

DL405

Data Types and Memory Maps

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DL405 Data Types

The following table shows the data types available with the DL405 products.

DL405 Data Type	Description	Bits per unit	Number of bytes	
			HEX	ASCII
31	V memory	16	2	4
	T / C current value	16	2	4
32	Inputs (X, GX, SP)	8	1	2
33	Outputs (Y, C, Stage, T/C bits)	8	1	2
39	Diagnostic Status	8	1	2

NOTE: Not all DL405 CPUs offer the same memory ranges. Check your DL405 User Manual to determine the ranges for your particular model.

Data Type 31 V Memory

V-memory Address	Memory Type	DirectNET Reference Address
V00000	TMR Current Time	0001
V00001	TMR Current Time	0002
-----	-----	-----
V00377	TMR Current Time	0100
V01000	CTR Current Count	0201
V01001	CTR Current Count	0202
-----	-----	-----
V01177	CTR Current Count	0280
V01400	V	0301
V01401	V	0302
-----	-----	-----
V7377	V	0F00
V10000	V	1001
V10001	V	1002
-----	-----	-----
V17777	V	2000
V40000	GX	4001
V40001	GX	4002
-----	-----	-----
V40077	GX	4040

Data Type 31
(continued)

V-memory Address	Memory Type	DirectNET Reference Address
V40400	X	4101
V40401	X	4102
-----	-----	-----
V40423	X	4114
V40500	Y	4141
V40501	Y	4142
-----	-----	-----
V40523	Y	4154
V40600	C	4181
V40601	C	4182
-----	-----	-----
V40677	C	41C0
V41000	Stage Bits	4201
V41001	Stage Bits	4202
-----	-----	-----
V41077	Stage Bits	4240
V41100	TMR Status Bits	4241
V41101	TMR Status Bits	4242
-----	-----	-----
V41117	TMR Status Bits	4250
V41140	CTR Status Bits	4261
V41141	CTR Status Bits	4262
-----	-----	-----
V41147	CTR Status Bits	4268
V41200	Special Relay	4281
V41201	Special Relay	4282
-----	-----	-----
V41205	Special Relay	4286
V41215	Special Relay	428E
V41216	Special Relay	428F
-----	-----	-----
V41234	Special Relay	429D

Data Type 32
Inputs

V-Memory Address	Memory Type	Range	DirectNET Reference Address
V40000 LSB	GX	0007 – 0000	0001
V40000 MSB	GX	0017 – 0010	0002
V40001 LSB	GX	0027 – 0020	0003
— — — —	— — — —	— — — —	— — — —
V40077 LSB	GX	1767 – 1760	007F
V40077 MSB	GX	1777 – 1770	0080
V40400 LSB	X	0007 – 0000	0101
V40400 MSB	X	0017 – 0010	0102
V40401 LSB	X	0027 – 0020	0103
— — — —	— — — —	— — — —	— — — —
V40423 LSB	X	0467 – 0460	0127
V40423 MSB	X	0477 – 0470	0128
V41200 LSB	Special Relay	0007 – 0000	0181
V41200 MSB	Special Relay	0017 – 0010	0182
V41201 LSB	Special Relay	0027 – 0020	0183
— — — —	— — — —	— — — —	— — — —
V41205 LSB	Special Relay	0127 – 0120	018B
V41205 MSB	Special Relay	0137 – 0130	018C
V41215 LSB	Special Relay	0327 – 0320	019B
V41215 MSB	Special Relay	0337 – 0330	019C
V41216 LSB	Special Relay	0347 – 0340	019D
— — — —	— — — —	— — — —	— — — —
V41234 LSB	Special Relay	0707 – 0700	01B9
V41234 MSB	Special Relay	0717 – 0710	01BA

Data Type 33
Outputs

V-Memory Address	Memory Type	Range	DirectNET Reference Address
V40500 LSB	Y	0007 – 0000	0101
V40500 MSB	Y	0017 – 0010	0102
V40501 LSB	Y	0027 – 0020	0103
-----	-----	-----	-----
V40523 LSB	Y	0467 – 0460	0127
V40523 MSB	Y	0477 – 0470	0128
V40600 LSB	C	0007 – 0000	0181
V40600 MSB	C	0017 – 0010	0182
V40601 LSB	C	0027 – 0020	0183
-----	-----	-----	-----
V40677 LSB	C	1767 – 1760	01FF
V40677 MSB	C	1777 – 1770	0200
V41000 LSB	Stage Bits	0007 – 0000	0281
V41000 MSB	Stage Bits	0017 – 0010	0282
V41001 LSB	Stage Bits	0027 – 0020	0283
-----	-----	-----	-----
V41077 LSB	Stage Bits	1767 – 1760	02FF
V41077 MSB	Stage Bits	1777 – 1770	0300
V41100 LSB	Timer Status Bits	0007 – 0000	0301
V41100 MSB	Timer Status Bits	0017 – 0010	0302
V41101 LSB	Timer Status Bits	0027 – 0020	0303
-----	-----	-----	-----
V41117 LSB	Timer Status Bits	0367 – 0360	031F
V41117 MSB	Timer Status Bits	0377 – 0370	0320
V41140 LSB	Counter Status Bits	0007 – 0000	0321
V41140 MSB	Counter Status Bits	0017 – 0010	0322
V41141 LSB	Counter Status Bits	0027 – 0020	0323
-----	-----	-----	-----
V41147 LSB	Counter Status Bits	0167 – 0160	032F
V41147 MSB	Counter Status Bits	0177 – 0170	0330

**Data Type 39
Diagnostic Status**

You can use Data Type 39 to obtain *DirectNET* diagnostic status. The following tables show the reference addresses for the various types of information and the *DirectNET* error codes (used with address 0000).

<i>DirectNET</i> Reference	Data Returned
0000	Last error and previous error*
0002	Number of successful communications
0004	Number of erroneous communications
0006	Number of retries for header
0008	Number of retries for data
* The last error code is contained in the most significant byte. The previous error code is in the least significant byte. Two codes that are displayed are cleared by two successful communication exchanges.	

Error Code	Applicable Data Type	Error Description
00	All types	The transfer was successful.
01	All types	A timeout occurred in the serial link.
03	32, 33	A request was made to read or write a non-existent I/O point.
04	32, 33	A request was made for data of more I/O points than are available.
05	All types	A request was made to read or write odd bytes. The number of data requested was not a multiple of 4 in the ASCII mode.
06	31	A request was made to read or write one or more non-existent memory locations.
07	All types	A request was made to read or write a zero data byte.
08	36	An attempt was made to write a protected memory.
09	All types	An invalid code is specified or an attempt was made to write to an invalid address.
0A	39	A request was made to read or write one or more non-existent diagnostic status words.
0B	36, 39	An invalid starting address is used in the PC type read, scan start/stop, diagnostic status read or write request.
0C	All types	Three attempts were made to transmit the header.
0D	All types	Three attempts were made to transmit the data.
0F	All types	The header unit number is incorrect. An invalid function was requested.
14	All types	One or more errors occurred during the data block transfer. Possible errors are: invalid STX, ETC, LRC, or ETB is received; a parity, framing, or overrun error occurred.
15	All types	EOT from the master station could not be received.
16	All types	A code other than ACK or NAK was received.
1D	31, 33, 36	There is a format error in the non-header portion of the message.
1E	All types	There is a format error in the header block.

DL430 Memory Map

Memory Type	Discrete Memory Reference (octal)	Word Memory Reference (octal)	Qty. Decimal	Symbol
Input Points	X0 – X477	V40400 – V40423	320	X0
Output Points	Y0 – Y477	V40500 – V40523	320	Y0
Control Relays	C0 – C737	V40600 – V40635	512	C0 C0
Special Relays	SP0 – SP137 SP320 – SP617	V41200 – V41205 V41215 – V41230	288	SP0
Timers	T0 – T177	None	128	
Timer Current Values	None	V00000 – V00177	128	V0 K100
Timer Status Bits	T0 – T177	V41100 – V41107	128	T0
Counters	CT0 – CT177	None	128	
Counter Current Values	None	V01000 – V01177	256	V1000 K100
Counter Status Bits	CT0 – CT177	V41040 – V41147	128	CT0
Data Words	None	V1400 – V7377	3072	None specific, used with many instructions
Stages	S0 – S577	V41000 – V41027	384	
Remote In / Out	GX0 – GX737	V40000 – V40037	512	GX0 GX0
System parameters	None	V7400 – V7777	256	None specific, used with many instructions

DL440 Memory Map

Memory Type	Discrete Memory Reference (octal)	Word Memory Reference (octal)	Qty. Decimal	Symbol
Input Points	X0 – X477	V40400 – V40423	320	X0
Output Points	Y0 – Y477	V40500–40523	320	Y0
Control Relays	C0 – C1777	V40600–40677	1024	C0 C0
Special Relays	SP0 – SP137 SP320 – SP617 SP620 – SP717	V41200–41205 V41215–41230 V41231 – V41234	352	SP0
Timers	T0 – T377	None	256	
Timer Current Values	None	V00000 – V00377	256	V0 K100
Timer Status Bits	T0 – T377	V41100 – V41117	256	T0
Counters	CT0 – CT177	None	128	
Counter Current Values	None	V01000 – V01177	128	V1000 K100
Counter Status Bits	CT0 – CT177	V41040 – V41147	128	CT0
Data Words	None	V1400 – V7377 V10000 – V17777	3072	None specific, used with many instructions
Stages	S0 – S1777	V41000 – V41077	1024	SG S 001 S0
Remote In / Out	GX0 – GX1777	V40000 – V40077	1024	GX0 GX0
System parameters	None	V700 – V737 V7400 – V7777	288	None specific, used with many instructions

X Input Bit Map

This table provides a listing of the individual Input points associated with each V-memory address bit for the DL430 and DL440 CPUs.

DL430/DL440 Input (X) Points															Address	
MSB																LSB
17	16	15	14	13	12	11	10	7	6	5	4	3	2	1	0	
017	016	015	014	013	012	011	010	007	006	005	004	003	002	001	000	V40400
037	036	035	034	033	032	031	030	027	026	025	024	023	022	021	020	V40401
057	056	055	054	053	052	051	050	047	046	045	044	043	042	041	040	V40402
077	076	075	074	073	072	071	070	067	066	065	064	063	062	061	060	V40403
117	116	115	114	113	112	111	110	107	106	105	104	103	102	101	100	V40404
137	136	135	134	133	132	131	130	127	126	125	124	123	122	121	120	V40405
157	156	155	154	153	152	151	150	147	146	145	144	143	142	141	140	V40406
177	176	175	174	173	172	171	170	167	166	165	164	163	162	161	160	V40407
217	216	215	214	213	212	211	210	207	206	205	204	203	202	201	200	V40410
237	236	235	234	233	232	231	230	227	226	225	224	223	222	221	220	V40411
257	256	255	254	253	252	251	250	247	246	245	244	243	242	241	240	V40412
277	276	275	274	273	272	271	270	267	266	265	264	263	262	261	260	V40413
317	316	315	314	313	312	311	310	307	306	305	304	303	302	301	300	V40414
337	336	335	334	333	332	331	330	327	326	325	324	323	322	321	320	V40415
357	356	355	354	353	352	351	350	347	346	345	344	343	342	341	340	V40416
377	376	375	374	373	372	371	370	367	366	365	364	363	362	361	360	V40417
417	416	415	414	413	412	411	410	407	406	405	404	403	402	401	400	V40420
437	436	435	434	433	432	431	430	427	426	425	424	423	422	421	420	V40421
457	456	455	454	453	452	451	450	447	446	445	444	443	442	441	440	V40422
477	476	475	474	473	472	471	470	467	466	465	464	463	462	461	460	V40423

Y Output Bit Map

This table provides a listing of the individual output points associated with each V-memory address bit for both the DL430 and DL440 CPUs.

DL430/DL440 Output (Y) Points															Address	
MSB																LSB
17	16	15	14	13	12	11	10	7	6	5	4	3	2	1	0	
017	016	015	014	013	012	011	010	007	006	005	004	003	002	001	000	V40500
037	036	035	034	033	032	031	030	027	026	025	024	023	022	021	020	V40501
057	056	055	054	053	052	051	050	047	046	045	044	043	042	041	040	V40502
077	076	075	074	073	072	071	070	067	066	065	064	063	062	061	060	V40503
117	116	115	114	113	112	111	110	107	106	105	104	103	102	101	100	V40504
137	136	135	134	133	132	131	130	127	126	125	124	123	122	121	120	V40505
157	156	155	154	153	152	151	150	147	146	145	144	143	142	141	140	V40506
177	176	175	174	173	172	171	170	167	166	165	164	163	162	161	160	V40507
217	216	215	214	213	212	211	210	207	206	205	204	203	202	201	200	V40510
237	236	235	234	233	222	221	220	217	216	215	214	213	212	211	210	V40511
257	256	255	254	253	252	251	250	247	246	245	244	243	242	241	240	V40512
277	276	275	274	273	272	271	270	267	266	265	264	263	262	261	260	V40513
317	316	315	314	313	312	311	310	307	306	305	304	303	302	301	300	V40514
337	336	335	334	333	332	331	330	327	326	325	324	323	322	321	320	V40515
357	356	355	354	353	352	351	350	347	346	345	344	343	342	341	340	V40516
377	376	375	374	373	372	371	370	367	366	365	364	363	362	361	360	V40517
417	416	415	414	413	412	411	410	407	406	405	404	403	402	401	400	V40520
437	436	435	434	433	432	431	430	427	426	425	424	423	422	421	420	V40521
457	456	455	454	453	452	451	450	447	446	445	444	443	442	441	440	V40522
477	476	475	474	473	472	471	470	467	466	465	464	463	462	461	460	V40523

Remote I/O Bit Map

This table provides a listing of the individual remote I/O points associated with each V-memory address bit.

DL430/DL440 Remote I/O (GX) Points															Address	
MSB																LSB
17	16	15	14	13	12	11	10	7	6	5	4	3	2	1	0	
017	016	015	014	013	012	011	010	007	006	005	004	003	002	001	000	V40000
037	036	035	034	033	032	031	030	027	026	025	024	023	022	021	020	V40001
057	056	055	054	053	052	051	050	047	046	045	044	043	042	041	040	V40002
077	076	075	074	073	072	071	070	067	066	065	064	063	062	061	060	V40003
117	116	115	114	113	112	111	110	107	106	105	104	103	102	101	100	V40004
137	136	135	134	133	132	131	130	127	126	125	124	123	122	121	120	V40005
157	156	155	154	153	152	151	150	147	146	145	144	143	142	141	140	V40006
177	176	175	174	173	172	171	170	167	166	165	164	163	162	161	160	V40007
217	216	215	214	213	212	211	210	207	206	205	204	203	202	201	200	V40010
237	236	235	234	233	222	221	220	217	216	215	214	213	212	211	210	V40011
257	256	255	254	253	252	251	250	247	246	245	244	243	242	241	240	V40012
277	276	275	274	273	272	271	270	267	266	265	264	263	262	261	260	V40013
317	316	315	314	313	312	311	310	307	306	305	304	303	302	301	300	V40014
337	336	335	334	333	332	331	330	327	326	325	324	323	322	321	320	V40015
357	356	355	354	353	352	351	350	347	346	345	344	343	342	341	340	V40016
377	376	375	374	373	372	371	370	367	366	365	364	363	362	361	360	V40017
417	416	415	414	413	412	411	410	407	406	405	404	403	402	401	400	V40020
437	436	435	434	433	432	431	430	427	426	425	424	423	422	421	420	V40021
457	456	455	454	453	452	451	450	447	446	445	444	443	442	441	440	V40022
477	476	475	474	473	472	471	470	467	466	465	464	463	462	461	460	V40023
517	516	515	514	513	512	511	510	507	506	505	504	503	502	501	500	V40024
537	536	535	534	533	532	531	530	527	526	525	524	523	522	521	520	V40025
557	556	555	554	553	552	551	550	547	546	545	544	543	542	541	540	V40026
577	576	575	574	573	572	571	570	567	566	565	564	563	562	561	560	V40027
617	616	615	614	613	612	611	610	607	606	605	604	603	602	601	600	V40030
637	636	635	634	633	622	621	620	617	616	615	614	613	612	611	610	V40031
657	656	655	654	653	652	651	650	647	646	645	644	643	642	641	640	V40032
677	676	675	674	673	672	671	670	667	666	665	664	663	662	661	660	V40033
717	716	715	714	713	712	711	710	707	706	705	704	703	702	701	700	V40034
737	736	735	734	733	732	731	730	727	726	725	724	723	722	721	720	V40035
757	756	755	754	753	752	751	750	747	746	745	744	743	742	741	740	V40036
777	776	775	774	773	772	771	770	767	766	765	764	763	762	761	760	V40037

This portion of the table shows additional Remote I/O points available with the DL440.

DL440 Additional Remote I/O (GX) Points															Address		
MSB	17	16	15	14	13	12	11	10	7	6	5	4	3	2		1	0
1017	1016	1015	1014	1013	1012	1011	1010	1007	1006	1005	1004	1003	1002	1001	1000		V40040
1037	1036	1035	1034	1033	1032	1031	1030	1027	1026	1025	1024	1023	1022	1021	1020		V40041
1057	1056	1055	1054	1053	1052	1051	1050	1047	1046	1045	1044	1043	1042	1041	1040		V40042
1077	1076	1075	1074	1073	1072	1071	1070	1067	1066	1065	1064	1063	1062	1061	1060		V40043
1117	1116	1115	1114	1113	1112	1111	1110	1107	1106	1105	1104	1103	1102	1101	1100		V40044
1137	1136	1135	1134	1133	1132	1131	1130	1127	1126	1125	1124	1123	1122	1121	1120		V40045
1157	1156	1155	1154	1153	1152	1151	1150	1147	1146	1145	1144	1143	1142	1141	1140		V40046
1177	1176	1175	1174	1173	1172	1171	1170	1167	1166	1165	1164	1163	1162	1161	1160		V40047
1217	1216	1215	1214	1213	1212	1211	1210	1207	1206	1205	1204	1203	1202	1201	1200		V40050
1237	1236	1235	1234	1233	1222	1221	1220	1217	1216	1215	1214	1213	1212	1211	1210		V40051
1257	1256	1255	1254	1253	1252	1251	1250	1247	1246	1245	1244	1243	1242	1241	1240		V40052
1277	1276	1275	1274	1273	1272	1271	1270	1267	1266	1265	1264	1263	1262	1261	1260		V40053
1317	1316	1315	1314	1313	1312	1311	1310	1307	1306	1305	1304	1303	1302	1301	1300		V40054
1337	1336	1335	1334	1333	1332	1331	1330	1327	1326	1325	1324	1323	1322	1321	1320		V40055
1357	1356	1355	1354	1353	1352	1351	1350	1347	1346	1345	1344	1343	1342	1341	1340		V40056
1377	1376	1375	1374	1373	1372	1371	1370	1367	1366	1365	1364	1363	1362	1361	1360		V40057
1417	1416	1415	1414	1413	1412	1411	1410	1407	1406	1405	1404	1403	1402	1401	1400		V40060
1437	1436	1435	1434	1433	1432	1431	1430	1427	1426	1425	1424	1423	1422	1421	1420		V40061
1457	1456	1455	1454	1453	1452	1451	1450	1447	1446	1445	1444	1443	1442	1441	1440		V40062
1477	1476	1475	1474	1473	1472	1471	1470	1467	1466	1465	1464	1463	1462	1461	1460		V40063
1517	1516	1515	1514	1513	1512	1511	1510	1507	1506	1505	1504	1503	1502	1501	1500		V40064
1537	1536	1535	1534	1533	1532	1531	1530	1527	1526	1525	1524	1523	1522	1521	1520		V40065
1557	1556	1555	1554	1553	1552	1551	1550	1547	1546	1545	1544	1543	1542	1541	1540		V40066
1577	1576	1575	1574	1573	1572	1571	1570	1567	1566	1565	1564	1563	1562	1561	1560		V40067
1617	1616	1615	1614	1613	1612	1611	1610	1607	1606	1605	1604	1603	1602	1601	1600		V40070
1637	1636	1635	1634	1633	1622	1621	1620	1617	1616	1615	1614	1613	1612	1611	1610		V40071
1657	1656	1655	1654	1653	1652	1651	1650	1647	1646	1645	1644	1643	1642	1641	1640		V40072
1677	1676	1675	1674	1673	1672	1671	1670	1667	1666	1665	1664	1663	1662	1661	1660		V40073
1717	1716	1715	1714	1713	1712	1711	1710	1707	1706	1705	1704	1703	1702	1701	1700		V40074
1737	1736	1735	1734	1733	1732	1731	1730	1727	1726	1725	1724	1723	1722	1721	1720		V40075
1757	1756	1755	1754	1753	1752	1751	1750	1747	1746	1745	1744	1743	1742	1741	1740		V40076
1777	1776	1775	1774	1773	1772	1771	1770	1767	1766	1765	1764	1763	1762	1761	1760		V40077

Control Relay Bit Map

This table provides a listing of the individual control relays associated with each V-memory address bit.

DL430/DL440 Control Relays (C)															Address	
MSB																LSB
17	16	15	14	13	12	11	10	7	6	5	4	3	2	1	0	
017	016	015	014	013	012	011	010	007	006	005	004	003	002	001	000	V40600
037	036	035	034	033	032	031	030	027	026	025	024	023	022	021	020	V40601
057	056	055	054	053	052	051	050	047	046	045	044	043	042	041	040	V40602
077	076	075	074	073	072	071	070	067	066	065	064	063	062	061	060	V40603
117	116	115	114	113	112	111	110	107	106	105	104	103	102	101	100	V40604
137	136	135	134	133	132	131	130	127	126	125	124	123	122	121	120	V40605
157	156	155	154	153	152	151	150	147	146	145	144	143	142	141	140	V40606
177	176	175	174	173	172	171	170	167	166	165	164	163	162	161	160	V40607
217	216	215	214	213	212	211	210	207	206	205	204	203	202	201	200	V40610
237	236	235	234	233	222	221	220	217	216	215	214	213	212	211	210	V40611
257	256	255	254	253	252	251	250	247	246	245	244	243	242	241	240	V40612
277	276	275	274	273	272	271	270	267	266	265	264	263	262	261	260	V40613
317	316	315	314	313	312	311	310	307	306	305	304	303	302	301	300	V40614
337	336	335	334	333	332	331	330	327	326	325	324	323	322	321	320	V40615
357	356	355	354	353	352	351	350	347	346	345	344	343	342	341	340	V40616
377	376	375	374	373	372	371	370	367	366	365	364	363	362	361	360	V40617
417	416	415	414	413	412	411	410	407	406	405	404	403	402	401	400	V40620
437	436	435	434	433	432	431	430	427	426	425	424	423	422	421	420	V40621
457	456	455	454	453	452	451	450	447	446	445	444	443	442	441	440	V40622
477	476	475	474	473	472	471	470	467	466	465	464	463	462	461	460	V40623
517	516	515	514	513	512	511	510	507	506	505	504	503	502	501	500	V40624
537	536	535	534	533	532	531	530	527	526	525	524	523	522	521	520	V40625
557	556	555	554	553	552	551	550	547	546	545	544	543	542	541	540	V40626
577	576	575	574	573	572	571	570	567	566	565	564	563	562	561	560	V40627
617	616	615	614	613	612	611	610	607	606	605	604	603	602	601	600	V40630
637	636	635	634	633	622	621	620	617	616	615	614	613	612	611	610	V40631
657	656	655	654	653	652	651	650	647	646	645	644	643	642	641	640	V40632
677	676	675	674	673	672	671	670	667	666	665	664	663	662	661	660	V40633
717	716	715	714	713	712	711	710	707	706	705	704	703	702	701	700	V40634
737	736	735	734	733	732	731	730	727	726	725	724	723	722	721	720	V40635

This portion of the table shows additional Control Relays points available with the DL440.

DL440 Additional Control Relays (C)															Address	
MSB																LSB
17	16	15	14	13	12	11	10	7	6	5	4	3	2	1	0	
757	756	755	754	753	752	751	750	747	746	745	744	743	742	741	740	V40636
777	776	775	774	773	772	771	770	767	766	765	764	763	762	761	760	V40637
1017	1016	1015	1014	1013	1012	1011	1010	1007	1006	1005	1004	1003	1002	1001	1000	V40640
1037	1036	1035	1034	1033	1032	1031	1030	1027	1026	1025	1024	1023	1022	1021	1020	V40641
1057	1056	1055	1054	1053	1052	1051	1050	1047	1046	1045	1044	1043	1042	1041	1040	V40642
1077	1076	1075	1074	1073	1072	1071	1070	1067	1066	1065	1064	1063	1062	1061	1060	V40643
1117	1116	1115	1114	1113	1112	1111	1110	1107	1106	1105	1104	1103	1102	1101	1100	V40644
1137	1136	1135	1134	1133	1132	1131	1130	1127	1126	1125	1124	1123	1122	1121	1120	V40645
1157	1156	1155	1154	1153	1152	1151	1150	1147	1146	1145	1144	1143	1142	1141	1140	V40646
1177	1176	1175	1174	1173	1172	1171	1170	1167	1166	1165	1164	1163	1162	1161	1160	V40647
1217	1216	1215	1214	1213	1212	1211	1210	1207	1206	1205	1204	1203	1202	1201	1200	V40650
1237	1236	1235	1234	1233	1232	1231	1230	1227	1226	1225	1224	1223	1222	1221	1220	V40651
1257	1256	1255	1254	1253	1252	1251	1250	1247	1246	1245	1244	1243	1242	1241	1240	V40652
1277	1276	1275	1274	1273	1272	1271	1270	1267	1266	1265	1264	1263	1262	1261	1260	V40653
1317	1316	1315	1314	1313	1312	1311	1310	1307	1306	1305	1304	1303	1302	1301	1300	V40654
1337	1336	1335	1334	1333	1332	1331	1330	1327	1326	1325	1324	1323	1322	1321	1320	V40655
1357	1356	1355	1354	1353	1352	1351	1350	1347	1346	1345	1344	1343	1342	1341	1340	V40656
1377	1376	1375	1374	1373	1372	1371	1370	1367	1366	1365	1364	1363	1362	1361	1360	V40657
1417	1416	1415	1414	1413	1412	1411	1410	1407	1406	1405	1404	1403	1402	1401	1400	V40660
1437	1436	1435	1434	1433	1432	1431	1430	1427	1426	1425	1424	1423	1422	1421	1420	V40661
1457	1456	1455	1454	1453	1452	1451	1450	1447	1446	1445	1444	1443	1442	1441	1440	V40662
1477	1476	1475	1474	1473	1472	1471	1470	1467	1466	1465	1464	1463	1462	1461	1460	V40663
1517	1516	1515	1514	1513	1512	1511	1510	1507	1506	1505	1504	1503	1502	1501	1500	V40664
1537	1536	1535	1534	1533	1532	1531	1530	1527	1526	1525	1524	1523	1522	1521	1520	V40665
1557	1556	1555	1554	1553	1552	1551	1550	1547	1546	1545	1544	1543	1542	1541	1540	V40666
1577	1576	1575	1574	1573	1572	1571	1570	1567	1566	1565	1564	1563	1562	1561	1560	V40667
1617	1616	1615	1614	1613	1612	1611	1610	1607	1606	1605	1604	1603	1602	1601	1600	V40670
1637	1636	1635	1634	1633	1622	1621	1620	1617	1616	1615	1614	1613	1612	1611	1610	V40671
1657	1656	1655	1654	1653	1652	1651	1650	1647	1646	1645	1644	1643	1642	1641	1640	V40672
1677	1676	1675	1674	1673	1672	1671	1670	1667	1666	1665	1664	1663	1662	1661	1660	V40673
1717	1716	1715	1714	1713	1712	1711	1710	1707	1706	1705	1704	1703	1702	1701	1700	V40674
1737	1736	1735	1734	1733	1732	1731	1730	1727	1726	1725	1724	1723	1722	1721	1720	V40675
1757	1756	1755	1754	1753	1752	1751	1750	1747	1746	1745	1744	1743	1742	1741	1740	V40676
1777	1776	1775	1774	1773	1772	1771	1770	1767	1766	1765	1764	1763	1762	1761	1760	V40677

Stage Control / Status Bit Map

This table provides a listing of the individual stage control bits associated with each V-memory address bit.

DL430/DL440 Stage (S) Control Bits															Address		
MSB	17	16	15	14	13	12	11	10	7	6	5	4	3	2		1	0
017	016	015	014	013	012	011	010	007	006	005	004	003	002	001	000	V41000	
037	036	035	034	033	032	031	030	027	026	025	024	023	022	021	020	V41001	
057	056	055	054	053	052	051	050	047	046	045	044	043	042	041	040	V41002	
077	076	075	074	073	072	071	070	067	066	065	064	063	062	061	060	V41003	
117	116	115	114	113	112	111	110	107	106	105	104	103	102	101	100	V41004	
137	136	135	134	133	132	131	130	127	126	125	124	123	122	121	120	V41005	
157	156	155	154	153	152	151	150	147	146	145	144	143	142	141	140	V41006	
177	176	175	174	173	172	171	170	167	166	165	164	163	162	161	160	V41007	
217	216	215	214	213	212	211	210	207	206	205	204	203	202	201	200	V41010	
237	236	235	234	233	222	221	220	217	216	215	214	213	212	211	210	V41011	
257	256	255	254	253	252	251	250	247	246	245	244	243	242	241	240	V41012	
277	276	275	274	273	272	271	270	267	266	265	264	263	262	261	260	V41013	
317	316	315	314	313	312	311	310	307	306	305	304	303	302	301	300	V41014	
337	336	335	334	333	332	331	330	327	326	325	324	323	322	321	320	V41015	
357	356	355	354	353	352	351	350	347	346	345	344	343	342	341	340	V41016	
377	376	375	374	373	372	371	370	367	366	365	364	363	362	361	360	V41017	
417	416	415	414	413	412	411	410	407	406	405	404	403	402	401	400	V41020	
437	436	435	434	433	432	431	430	427	426	425	424	423	422	421	420	V41021	
457	456	455	454	453	452	451	450	447	446	445	444	443	442	441	440	V41022	
477	476	475	474	473	472	471	470	467	466	465	464	463	462	461	460	V41023	
517	516	515	514	513	512	511	510	507	506	505	504	503	502	501	500	V41024	
537	536	535	534	533	532	531	530	527	526	525	524	523	522	521	520	V41025	
557	556	555	554	553	552	551	550	547	546	545	544	543	542	541	540	V41026	
577	576	575	574	573	572	571	570	567	566	565	564	563	562	561	560	V41027	

DL440 Additional Stage (S) Control Bits															Address		
MSB	17	16	15	14	13	12	11	10	7	6	5	4	3	2		1	0
617	616	615	614	613	612	611	610	607	606	605	604	603	602	601	600	V41030	
637	636	635	634	633	622	621	620	617	616	615	614	613	612	611	610	V41031	
657	656	655	654	653	652	651	650	647	646	645	644	643	642	641	640	V41032	
677	676	675	674	673	672	671	670	667	666	665	664	663	662	661	660	V41033	
717	716	715	714	713	712	711	710	707	706	705	704	703	702	701	700	V41034	
737	736	735	734	733	732	731	730	727	726	725	724	723	722	721	720	V41035	
757	756	755	754	753	752	751	750	747	746	745	744	743	742	741	740	V41036	
777	776	775	774	773	772	771	770	767	766	765	764	763	762	761	760	V41037	

DL440 Additional Stage (S) Control Bits (continued)															Address	
MSB																LSB
17	16	15	14	13	12	11	10	7	6	5	4	3	2	1	0	
1017	1016	1015	1014	1013	1012	1011	1010	1007	1006	1005	1004	1003	1002	1001	1000	V41040
1037	1036	1035	1034	1033	1032	1031	1030	1027	1026	1025	1024	1023	1022	1021	1020	V41041
1057	1056	1055	1054	1053	1052	1051	1050	1047	1046	1045	1044	1043	1042	1041	1040	V41042
1077	1076	1075	1074	1073	1072	1071	1070	1067	1066	1065	1064	1063	1062	1061	1060	V41043
1117	1116	1115	1114	1113	1112	1111	1110	1107	1106	1105	1104	1103	1102	1101	1100	V41044
1137	1136	1135	1134	1133	1132	1131	1130	1127	1126	1125	1124	1123	1122	1121	1120	V41045
1157	1156	1155	1154	1153	1152	1151	1150	1147	1146	1145	1144	1143	1142	1141	1140	V41046
1177	1176	1175	1174	1173	1172	1171	1170	1167	1166	1165	1164	1163	1162	1161	1160	V41047
1217	1216	1215	1214	1213	1212	1211	1210	1207	1206	1205	1204	1203	1202	1201	1200	V41050
1237	1236	1235	1234	1233	1222	1221	1220	1217	1216	1215	1214	1213	1212	1211	1210	V41051
1257	1256	1255	1254	1253	1252	1251	1250	1247	1246	1245	1244	1243	1242	1241	1240	V41052
1277	1276	1275	1274	1273	1272	1271	1270	1267	1266	1265	1264	1263	1262	1261	1260	V41053
1317	1316	1315	1314	1313	1312	1311	1310	1307	1306	1305	1304	1303	1302	1301	1300	V41054
1337	1336	1335	1334	1333	1332	1331	1330	1327	1326	1325	1324	1323	1322	1321	1320	V41055
1357	1356	1355	1354	1353	1352	1351	1350	1347	1346	1345	1344	1343	1342	1341	1340	V41056
1377	1376	1375	1374	1373	1372	1371	1370	1367	1366	1365	1364	1363	1362	1361	1360	V41057
1417	1416	1415	1414	1413	1412	1411	1410	1407	1406	1405	1404	1403	1402	1401	1400	V41060
1437	1436	1435	1434	1433	1432	1431	1430	1427	1426	1425	1424	1423	1422	1421	1420	V41061
1457	1456	1455	1454	1453	1452	1451	1450	1447	1446	1445	1444	1443	1442	1441	1440	V41062
1477	1476	1475	1474	1473	1472	1471	1470	1467	1466	1465	1464	1463	1462	1461	1460	V41063
1517	1516	1515	1514	1513	1512	1511	1510	1507	1506	1505	1504	1503	1502	1501	1500	V41064
1537	1536	1535	1534	1533	1532	1531	1530	1527	1526	1525	1524	1523	1522	1521	1520	V41065
1557	1556	1555	1554	1553	1552	1551	1550	1547	1546	1545	1544	1543	1542	1541	1540	V41066
1577	1576	1575	1574	1573	1572	1571	1570	1567	1566	1565	1564	1563	1562	1561	1560	V41067
1617	1616	1615	1614	1613	1612	1611	1610	1607	1606	1605	1604	1603	1602	1601	1600	V41070
1637	1636	1635	1634	1633	1622	1621	1620	1617	1616	1615	1614	1613	1612	1611	1610	V41071
1657	1656	1655	1654	1653	1652	1651	1650	1647	1646	1645	1644	1643	1642	1641	1640	V41072
1677	1676	1675	1674	1673	1672	1671	1670	1667	1666	1665	1664	1663	1662	1661	1660	V41073
1717	1716	1715	1714	1713	1712	1711	1710	1707	1706	1705	1704	1703	1702	1701	1700	V41074
1737	1736	1735	1734	1733	1732	1731	1730	1727	1726	1725	1724	1723	1722	1721	1720	V41075
1757	1756	1755	1754	1753	1752	1751	1750	1747	1746	1745	1744	1743	1742	1741	1740	V41076
1777	1776	1775	1774	1773	1772	1771	1770	1767	1766	1765	1764	1763	1762	1761	1760	V41077

Timer Status Bit Map

This table provides a listing of the individual timer contacts associated with each V-memory address bit.

DL430/DL440 Timer (T) Contacts															Address		
MSB	17	16	15	14	13	12	11	10	7	6	5	4	3	2		1	0
	017	016	015	014	013	012	011	010	007	006	005	004	003	002	001	000	V41100
	037	036	035	034	033	032	031	030	027	026	025	024	023	022	021	020	V41101
	057	056	055	054	053	052	051	050	047	046	045	044	043	042	041	040	V41102
	077	076	075	074	073	072	071	070	067	066	065	064	063	062	061	060	V41103
	117	116	115	114	113	112	111	110	107	106	105	104	103	102	101	100	V41104
	137	136	135	134	133	132	131	130	127	126	125	124	123	122	121	120	V41105
	157	156	155	154	153	152	151	150	147	146	145	144	143	142	141	140	V41106
	177	176	175	174	173	172	171	170	167	166	165	164	163	162	161	160	V41107

DL440 Additional Timer (T) Contacts															Address		
MSB	17	16	15	14	13	12	11	10	7	6	5	4	3	2		1	0
	217	216	215	214	213	212	211	210	207	206	205	204	203	202	201	200	V41110
	237	236	235	234	233	222	221	220	217	216	215	214	213	212	211	210	V41111
	257	256	255	254	253	252	251	250	247	246	245	244	243	242	241	240	V41112
	277	276	275	274	273	272	271	270	267	266	265	264	263	262	261	260	V41113
	317	316	315	314	313	312	311	310	307	306	305	304	303	302	301	300	V41114
	337	336	335	334	333	332	331	330	327	326	325	324	323	322	321	320	V41115
	357	356	355	354	353	352	351	350	347	346	345	344	343	342	341	340	V41116
	377	376	375	374	373	372	371	370	367	366	365	364	363	362	361	360	V41117

Counter Status Bit Map

This table provides a listing of the individual counter contacts associated with each V-memory address bit.

DL430/DL440 Counter (CT) Contacts															Address		
MSB	17	16	15	14	13	12	11	10	7	6	5	4	3	2		1	0
	017	016	015	014	013	012	011	010	007	006	005	004	003	002	001	000	V41140
	037	036	035	034	033	032	031	030	027	026	025	024	023	022	021	020	V41141
	057	056	055	054	053	052	051	050	047	046	045	044	043	042	041	040	V41142
	077	076	075	074	073	072	071	070	067	066	065	064	063	062	061	060	V41143
	117	116	115	114	113	112	111	110	107	106	105	104	103	102	101	100	V41144
	137	136	135	134	133	132	131	130	127	126	125	124	123	122	121	120	V41145
	157	156	155	154	153	152	151	150	147	146	145	144	143	142	141	140	V41146
	177	176	175	174	173	172	171	170	167	166	165	164	163	162	161	160	V41147