11. 8   Input terminal function

The function No. in the following table can be assigned to parameters <F110>-<F124>, <F127>, <F128>. and <F151>-<F158>.

Function number		Symbol	Function	Action	Reference
Positive logic	Negative logic				
0	1	-	No function	Disabled	-
2	3	F	Fwd run	ON: Forward run (except deceleration stop) OFF: Deceleration stop	[7. 2. 1]
4	5	R	Rev run	ON: Reverse run (except deceleration stop) OFF: Deceleration stop	
6	7	ST	Standby	ON: Ready for operation, OFF: Coast stop (gate OFF)	[5. 4. 2] [6. 3. 1] [6. 34. 8] [6. 8. 2] [7. 2. 1]
8	9	RES1	Reset 1	ON: Acceptance of reset command, ON→OFF: Trip reset	[7. 2. 1] [13. 1]
10	11	SS1	Preset speed switching 1	Selection of 31-speed SS1 to SS5 (5 bits)	[5. 3. 7] [7. 2. 1]
12	13	SS2	Preset speed switching 2		
14	15	SS3	Preset speed switching 3		
16	17	SS4	Preset speed switching 4		
18	19	JOG	Jog run	ON: Jog run enabled	[6. 10] [7. 2. 1]
20	21	EXT	Emergency off	ON: "E" trip after <F603> operation	[6. 30. 4] [7. 2. 1]
22	23	DB	DC braking	ON: DC braking	[6. 8. 1] [6. 8. 3] [7. 2. 1]
24	25	AD1	Acc/Dec switching 1	Selection of Acc/Dec 1 - 4 AD2, AD3 (2 bits)	[7. 2. 1]
26	27	AD2	Acc/Dec switching 2		
28	29	VFSW1	V/f switching 1	Selection of V/f 1 - 4 VFSW1, VFSW2 (2 bits)	
30	31	VFSW2	V/f switching 2		
32	33	OCS2	Stall prevention switching/Torque limit switching 1	ON: <F185: Stall prevention level 2> enabled OFF: <F601: Stall prevention level 1> enabled	[6. 24. 1] [6. 27. 2] [6. 30. 2] [7. 2. 1]
34	35	TRQL2	Torque limit switching 2	Selection of Power running/Regenerative torque limit 1 - 4 OCS2, TRQL1 (2 bits)	[6. 24. 1] [6. 27. 2] [7. 2. 1]
36	37	PID	PID control OFF	ON: PID control OFF	[5. 3. 8] [7. 2. 1]
38	39	PTTN1	Pattern operation 1	ON: Pattern operation 1 enabled	[6. 28] [7. 2. 1]
40	41	PTTN2	Pattern operation 2	ON: Pattern operation 2 enabled	
42	43	PTTNC	Pattern operation continuation	ON: Pattern operation continued	
44	45	PTTNS	Pattern operation start	ON: Pattern operation start	
46	47	OH2	External thermal trip	ON: "OH2" trip	[7. 2. 1]

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Function number		Symbol	Function	Action	Reference
Positive logic	Negative logic				
48	49	SCLC	Communication priority cancel	ON: Run at the setting of <CMOd: Run command select> and <FMOd: Frequency command select 1> OFF: Run by communication	[6. 38. 2] [7. 2. 1]
50	51	HD	3-wire operation hold/ stop	ON: Forward run (F), Reverse run (R) held, 3-wire operation OFF: Deceleration stop	[7. 2. 1]
52	53	IDC	PID differential/integral reset	ON: PID differential/integral cleared	[5. 3. 8] [7. 2. 1]
54	55	PIDSW	PID plus/minus switching	ON: Plus/minus characteristics of <F359: PID control 1> setting OFF: Characteristics of <F359: PID control 1> setting	[7. 2. 1]
56	57	FORCE	Forced run	ON: Forced run, continues in a slight failure condition (Set <F650: Forced run> = "1: Enabled". Frequency command value = <F294: Preset speed 15 / Forced run speed>.) *Stop with power off	[6. 12. 2] [6. 31] [7. 2. 1]
58	59	FIRE	Fire speed run	ON: Fire speed run (Set <F650: Fire speed run> = "1: Enabled". Frequency command value = <F294: Preset speed 15 / Forced run speed>.) *Stop with power off	
60	61	DWELL	Dwell operation	ON: Dwell operation (Stop acceleration and deceleration and run the motor at a constant speed)	[6. 19] [7. 2. 1]
62	63	KEB	Synchronized Acc/Dec	ON: Deceleration stop with synchronizing at power failure	[7. 2. 1]
64	65	MYF	My function start	ON: My function start (When <A977: My function> = "1: Enabled by permission signal")	
66	67	AUTT	Offline auto-tuning	<F400> = "3" ON: Offline auto-tuning executed <F400> = "6" ON: Offline auto-tuning executed at run command while this signal is ON. <F400> = "7" ON: Offline auto-tuning executed only for <F402> at run command while this signal is ON.	[6. 23. 1] [6. 23. 2] [7. 2. 1]
68	69	SGSW	Speed control gain switching	ON: Use F463-F465 OFF: Use F460-F462	[7. 2. 1]
70	71	SRVL	Servo lock	ON: Servo lock	
72	73	SIMP	Simple positioning	ON: Simple positioning operation	
74	75	CKWH	Cumulative power monitor clear	ON: Clear cumulative power (kWh) monitor display	[6. 36] [7. 2. 1]
76	77	TRACE	Trace trigger	ON: Trace trigger (start) signal	
78	79	HSLL	Light-load high-speed operation inhibited	ON: Light-load high-speed operation inhibited OFF: Light-load high-speed operation permitted	[7. 2. 1]
80	81	HDFP	Terminal FP output hold	ON: Terminal [FP] is held ON once turned ON	
82	83	HDR1	Terminal R1 output hold	ON: Terminal [R1] is held ON once turned ON	
84	85	HDR2	Terminal R2 output hold	ON: Terminal [R2] is held ON once turned ON	
88	89	UP	Terminal Up frequency	ON: Frequency command increased	[6. 6. 5] [7. 2. 1]
90	91	DOWN	Terminal Down frequency	ON: Frequency command decreased	
92	93	CLR	Terminal Up, Down frequency clear	OFF-> ON: Clear Terminal Up, Down frequency command	
94	95	DANC	Dancer correction OFF	ON: Dancer correction OFF	[7. 2. 1]
96	97	FRR	Coast stop	ON: Coast stop (gate OFF)	[6. 34. 8] [7. 2. 1]
98	99	FR	Fwd/Rev	ON: Forward command, OFF: Reverse command	[7. 2. 1]
100	101	RS	Run/Stop	ON: Run command, OFF: Stop command	

Function number		Symbol	Function	Action	Reference
Positive logic	Negative logic				
102	103	CPSW	Commercial powr run switching	ON: Commercial power run, OFF: Inverter run	[6. 20] [7. 2. 1]
104	105	FCHG	FMOd/F207 priority switching	ON: <F207: Frequency command select 2> enabled (When <F200: Frequency command priority select> = "0") OFF: <FMOd: Frequency command select 1> enabled	[5. 4. 1] [7. 2. 1]
106	107	FMTB	Terminal II priority	ON: Frequency command of Terminal [II] enabled OFF: <FMOd: Frequency command select 1> enabled	[7. 2. 1]
108	109	CMTB	Terminal run priority	ON: Run command of terminal enabled OFF: <CMOd: Run command select> enabled	[5. 2. 1] [7. 2. 1]
110	111	PWE	Parameter writing unlocked	ON: Parameter writing unlocked OFF: <F700: Parameter reading & writing access lockout> setting	[6. 34. 1] [7. 2. 1]
112	113	STSW	Speed control/Torque control switching	ON: Torque control, OFF: Speed control	[7. 2. 1]
114	115	EXCUT	External equipment counter	ON: Count the signals (Monitor number "103" can monitor the number of ON signal)	[6. 30. 21] [7. 2. 1]
116	117	PI1SW	PID 1, 2 switching	ON: PID2, OFF: PID1	[7. 2. 1]
118	119	SS5	Preset speed switching 5	Selection of 31-speed SS1 to SS5 (5 bits)	[5. 3. 7] [7. 2. 1]
120	121	FSTP1	Quick deceleration 1	ON: Dynamic quick deceleration OFF: Canceled *Operation is resumed when dynamic quick deceleration is canceled	[7. 2. 1]
122	123	FSTP2	Quick deceleration 2	ON: Quick deceleration OFF: Canceled *Operation is resumed when quick deceleration is canceled	
124	125	PREX	Preliminary excitation	ON: Preliminary excitation	
126	127	BRK	Brake	ON: Brake closed	
130	131	BRKA	Brake answerback	ON: Comparison signal with output terminal function "68: During brake release" ("E-11" trip when mismatching)	[6. 30. 15] [7. 2. 1]
134	135	TVS	Traverse operation	ON: Traverse operation permission	[7. 2. 1]
136	137	RSC	Rescue operation	ON: Rescure operation (Low voltage operation)	
138	139	PMPSW	Pump control switching	ON: Pump switching during pump control	
140	141	SLOWF	Fwd slowdown	ON: Forward run toward the setting value of <F383: Hit and stop frequency>	
142	143	STOPF	Fwd stop	ON: Stop (Forward run only)	
144	145	SLOWR	Rev slowdown	ON: Reverse run toward the setting value of <F383: Hit and stop frequency>	
146	147	STOPR	Rev stop	ON: Stop (Reverse run only)	
148	149	SLOFR	Fwd/Rev slowdown	ON: Stop (Forward/Reverse run)	
150	151	HSC	Hit and stop clear	ON: Hit and stop cleared	

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Function number		Symbol	Function	Action	Reference
Positive logic	Negative logic				
152	153	MOT2	No. 2 motor switching	ON: No.2 motor setting + No.2 Acc/Dec + No.2 Stall (Torque limit) (V/f constant, <F170>, <F171>, <F172>, <F182>, <F185>, <F500>, <F501>, <F503>) <tHrA> (not <F182>) when <F632> = "2", "3" OFF: No.1 motor setting + No.1 Acc/Dec + No. 1 Stall (Torque limit) (<Pt>, <vL>, <vLv>, <vb>, <tHrA>, <ACC>, <dEC>, <F502>, <F601>)	[7. 2. 1]
154	155	PID3	External PID3 enabled	ON: External PID3 enabled	
156	157	PID4	External PID4 enabled	ON: External PID4 enabled	
158	159	RES2	Reset 2	ON: Reset accepted, ON -> OFF: Trip reset	
162	163	PID3R	External PID3 differential/ integral reset	ON: External PID3 differential/integral reset	
164	165	PID3S	External PID3 plus/minus switching	ON: Plus/minus characteristics of <A340: PID control 3> setting OFF: Characteristics of <A340: PID control 3> setting	
170	171	PID4R	External PID4 differential/ integral reset	ON: External PID4 differential/integral reset	
172	173	PID4S	External PID4 plus/minus switching	ON: Plus/minus characteristics of <A370: PID control 4> setting OFF: Characteristics of <A370: PID control 4> setting	
176	177	PMPR	Pump control release	ON: Pump release during pump control	
200	201	PWP	Parameter writing locked	ON: Parameter writing locked (Reading unlocked) OFF: <F700: Parameter reading & writing access lockout> setting	[6. 34. 1] [7. 2. 1]
202	203	PRWP	Parameter reading locked	ON: Parameter reading & writing access lockout OFF: <F700: Parameter reading & writing access lockout> setting	

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11. 9   Output terminal function

The function No. in the following table can be assigned to parameters <F130>, <F132>-<F134>, <F137>, <F138>, and <F159>-<F163>.

Function Number		Symbol	Function	Action	Reference
Positive logic	Negative logic				
0	1	LL	Lower limit frequency (LL)	ON: Output frequency over <LL: Lower limit frequency>	[7. 2. 2]
2	3	UL	Upper limit frequency (UL)	ON: Output frequency is <UL: Upper limit frequency> or more	[7. 2. 2]
4	5	LOW	Low-speed signal	ON: Output frequency is <F100: Low-speed signal output frequency> or more	[6. 1. 1] [7. 2. 2]
6	7	RCH	Acc/Dec completed	Output frequency is within command frequency ± <F102: Reach signal detection band>	[6. 1. 2] [7. 2. 2]
8	9	RCHF	Specified frequency attainment	ON: Output frequency is within <F101: Reach signal specified frequency> ± <F102: Reach signal detection band>	[6. 1. 3] [7. 2. 2]
10	11	FL1	Failure signal 1	ON: Tripped	[6. 30. 5] [6. 30. 6] [6. 30. 7] [6. 30. 8] [6. 30. 10] [6. 30. 14] [7. 2. 2]
12	13	FL2	Failure signal 2	ON: At trip, except "EF", "OCL", "EPHO", and "OL2"	
14	15	POC	Overcurrent (OC) pre-alarm	ON: Output current is <F601: Stall prevention level 1> or more	
16	17	POLI	Inverter overload (OL1) pre-alarm	ON: Calculated value of overload protection level is a specific level or more	
18	19	POLM	Motor overload (OL2) pre-alarm	ON: Calculated value of overload protection level is <F657: Overload alarm level> or more	
20	21	POH	Overheat (OH) pre-alarm	ON: Approx. 95°C or more of IGBT element OFF: Under approx. 95°C of IGBT element (90°C or less after detection is turned on)	[7. 2. 2]
22	23	POP	Overvoltage (OP) pre-alarm	ON: Overvoltage limit in operation	
24	25	MOFF	Power circuit undervoltage (MOFF) alarm	ON: Main circuit undervoltage (MOFF) detected	
26	27	UC	Undercurrent (UC) alarm	ON: When the output current falls below the value set by <F611: Undercurrent detection level> and remains below <F611: Undercurrent detection level>+<F609: Undercurrent detection hysteresis> for the period of time specified by <F612: Undercurrent detection time> OFF: Output current is over <F611> (<F611>+<F609> or more after detection turns on)	[6. 30. 7] [7. 2. 2]
28	29	OT	Overtorque (OT) alarm	ON: When the torque becomes <F616: Overtorque detection level during power running> or more, and remains over <F616: Overtorque detection level during power running> - <F619: Overtorque detection hysteresis> for the time specified by <F618: Overtorque detection time> OFF: Torque is under <F616> (<F616>-<F619> or less after detection turns on)	[6. 30. 8] [7. 2. 2]
30	31	POLR	Braking resistor overload (OLr) pre-alarm	ON: 50% or more of calculated value of <F309: Braking resistor capacity> set overload protection level	[6. 15. 4] [7. 2. 2]

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Function Number		Symbol	Function	Action	Reference
Positive logic	Negative logic				
32	33	E	Emergency off trip	ON: During emergency off trip ("E" is displayed)	[7. 2. 2]
34	35	RETRY	During retry	ON: During retry	
36	37	PTNS	Pattern operation end	ON: All pattern operation end	[6. 28] [7. 2. 2]
38	39	PIDL	PID deviation limit	ON: Within the setting value of <F364: PID1 deviation upper-limit>, <F365: PID1 deviation lower-limit>	[7. 2. 2]
40	41	RUN	Run/Stop	ON: During run or DC braking, OFF: During stop	
42	43	HFL	Serious failure	ON: At trip [*1], OFF: Other than those trip above	
44	45	LFL	Slight failure	ON: At trip ("OC1", "OC2", "OC3", "OP1", "OP2", "OP3", "OH", "OL1", "OL2", "OL3", "OLr") OFF: Other than those trip above	
46	47	CPSW1	Commercial power/ Inverter Switching 1	ON: For inverter run	
48	49	CPSW2	Commercial power/ Inverter Switching 2	ON: For commercial power run	
50	51	FAN	During cooling fan run	ON: During cooling fan run	[6. 30. 11] [7. 2. 2]
52	53	JOG	During jog run	ON: During jog run	[7. 2. 2]
54	55	JBM	During terminal run	ON: During terminal run, OFF: Other than terminal run	
56	57	COT	Cumulative run time alarm	ON: Cumulative operation time is <F621: Cumulative run time alarm > or more	[6. 30. 12] [7. 2. 2]
58	59	COMOP	Communication option communication time-out	ON: Time-out of communication option occurs (held until reset)	[7. 2. 2]
60	61	FR	Fwd/Rev run	ON: During reverse run, OFF: During forward run * Command direction or OFF during stop	
62	63	RDY1	Ready for run 1	ON: Run when frequency command is ON	
64	65	RDY2	Ready for run 2	ON: Run when ST, RUN, or frequency command is ON	
68	69	BR	During brake	ON: Brake, OFF: Break release	
70	71	PAL	During alarm or pre-alarm	ON: Alarm or pre-alarm occuring	
72	73	FSL	During Fwd speed limit	ON: <F426: Fwd speed limit level> or more (Torque control)	
74	75	RSL	During Rev speed limit	ON: <F428: Rev speed limit level> or more (Torque control)	
76	77	HLTH	Inverter healthy output	Output while switching ON and OFF over at every 1 sec. (to check inverter soundness)	
78	79	COME	RS485 communication time-out	ON:RS485 communication time-out	[6. 38. 1] [7. 2. 2]
92	93	DATA1	Designated data bit 0	ON: bit0 of FA50 is ON, OFF: bit0 of FA50 is OFF	[7. 2. 2]
94	95	DATA2	Designated data bit 1	ON: bit1 of FA50 is ON, OFF: bit1 of FA50 is OFF	
106	107	LLD1	Light load detection 1	ON: Under heavy load torque(<F335> to <F338>)	
108	109	HLD	Heavy load detection	ON: Heavy load torque(<F335> to <F338>)or more	
110	111	PTL	During positive torque limit	ON: During positive torque limit	
112	113	MTL	During negative torque limit	ON: During negative torque limit	
114	115	RCRY	For external relay of rush current suppression	ON: For external relay of rush current suppression	
116	117	FL4	Failure signal 4	ON: During trip (including retry waite time)	[6. 15. 3] [7. 2. 2]

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| Function Number | | Symbol | Function | Action | Reference |
Positive logic	Negative logic				
118	119	STPC	Stop positioning completion	ON: Stop position completion	[7. 2. 2]
120	121	LLS	During sleep	ON: During sleep	
122	123	KEB	During synchronized Acc/Dec	ON: During synchronized acceleration/deceleration	
124	125	TVS	During traverse operation	ON: During traverse operation	
126	127	TVSD	During traverse Dec	ON: During traverse deceleration	
128	129	LTA	Parts replacement alarm	ON: Any one of cooling fan, control board capacitor, or power circuit capacitor reaches parts replacement time	[6. 30. 17] [7. 2. 2]
130	131	POT	Overtorque (OT) pre-alarm	ON: Torque current is 70% of <F616: Overtorque detection level during power running> setting value or more OFF: Torque current is under <F616> x 70%-<F619: Overtorque detection hysteresis>	[7. 2. 2]
132	133	FMOD	Frequency command 1/ Frequency command 2	ON: <F207: Frequency command select 2> enabled OFF: <FMOd: Frequency command select 1> enabled	
134	135	FL3	Failure signal 3	ON: During trip (except Emergency off)	
136	137	FLC	Hand/Auto	ON: Run command or panel run, OFF: Other than those at left	
138	139	FORCE	During forced run	ON: During forced run	[6. 31] [7. 2. 2]
140	141	FIRE	During fire speed run	ON: During fire speed run	
142	143	UTA	Undertorque alarm	ON: Undertorque alarm level or more	[7. 2. 2]
144	145	PIDF	PID1,2 frequency command agreement	ON: Frequency commanded by <F389: PID1 set value select > and <F360: PID1 feedback input select > are within ± <F374: PID1 set value agreement detection band>	
150	151	PTCA	PTC input pre-alarm	ON: PTC thermal input value is 60% of <F646: PTC detection resistance> or more	[6. 30. 19] [7. 2. 2]
152	153	STO	During Safe Torque Off (STO)	ON: Open between [STOA]-[STOB]-[PLC] OFF: Short circuit between [STOA]-[STOB]-[PLC]	[7. 2. 2]
154	155	DISK	Analog input disconnecting alarm	ON: The input value of terminal [II] is <F633: II analog input disconnection detection level> or less	
156	157	LI1	Terminal F ON/OFF	ON: Terminal [F] is ON, OFF: Terminal [F] is OFF	
158	159	LI2	Terminal R ON/OFF	ON: Terminal [R] is ON, OFF: Terminal [R] is OFF	
160	161	LTAF	Cooling fan replacement alarm	ON: Cooling fan reaches parts replacement time	[6. 30. 17] [7. 2. 2]
162	163	NSA	Number of starting alarm	ON: Number of starting is <F648: Number of starting alarm> or more	[6. 30. 21] [7. 2. 2]
164	165	LLD2	Light load detection 2	ON: Light load detection (compatible with old model)	[7. 2. 2]
166	167	DACC	During Acc	ON: During acceleration	
168	169	DDEC	During Dec	ON: During deceleration	
170	171	DRUN	During constant speed run	ON: During constant speed run	
172	173	DDC	During DC braking	ON: During DC braking	
174	175	HSTOP	During hit and stop	ON: During hit and stop	
176	177	SRVLR	During run including servo lock	ON: During run including servo lock	[7. 2. 2]

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Function Number		Symbol	Function	Action	Reference
Positive logic	Negative logic				
178	179	SRVL	During servo lock	ON: During servo lock	[7. 2. 2]
180	181	IPU	For input cumulative power	ON: Input cumulative power unit reach	
182	183	SMPA	Shock monitoring alarm	ON: Current / torque value reach the shock monitoring detection condition	
184	185	ENSA	Number of external equipment starting alarm	ON: Number of starting of external equipment is <F658: Number of external equipment starting alarm> or more	[6. 30. 21] [7. 2. 2]
186	187	VFS1	V/f switching status 1	ON: V/f switching status 1	[7. 2. 2]
188	189	VFS2	V/f switching status 2	ON: V/f switching status 2	
190	191	FAL	Cooling fan fault alarm	ON: Cooling fan fault	[6. 30. 11] [7. 2. 2]
192	193	ETHE	Embedded Ethernet communication time-out	ON: Embedded Ethernet communication time-out	
194	195	CLD1	Calendar 1	ON: Calendar 1	
196	197	CLD2	Calendar 2	ON: Calendar 2	
198	199	CLD3	Calendar 3	ON: Calendar 3	
200	201	CLD4	Calendar 4	ON: Calendar 4	
202	203	PID2	During PID2 control	ON: During PID2 control	
204	205	PID3	During External PID3 control	ON: During External PID3 control	
206	207	PID3L	External PID3 deviation limit	ON: Within the setting value of <A346: PID3 deviation upper-limit>, <A347: PID3 deviation lower-limit>	
208	209	PID4	During External PID4 control	ON: During External PID4 control	
210	211	PID4L	External PID4 deviation limit	ON: Within the setting value of <A376: PID4 deviation upper-limit>, <A377: PID4 deviation lower-limit>	
212	213	PMPC	Pump control	ON: For pump operation	
222	223	MYF1	My function output 1	ON: My function output 1	[7. 2. 2]
224	225	MYF2	My function output 2	ON: My function output 2	
226	227	MYF3	My function output 3	ON: My function output 3	
228	229	MYF4	My function output 4	ON: My function output 4	
230	231	MYF5	My function output 5	ON: My function output 5	
232	233	MYF6	My function output 6	ON: My function output 6	
234	235	MYF7	My function output 7	ON: My function output 7	
236	237	MYF8	My function output 8	ON: My function output 8	
238	239	MYF9	My function output 9	ON: My function output 9	
240	241	MYF10	My function output 10	ON: My function output 10	
242	243	MYF11	My function output 11	ON: My function output 11	
244	245	MYF12	My function output 12	ON: My function output 12	
246	247	MYF13	My function output 13	ON: My function output 13	
248	249	MYF14	My function output 14	ON: My function output 14	
250	251	MYF15	My function output 15	ON: My function output 15	
252	253	MYF16	My function output 16	ON: My function output 16	[7. 2. 2]
254	-	AOFF	Always OFF	Always OFF	–

11

Function Number		Symbol	Function	Action	Reference
Positive logic	Negative logic				
-	255	AON	Always ON	Always ON	−

*1 At trip "OCL", "OCR", "EPH1", "EPH0", "Ot", "Ot2", "OtC3", "UtC3", "OH2", "E", "EEP1"-"EEP3", "Err2"-"Err5", "UC", "UP1", "Etn", "Etn1"-"Etn3", "EF2", "PrF", "EtyP", "E-13", "E-18"-"E-21", "E-23", "E-26", "E-32", "E-37", "E-39"

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