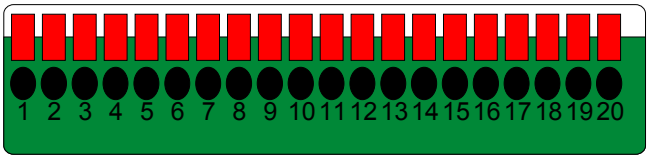
2.15 Connecting the Sensor/Relay device to 15225 DSS6000E I/O card

The I/O Audio card enables you to connect (4) sensor inputs and (4) relay outputs. Just connect the external sensor and relay pin directly to the DSS6000E/7000H/7240/7480/8416E4/9000E I/O card pinhole. Check the table below and locate which pinhole is assigned to sensor input and relay output.



2.15.1 I/O Card Sensor and Relay pinhole allocation:

The signal from the sensor (i.e., infrared sensors, smoke detectors, proximity sensors, door sensors, etc.) is being transmitted to the I/O card and this triggers the system to respond and send signal to relay device (i.e., alarm, telephone etc).

Pin #	Definition	Pin #	Definition
1	Sensor input signal 1+	**11**	Relay Normal Close 1
2	Sensor output signal 1-(GND)	**12**	Relay Common 2
3	Sensor input signal 2+	**13**	Relay Normal Open 2
4	Sensor output signal 2-(GND)	**14**	Relay Normal Close 2
5	Sensor input signal 3+	**15**	Relay Common 3
6	Sensor output signal 3-(GND)	**16**	Relay Normal Open 3
7	Sensor input signal 4+	**17**	Relay Normal Close 3
8	Sensor output signal 4-(GND)	**18**	Relay Common 4
9	Relay Common 1	**19**	Relay Normal Open 4
10	Relay Normal Open 1	**20**	Relay Normal Close 4

2.16 The Sensor input and Relay output Specifications

You may use the sensor input and relay output specifications table below for your reference.

A. Sensor Input Specification

Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Rating	Unit
Input	Forward Current	I_F	50	mA
	Reverse Voltage	V_R	6	V
	Power Dissipation	P	70	mW

Electrical/Optical Characteristics (Ta=25°C)

Parameter		Symbol	Min	Typ.	Max.	Unit	Conditions
Input	Forward Current	V_F	-	1.2	1.4	V	I_F=20mA
	Reverse Voltage	I_R	-	-	10	A	V_R=4V
	Terminal Capacitance	C_t	-	30	250	pF	V=o, f=1KHz
Parameter		**Symbol**	**Min**	**Typ.**	**Max.**	**Unit**	**Conditions**
Output	Collector Dark Current	I_{CEO}	-	-	100	nA	V_{CE}=20V
	Collector-Emitter Breakdown Voltage	BV_{CEO}	35	-	-	V	I_C=0.1mA
	Emitter-Collector Breakdown Voltage	BV_{ECO}	6	-	-	V	I_E=10 A

Transfer Characteristics	*Current Transfer Ratio	CTR	50	-	600	%	I_F=5mA, V_{CE}=5V R_{BE}=
	Collector Current	I_C	2.5	-	30	mA	
	Collector-Emitter Breakdown Voltage	$V_{CE(sat)}$	-	0.1	0.2	V	I_F=20mA, I_C=1mA
	Isolation Resistance	R_{ISO}	5 x 10^{10}	10^{11}	-		DC500V, 40-60% R.H.
	Floating Capacitance	C_f	-	0.6	1.0	pF	V=0, f=1MHz
	Cut-off Frequency	f_c	-	80		KHz	V_{CE}=5V, I_C=2mA R_L=100, -3dB
	Response Time (Rise)	t_r	-	4	18	s	V_{CE}=2V, I_C=2mA R_L=100
	Response Time (Fall)	t_f	-	3	18	s	

*CTR= $\frac{I_C}{I_F}$ 100%

B. Relay Output Specification

Surge strength	:1500 VAC
Nominal power	: 200mw ~ 360mw
Operating power	: 110mw ~ 200mw

C. COIL RATINGS (at 20 oC)

Coil Nominal Voltage (VDC)	Coil Resistance 10%	Pick-up Voltage (VDC)	Drop-Out Voltage (VDC)	Nominal Current (mA)
5	125	3.75	0.5	40

* Max Continuous Voltage at 20°C : 110% of Coil Nominal Voltage

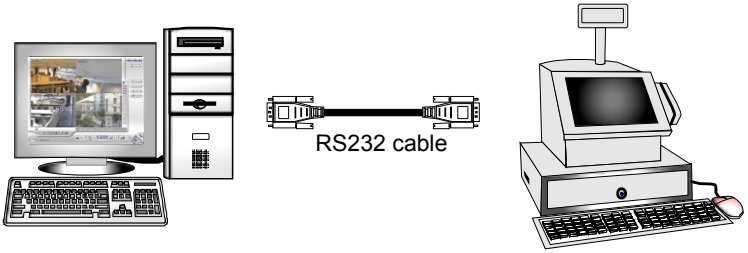
D. CONTACT RATINGS

Contact Arrangement	1 Form C (SPDT)
max. Switch Power max. Switch voltage max. Switch current	125VA 60W 125VAC 30VDC 1A
Contact Resistance	≤ 100mΩ
Resistive Load	1A/125VAC 1A/30VDC

2.17 Connecting POS (Point of Sales)

DSS DVR can be integrated with POS system equipment. Connecting the POS equipment to DSS DVR system thru RS232 connection, enables you to view, record and keep track of the items that were sold. You may also select the camera on where to display all the data.

To connect, locate the RS232 port of the POS equipment and PC. Use an RS232 cable (not supplied) to make the connection.



For detail of POS installation, please refer to POS Quick Guide.