		27.3	19.8	9.45	10.35	25.3
26		29.1	21.6	11.25	10.35	27.1
28		30.9	23.4	11.25	12.15	28.9
30		32.7	25.2	13.05	12.15	30.7
32		34.5	27.0	13.05	13.95	32.5
34		36.3	28.8	14.85	13.95	34.3
36		38.1	30.6	14.85	15.75	36.1
38		39.9	32.4	16.65	15.75	37.9
40		41.7	34.2	16.65	17.55	39.7

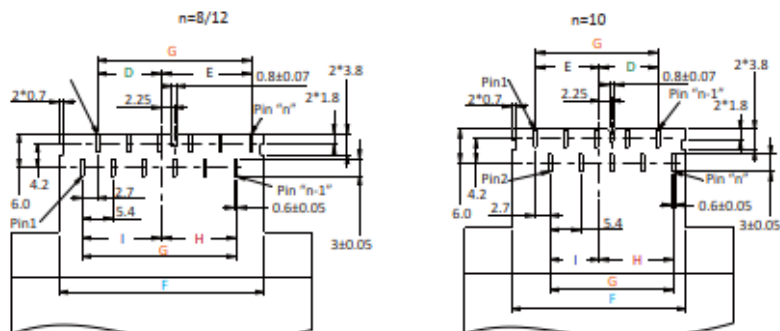
0.9mm Pitch



1.8mm Pitch



2.7mm Pitch



(unit: mm)



Amphenol LTW

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