

ASCII, Extended ASCII and Keyboard Scan Codes for the ProtoLink Architecture Keypad key programming

The key definitions are in ASCII, eg "A" or single byte scan code, eg 01 or a two byte extended code, eg 0,30

Key	Shift	Ctrl	Alt
1			0,120
2	@		0,121
3	#		0,122
4	\$		0,123
5	%		0,124
6	^		0,125
7	&		0,126
8	*		0,127
9	(0,128
0)		0,129
-	_		0,130
=	+		0,131
[{		0,26
]	}		0,27
\			0,43
;	:		0,39
'	"		0,40
,	<		0,51
.	>		0,52
/	?		0,53

Key	Shift	Ctrl	Alt
a	A	01	0,30
b	B	02,02 ¹	0,48
c	C	03	0,46
d	D	04	0,32
e	E	05	0,18
f	F	06	0,33
g	G	07	0,34
h	H	08	0,35
i	I	09	0,23
j	J	10	0,36
k	K	11	0,37
l	L	12	0,38
m	M	13	0,50
n	N	14	0,49
o	O	15	0,24
p	P	16	0,25
q	Q	17	0,16
r	R	18	0,19
s	S	19	0,31
t	T	20	0,20
u	U	21	0,22
v	V	22	0,47
w	W	23	0,17
x	X	24	0,45
y	Y	25	0,21
z	Z	26	0,44

¹ Control B opens the command interpreter in the ProtoLink Device, the second control B exits the interpreter and sends the control B. This requires the code to be entered twice (02,02).

Key	Programmed code	Shift	Ctrl	Alt
Tab	09	0,15	0,148	0,165
Backspace	08		127	0,14
Enter	13		10	0,28
Esc	27			0,01
Space	32			

The following group is commonly referred to as the **grey** keys.
That is the cursor and page keys

Key	Programmed code	Shift	Ctrl	Alt
Home	0,71		0,119	0,151
Up	0,72		0,141	0,152
PgUp	0,73		0,132	0,153
Left	0,75		0,115	0,155
Right	0,77		0,116	0,157
End	0,79		0,117	0,159
Down	0,80		0,145	0,160
PgDn	0,81		0,118	0,161
Ins	0,82		0,146	0,162
Del	0,83		0,147	0,163

Function Keys.

Key	Programmed code	Shift	Ctrl	Alt
F1	0,59	0,84	0,94	0,104
F2	0,60	0,85	0,95	0,105
F3	0,61	0,86	0,96	0,106
F4	0,62	0,87	0,97	0,107
F5	0,63	0,88	0,98	0,108
F6	0,64	0,89	0,99	0,109
F7	0,65	0,90	0,100	0,110
F8	0,66	0,91	0,101	0,111
F9	0,67	0,92	0,102	0,112
F10	0,68	0,93	0,103	0,113
F11	0,133	0,135	0,137	0,139
F12	0,134	0,136	0,138	0,140

System Control Keys.

Key	Programmed code	Shift	Ctrl	Alt
Break	0,02			
Null	0,03			
Pause	0,04			
Prt Screen	0,05		0,114	
NUM Lock	0,06			
CAPS Lock	0,07			
SCROLL Lock	0,08			

Numeric Keypad Group.

Key	Programmed code	Shift	Ctrl	Alt
Keypad Enter	0,182		10	0,166
Keypad -	0,183		0,142	0,74
Keypad *	0,184		0,150	0,55
Keypad /	0,185		0,149	0,164
Keypad +	0,186		0,144	0,78
Keypad 0	0,190		0,146	
Keypad 1	0,191		0,117	
Keypad 2	0,192		0,145	
Keypad 3	0,193		0,118	
Keypad 4	0,194		0,115	
Keypad 5	0,195		0,143	
Keypad 6	0,196		0,116	
Keypad 7	0,197		0,119	
Keypad 8	0,198		0,141	
Keypad 9	0,199		0,132	
Keypad .	127		0,147	

Control/Alt/Shift Group.

These keys generate code when pushed (make) and when released (break).

Key	Programmed code
Left Ctrl make	0,173
break	0,174
Left Alt make	0,169
break	0,170
Right Ctrl make	0,175
break	0,176
Right Alt make	0,171
break	0,172
Left Shift make	0,177
break	0,178
Right Shift make	0,179
break	0,180

The following tables list the codes in Scan-Code order.
 Firstly, single byte scan code

Value	Description
01	Ctrl-A
02,02	Ctrl-B
03 - 07	Ctrl-C Ctrl-G
08	Ctrl-H (Backspace)
09	Ctrl-I (Tab)
10	Ctrl-J (Ctrl-Enter) and (Ctrl-Keypad Ent)
11 - 12	Ctrl-K, Ctrl-L
13	Ctrl-M (Enter)
14 - 26	Ctrl-N Ctrl-Z
27	Esc
32	Space
127	Ctrl-Backspace (Keypad .)

Secondly the two byte extended code, the first byte is the NULL character (0) and the second byte is the listed extended ASCII code.

Value	Description
01	Alt-Esc
02	Break
03	Null
04	Pause
05	Prt Screen
06	NUM Lock
07	CAPS Lock
08	SCROLL Lock
14	Alt-Backspace
15	Shift-Tab
16 - 25	Alt-Q,W,E,R,T,Y,U,I,O,P
26 - 28	Alt-[,], Enter

Value	Description
30 - 38	Alt-A,S,D,F,G,H,J,K,L
39 - 40	Alt-; '
43	Alt-\
44 - 50	Alt-Z,X,C,V,B,N,M
51 - 53	Alt-, (comma) . (full stop) /
55	Alt-keypad *
59 - 68	Function Keys F1 - F10
71	Home
72	Cursor Up
73	PgUp
74	Keypad -
75	Cursor Left
77	Cursor Right
78	Keypad +
79	End
80	Cursor Down
81	PgDn
82	Ins
83	Del
84 - 93	Function keys Shift F1 - F10 (F11 - F20)
94 - 103	Function keys Ctrl F1 - F10 (F21 - F30)
104 - 113	Function keys Alt F1 - F10 (F31 - F40)
114	Ctrl-Prt Screen
115	Ctrl-Cursor Left (Ctrl-Keypad 4)
116	Ctrl-Cursor Right (Ctrl-Keypad 6)
117	Ctrl-Cursor End (Ctrl-Keypad 1)
118	Ctrl-PgDn (Ctrl-Keypad 3)
119	Ctrl-Home (Ctrl-Keypad 7)
120 - 131	Alt-1,2,3,4,5,6,7,8,9,0,-,=
132	Ctrl-PgUp (Ctrl-Keypad 9)

Value	Description
133 - 134	F11 - F12
135 - 136	Shift-F11 - F12
137 - 138	Ctrl-F11 - F12
139 - 140	Alt-F11 - F12
141	Ctrl-Keypad 8 (Ctrl-Cursor Up)
142	Ctrl-Keypad -
143	Ctrl-Keypad 5
144	Ctrl-Keypad +
145	Ctrl-Keypad 2 (Ctrl-Cursor Down)
146	Ctrl-Keypad 0 (Ctrl-Ins)
147	Ctrl-Keypad . (Ctrl-Del)
148	Ctrl-Tab
149	Ctrl-Keypad /
150	Ctrl-Keypad *
151	Alt-Home
152	Alt-Cursor Up
153	Alt-Pg Up
155	Alt-Cursor Left
157	Alt-Cursor Right
159	Alt-End
160	Alt-Cursor Down
161	Alt-Pg Dn
162	Alt-Ins
163	Alt-Del
164	Alt-Keypad /
165	Alt-Tab
166	Alt-Keypad Enter

Value	Description
169	Left Alt (make)
170	Left Alt (break)
171	Right Alt (make)
172	Right Alt (break)
173	Left Ctrl (make)
174	Left Ctrl (break)
175	Right Ctrl (make)
176	Right Ctrl (break)
177	Left Shift (make)
178	Left Shift (break)
179	Right Shift (make)
180	Right Shift (break)
182	Keypad enter
183	Keypad -
184	Keypad *
185	Keypad /
186	Keypad +
190 - 199	Keypad 0 - 9