

ISO-LOGIC SCHMITT TRIGGER INTERRUPTER SWITCH

BUFFER OUTPUT				WITH MOUNTING TAB						WITHOUT MOUNTING TAB	
				ISTS2001	ISTS2002	ISTS2003	Test Conditions	ISTS970T	ISTS971T	ISTS970N	ISTS971N
Paramter	Units	Test Conditions									
V _F	Max	V	I _F = 20mA	1.5	1.5	1.5		1.7	1.7	1.7	1.7
I _R	Max	μA	V _R = 3V	10	10	10	V _R = 2V	100	100	100	100
V _R	Min	V	I _F = 10μA	6.0	6.0	6.0		-	-	-	-
V _{CC}	Min	V		4.5	4.5	4.5		4.75	4.75	4.75	4.75
	Max	V		16	16	16		5.25	5.25	5.25	5.25
V _{OH}	Typ	V	Note 1	V _{CC}	V _{CC}	V _{CC}	V _{CC} = 4.75V I _{OH} = 800μA	V _{CC}	V _{CC}	V _{CC}	V _{CC}
V _{OL}	Min	V	I _O = 16mA	0.1	0.1	0.1	V _{CC} = 4.75V	-	-	-	-
	Max	V		0.4	0.4	0.4	I _O = 12.8mA	0.4	0.4	0.4	0.4
I _{OH}			V _{CC} = 4.75V	-	-	-	I _F = 15mA	-	-	-	-
	Max	μA	V _{OH} = 30V	-	-	-		-	100	-	100
I _{OCL}	Min	mA	V _{CC} = 5V	2.0	2.0	2.0	V _{CC} = 5.25V	-	-	-	-
	Max	mA	I _F = 0mA	12	12	12	I _F = 0	15	15	15	15
	Min	mA	V _{CC} = 16V	2.0	2.0	2.0		-	-	-	-
	Max	mA	I _F = 0mA	15	15	15		-	-	-	-
I _{OCH}	Min	mA	V _{CC} = 5V	0.5	0.5	0.5	V _{CC} = 5.25V	-	-	-	-
	Max	mA	I _F = I _{FT}	10	10	10	I _F = 15mA	15	15	15	15
	Min	mA	V _{CC} = 16V	0.5	0.5	0.5					
	Max	mA	I _F = I _{FT}	12	12	12					
T _{PLH}	Max	μS	I _F = I _{FT} R _L = 390Ω C _L = 50pF	5.0	5.0	5.0		5.0	5.0	5.0	5.0
T _{PHL}	Max	μS		5.0	5.0	5.0		5.0	5.0	5.0	5.0
T _R	Max	μS	V _{CC} = 5V R _L = 390Ω C _L = 50pF	0.2	0.2	0.2	Note 2 Typical	0.1	0.1	0.1	0.1
T _F	Max	μS		0.2	0.2	0.2	Typical	0.05	0.05	0.05	0.05
I _{FT}	Max	mA	V _{CC} = 5V, R _L = 390Ω	20	20	20		15	15	15	15
F _M	Max	kHz	C _L = 50pF	100	100	100		-	-	-	-
Aperture		mm	Emitter	-	-	-		-	-	-	-
		mm	Sensor	-	0.25	0.25		1.0	1.0	1.0	1.0
Package Schematic				8B	8A	8B		8A	8A	7	7
				6	6	6		6	7	6	7

Note 1 The Output is tied to V_{CC} through an internal 10K resistor, with the exception of ISTS971_

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, 1.6 mm below the seating plate)

Input Diode

Forward D.C. Current 60mA
Peak Forward Current 1A see Note1
Reverse Voltage 6V
Power Dissipation : slotted 75mW
interrupter switch
Reflective opto-sw-tch 90mW

Note1: Pulse Width ≤ 100μs, Duty Ratio 0.01

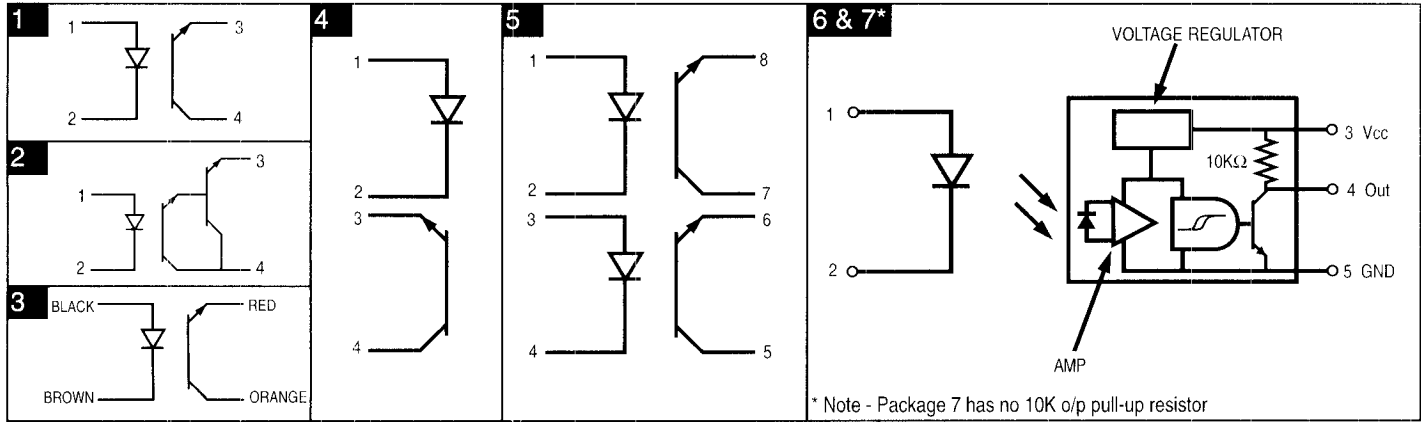
Output Photo-transistor

Collector – Emitter Voltage 35V
Emitter – Collector Voltage 6V
Collector D.C. Current : Transistor Sensor 20mA
Darlington Sensor 50mA

Output with Built-in Schmitt Trigger

Collector – Emitter Voltage – ISTS 971_ 40V
ISTS 200_ 17V
ISTS 970_ 17V
Maximum Allowable V_{CC} – ISTS 971_ 35V
ISTS 200_ 17V
ISTS 970_ 17V
Output Current 50mA
Power Dissipation 250mW

SCHEMATIC DIAGRAMS



PACKAGE DRAWINGS

