

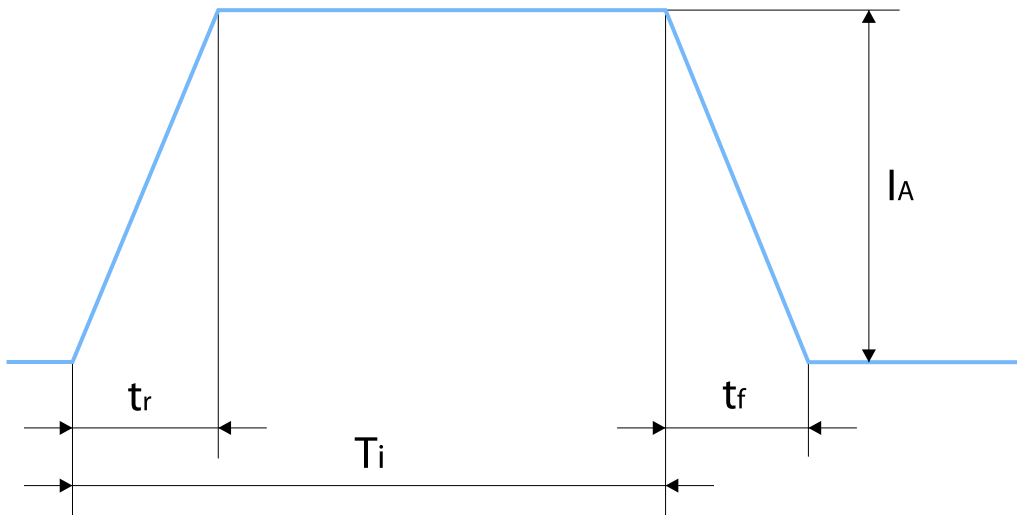
# DATASHEET

## Description

Electromagnetic display - flip disc - it is a passive technology, because it only needs a short current pulse to flip the disc. The disc remains in the set position without any other energy needed.

## Operation Condition

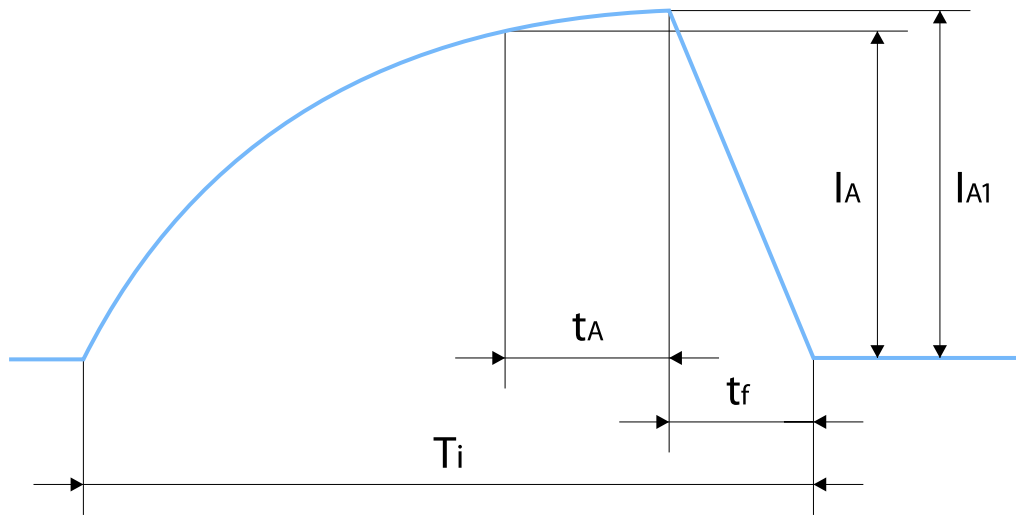
Operation Temperature	-40°C to +80°C
Storing Temperature	-50°C to +85°C
Humidity	max. 95% for +40°C, non-condensing, air pressure min. 70kPa
Mounting	20° counter clockwise 10° clockwise from vertical position



current mode pulse (**recommended**)

## Current mode timing characteristics (Ta=25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Pulse duration	$T_i$		0.8		2	ms
Rise time	$t_r$		0		0.4	ms
Fall time	$t_f$		0		0.4	ms
Excitation current	$I_A$		300		600	mA
Single disc recommended pulse		at $T_i = 1$ ms		350 - 400		mA



voltage mode pulse

### Voltage mode timing characteristics ( $T_a=25^\circ\text{C}$ )

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Pulse duration	$T_i$		0.8		2	ms
Time above min. excitation	$t_A$	$I > I_A$	0.2			ms
Fall time	$t_f$		0		0.4	ms
Minimum excitation current	$I_A$		300			mA
Maximum excitation current	$I_{A1}$				800	mA

### Winding characteristics

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Resistance (Note 1)	$R_{SER}$	$T_a=20^\circ\text{C}$	16.2	18	19.8	$\Omega$
Temperature coefficient	TCR			0.004		deg
Inductance (Note 1)	$L_{SER}$			6		mH
Power dissipation at low temp	$P_{W1}$	$T_a < -40 \text{ to } 20^\circ\text{C}$			0.6	W
Power dissipation at high temp	$P_{W2}$	$T_a = 80^\circ\text{C}$			0.3	W

(Note 1): Current timing model is given by serial combination of  $R_{SER}$  and  $L_{SER}$ .

## Flip disc characteristics

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Flip time	$t_{FTS}$	$I=350\text{mA}$ , $T_i=1\text{ms}$ , current mode		100		ms
Mechanical endurance	$t_{FTU}$			$200 \times 10^6$		cycles

