



**THE DATASHEET OF
10166409-F24210BLF**



FlexLock™ Flex-to-Board & Flex-to-Wire

MORE FLEXIBLE SOLDERING AUTOMOTIVE GRADE CONNECTOR SYSTEM

FlexLock™ FPC-to-Board and Flex-to-Wire connector's compact design address the growing demand for automotive application market. The connector design is compliant to USCAR- T2V2 and LV-214 S3 specifications.

The connector has nominal current carrying capacity of 2A per contact to support higher power application.

FlexLock™ 2.54mm pitch is supporting in 10 to 36 positions double row with vertical and horizontal TH configurations, and in 4 position single row vertical and horizontal TH configurations.

FlexLock™ 3.20mm pitch is supporting in 10 to 26 positions double row with horizontal TH configuration.

- USCAR-T2V2, LV-214 S3 compliant
- Re-flow tin plated reduce mating force
- Position from 10 to 36 (2.54mm pitch, double row)
- Position from 4 to 15 (2.54mm pitch, single row)
- Position from 10 to 26 (3.20mm pitch, double row)
- Connector Position Assurance (CPA)

FEATURES

- Re-flow tin plating process for terminal
- Current rating 2A with each contact
- Terminal Position Assurance (TPA)
- Hold down
- Connector Positioning Assurance (CPA)



BENEFITS

- Low mating and un-mating force
- Meet higher power Amps performance
- Ensures proper terminal insertion position and retention
- Increase the board grip force
- Ensures that connectors are properly mated and locked together

TECHNICAL INFORMATION

MATERIAL

- Connector Contact: Copper Alloy
- Housing: High temperature UL94V-0
- Plating: Tin plated
8μin GXT®/Au

ELECTRICAL PERFORMANCE

- Voltage Rating: 48VAC/DC
- Insulation Resistance: 100MΩ min.
- Contact Resistance: 25mΩ max. (initial)
- Current Rating: 2A
- Low Level Contact Resistance: <25mΩ
- Dielectric Withstand Voltage: 500V AC
- Temperature Rise: +55°C max. for 7.32A

MECHANICAL PERFORMANCE

- Durability: 10 cycles (Tin), 30 cycles (Gold)
- Mating/Un-mating Force: 75N max.
- Terminal Insertion Force: <5N max./pin
- Terminal Retention Force: 15N min.

ENVIRONMENTAL

- Operating Temperature Range: -40°C to +105°C

APPROVALS AND CERTIFICATIONS

- UL E66906
- USCAR T2V2
- LV 214 S3

SPECIFICATIONS

- Product Specification:
 - GS-12-1679 (FlexLock™ 2.54mm & 3.2mm D/R, flex-to-board)
 - GS-12-1535 (FlexLock™ 2.54mm, flex-to-wire)
 - GS-12-1745 (FlexLock™ 2.54mm S/R)
- Product Pitch: 2.54mm, 3.20m
- PCB Termination: 1.60mm
- Packaging Specification: GS-14-2781
- Application Specification:
 - GS-20-0707 (flex-to-board)
 - GS-20-0788 (flex-to-wire)

PACKAGING

- Header: Tape and reel
- Receptacle Housing: Tray
- Cable housing: Bag

TARGET MARKETS/APPLICATIONS



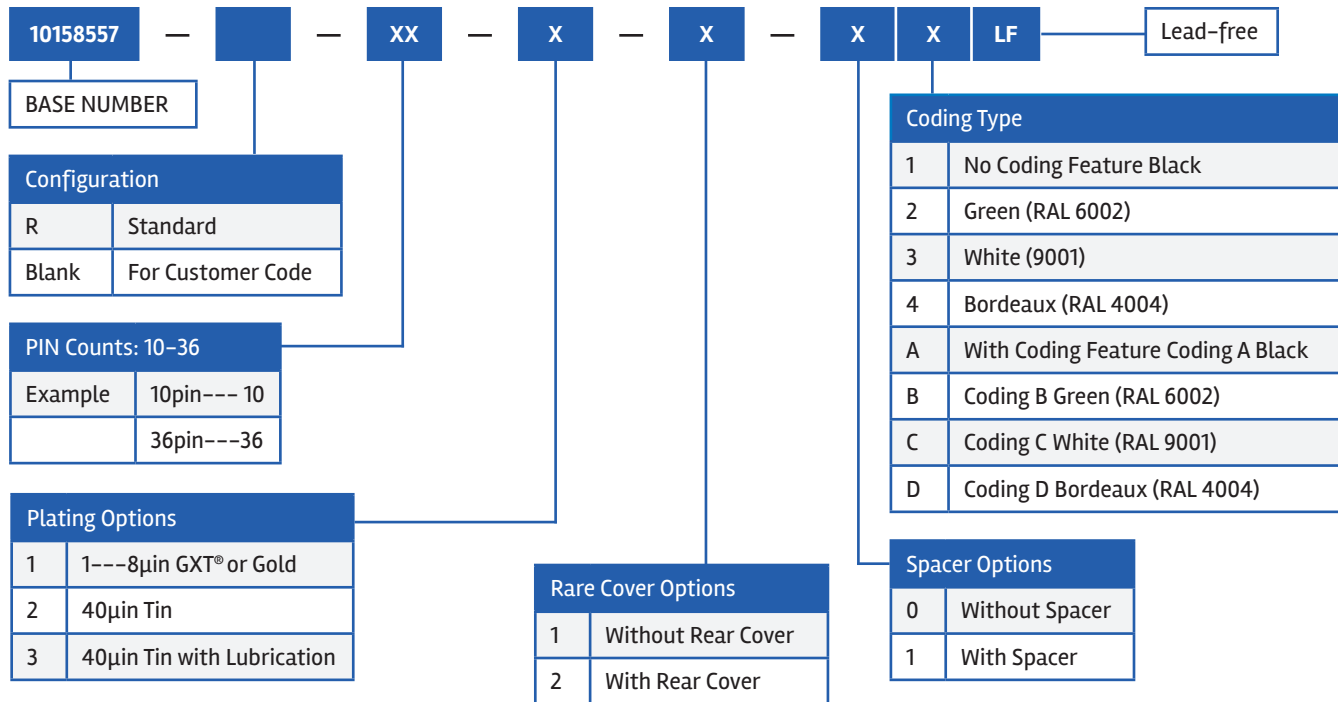
BMS (Battery Management System)
OBC (On-board Charger)
MCU (Micro Control Unit)



Robotics

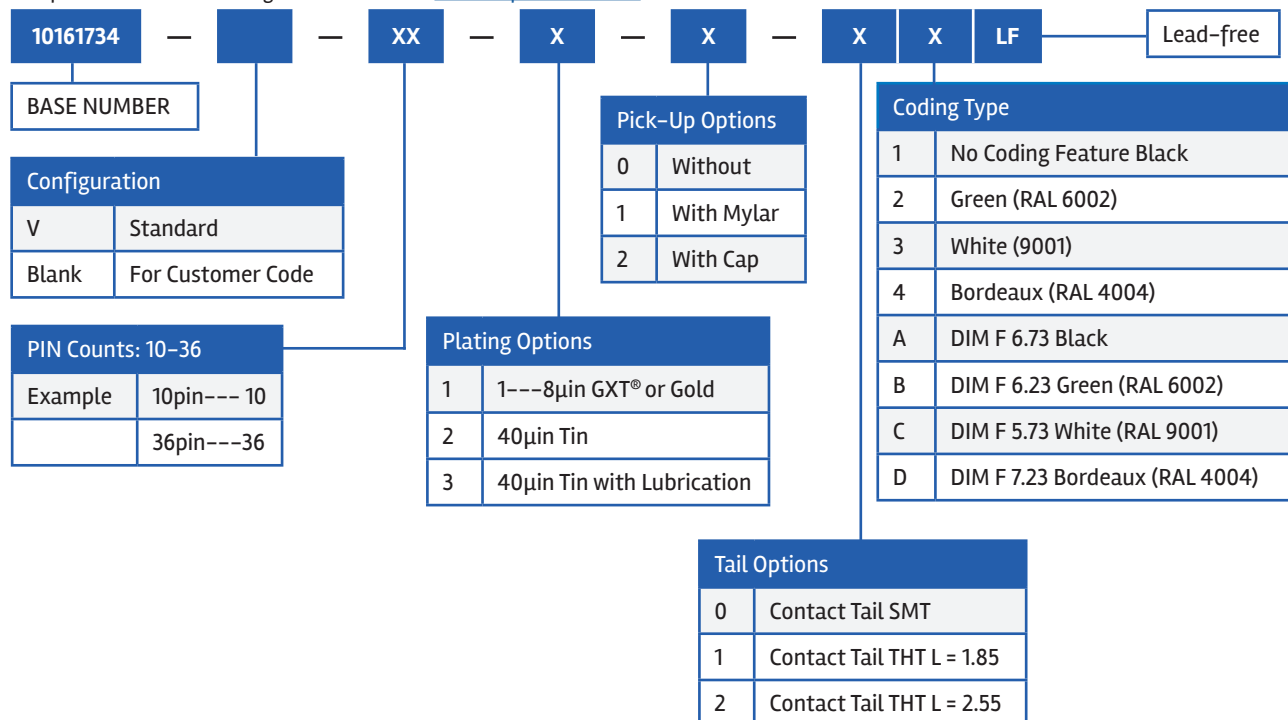
PART NUMBER SELECTOR-DOUBLE ROW R/A-HEADER-2.54MM

Find part number details using the search box on www.amphenol-cs.com



PART NUMBER SELECTOR-DOUBLE ROW VERTICAL-HEADER-2.54MM

Find part number details using the search box on www.amphenol-cs.com



PART NUMBER SELECTOR-DOUBLE ROW R/A-RECEPTACLE-2.54MM

Find part number details using the search box on www.amphenol-cs.com

10158558 — [] — XX — X — X — X X LF — Lead-free

BASE NUMBER

Configuration	
R	Standard
N	LV214 S3
B	Special for user (CPA Separated Wrap)
Blank	For Customer Code

Cover Options	
0	Without Cover
1	With Cover

Coding Type	
1	DIM F 0 (No Coding) Black
2	Green (RAL 6002)
3	White (9001)
4	Bordeaux (RAL 4004)
A	DIM F 6.65 Black
B	DIM F 6.15 Green (RAL 6002)
C	DIM F 5.65 White (RAL 9001)
D	DIM F 7.15 Bordeaux (RAL 4004)

Plating Options	
1	1---8µin GXT® or Gold
2	40µin Tin

CPA Options	
1	Without
2	With

PIN Counts: 10-36	
Example	10pin--- 10
	36pin---36

PART NUMBER SELECTOR-DOUBLE ROW VERTICAL-RECEPTACLE-2.54MM

Find part number details using the search box on www.amphenol-cs.com

10161735 — [] — XX — X — X — X X LF — Lead-free

BASE NUMBER

Configuration	
V	Standard
Blank	For Customer Code

Pick-Up Options	
0	Without
1	With Mylar

Coding Type	
1	No Coding Feature Black
2	Green (RAL 6002)
3	White (9001)
4	Bordeaux (RAL 4004)
A	With Coding Feature Coding A Black
B	Coding B Green (RAL 6002)
C	Coding C White (RAL 9001)
D	Coding D Bordeaux (RAL 4004)

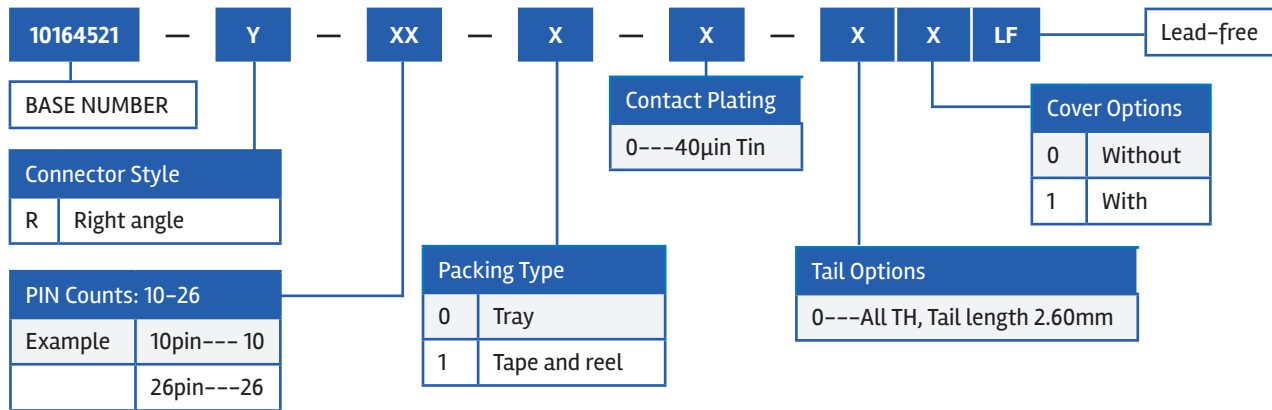
Plating Options	
1	1---8µin GXT® or Gold
2	40µin Tin

CPA Options	
0	Without
1	With

PIN Counts: 10-36	
Example	10pin--- 10
	36pin---36

PART NUMBER SELECTOR-DOUBLE ROW R/A-HEADER-3.20MM

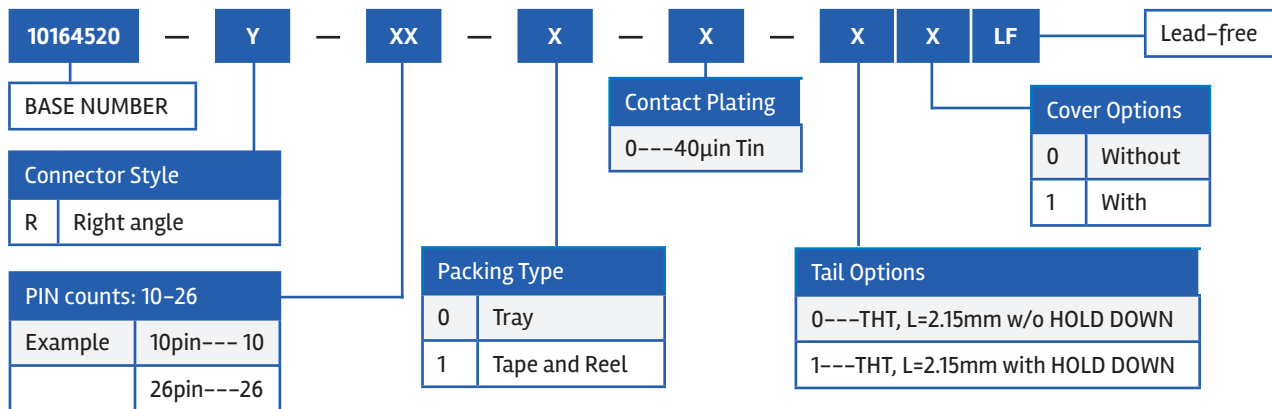
Note: This table may update not on time, please contact our local sales to confirm the latest information.



Find part number details using the search box on www.amphenol-cs.com

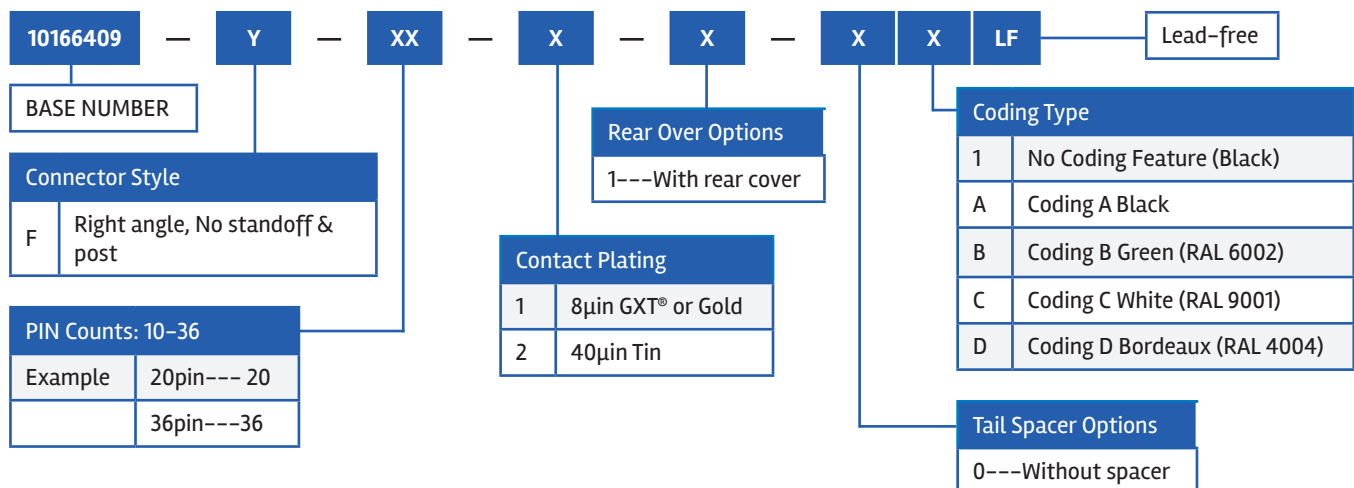
PART NUMBER SELECTOR-DOUBLE ROW R/A-RECEPTACLE-3.20MM

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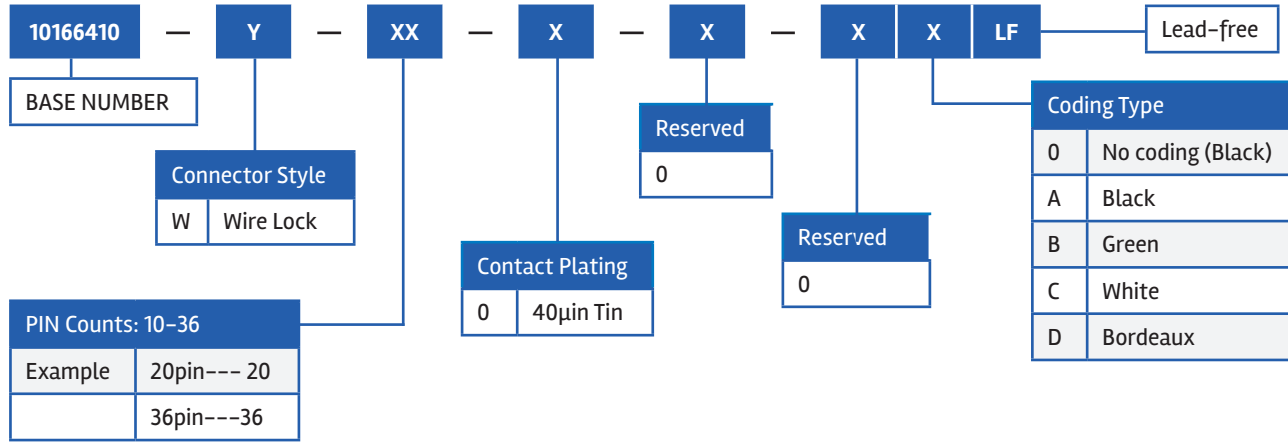
PART NUMBER SELECTOR-DOUBLE ROW R/A-HEADER-2.54MM (FLEX-TO-WIRE)



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PART NUMBER SELECTOR_DOUBLE ROW_CABLE HOUSING_2.54MM (FLEX-TO-WIRE)

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PART NUMBERS

Description	Part Numbers
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Board Header, 30 Position, Top Latch, Tin (pre-plated)	10158557-R302111LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Receptacle, 30 Position, Top Latch, Tin (pre-plated), USCAR T2V2	10161735-V302011LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Receptacle, 30 Position, Top Latch, Tin (pre-plated), LV214 S3	10161735-N302011LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Board Header, 30 Position, Top Latch, 8µin GXT® or Au plating	10158557-R301111LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Receptacle, 30 Position, Top Latch, 8µin GXT® or Au plating, USCAR T2V2	10161735-V301011LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Receptacle, 30 Position, Top Latch, 8µin GXT® or Au plating, USCAR T2V2	10158558-R301111LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Board Header, 28 Position, Top Latch, Tin (pre-plated)	10158557-R282111LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Receptacle, 28 Position, Top Latch, Tin (pre-plated), USCAR T2V2	10158558-R282111LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Receptacle, 28 Position, Top Latch, Tin (pre-plated), LV 214 S3	10158558-N282111LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, R/A Board Header, 4 Position, Top Latch, Tin (pre-plated)	10165157-R041000LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Receptacle, 4 Position, Top Latch, Tin (pre-plated), USCAR T2V2	10165160-V040010LF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Board Header, 28 Position, Top Latch, Tin (preplated), A code	10161734-V28322ALF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Board Header, 28 Position, Top Latch, Tin (preplated), B code	10161734-V28322BLF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Receptacle, 28 Position, Top Latch, Tin (preplated), A code	10161735-V28201ALF
FlexLock™, 2.54mm FPC-to-Board Connector Platform, VT Receptacle, 28 Position, Top Latch, Tin (preplated), B code	10161735-V28201BLF
FlexLock™, 3.20mm FPC-to-Board Connector Platform, Board Header, 18 Position, Top Latch, Tin (pre-plated)	10164521-R181000LF
FlexLock™, 3.20mm FPC-to-Board Connector Platform, Receptacle, 18 Position, Top Latch, Tin (pre-plated), USCAR T2V2	10164520-R180001LF
FlexLock™, 2.54mm Flex-to-Wire, R/A header, Top Latch, Tin, USCAR T2V2	10166409 series
FlexLock™, 2.54mm Flex-to-Wire, Cable housing, USCAR T2V2	10166410 series
FlexLock™, 2.54mm Flex-to-Wire, Crimping terminal, USCAR T2V2	10163003-002LF

Find part number details using the search box on www.amphenol-cs.com

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