

ISO-LOGIC SCHMITT TRIGGER INTERRUPTER SWITCH

INVERTER OUTPUT				H22L1	H22L2	H21L1	H21L2	Test Conditions	ISTS972T	ISTS973T	ISTS972N	ISTS973N
Parameter	Units	Test Conditions										
V _F Max	V	I _F = 20mA	1.6	1.6	1.6	1.6			1.7	1.7	1.7	1.7
I _R Max	μA	V _R = 3V	10	10	10	10	V _{CC} = 2V		100	100	100	100
V _R Min	V	I _R = 10μA	6.0	6.0	6.0	6.0			6.0	6.0	6.0	6.0
V _{CC} Min	V		4	4	4	4			4.75	4.75	4.75	4.75
Max	V		15	15	15	15			5.25	5.25	5.25	5.25
V _{OH} Typ	V	Note 1					V _{CC} = 4.75V I _{OL} = 900μA	V _{CC}			V _{CC}	
V _{OL} Min	V	R _L = 270Ω					V _{CC} = 4.75V	-	-	-	-	-
Max	V	V _{CC} = 5V, I _F = 30mA	0.4	0.4	0.4	0.4	I _O = 12.0mA	0.4	0.4	0.4	0.4	0.4
I _{OH} Max		V _{CC} = 10V					I _F = 0mA	-	-	-	-	-
	μA	V _O = 15V	100	100	100	100		-	100	-	100	
I _{CCL} Max		V _{CC} = 5V					V _{CC} = 5.25V	15	15	15	15	
	mA	I _F = 0mA	5	5	5	5	I _F = 15mA					
I _{CCH} Min	mA	V _{CC} = 5V					V _{CC} = 5.25V	15	15	15	15	
Max	mA	I _F = 0mA	5	5	5	5	I _F = 0mA					
T _{PLH} Max	μs	I _F = I _{FT}	15	15	15	15		15	15	15	15	
T _{PHL} Max	μs	R _L = 270Ω, C _L = 50pF	9.0	9.0	9.0	9.0		9.0	9.0	9.0	9.0	
T _R Typ	μs	V _{CC} = 5V	0.1	0.1	0.1	0.1	Note 2 (ISTS972)	0.1	-	0.1	-	
T _F Typ	μs	R _L = 270Ω, C _L = 50pF	0.1	0.1	0.1	0.1	Note 3 (ISTS973)	-	0.05	-	0.05	
I _{FT} Max	mA	V _{CC} = 5V, R _L = 270Ω	30	15	30	15		15	15	15	15	
Aperture	mm	Emitter	1.0	1.0	1.0	1.0		-	-	-	-	
	mm	Sensor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	
Package / Schematic			7 / 7	7 / 7	8B / 7	8B / 7		8A / 6	8A / 7	7 / 6	7 / 7	

Note 1 The Output is an open collector output with the exception of ISTS972 **Note 2** Output load equivalent to 8 TTL loads.

ABSOLUTE MAXIMUM RATINGS

Operating Temperature	-25 to +85 °C
Storage Temperature	-40 to +85 °C
Soldering Temperature	260 °C
(3 seconds, 1.6mm below the seating plate)	

Input Diode

Forward D.C. Current	60mA
Peak Forward Current	1A see note 1
Reverse Voltage	6V
Power Dissipation :	75mW
Interrupter switch	
Reflective opto-switch	90mW

Note1: Pulse width ≤ 100μs, duty ratio 0.01

Output Photo-transistor

Emitter-Collector Voltage	6V
Collector D.C. Current: Transistor Sensor	20mA
Darlington Sensor	50mA

Output with Built-in Schmitt Trigger

Collector-Emitter Voltage	H21	40V
	H22	40V
	ISTS 970	17V
Max Allowable V _{CC}	H21	35V
	H22	35V
	ISTS 970	17V
Output Current		50mA
Power Dissipation		250mW