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Description

Harrington's Series SM and DSM Sync Modules are utilized with the Series AS/AH, Series NS/NS4/NH, Series RSS, Series RSSP, Series SLM and selected strobe applications with other Wheelock combination appliances.

When used with Series AS Audible Strobes and/or Series NS Horn Strobes, the SM and DSM Sync Modules provide independent operation of synchronized temporal pattern (code 3) horn and synchronized strobe flash, as well as the ability to silence the horn while maintaining the strobe flash, while using only a single pair of wires.

The sync modules are available in tow versions: the SM-12/24 for control of a Class B NAC circuit; and a dual output version, the DSM-12/24 for control of either a Class A or two (2) Class B NAC circuits.

Features

- Uniquely designed to accept an independent strobe and audible input from the FACP and convert to a single output that connects to Harrington's Series AS or Series NS family of audible strobes
- Series SM and DSM Sync Modules can also be used to synchronize Harrington's Series RSS, RSSP and SLM Sync Strobes
- 3 ampere per circuit current handling at 12 or 24 VDC
- Low operating current draw
- Compatible with all standard fire alarm control panels
- Meets the NFPA-72 requirement for Temporal Pattern when used with the Series AS/AH and/or Series NS/NS4/NH
- 3 year warranty



Series SM or DSM

Ordering Information

Model Number	Part Number	Description
SM-12/24-R	SM-12/24-R	SM Sync Module, 12/24 VDC, Red
DSM-12/24-R	DSM-12/24-R	DSM Sync Module, 12/24 VDC, Red

Table 1: Sync Module (SM) Current Requirements (AMPS) Table 2: Sync Module (DSM) Current Requirements (AMPS)

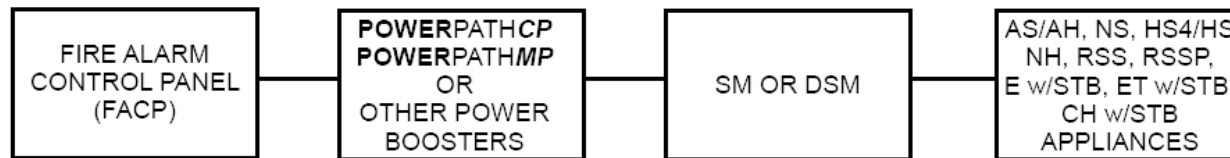
UL Voltage	ULC Voltage	Rated Average Current		Rated Peak Current		Rated Inrush Current		UL Voltage	ULC Voltage	Rated Average Current		Rated Peak Current		Rated Inrush Current	
		In1	Audible	In1	Audible	In1	Audible			In1/In2	Audible	In1/In2	Audible	In1/In2	Audible
8.0 VDC	10.5 VDC	0.017	0.004	0.055	0.004	0.140	0.016	8.0 VDC	10.5 VDC	0.019	0.004	0.055	0.004	0.150	0.016
12.0 VDC	12.0 VDC	0.017	0.004	0.060	0.004	0.160	0.019	12.0 VDC	12.0 VDC	0.020	0.004	0.064	0.004	0.170	0.019
24.0 VDC	24.0 VDC	0.028	0.008	0.070	0.008	0.320	0.030	24.0 VDC	24.0 VDC	0.035	0.008	0.080	0.008	0.342	0.030
33.0 VDC	33.0 VDC	0.038	0.010	0.080	0.010	0.440	0.040	33.0 VDC	33.0 VDC	0.045	0.010	0.090	0.010	0.470	0.040
8.0 VRMS	8.0 VRMS	0.026	0.006	0.085	0.008	0.210	0.016	8.0 VRMS	8.0 VRMS	0.028	0.107	0.107	0.008	0.210	0.016
12.0 VRMS	12.0 VRMS	0.028	0.006	0.090	0.009	0.225	0.019	12.0 VRMS	12.0 VRMS	0.030	0.103	0.103	0.009	0.240	0.019
24.0 VRMS	24.0 VRMS	0.040	0.010	0.120	0.015	0.446	0.033	24.0 VRMS	24.0 VRMS	0.048	0.145	0.145	0.015	0.480	0.033
33.0 VRMS	31.0 VRMS	0.055	0.012	0.150	0.022	0.645	0.056	33.0 VRMS	31.0 VRMS	0.062	0.175	0.175	0.022	0.685	0.056

When calculating the total current, use Tables 1 & 2 to determine the highest value of "Rated Average Current" for the SM or DSM (across the listed voltage range), then add this value to the total current for any other appliances powered by the same source and include any required safety factors. Refer to Instruction Sheet for additional information.

Table 3: Current Consumption of the SM and DSM Modules

Output Circuit Description of SM/DSM Module		SM Module	DSM Module	Ref. Fig.
Class "B" with Audible Silence	(Single circuit)	Y		1
Class "B" with No Audible Silence	(Single circuit)	Y		2
Class "B" with Audible Silence	(Dual circuit)		Y	3
Class "B" with No Audible Silence	(Dual circuit)		Y	4
Class "A" with Audible Silence	(Single circuit)		Y	5
Class "A" with No Audible Silence	(Single circuit)		Y	6

Note: SM Sync Modules are rated for 3.0 amperes at 12/24 VDC; DSM Dual Sync Modules are rated for 3.0 amperes per circuit. **The maximum number of interconnected DSM modules is twenty (20).**



SM or DSM Connection Diagram with Power Booster

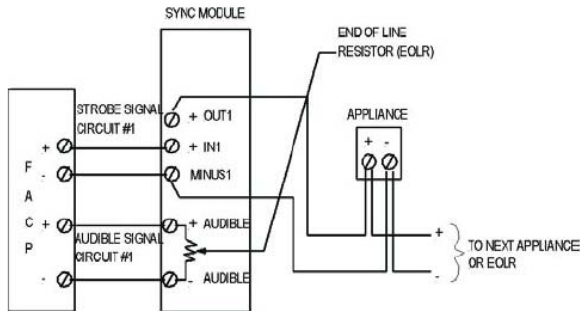


FIG. 1 SINGLE CLASS "B" CIRCUIT WITH AUDIBLE SILENCE FEATURE

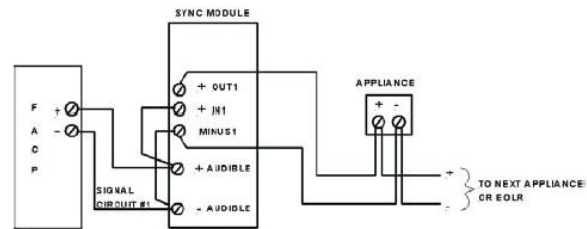


FIG. 2 SINGLE CLASS "B" CIRCUIT WITH NO AUDIBLE SILENCE FEATURE

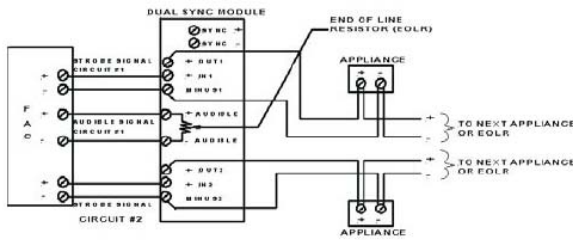


FIG. 3 DUAL CLASS "B" CIRCUIT WITH AUDIBLE SILENCE FEATURE

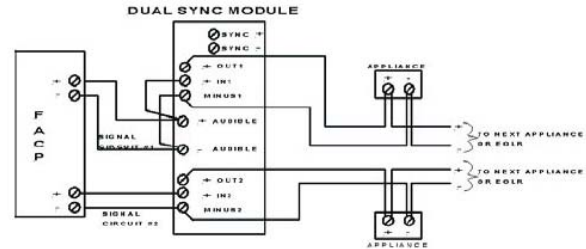


FIG. 4 DUAL CLASS "B" CIRCUIT WITH NO AUDIBLE SILENCE FEATURE

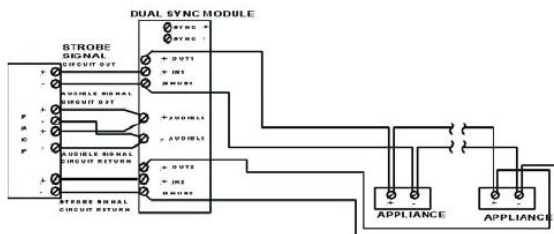


FIG. 5 SINGLE CLASS "A" CIRCUIT WITH AUDIBLE SILENCE FEATURE

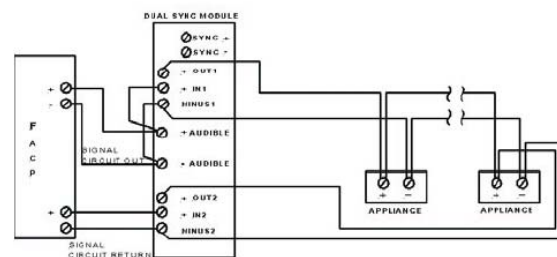


FIG. 6 SINGLE CLASS "A" CIRCUIT WITHOUT AUDIBLE SILENCE FEATURE

Notes:

1. Non-Sync Appliances can be installed before or after a SM or DSM. If the Non-Sync appliance requires audible silence, four wire connection is necessary with the strobe circuit connected before the SM or DSM NAC circuit, and the audible leads connected to a silenceable NAC circuit from the FACP.
2. The audible appliance produces a momentary interruption (approximately 25ms) each time the strobes flash.
3. Circuit #2 may be omitted if only 1 circuit is required when using the DSM.
4. Non-Sync Audible Appliances can be installed on the audible NAC. Be aware of the current requirement for the SM or DSM module. See table 3.

Architects and Engineers Specifications

The Sync modules shall be Harrington Series SM or DSM Sync Modules. Series SM or DSM Sync Modules shall be the master controllers for Harrington Series AS/AH, NS/NS4/NH, RSS, RSP and appliances where a synchronized audible/visual only appliance is specified. All modules shall be UL listed under Standard 464. Series SM and DSM modules shall be designed to interface with Series AS Audible Strobe Appliances and NS Horn Strobe Appliances to produce a synchronized temporal (Code 3) horn as well as synchronized strobe flash on a two-wire alarm circuit. Other synchronized products are the Harrington Series RSS, RSP, SLM visual only appliances and Series AH and NH Horn Appliances.

SM Sync Module shall incorporate two input NAC circuits for power connection from the Fire Alarm Control Panel; one for the strobe NAC circuit and one for the audible NAC circuit. DSM modules shall provide an additional strobe circuit input/output for control of either two Class "B" NAC circuits or a single Class "A" NAC circuit. Upon activation of the audible silence function at the Fire Alarm Control Panel, the audible signal component of Series AS Audible Strobe and/or the Series NS Horn Strobe may be silenced while maintaining strobe activation.

Series SM or DSM module shall be designed and available in two versions; the SM-12/24 for control of a single Class B NAC circuit and a dual output version, the DSM-12/24 for control of either Class "A" two (2) Class "B" NAC circuits. The DSM dual circuit version shall provide the additional capability of "daisy-chaining", that is, the ability to interconnect multiple DSM's for synchronous horn and strobe operation on multiple NAC circuits. Interconnection capability shall be a maximum of 40 NAC circuits. All modules shall operate on either 12 or 24 VDC. Rated average current requirement for the SM 12/24 shall be .017 amperes @ 12 VDC and .028 amperes @ 24 VDC. The DSM 12/24 shall be .020 amperes @ 12 VDC and .035 amperes @ 24 VDC. A single circuit SM Sync Module shall be capable for handling a 3 ampere load at 12 or 24 VDC and the dual circuit DSM Sync Module shall be capable of handling a load of 3 amperes per NAC circuit at 12 or 24 VDC.

All versions shall be polarized for DC supervision and shall incorporate screw terminals for in/out field wiring of #18 to #12 AWG wire size. The SM and DSM Sync Modules shall mount to a 4 11/16" x 2 1/8" deep back box.

Specifications

Model	Order Code	Input Voltage VDC	Average Current @ 12 or 24 VDC	UL Max	Mounting Options
SM-12/24R	6369	12	0.017	0.023	W
		24	0.028	0.038	W
DSM-12/24-R	6374	12	0.02	0.026	W
		24	0.035	0.055	W

NOTICE: The information contained in this document is intended only as a summary and is subject to change without notice. The devices described in this document have specific instruction sheets which cover various technical, limitation and liability information. Copies of these instruction sheets and the General Product Warning and Limitations Document, which also contains important information are provided with the product and are available from Harrington Signal Inc. Fire Alarm. Information contained in these documents should be consulted before specifying or using the product. For further information or assistance concerning particular problems contact Harrington Signal Inc. Harrington Signal Inc. Fire Alarm reserves the right to change specifications without notice.