Ampel

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&

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Funktionstabelle

Fußgänger	rot	rot	rot	rot	grün	rot	rot	rot
Auto	grün	grün	gelb	rot	rot	rot	rot-gelb	grün
Zeit in s	idle	5	1	5	30	5	1	30
Zeit addiert	0	5	6	11	41	46	47	77
Zeit in Bits	0000000	0000101	0000110	0001010	0101001	0101110	0101111	1001101

Zustandsdiagramm Legende

$$E, Z$$

Z

$R_F \, G_F \, R_A \, Y_A \, G_A$ Reset

R_F	RED (Fußgänger)
G_F	GREEN (Fußgänger)
R_A	RED (Auto)
Y_A	YELLOW (Auto)
G_A	GREEN (Auto)
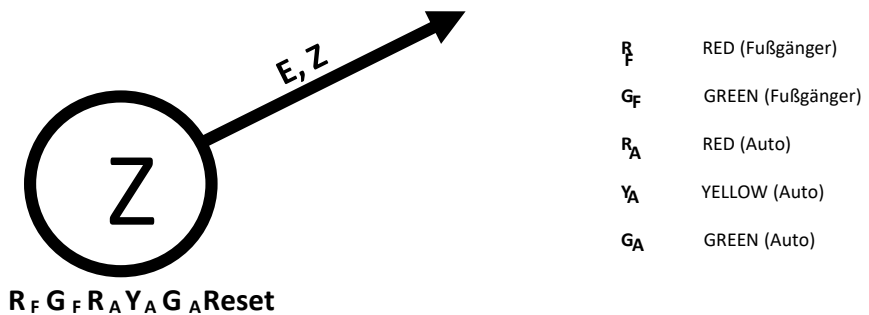
Zustand	Codierung
Idle	000
rot/grün	001
rot/gelb	010
rot/rot	011
grün/rot	100
rot/rot-gelb	101
undefiniert	110
undefiniert	111

Zustandsdiagramm
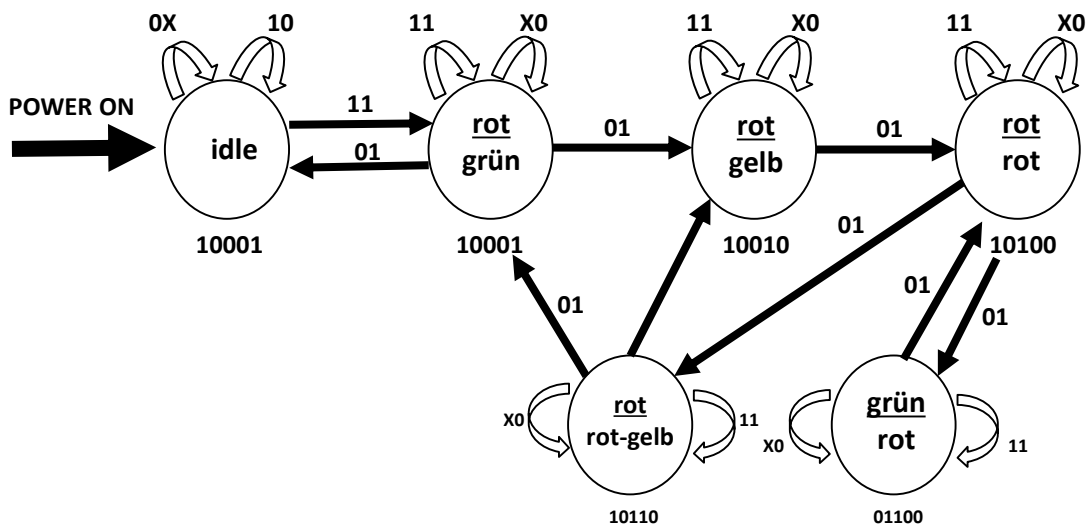
Übergangsschaltnetz

Z2	Z1	Z0	E	S	Z2+	Z1+	Z0+
0	0	0	0	0	0	0	0
0	0	0	0	1	0	0	0
0	0	0	1	0	0	0	0
0	0	0	1	1	0	0	1
0	0	1	0	0	0	0	1
0	0	1	0	1	0	1	0
0	0	1	1	0	0	0	1
0	0	1	1	1	0	0	1
0	1	0	0	0	0	1	0
0	1	0	0	1	0	1	1
0	1	0	1	0	0	1	0
0	1	0	1	1	0	1	0
0	1	1	0	0	0	1	1
0	1	1	0	1	1	0	0
0	1	1	1	0	0	1	1
0	1	1	1	1	0	1	1
1	0	0	0	0	1	0	0
1	0	0	0	1	0	1	1
1	0	0	1	0	1	0	0
1	0	0	1	1	1	0	0
1	0	1	0	0	1	0	1
1	0	1	0	1	0	0	1
1	0	1	1	0	1	0	1
1	0	1	1	1	1	0	1
1	1	0	0	0	X	X	X
1	1	0	0	1	X	X	X
1	1	0	1	0	X	X	X
1	1	0	1	1	X	X	X
1	1	1	0	0	X	X	X
1	1	1	0	1	X	X	X
1	1	1	1	0	X	X	X
1	1	1	1	1	X	X	X

KV - Diagramm

Z2+	S		S	
E				Z1
				Z1
E				
				Z1
	Z0	Z0	Z0	

Z1+	S		S	
E				Z1
				Z1
E				
				Z1
	Z0	Z0	Z0	

Z0+	S		S	
E				Z1
				Z1
E				
				Z1
	Z0	Z0	Z0	

Ausgangsschaltnetz

Z2	Z1	Z0	E	S	R_F	G_F	R_A	Y_A	G_A	Reset
0	0	0	0	0	1	0	0	0	1	1
0	0	0	0	1	1	0	0	0	1	1
0	0	0	1	0	1	0	0	0	1	1
0	0	0	1	1	1	0	0	0	1	0
0	0	1	0	0	1	0	0	0	1	0
0	0	1	0	1	1	0	0	1	0	0
0	0	1	1	0	1	0	0	0	1	0
0	0	1	1	1	1	0	0	0	1	0
0	1	0	0	0	1	0	0	1	0	0
0	1	0	0	1	1	0	1	0	0	0
0	1	0	1	0	1	0	0	1	0	0
0	1	0	1	1	1	0	0	1	0	0
0	1	1	0	0	1	0	1	0	0	0
0	1	1	0	1	0	1	1	0	0	0
0	1	1	1	0	1	0	1	0	0	0
0	1	1	1	1	1	0	1	0	0	0
1	0	0	0	0	0	1	1	0	0	0
1	0	0	0	1	1	0	1	0	0	0
1	0	0	1	0	0	1	1	0	0	0
1	0	0	1	1	0	1	1	0	0	0
1	0	1	0	0	1	0	1	1	0	0
1	0	1	0	1	1	0	0	0	1	0
1	0	1	1	0	1	0	1	1	0	0
1	0	1	1	1	1	0	1	1	0	0
1	1	0	0	0	X	X	X	X	X	X
1	1	0	0	1	X	X	X	X	X	X
1	1	0	1	0	X	X	X	X	X	X
1	1	0	1	1	X	X	X	X	X	X
1	1	1	0	0	X	X	X	X	X	X
1	1	1	0	1	X	X	X	X	X	X
1	1	1	1	0	X	X	X	X	X	X
1	1	1	1	1	X	X	X	X	X	X

KV - Diagramm

RF	S	S	
E			Z1
			Z1
E			
			Z1
	Z0	Z0	Z0	

GF	S	S	
E			Z1
			Z1
E			
			Z1
	Z0	Z0	Z0	

RA	S	S	
E			Z1
			Z1
E			
			Z1
	Z0	Z0	Z0	

KV - Diagramm

YA	S		S	
E					Z1
E					Z1
	Z0	Z0	Z0	

GA	S		S	
E					Z1
E					Z1
	Z0	Z0	Z0	

Reset	S		S	
E					Z1
E					Z1
	Z0	Z0	Z0	