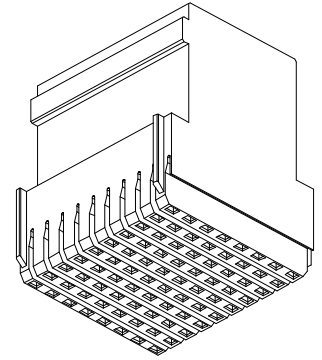




***VHDM® Backplane Signal Insertion Module
Application Tooling Specification
Press-In Tool
Order No. 62202-0209**



FEATURES

- Polarized tool prevents product damage.
- Tool provides uniform distribution of press force across entire pin array.
- May be used as a stand-alone tool or mounted in an optional tooling holder with other Molex press-in tools.

SCOPE

Products: *VHDM® Standard Shield Signal Module Assembly, (80 Circuits), 74060, 74061, 74062, 74075, 74078, 74457 and 74458 Series 8 Rows by 10 Columns Assemblies.
2.00mm (.079") Pitch VHDM® Lite Signal Module Assembly, (80 Circuits), 75197, 75198, and 75199 Series, 8 Rows by 10 Columns Assemblies. See Product List below for specific part numbers.

Product List

The following is a partial list of the product order numbers and their specifications this tool is designed to run. Updates to this list are available on www.molex.com.

74060 Series Number							
Guide Style	Columns	Assembly Order Number					
Open End	8	74060-1001	74060-1002	74060-1003	74060-1004	74060-1006	74060-1007
		74060-1008	74060-1009				
		74060-1101	74060-1102	74060-1103	74060-1104	74060-1106	74060-1107
		74060-1108	74060-1109				
		74060-9001	74060-9002	74060-9003	74060-9004	74060-9006	74060-9007
		74060-9008	74060-9009				
		74060-9101	74060-9102	74060-9103	74060-9104	74060-9106	74060-9107
		74060-9108	74060-9109				

74061 Series Number							
Guide Style	Columns	Assembly Order Number					
Signal End	8	74061-1001	74061-1002	74061-1003	74061-1004	74061-1006	74061-1007
		74061-1008	74061-1009	74061-1011	74061-1012	74061-1013	74061-1014
		74061-1016	74061-1017	74061-1018	74061-1019	74061-1021	74061-1022
		74061-1023	74061-1024	74061-1026	74061-1027	74061-1028	74061-1029
		74061-1031	74061-1032	74061-1033	74061-1034	74061-1036	74061-1037
		74061-1038	74061-1039	74061-1041	74061-1042	74061-1043	74061-1044
		74061-1046	74061-1047	74061-1048	74061-1049	74061-1051	74061-1052
		74061-1053	74061-1054	74061-1056	74061-1057	74061-1058	74061-1059
		74061-1061	74061-1062	74061-1063	74061-1064	74061-1066	74061-1067
		74061-1068	74061-1069	74061-1071	74061-1072	74061-1073	74061-1074
		74061-1076	74061-1077	74061-1078	74061-1079	74061-1081	74061-1082
		74061-1083	74061-1084	74061-1086	74061-1087	74061-1088	74061-1089
		74061-1101	74061-1102	74061-1103	74061-1104	74061-1106	74061-1107
		74061-1108	74061-1109	74061-1111	74061-1112	74061-1113	74061-1114
		74061-1116	74061-1117	74061-1118	74061-1119	74061-1121	74061-1122
		74061-1123	74061-1124	74061-1126	74061-1127	74061-1128	74061-1129
		74061-1131	74061-1132	74061-1133	74061-1134	74061-1136	74061-1137

74061 Series Number							
Guide Style	Columns	Assembly Order Number					
Signal End	8	74061-1138	74061-1139	74061-1141	74061-1142	74061-1143	74061-1144
		74061-1146	74061-1147	74061-1148	74061-1149	74061-1151	74061-1152
		74061-1153	74061-1154	74061-1156	74061-1157	74061-1158	74061-1159
		74061-1161	74061-1162	74061-1163	74061-1164	74061-1166	74061-1167
		74061-1168	74061-1169	74061-1171	74061-1172	74061-1173	74061-1174
		74061-1176	74061-1177	74061-1178	74061-1179	74061-1181	74061-1182
		74061-1183	74061-1184	74061-1186	74061-1187	74061-1188	74061-1189
		74061-9001	74061-9002	74061-9003	74061-9004	74061-9006	74061-9007
		74061-9008	74061-9009	74061-9011	74061-9012	74061-9013	74061-9014
		74061-9016	74061-9017	74061-9018	74061-9019	74061-9021	74061-9022
		74061-9023	74061-9024	74061-9026	74061-9027	74061-9028	74061-9029
		74061-9031	74061-9032	74061-9033	74061-9034	74061-9036	74061-9037
		74061-9038	74061-9039	74061-9041	74061-9042	74061-9043	74061-9044
		74061-9046	74061-9047	74061-9048	74061-9049	74061-9051	74061-9052
		74061-9053	74061-9054	74061-9056	74061-9057	74061-9058	74061-9059
		74061-9061	74061-9062	74061-9063	74061-9064	74061-9066	74061-9067
		74061-9068	74061-9069	74061-9071	74061-9072	74061-9073	74061-9074
		74061-9076	74061-9077	74061-9078	74061-9079	74061-9081	74061-9082
		74061-9083	74061-9084	74061-9086	74061-9087	74061-9088	74061-9089
		74061-9101	74061-9102	74061-9103	74061-9104	74061-9106	74061-9107
		74061-9108	74061-9109	74061-9111	74061-9112	74061-9113	74061-9114
		74061-9116	74061-9117	74061-9118	74061-9119	74061-9121	74061-9122
		74061-9123	74061-9124	74061-9126	74061-9127	74061-9128	74061-9129
		74061-9131	74061-9132	74061-9133	74061-9134	74061-9136	74061-9137
		74061-9138	74061-9139	74061-9141	74061-9142	74061-9143	74061-9144
		74061-9146	74061-9147	74061-9148	74061-9149	74061-9151	74061-9152
		74061-9153	74061-9154	74061-9156	74061-9157	74061-9158	74061-9159
		74061-9161	74061-9162	74061-9163	74061-9164	74061-9166	74061-9167
		74061-9168	74061-9169	74061-9171	74061-9172	74061-9173	74061-9174
		74061-9176	74061-9177	74061-9178	74061-9179	74061-9181	74061-9182
		74061-9183	74061-9184	74061-9186	74061-9187	74061-9188	74061-9189

74062 Series Number							
Guide Style	Columns	Assembly Order Number					
Shield End	8	74062-1001	74062-1002	74062-1003	74062-1004	74062-1006	74062-1007
		74062-1008	74062-1009	74062-1011	74062-1012	74062-1013	74062-1014
		74062-1016	74062-1017	74062-1018	74062-1019	74062-1021	74062-1022
		74062-1023	74062-1024	74062-1026	74062-1027	74062-1028	74062-1029
		74062-1031	74062-1032	74062-1033	74062-1034	74062-1036	74062-1037
		74062-1038	74062-1039	74062-1041	74062-1042	74062-1043	74062-1044
		74062-1046	74062-1047	74062-1048	74062-1049	74062-1051	74062-1052
		74062-1053	74062-1054	74062-1056	74062-1057	74062-1058	74062-1059
		74062-1061	74062-1062	74062-1063	74062-1064	74062-1066	74062-1067
		74062-1068	74062-1069	74062-1071	74062-1072	74062-1073	74062-1074
		74062-1076	74062-1077	74062-1078	74062-1079	74062-1081	74062-1082
		74062-1083	74062-1084	74062-1086	74062-1087	74062-1088	74062-1089
		74062-1101	74062-1102	74062-1103	74062-1104	74062-1106	74062-1107
		74062-1108	74062-1109	74062-1111	74062-1112	74062-1113	74062-1114
		74062-1116	74062-1117	74062-1118	74062-1119	74062-1121	74062-1122
		74062-1123	74062-1124	74062-1126	74062-1127	74062-1128	74062-1129
		74062-1131	74062-1132	74062-1133	74062-1134	74062-1136	74062-1137
		74062-1138	74062-1139	74062-1141	74062-1142	74062-1143	74062-1144
		74062-1146	74062-1147	74062-1148	74062-1149	74062-1151	74062-1152
		74062-1153	74062-1154	74062-1156	74062-1157	74062-1158	74062-1159

74062 Series Number							
Guide Style	Columns	Assembly Order Number					
Shield End	8	74062-1161	74062-1162	74062-1163	74062-1164	74062-1166	74062-1167
		74062-1168	74062-1169	74062-1171	74062-1172	74062-1173	74062-1174
		74062-1176	74062-1177	74062-1178	74062-1179	74062-1181	74062-1182
		74062-1183	74062-1184	74062-1186	74062-1187	74062-1188	74062-1189
		74062-9001	74062-9002	74062-9003	74062-9004	74062-9006	74062-9007
		74062-9008	74062-9009	74062-9011	74062-9012	74062-9013	74062-9014
		74062-9016	74062-9017	74062-9018	74062-9019	74062-9021	74062-9022
		74062-9023	74062-9024	74062-9026	74062-9027	74062-9028	74062-9029
		74062-9031	74062-9032	74062-9033	74062-9034	74062-9036	74062-9037
		74062-9038	74062-9039	74062-9041	74062-9042	74062-9043	74062-9044
		74062-9046	74062-9047	74062-9048	74062-9049	74062-9051	74062-9052
		74062-9053	74062-9054	74062-9056	74062-9057	74062-9058	74062-9059
		74062-9061	74062-9062	74062-9063	74062-9064	74062-9066	74062-9067
		74062-9068	74062-9069	74062-9071	74062-9072	74062-9073	74062-9074
		74062-9076	74062-9077	74062-9078	74062-9079	74062-9081	74062-9082
		74062-9083	74062-9084	74062-9086	74062-9087	74062-9088	74062-9089
		74062-9101	74062-9102	74062-9103	74062-9104	74062-9106	74062-9107
		74062-9108	74062-9109	74062-9111	74062-9112	74062-9113	74062-9114
		74062-9116	74062-9117	74062-9118	74062-9119	74062-9121	74062-9122
		74062-9123	74062-9124	74062-9126	74062-9127	74062-9128	74062-9129
		74062-9131	74062-9132	74062-9133	74062-9134	74062-9136	74062-9137
		74062-9138	74062-9139	74062-9141	74062-9142	74062-9143	74062-9144
		74062-9146	74062-9147	74062-9148	74062-9149	74062-9151	74062-9152
		74062-9153	74062-9154	74062-9156	74062-9157	74062-9158	74062-9159
		74062-9161	74062-9162	74062-9163	74062-9164	74062-9166	74062-9167
		74062-9168	74062-9169	74062-9171	74062-9172	74062-9173	74062-9174
		74062-9176	74062-9177	74062-9178	74062-9179	74062-9181	74062-9182
		74062-9183	74062-9184	74062-9186	74062-9187	74062-9188	74062-9189

74075 Series Number							
Guide Style	Columns	Assembly Order Number					
Custom	8	74074-0005	74075-0008	74075-0009	74075-0010	74075-0011	74075-0015
		74075-0021	74075-0025	74075-0027	74075-0032	74075-0033	74075-0034
		74075-0035	74075-0039	74075-0040	74075-0041	74075-0042	74075-0044
		74075-0045	74075-0046	74075-0047	74075-0048	74075-0049	74075-0050
		74075-0051	74075-0052	74075-0053	74075-0056	74075-0057	74075-0058
		74075-0059	74075-0060	74075-0061	74075-0062	74075-0063	74075-0064
		74075-0065	74075-0066	74075-0067	74075-0068	74075-0069	74075-0060
		74075-0071	74075-0075	74075-0076	74075-0079	74075-0080	74075-0082
		74075-0092	74075-0093	74075-0094	74075-0095	74075-0096	74075-0097
		74075-0098	74075-0101	74075-0102	74075-0103	74075-0104	74075-0105
		74075-0106	74075-0107	74075-0108	74075-0109	740750110	74075-0113
		74075-0117	74075-0118	74075-0119	74075-0120	74075-0122	74075-0124
		74075-0125	74075-0130	74075-0131	74075-0132	74075-0133	74075-0134
		74075-0135	74075-0136	74075-0137	74075-0138	74075-0139	74075-0140
		74075-0141	74075-0142	74075-0143	74075-0144	74075-0152	740760156
		74075-0157	74075-0159	74075-0162	74075-0163	74075-0164	74075-0165
		74075-0166	74075-0167	74075-0171	74075-0172	74075-0173	74075-0177
		74075-0178	74075-0179	74075-0181	74075-0182	74075-0183	74075-0190
		74075-0191	74075-0192	74075-0199	74075-0202	74075-0204	74075-0205
		74075-0209	74075-0212	74075-0213	74075-0214	74075-0215	74075-0216
		74075-0217	74075-0218	74075-0225	74075-0227	74075-0235	74075-0236
		74075-0240	74075-0242	74075-0244	74075-0245	74075-0247	74075-0248
		74075-0249	74075-0250	74075-0251	74075-0256	74075-0257	74075-0260

74075 Series Number							
Guide Style	Columns	Assembly Order Number					
Custom	8	74075-0262	74075-0264	74075-0274	74075-0276	74075-0277	74075-0278
		74075-0280	74075-0282	74075-0283	74075-0287	74075-0288	74075-0290
		74075-0293	74075-0294	74075-0295	74075-0297	74075-0298	74075-0305
		74075-0316	74075-0318	74075-0319	74075-0320	74075-9907	74075-9915
		74075-9999					

74078 Series Number							
Guide Style	Columns	Assembly Order Number					
Custom	8	74078-0001	74078-0003	74078-0004	74078-0005	74078-0007	74078-0009
		74078-0016	74078-0017	74078-0018	74078-0019	74078-0020	74078-0021
		74078-0023	74078-0024	74078-0025			

74457 Series Number							
Guide Style	Columns	Assembly Order Number					
Signal End	8	74457-1001	74457-1002	74457-1003	74457-1004	74457-1006	74457-1007
		74457-1008	74457-1009				

74458 Series Number							
Guide Style	Columns	Assembly Order Number					
Shield End	8	74458-1001	74458-1002	74458-1003	74458-1004	74458-1006	74458-1007
		74458-1008	74458-1009				

75197 Series Number							
Guide Style	Columns	Assembly Order Number					
Open End	8	75197-1001	75197-1002	75197-1003	75197-1004	75197-1006	75197-1007
		75197-1008	75197-1009				
		75197-9001	75197-9002	75197-9003	75197-9004	75197-9006	75197-9007
		75197-9008	75197-9009				

75198 Series Number							
Guide Style	Columns	Assembly Order Number					
Left	8	75198-1001	75198-1002	75198-1003	75198-1004	75198-1011	75198-1012
		75198-1013	75198-1014	75198-1021	75198-1022	75198-1023	75198-1024
		75198-1031	75198-1032	75198-1033	75198-1034	75198-1041	75198-1042
		75198-1043	75198-1044	75198-1051	75198-1052	75198-1053	75198-1054
Left	8	75198-1061	75198-1062	75198-1063	75198-1064	75198-1071	75198-1072
		75198-1073	75198-1074	75198-1081	75198-1082	75198-1083	75198-1084
		75198-9001	75198-9002	75198-9003	75198-9004	75198-9011	75198-9012
		75198-9013	75198-9014	75198-9021	75198-9022	75198-9023	75198-9024
		75198-9031	75198-9032	75198-9033	75198-9034	75198-9041	75198-9042
		75198-9043	75198-9044	75198-9051	75198-9052	75198-9053	75198-9054
		75198-9061	75198-9062	75198-9063	75198-9064	75198-9071	75198-9072
		75198-9073	75198-9074	75198-9081	75198-9082	75198-9083	75198-9084

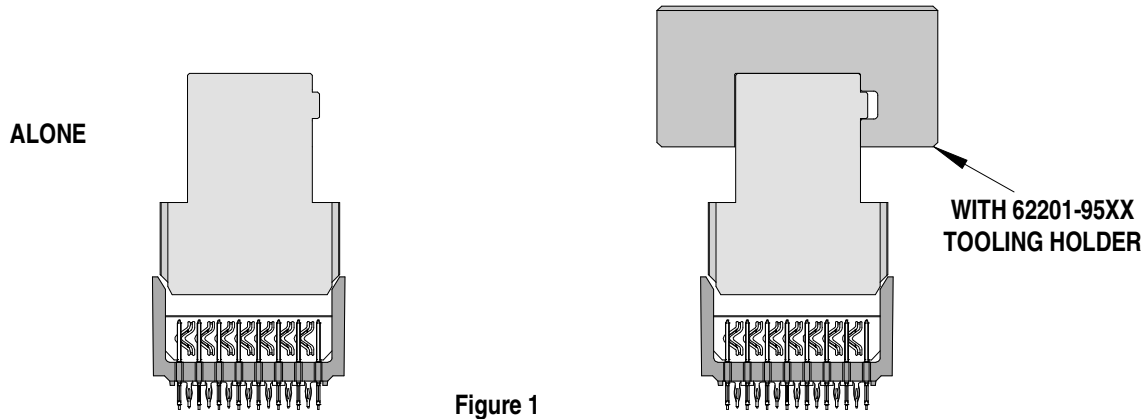
75199 Series Number							
Guide Style	Columns	Assembly Order Number					
Right	8	75199-1001	75199-1002	75199-1003	75199-1004	75199-1011	75199-1012
		75199-1013	75199-1014	75199-1021	75199-1022	75199-1023	75199-1024
		75199-1031	75199-1032	75199-1033	75199-1034	75199-1041	75199-1042
		75199-1043	75199-1044	75199-1051	75199-1052	75199-1053	75199-1054
		75199-1061	75199-1062	75199-1063	75199-1064	75199-1071	75199-1072
		75199-1073	75199-1074	75199-1081	75199-1082	75199-1083	75199-1084

75199 Series Number							
Guide Style	Columns	Assembly Order Number					
		75199-9001	75199-9002	75199-9003	75199-9004	75199-9011	75199-9012
		75199-9013	75199-9014	75199-9021	75199-9022	75199-9023	75199-9024
		75199-9031	75199-9032	75199-9033	75199-9034	75199-9041	75199-9042
		75199-9043	75199-9044	75199-9051	75199-9052	75199-9053	75199-9054
		75199-9061	75199-9062	75199-9063	75199-9064	75199-9071	75199-9072
		75199-9073	75199-9074	75199-9081	75199-9082	75199-9083	75199-9084

*VHDM® is a registered trademark of Teradyne, Inc.

Tool Setup

Depending on the number of connectors to be installed and/or the press used, this tool can be used alone or with a group of press-in tools, mounted in a 62201-95XX tooling holder (ordered separately). See Figure 1.



Tool Installation

The 62201-95XX tooling holder is available in a variety of lengths to accommodate multiple press-in tools.

Tooling Holder Part Number	Rail Overall Length
62201-9501	24mm (0.94 in)
62201-9502	72mm (2.83 in)
62201-9503	156mm (6.14 in)
62201-9504	216mm (8.50 in)
62201-9509	254mm (10.0 in)
62201-9511	305mm (12.0 in)

Reference: The 62202-0209 Press-In Tool is 19.9mm (.785 in.) long by 25.0mm (.984 in.) high.

Printed Circuit Board (PCB) Support

The *VHDM® connectors requires a large amount of force per pin to press into the PCB. To prevent excessive PCB flexure and/or damage to the PCB, a support plate is strongly recommended directly beneath the connector hole pattern.

Due to the custom nature of every application, Molex does not offer any PCB support plate. The customer must furnish their own support plate.

When creating the PCB support plate, remember to allow clearance for the connector pins as they pass through the PCB thickness.

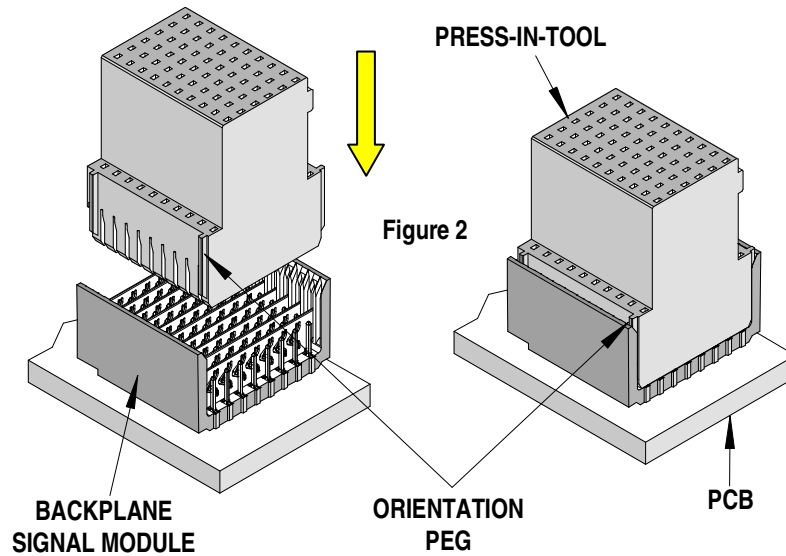
Press Equipment Recommendations

Many types of presses can be used to install *VHDM® connectors, but to assure consistent connector installation Molex recommends the following press criteria:

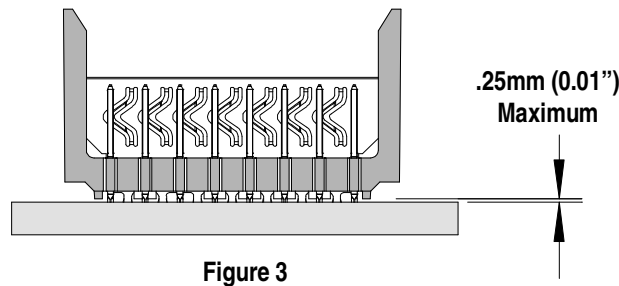
1. The capability to detect force variations as low as 4.5kg (10 lb) during the press-in cycle; excessive force measurements should stop the press-in cycle.
2. The rate of pressing can be regulated as low as 0.13mm (0.005 in) per second.
3. Press stroke control to within 0.25mm (0.010 in).
4. Total press stroke must be at least 19mm (0.75 in).
5. For statistical purposes, automatic collection of force and distance data.

Tool Operation

1. Carefully insert, by hand, the backplane signal module(s) into the PCB hole pattern. Make sure the connector(s) are oriented properly.
2. Insert the press-in-tool into the backplane signal module assembly with the orientation peg on the tool entering the groove in the connector housing. Make sure all the pins and shields fit into the proper slots. See Figure 2.



- Using the application tool and an appropriate press, seat the header assembly until there is less than 0.25mm (0.01 in) clearance between the bottom of the plastic housing and the surface of the PCB. See Figure 3.



CAUTION: To prevent injury, never operate any press without the guards in place. Refer to the press manufacturer's instruction manual.

CAUTION: Molex application tooling specifications are valid only when used with Molex connectors and tooling.

Contact Information

For more information on Molex application tooling please contact Molex at 1-800-786-6539.

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