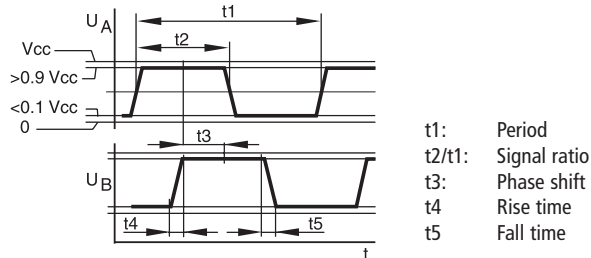


**Characteristics at 22°C**

			<b>D</b>	<b>F</b>		
Number of pulses per rev			12	16		
Supply voltage	Vcc	V	5	3.5...15		
Supply current	typical at 5 V	mA	4	6		
Rise time	t4	µs	0.125	5		
Fall time	t5	µs	0.05	0.2		
Output signal <sup>2)</sup>			Two channels / square wave in quadrature			
Electrical phase shift between U1 and U2	t3/t1 x 360	degree	90 ± 40			
Signal ratio <sup>3)</sup>	t2/t1	%	50 ± 25			
Max. count frequency		kHz	10	15		
Operating temperature range		°C	-20...+85			
Inertia		10 <sup>-7</sup> x kgm <sup>2</sup>	0.1			
Measuring conditions	Temperature	°C	22			
	Supply voltage	V	5			
	Load resistance	Mohm	1			
	Load capacity	pF	25			
Encoder F available on motor types	<b>16C</b>	<b>16N</b>	<b>17S</b>	<b>17N</b>	<b>22N</b>	<b>22V</b>
L1 = length (mm)	18.6	30	20	28.9	34	36.3
L2 = length (mm)	3,6	3.6	3.6	3.6	3.1	3.1
D = motor diameter (mm)	16	16	17	17	22	22
Encoder D available on motor types	13N	P110.19	P110.19	P110.19	P110.19	P110.19
L = length (mm)	40.4	31.2	31.2	31.2	31.2	31.2
D = motor diameter (mm)	13	16	16	16	16	16

**Typical Encoder Output Signal**



- 1) Connector Dupont type Quikie II or equivalent
- 2) Internal pull-up resistor: 10 kohm only available with the F type encoder
- 3) Over the entire frequency and temperature range

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