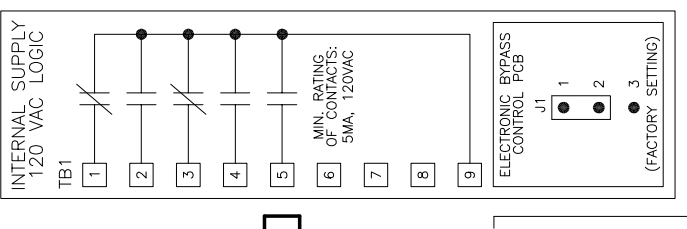
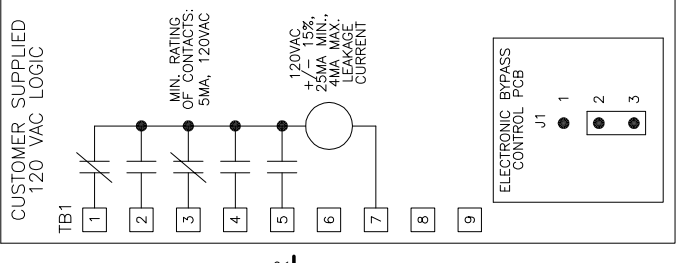


CONTROL TRANSFORMER PRIMARY CONNECTIONS

INPUT VOLTS	TERMINALS	JUMPER LOCATION
208	(H1) (H2)	NONE
460/480	(H1) (H4)	(H2) TO (H3)

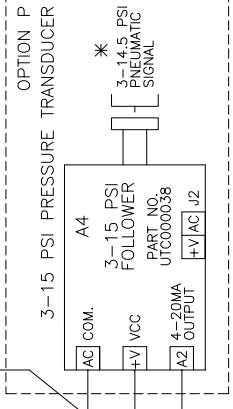


CONTACTS FOR CUSTOMER USE

RATED: 5A, 24VDC/120VAC
 7/15% MAX.

CUSTOMER MUST PROVIDE PROPER CIRCUIT PROTECTION AND MEANS OF DISCONNECT.

- CONTACTS FOR CUSTOMER USE**
1. BYPASS RUN
 2. DAMPER ACTUATOR OUTPUT
 3. AUTO TRANSFER
 4. DRIVE RUN
 5. SERIAL COMMAND RUN COMMAND
 6. HAND MODE ACTIVE
 7. AUTO MODE ACTIVE
 8. SYSTEM FAULT
- AS SELECTED BY ELECTRONIC BYPASS CONTROL PCB DIP SWITCHES S2 AND S3. SEE SHEET 3, TABLE 5.



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DATE	12/5/08	TITLE	SCHEMATIC DIAGRAM
DATE	12/5/08	DATE	E7N ELECTRONIC BYPASS
TECH	K. FLIERL	DATE	
APPROVED	J. ZUEHLKE	DATE	
ORIGINAL DESIGNER	D.R. CMELAK	DATE	
DATE	6/1/07	DATE	
SIZE	D	REVISION	R04
SIZE	1 of 3	REVISION	
DRAWING #	DS-E7N.01	REVISION	

* - INDICATES COMPONENTS NOT SUPPLIED BY YASKAWA.
 - - INDICATES CUSTOMER WIRING.
 SEE SHEETS 2 AND 3 FOR NOTES AND TABLES.

NOTES:

- CONNECTED TO THE CABINET. CUSTOMER TO CONNECT THE CABINET GROUND LUG TO EARTH GROUND.
- THE MOTOR OVERLOAD RELAY IS FACTORY SET FOR MANUAL RESET. CUSTOMER TO ADJUST THE MOTOR OVERLOAD RELAY TRIP SETTING FOR THE ACTUAL AC MOTOR'S FULL LOAD AMPS.
- WITHOUT THE INPUT CIRCUIT BREAKER MCP OPTION C OR FUSED DISCONNECT SWITCH OPTION D, BRANCH CIRCUIT FUSES MUST BE SUPPLIED BY THE INSTALLER.
- INSULATED TWISTED SHIELDED WIRE IS REQUIRED. SHIELD TO CONNECT TO PROPER TERMINAL AS SHOWN. CONNECT THE SHIELD ONLY AT THIS END. STUB AND ISOLATE THE OTHER END. DO NOT RUN THESE WIRES IN THE SAME CONDUIT AS THE AC POWER AND THE AC CONTROL WIRES.
- SERIAL COMMUNICATIONS OPTIONS 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

TABLE 1 FACTORY SET DRIVE PARAMETERS

PARAMETER	DATA	UNIT	DESCRIPTION/REMARKS
b1-01	SEE TABLE 6	N/A	FREQUENCY REFERENCE SELECTION
b1-08	1	N/A	RUN COMMAND SELECTION DURING PROGRAMMING - ENABLED
b2-03	0.0	SEC.	DC INJECTION BRAKING TIME AT START
b5-01	SEE TABLE 6	N/A	PI MODE SETTING
d1-01	10.0	HZ.	FREQUENCY REFERENCE 1 - SEE TABLE 6
d1-02	6.0	HZ.	FREQUENCY REFERENCE 2 - SEE TABLE 6
E1-01	480	VOLTS	STANDARD INPUT VOLTAGE SETTING
	208	VOLTS	INPUT VOLTAGE SETTING FOR BASE NUMBER "D_---"
E1-05	460	VOLTS	STANDARD MAXIMUM OUTPUT VOLTAGE SETTING
	208	VOLTS	MAXIMUM OUTPUT VOLTAGE SETTING FOR BASE NUMBER "D_---"
F6-02	SEE TABLE 6	N/A	SERIAL COMMUNICATIONS EXTERNAL FAULT DETECTION SELECTION
F6-03	SEE TABLE 6	N/A	SERIAL COMMUNICATIONS EXTERNAL FAULT STOPPING METHOD SELECTION
H1-01	70	N/A	TERMINAL S3 SET FOR BYPASS DRIVE ENABLE
H1-02	SEE TABLE 6	N/A	TERMINAL S4 SELECTION
H1-03	SEE TABLE 6	N/A	TERMINAL S5 SELECTION
H1-04	SEE TABLE 6	N/A	TERMINAL S6 SELECTION
H2-02	3B	N/A	TERMINALS M3-M4 SET FOR SERIAL COMM. RUN COMMAND
H3-08	SEE TABLE 6	N/A	TERMINAL A2 SIGNAL SELECTION
H3-09	SEE TABLE 6	N/A	TERMINAL A2 FUNCTION SELECTION
H5-02	SEE TABLE 6	N/A	SERIAL COMMUNICATIONS SPEED SELECTION BAUD RATE
H5-07	SEE TABLE 6	N/A	REQUEST TO SEND (RTS) CONTROL SELECTION
H5-08	SEE TABLE 6	N/A	SERIAL COMMUNICATIONS PROTOCOL SELECTION
H5-09	10.0	SEC.	SERIAL COMMUNICATIONS ERROR DETECTION TIME
L4-05	0	N/A	FREQUENCY REFERENCE LOSS DETECTION DISABLED
L5-01	10	N/A	NUMBER OF AUTO RESTART ATTEMPTS
L5-03	10.0	SEC.	MAXIMUM RESTART TIME AFTER FAULT
o2-01	0	N/A	DRIVE DIGITAL OPERATOR KEYPAD "LOCAL/REMOTE" KEY DISABLED, WITH STD. LED STYLE KEYPAD
o2-02	0	N/A	DRIVE DIGITAL OPERATOR KEYPAD "OFF", OR "STOP", KEY DISABLED
o2-03	1	N/A	USER INITIALIZATION FACTORY SET PARAMETER DEFAULT VALUES (FOUND IN A1-03="1110") (PROGRAM LAST)
o2-15	0	N/A	DRIVE DIGITAL OPERATOR KEYPAD "HAND" KEY DISABLED, WITH OPTION Y LCD STYLE KEYPAD
o3-02	1	N/A	DRIVE DIGITAL OPERATOR KEYPAD READ ALLOWED ENABLED

CUSTOMER WIRING REQUIREMENTS

- FOR 0 TO 100 AMPS, USE A MINIMUM OF 60"-75°C COPPER WIRE.
- FOR ABOVE 100 AMPS, USE A MINIMUM OF 75°C COPPER WIRE.

TABLE 2 A.C. LINE WIRING

E7 BYPASS MODEL NO. E7NXXXX	OPTION C INPUT CIRCUIT BREAKER MCP			OPTION D FUSED INPUT DISCONNECT SWITCH			STANDARD NON-FUSED INPUT DISCONNECT SWITCH				
	MFG. PART. NUMBER	CURRENT RATING (AMPS)	WIRE SIZE RANGE (AWG)	TIGHTENING TORQUE (LB.-IN.)	MFG. PART. NUMBER	WIRE SIZE RANGE (AWG)	TIGHTENING TORQUE (LB.-IN.)	MFG. PART. NUMBER	WIRE SIZE RANGE (AWG)	TIGHTENING TORQUE (LB.-IN.)	
208V 480V	B001	FAL36003	3	14 - 4	35	CFD30J3	18 - 8	17	V0	14 - 8	19
D002	B002	FAL36007	7								
D003	B003										
D004	B004										
D007	B007	FAL36015	15								
D010	B011										
D014	B014	FAL36030	30								
D016	B021	FAL36030	30	14 - 4	35	CFD30J3	18 - 8	17	V3	12 - 6	40
D024	B027	FAL36050	50	14 - 4	35	CFD60J3	14 - 4	30			
D030				14 - 1/0	80						
B034	FAL36050		50			GS1GU3	10 - 3	58	V4	6 - 2	50
B040	FAL36100		100			GS1JU3	14 - 2/0	120	V5	8 - 2/0	200
B052											
D046											
D059											
B065	KAL36150		150	4 - 350	kcMil	250		200	V6		

TABLE 3

E7 BYPASS MODEL NO. E7NXXXX	A.C. MOTOR WIRING MOTOR OVERLOAD RELAY			EARTH GND. WIRING GROUND LUG			CONTROL WIRING TERMINAL BLOCKS TB1 - TB5		
	MFG. PART. NUMBER	WIRE SIZE RANGE (AWG)	TIGHTENING TORQUE (LB.-IN.)	MFG. PART. NUMBER	WIRE SIZE RANGE (AWG)	TIGHTENING TORQUE (LB.-IN.)	MFG. PART. NUMBER	WIRE SIZE RANGE (AWG)	TIGHTENING TORQUE (LB.-IN.)
208V 480V	B001	LRD06	18 - 8	B001	14 - 10	35	B001	22 - 14	4.4
D002	B002	LRD07							
D003	B003	LRD15							
D004	B004								
D007	B007								
D010	B011								
D016	B014								
D024	B021								
D030	B027								
D046	B034	LR2 D35	10 - 1/0			100			
D059	B040								
D074	B052								
B065									

SEE SHEET 3 FOR TABLES 4, 5 AND 6.



DRAWN BY: D.R. CMELAK
 CHECKED: K. FLIERL
 TECH: J. ZUEHLKE
 ORIGINAL DESIGNER: D.R. CMELAK
 DATE: 12/5/08
 DATE: 12/5/08
 DATE: 6/1/07

TITLE: SCHEMATIC DIAGRAM
 E7N ELECTRONIC BYPASS
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DATE: 12/5/08
 DRAWN BY: D.R. CMELAK
 SIZE: D
 REVISION: R04
 PAGE: 2 of 3

ELECTRONIC BYPASS CONTROL PCB DIP SWITCH SETTINGS

TABLE 5

NO.	FUNCTION	PROGRAMMABLE RELAY 1			PROGRAMMABLE RELAY 2			PROGRAMMABLE RELAY 3			ACTIVE	DESCRIPTION
		S2(6)	S2(5)	S2(4)	S3(3)	S3(2)	S3(1)	S3(6)	S3(5)	S3(4)		
1	BYPASS RUN	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	HIGH	RUNNING IN BYPASS MODE
2	DAMPER COIL	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	HIGH	DAMPER COIL ACTIVATION
3	AUTO TRANSFER	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	HIGH	AUTO-TRANSFER IS ACTIVE
4	DRIVE RUN	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	HIGH	DRIVE IS IN THE RUN MODE
5	SERIAL COMM. RUN	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	HIGH	SERIAL COMM. RUN COMMAND
6	HAND MODE	ON	OFF	ON	ON	OFF	ON	ON	ON	ON	HIGH	MANUAL MODE OPERATION
7	AUTO MODE	ON	ON	ON	ON	ON	ON	ON	ON	ON	HIGH	AUTO MODE OPERATION
8	SYSTEM FAULT	ON	ON	ON	ON	ON	ON	ON	ON	ON	LOW	DRIVE, MOTOR OR CONTROL FAULT
FACTORY SETTINGS												

DIP SWITCH	POS.	DESCRIPTION	SETTINGS		FACTORY SETTING
			ON	OFF	
S1	1	SERIAL COMMUNICATIONS TERMINATING RESISTANCE	IN	OUT	SEE TABLE 6
	2	DRIVE ANALOG INPUT 2 (A2) SIGNAL (H3-08=0", FOR 0-10VDC)	4-20MADC	0-10VDC	ON
	3	TB3(3) CONNECTED TO DRIVE ANALOG INPUT 2 (A2)	YES	YES	ON
	4		YES	YES	OFF
S2	3	TB3(3) CONNECTED TO DRIVE ANALOG INPUT 1 (A1)	YES	YES	ON
	1	AUTO TRANSFER TO BYPASS UPON A DRIVE FAULT	ACTIVE	INACTIVE	OFF
	2	POWER UP IN THE "OFF" OR "AUTO" MODE	AUTO	OFF	OFF
	3	POWER UP IN THE MAINTENANCE MODE	ACTIVE	INACTIVE	OFF
	4-6	SEE TABLE 5			
	7	SAFETY INTERLOCKS AT TB1(1) SEE SHEET 2, NOTE 7	INACTIVE	ACTIVE	OFF
	8	BAS/DAMPER INTERLOCKS AT TB1(3) SEE SHEET 2, NOTE 8	INACTIVE	ACTIVE	OFF
S3	1-6	SEE TABLE 5			
	1	RESERVED FOR FUTURE EXPANSION	ACTIVE	INACTIVE	OFF
	2	SPEED COMMAND FROM DRIVE TERMINAL A2, WITH SERIAL COMM.	YES	NO	SEE TABLE 6
	3	RESERVED FOR FUTURE EXPANSION	ACTIVE	INACTIVE	OFF
	4	RESERVED FOR FUTURE EXPANSION	ACTIVE	INACTIVE	OFF
	5	RESERVED FOR FUTURE EXPANSION	ACTIVE	INACTIVE	OFF
S4	1	RESERVED FOR FUTURE EXPANSION	ACTIVE	INACTIVE	OFF
	2	SPEED COMMAND FROM DRIVE TERMINAL A2, WITH SERIAL COMM.	YES	NO	SEE TABLE 6
	3	RESERVED FOR FUTURE EXPANSION	ACTIVE	INACTIVE	OFF
	4	RESERVED FOR FUTURE EXPANSION	ACTIVE	INACTIVE	OFF
	5	RESERVED FOR FUTURE EXPANSION	ACTIVE	INACTIVE	OFF
	6	RESERVED FOR FUTURE EXPANSION	ACTIVE	INACTIVE	OFF

TABLE 6 DRIVE OPERATION MODE SELECTION

OPTION		FACTORY SET E7N BYPASS DRIVE PARAMETERS														BYPASS CONTROL PCB DIP SWITCH SETTINGS					DRIVE MODE SPEED COMMAND					DRIVE MODE PI CONTROL				
		FACTORY SET E7N BYPASS DRIVE PARAMETERS														DRIVE MODE SPEED COMMAND					DRIVE MODE PI CONTROL									
		FACTORY SET E7N BYPASS DRIVE PARAMETERS														DRIVE MODE SPEED COMMAND					DRIVE MODE PI CONTROL									
		FACTORY SET E7N BYPASS DRIVE PARAMETERS														DRIVE MODE SPEED COMMAND					DRIVE MODE PI CONTROL									
PRESENT	b1-01	b5-01	F6-03	(S4)	H1-02	H1-03	H1-04	(S5)	H3-06	H3-09	H5-02	H5-07	H5-08	S1	S4	HAND MODE	DRIVE KEYPAD	DRIVE KEYPAD d1-02	DRIVE TERMINAL A2 SIGNAL LEVEL VIA TB3(3) OR TB5(9) 4-20 MADC	LEVEL VIA TB5(9) 3-15 PSI	DRIVE TERMINAL A2 SIGNAL LEVEL VIA TB3(3) OR TB5(9) 0-10 VDC	SEE SERIAL SH. 2, COMM. NOTE	SPEED CMD. DRIVE KEYPAD d1-01	SETPOINT DRIVE KEYPAD SERIAL COMM. d1-01	FEEDBACK DRIVE TERMINAL A2 SIGNAL LEVEL VIA TB3(3) OR TB5(9) 0-10 VDC	HAND MODE	AUTO MODE	RUN/STOP CONTROL (SEE SHEET 2, NOTE 8)		
NONE +	1	0	0	1	14	3	4	4	2	0	3	1	0	OFF	ON	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	DRIVE	BYPASS	AUTO MODE	
NONE	1	0	0	1	14	3	4	4	0	0	3	1	0	OFF	OFF	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
P	1	0	0	1	14	3	4	4	2	0	3	1	0	OFF	ON	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
3 +	0	0	0	1	14	6C	4	4	2	2	3	1	0	OFF	ON	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
3	0	0	0	1	3	6C	4	4	0	2	3	1	0	OFF	OFF	ON	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
3 AND P	0	0	0	1	3	6C	4	4	2	2	3	1	0	OFF	ON	ON	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
J +	0	0	0	1	14	6C	4	4	2	2	3	1	1	OFF	ON	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
J	0	0	0	1	3	6C	4	4	0	2	3	1	1	OFF	OFF	ON	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
J AND P	0	0	0	1	3	6C	4	4	2	2	3	1	1	OFF	ON	ON	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
U +	0	0	0	1	14	6C	4	4	2	2	2	2	2	OFF	ON	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
U	0	0	0	1	3	6C	4	4	2	2	2	2	2	OFF	ON	ON	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
U AND P	0	0	0	1	3	6C	4	4	2	2	2	2	2	OFF	ON	ON	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
V +	0	0	0	1	14	6C	4	4	2	2	3	1	0	OFF	ON	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
V	0	0	0	1	3	6C	4	4	0	2	3	1	0	OFF	OFF	ON	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
V AND P	0	0	0	1	3	6C	4	4	2	2	3	1	0	OFF	ON	ON	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
L +	0	0	0	1	14	6C	4	4	2	2	3	0	0	ON	ON	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
L	0	0	0	1	3	6C	4	4	0	2	3	0	0	ON	OFF	ON	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
L AND P	0	0	0	1	3	6C	4	4	2	2	3	0	0	ON	ON	ON	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
PI CONTROL	0	1	0	1	14	19	4	4	2	2	B	3	1	0	OFF	ON	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE	
PI CONTROL	0	1	0	1	14	19	4	4	0	B	3	1	0	OFF	OFF	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
3 AND PI	0	1	1	3	14	6C	19	0	0	B	3	1	0	OFF	OFF	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
J AND PI	0	1	0	1	14	6C	19	0	0	B	3	1	1	OFF	OFF	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
U AND PI	0	1	0	1	14	6C	19	0	0	B	2	1	2	OFF	OFF	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
V AND PI	0	1	0	1	14	6C	19	0	0	B	3	1	0	OFF	OFF	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		
L AND PI	0	1	0	1	14	6C	19	0	0	B	3	0	0	ON	OFF	OFF	YES	YES	YES	YES	0-10 VDC	0-10 VDC	0-10 VDC	0-10 VDC	DRIVE	BYPASS	AUTO MODE	AUTO MODE		

+ = STANDARD E7N BYPASS SET UP
 ■ = FACTORY 2-WIRE INITIALIZATION/DEFAULT SETTING

SEE SHEET 2 FOR NOTES, AND TABLES 1, 2 AND 3.

DRAWN BY: D.R. CMELAK
 CHECKED BY: K. FLIERL
 DATE: 12/5/08
 TITLE: SCHEMATIC DIAGRAM E7N ELECTRONIC BYPASS

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 DRAWING #: DS-E7N.01

REVISION R04
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 SHEET 3 OF 3