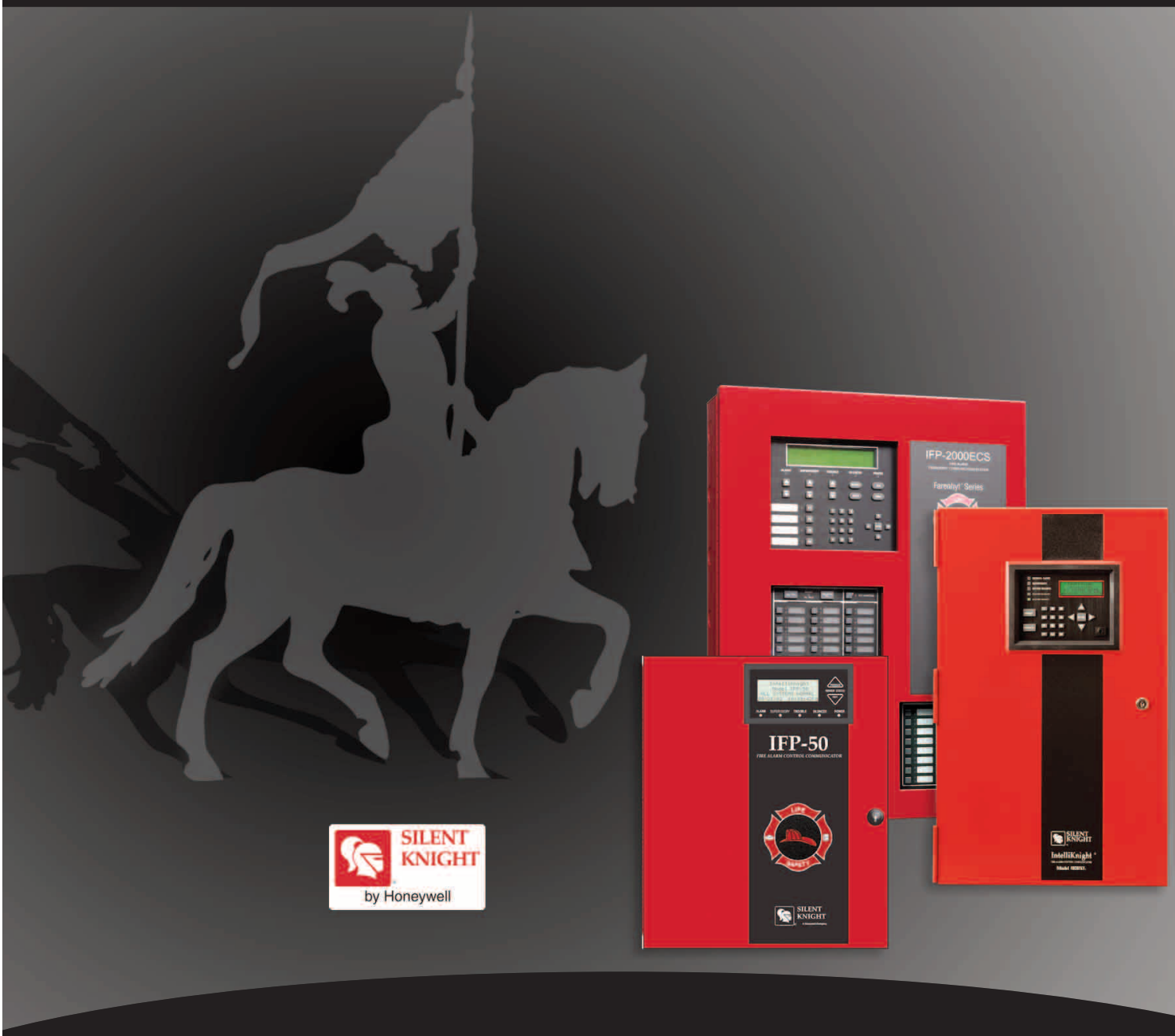
Genesis® Series Cable

Honeywell



SILENT KNIGHT by Honeywell

THE POWER OF CHOICE

Cables for Silent Knight

Cable for That!

Genesis Series Cables for Silent Knight

SILENT KNIGHT®
by Honeywell


5600


5700


5808


5820XL


IFP-25


IFP-50


IFP-100


IFP-1000


IFP-2000


SK-5208

DIRECTORY

NEC Article 760 Fire Alarm Systems

The scope of this article covers:

- Installation of wiring and equipment of fire alarm systems, including all circuits controlled and powered by the fire alarm system. Also includes fire detection and alarm notification, guard's tour, sprinkler waterflow and sprinkler supervisory systems.
- Circuits controlled and powered by the fire alarm system, including circuits for the control of a building system's safety functions, elevator capture, elevator shutdown, door release, smoke doors and damper control, fire doors and damper control and fan shutdown, but only where these circuits are powered and controlled by the fire alarm system.

NEC Listings for Power Limited Fire Alarm (PLFA) cables

- FPL: For general use in buildings
- FPLR: For use within buildings in vertical shafts
- FPLP: For use in ducts, plenums or other environmental spaces
- Direct Burial: For use outdoor or underground sunlight resistant

SBUS

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5600	**5700**	**5808**	**5820XL**	**IFP-25**	**IFP-50**	**IFP-100**	**IFP-1000**	**IFP-2000**	**SK-5208**

Wire Requirements
22-14 AWG, 4 Solid Copper Conductors, Unshielded

AWG	Maximum Distance																				Genesis® Series Cables		
	Total Worst Case Current																						
	0.1 A		0.2 A		0.3 A		0.4 A		0.5 A		0.6 A		0.7 A		0.8 A		0.9 A		1.0 A		General	Riser	Plenum
	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	FPL	FPLR	FPLP
22 AWG	1,852	564	926	282	617	188	463	141	370	113	309	94	265	81	231	70	206	63	183	56	4101	4301	-
18 AWG	4,688	1,429	2,344	714	1,563	476	1,172	357	938	286	781	238	670	204	586	179	521	159	469	143	4107	4307	4507
16 AWG	6,000*	1,829	3,731	1137	2,488	758	1,866	569	1,493	455	1,244	379	1,066	325	933	284	829	253	746	227	4112	4312	4512
14 AWG	6,000*	1,829	5,906	1,800	3,937	1,200	2,953	900	2,362	720	1,969	600	1,687	514	1,476	450	1,312	400	1,181	360	4114	4313	4513

Absolute maximum wiring distance for SBUS circuits.

Signaling Line Circuits (SLC)

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SUPPORTED SLC DEVICES

								
5600	**5700**	**5808**	**5820XL**	**IFP-25**	**IFP-50**	**IFP-100**	**IFP-1000**	**IFP-2000**
SK	SK	SK	SK	IDP	IDP	IDP	IDP	IDP
HFS	Hochiki	Hochiki	Hochiki	HFS	Hochiki	Hochiki	Hochiki	Hochiki

SK, IDP, HFS Protocols
Wire Requirements
18-12 AWG, 2 Solid Copper Conductors, Unshielded

AWG	Maximum Distance		Genesis® Series Cables		
			General	Riser	Plenum
	ft.	m	FPL	FPLR	FPLP
18 AWG	3,100	945	4106	4306	4506
16 AWG	4,900	1,494	4111	4311	4511
14 AWG	7,900	2,408	4113	4313	4513
12 AWG	10,000	3,048	4115	4315	4515

Hochiki Protocol
Wire Requirements
18-12 AWG, 2 Solid Copper Conductors, Unshielded

AWG	Maximum Distance		Genesis® Series Cables		
			General	Riser	Plenum
	ft.	m	FPL	FPLR	FPLP
18 AWG	3,900	1,189	4106	4306	4506
16 AWG	6,200	1,890	4111	4311	4511
14 AWG	10,000	3,048	4113	4313	4513

Conventional 2&4 Wire Initiating Device Circuits (IDC)

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5820XL	**IFP-1000**	**IFP-2000**	**SK-5208**

2-Wire Devices
Wire Requirements
18-12 AWG, Four Solid Copper Conductors, Unshielded

AWG	Maximum Distance		Genesis® Series Cables		
			General	Riser	Plenum
	ft.	m	FPL	FPLR	FPLP
18 AWG	3,218	981	4106	4306	4506
16 AWG	5,112	1,558	4111	4311	4511
14 AWG	8,143	2,482	4113	4313	4513
12 AWG	12,953	3,948	4115	4315	4515

4-Wire Devices
Wire Requirements
18-12 AWG, Two Solid Copper Conductors, Unshielded

AWG	Maximum Distance		Genesis® Series Cables		
			General	Riser	Plenum
	ft.	m	FPL	FPLR	FPLP
18 AWG	3,218	981	4107	4307	4507
16 AWG	5,112	1,558	4112	4312	4512
14 AWG	8,143	2,482	4114	4313	4513

Maximum distances based on circuit current of 100mA and maximum loop resistance of 50 Ohms.

Notification Appliance Circuits (NAC)

									
5600	**5700**	**5808**	**5820XL**	**IP-25**	**IFP-50**	**IFP-100**	**IFP-1000**	**IFP-2000**	**SK-5208**
NUMBER OF NAC CIRCUITS									
2	2	4	6	2	2	4	6	8	4
MAXIMUM CURRENT PER NAC CIRCUIT (A)									
2.0	2.5	3.0	3.0	2.0	2.5	3.0	3.0	3.0	3.0
MAXIMUM CONTROL PANEL CURRENT (A)									
2.0	2.5	6.0	6.0	2.0	2.5	6.0	6.0	9.0	6.0

Wire Requirements
18-12 AWG, Two Solid Copper Conductors, Unshielded

AWG	Maximum Class-B Wiring Distance										Genesis® Series Cables		
	0.5 A		1.0 A		1.5 A		2.0 A		2.5 A		General	Riser	Plenum
	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	FPL	FPLR	FPLP
18 AWG	438	134	219	67	146	45	109	33	88	27	4106	4306	4506
16 AWG	695	212	348	106	232	71	174	53	139	42	4111	4311	4511
14 AWG	1,107	337	554	169	369	112	277	84	221	67	4113	4313	4513
12 AWG	1,762	537	881	269	587	179	440	134	352	107	4115	4315	4515

Calculations are based on Direct-Current Resistance data for uncoated copper wire, per National Electrical Code (2011 Edition) Table 8, Conductor Properties.

Emergency Communication System Panels

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Panels with Emergency Communication System have a Voice Control Module

IFP-100ECS
IFP-1000ECS
IFP-2000ECS

Panel shown is IFP-2000ECS

Wire Requirements
18-12 AWG, Two Solid Copper Conductors, Unshielded

AWG	Maximum Distance at 25 Vrms														Genesis® Series Cables		
	5 W		10 W		15 W		20 W		26 W		40 W		50 W		General	Riser	Plenum
	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	FPL	FPLR	FPLP
18 AWG	1,609	490	804	245	536	163	402	123	309	94	201	61	161	49	4106	4306	4506
16 AWG	2,556	779	1,278	390	852	260	639	195	492	150	320	97	256	78	4111	4311	4511
14 AWG	4,072	1,241	2,036	621	1,357	414	1,018	310	783	239	509	155	407	124	4113	4313	4513
12 AWG	6,477	1,974	3,238	987	2,159	658	1,619	494	1,246	380	810	247	648	197	4115	4315	4515

AWG	Maximum Distance at 70 Vrms														Genesis® Series Cables		
	5 W		10 W		15 W		20 W		26 W		40 W		50 W		General	Riser	Plenum
	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	FPL	FPLR	FPLP
18 AWG	12,613	3,844	6,306	1,922	4,204	1,281	3,153	961	2,426	739	1,577	481	1,261	384	4106	4306	4506
16 AWG	20,041	6,108	10,020	3,054	6,680	2,036	5,010	1,527	3,854	1,175	2,505	764	2,004	611	4111	4311	4511
14 AWG	31,922	9,730	15,961	4,865	10,641	3,243	7,980	2,432	6,139	1,871	3,990	1,216	3,192	973	4113	4313	4513
12 AWG	50,777	50,777	15,477	25,389	7,738	16,926	5,159	12,694	9,765	2,976	6,347	1,935	5,078	1,548	4115	4315	4515

Amplifier ECS-125W Wire Requirements
18-12 AWG, 2 Solid Copper Conductors, Unshielded

AWG	Maximum Distance at 25 Vrms																		Genesis® Series Cables		
	5 W		10 W		15 W		20 W		26 W		40 W		50 W		75 W		100 W		125 W		General	Riser	Plenum
	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	ft.	m	FPL	FPLR	FPLP
18 AWG	1,609	490	804	245	536	163	402	123	309	94	201	61	161	49	107	33	80	25	64	20	4106	4306	4506
16 AWG	2,556	779	1,278	390	852	260	639	195	492	150	320	97	256	78	170	52	128	39	102	31	4111	4311	4511
14 AWG	4,072	1,241	2,036	621	1,357	414	1,018	310	783	239	509	155	407	124	271	83	204	62	163	50	4113	4313	4513
12 AWG	6,477	1,974	3,238	987	2,159	658	1,619	494	1,246	380	810	247	648	197	432	132	324	99	259	79	4115	4315	4515

The above tables assume a uniform distribution of speakers and that a maximum of 20% voltage drop at the last speaker is allowed.

Fire Alarm Cables

18 AWG UNSHIELDED

AWG	# COND	SOL/STR	DC RESISTANCE (OHMS)	NOM. CAP. (PF/FT)	PART #
GENERAL PURPOSE - FPL LISTED					
18	2	SOL	6.5	20	4106
18	4	SOL	6.5	20	4107
RISER RATED - FPLR LISTED					
18	2	SOL	6.5	19	4306
18	4	SOL	6.5	19	4307
PLENUM RATED - FPLP LISTED					
18	2	SOL	6.5	24	4506
18	4	SOL	6.5	24	4507

18 AWG SHIELDED

AWG	# COND	SOL/STR	DC RESISTANCE (OHMS)	NOM. CAP. (PF/FT)	PART #
GENERAL PURPOSE - FPL LISTED					
18	2	SOL	6.5	42	4202
18	4	SOL	6.5	42	4203
RISER RATED - FPLR LISTED					
18	2	SOL	6.5	42	4402
18	4	SOL	6.5	42	4203
PLENUM RATED - FPLP LISTED					
18	2	SOL	6.5	68	4602
18	4	SOL	6.5	68	4603

16 AWG UNSHIELDED

AWG	# COND	SOL/STR	DC RESISTANCE (OHMS)	NOM. CAP. (PF/FT)	PART #
GENERAL PURPOSE - FPL LISTED					
16	2	SOL	4.2	20	4111
16	4	SOL	4.2	20	4112
RISER RATED - FPLR LISTED					
16	2	SOL	4.1	20	4311
16	4	SOL	4.2	20	4312
PLENUM RATED - FPLP LISTED					
16	2	SOL	4.2	27	4511
16	4	SOL	4.1	27	4512

16 AWG SHIELDED

AWG	# COND	SOL/STR	DC RESISTANCE (OHMS)	NOM. CAP. (PF/FT)	PART #
GENERAL PURPOSE - FPL LISTED					
16	2	SOL	4.1	46	4206
16	4	SOL	4.1	46	4207
RISER RATED - FPLR LISTED					
16	2	SOL	4.1	46	4406
16	4	SOL	4.1	46	4407
PLENUM RATED - FPLP LISTED					
16	2	SOL	4.1	77	4606
16	4	SOL	4.1	77	4607

14 AWG UNSHIELDED

AWG	# COND	SOL/STR	DC RESISTANCE (OHMS)	NOM. CAP. (PF/FT)	PART #
GENERAL PURPOSE - FPL LISTED					
14	2	SOL	2.6	22	4113
14	4	SOL	2.6	22	4114
RISER RATED - FPLR LISTED					
14	2	SOL	2.5	22	4313
14	4	SOL	2.5	22	4314
PLENUM RATED - FPLP LISTED					
14	2	SOL	2.5	27	4513
14	4	SOL	2.5	27	4514

14 AWG SHIELDED

AWG	# COND	SOL/STR	DC RESISTANCE (OHMS)	NOM. CAP. (PF/FT)	PART #
GENERAL PURPOSE - FPL LISTED					
14	2	SOL	2.5	52	4208
14	4	SOL	2.5	52	4209
RISER RATED - FPLR LISTED					
14	2	SOL	2.5	52	4408
14	4	SOL	2.5	52	4409
PLENUM RATED - FPLP LISTED					
14	2	SOL	2.5	86	4608
14	4	SOL	2.5	86	4609

12 AWG UNSHIELDED

AWG	# COND	SOL/STR	DC RESISTANCE (OHMS)	NOM. CAP. (PF/FT)	PART #
GENERAL PURPOSE - FPL LISTED					
12	2	SOL	1.6	22	4115
RISER RATED - FPLR LISTED					
12	2	SOL	2.5	22	4315
PLENUM RATED - FPLP LISTED					
12	2	SOL	1.6	30	4515

12 AWG SHIELDED

AWG	# COND	SOL/STR	DC RESISTANCE (OHMS)	NOM. CAP. (PF/FT)	PART #
GENERAL PURPOSE - FPL LISTED					
12	2	SOL	1.6	56	4210
RISER RATED - FPLR LISTED					
12	2	SOL	1.7	56	4410
PLENUM RATED - FPLP LISTED					
12	2	SOL	1.6	96	4610

Mid. Capacitance Fire Alarm Cables

MID. CAPACITANCE CABLES UNSHIELDED

AWG	# COND	SOL/STR	DC RESISTANCE (OHMS)	NOM. CAP. (PF/FT)	PART #
RISER RATED - FPLR LISTED					
18	2	SOL	6.3	15	4431
16	2	SOL	4.0	17	4432

MID. CAPACITANCE CABLES SHIELDED

AWG	# COND	SOL/STR	DC RESISTANCE (OHMS)	NOM. CAP. (PF/FT)	PART #
RISER RATED - FPLR LISTED					
18	2	SOL	6.3	34	4441
16	2	SOL	4.0	38	4442
12	2	SOL	1.6	48	4444

For complete cable selection, including Direct Burial and NYC LL5 rated cable, see pages 33-40 in the Honeywell Genesis Series Low Voltage Cable Catalog.

All Honeywell fire alarm cables are proudly produced in Pleasant Prairie, WI USA.

Honeywell's Genesis Series low voltage wire and cable is produced with innovative equipment and technology. Our leading edge production facility, located in Pleasant Prairie, Wisconsin enables Honeywell to produce the highest quality and cost effective thermostat, electronic, security, fire, sound, voice, data and video wire and cable.

See our full line catalog or visit **www.honeywellcable.com** to see our full product listing of low voltage wire and cable.

- Thermostat
- Electronic Shielded and Unshielded
- Fire
- Security
- Sound
- Video
- Voice & Data
- And Much More!

For more information:
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