



System Design Criteria

Initiating Devices

When 2-wire ionization and/or photoelectric smoke detectors are incorporated into an alarm system, you must ensure that the detector standby current (of any combination of detectors), does not exceed the allowable total standby detector current per zone of 1500 microamps. Normally-open devices, such as manual fire stations, automatic heat detectors and waterflow switches require no standby current, and therefore can be installed in any quantity required.

Cat. No.*	Detector Type	Current Standby Req.	Alarm Current
SC10U	Ionization	50 microamps	100mA
SC30U	Photoelectric	62 microamps	100mA

*2-wire application

Operation of a manual station, automatic heat detector or waterflow switch on the same zone as smoke detectors will prevent the operation of smoke detectors on that zone.

To determine the maximum number of Edwards smoke detectors that can be connected to each alarm initiating circuit, total the smoke detector standby current requirements of all detectors. The following table and example may be utilized as a reference:

Example:

Qty.	Detector Type		Microamps
20	SC10U Ion Detectors	20 x 50	= 1000
18	SC30U Photo Detectors	18 x 62	= 1116
Total microamps			= 2116

Signaling Appliances

When any combination of Edwards signaling appliances (horns, strobes, horn/strobes, bells) is used, the total signaling current requirements for the panel must not exceed as follows:

Cat. No.	Description	NAC/Pwr Outputs	Aux Pwr Output
E-FS101*	FireShield 1 zone	1.0A	0.5A
E-FS302*	FireShield 3 zone	1.5A	0.5A
E-FS502*	FireShield 5 zone	2.5A	0.5A
E-FS1004*	FireShield 10 zone	2.5A**	0.5A
EBPS6	6.5A Booster Panel	6.5A Tot.	2; 3 A
EBPS10	10A Booster Panel	10.0A Tot.	2; 3 A

*Add "G" for gray cabinet or "R" for red cabinet

**Expandable to 5.0A with Cat. No. XTR3A-120 Transformer

To determine the maximum number of signaling appliances that can be connected to the signaling circuit, total the signaling appliance alarm current requirements of all signaling appliances. See the below examples and applicable catalog pages as a reference:

Qty	Cat. No.	Type	mA	Total Current
3	2447TH	Horn	20	3 x 20 = 60 mA
4	2452THS-15/75-R	Horn/Strobe	225	4 x 225 = 900 mA
Total Signaling Current				960 mA