

## SECUREX® FAS 105/LVT

Fire Alarm and Signal. Security System and Extra Low Voltage Cable (FAS 105/LVT)

### Description

20 to 12 AWG solid bare copper conductors (stranded conductors optional).  
 Multiconductors: 2 to 50 unarmoured. Conductor #3 of multiconductor cables is coloured green, suitable for bonding purposes.

Outer jacket is 105°C flame retardant and sunlight resistant red PVC.  
 Optional aluminum/mylar shield with tinned copper drain wire. Rip cord under jacket for safe, easy jacket stripping.



### Standards

**National** CSA C22.2 N° 208,  
 File No. LL23462

### Application

SECUREX® II is a 300V 105°C cable specifically designed for the interconnection of security system elements: including fire protective signaling devices such as smoke and fire detectors, fire alarms, and two-way emergency communication systems.

LVT Extra Low Potential Control Cable is for use in normally dry locations for the wiring of control circuits of heating equipment and signaling circuits, etc.

FAS 105: Fire Alarm & Signal Cable for interconnection of electrical devices within a security and fire protective signaling system. The cables are intended for installation according to Section 32 of the Canadian Electrical Code.

LVT: Class 2 circuit wiring for installation according to Section 16 of the Canadian Electrical Code.

FT1: For installation in buildings of combustible construction (excluding plenum areas) per the Canadian Electrical Code, Rule 2-126 and the National Building Code Article 3.1.4.3.

FT4: For installation in buildings of non-combustible construction and plenum areas in any building per the Canadian Electrical Code, Rule 2-126 and the National Building Code Articles 3.1.5.18 and 3.6.4.3.

### Characteristics

Construction characteristics	
Conductor material	Copper
Electrical characteristics	
Maximum operating voltage	300 V
Usage characteristics	
Maximum operating temperature	105 °C

## SECUREX® FAS 105/LVT

### Unarmoured Unshielded SECUREX® II 18 AWG Multiconductor

No. of Conductors	Ins. Wall		Jacket Wall		Cable Diameter		Cable Weight	
	mils	mm	mils	mm	in.	mm	lb/mft	kg/km
2	15	0.38	33	0.84	0.21	5.33	25	37
2 Parallel	15	0.38	33	0.84	0.150x0.210	3.81x5.33	25	37
3	15	0.38	33	0.84	0.225	5.72	35	52
4	15	0.38	33	0.84	0.24	6.1	43	64
5	15	0.38	33	0.84	0.26	6.6	51	76
6	15	0.38	35	0.89	0.285	7.24	65	97
8	15	0.38	35	0.89	0.31	7.87	77	115
10	15	0.38	35	0.89	0.33	8.38	92	137
20	15	0.38	45	1.19	0.465	11.81	182	271
30	15	0.38	45	1.19	0.545	13.84	260	387
50	15	0.38	54	1.37	0.695	17.65	420	625

### Electrical Properties - Solid Copper Conductors

AWG	12	14	16	18	20					
<b>D.C. Resistance</b>										
@ 20°C (ohms/km)										
Bare Copper	5.21	8.27	13.60	20.90	33.10					
Tinned Copper	5.54	8.79	14.70	22.10	34.40					
<b>Mutual Capacitance</b>	*	**	*	**	*	**	*	**	*	**
(picofarads/m)										
Unshielded Cables	108	--	98	--	89	--	82	--	79	--
(Pairs or Singles)										
O/A Shielded Cables > 6/C	108	197	98	177	89	161	82	148	79	141
O/A Shielded Cables 6/C or less	223	400	203	361	177	318	157	279	154	272
*Capacitance between adjacent conductors.										
**Capacitance between one conductor and other conductors connected to shield.										

## SECUREX® FAS 105/LVT

### Colour Codes

Multiconductor					
Cond. No.	Base Colour	Longitudinal Stripe	Cond. No.	Base Colour	Longitudinal Stripe
1	Black		16	White	Brown
2	Red		17	Green	Brown
3	Green		18	Yellow	Brown
4	Blue		19	White	Orange
5	Brown		20	Black	Orange
6	Orange		21	Red	Orange
7	Black	White	22	Green	Orange
8	Red	White	23	Brown	Orange
9	Green	White	24	White	Blue
10	Yellow	White	25	Red	Blue
11	Red	Black	26	Yellow	Blue
12	Green	Black	27	Brown	Blue
13	Yellow	Black	28	Black	Red
14	Green	Red	29	White	Red
15	Yellow	Red	30	Brown	Red

**Note: Cables over 30 Conductors will have Black or White insulation with number coding.**

### Unarmoured Shielded SECUREX® II 18 AWG Multiconductor - Overall Shielded

No. of Conductors	Ins. Wall		Jacket Wall		Cable Diameter		Cable Weight	
	mils	mm	mils	mm	in.	mm	lb/mft	kg/km
2	15	0.38	33	0.84	0.215	5.46	29	43
3	15	0.38	33	0.84	0.23	5.83	36	53
4	15	0.38	33	0.84	0.252	6.39	44	65
5	15	0.38	33	0.84	0.27	6.86	53	78
6	15	0.38	40	1.02	0.305	7.75	63	93
8	15	0.38	40	1.02	0.325	8.26	78	115
10	15	0.38	40	1.02	0.35	8.89	93	138
20	15	0.38	50	1.27	0.48	12.19	188	280
30	15	0.38	50	1.27	0.57	14.48	263	390
50	15	0.38	60	1.52	0.715	18.15	425	633

### Selling information

#### Notes

Unless otherwise permitted by local electrical inspection authorities, Section 32 (Canadian Electrical Code) requires that non-metallic sheathed fire alarm cables used in non-combustible buildings be installed in conduit or metal armour (Rule 32-102), regardless of an FT4 designation. As a cost-effective alternative to metal conduit, SECUREX® II is available with an interlock aluminum armour.