

Specialty Exhaust Grilles

CEG-II and CEG-II Twin,
HCG, and OSG



#HealthyLiving

aldes

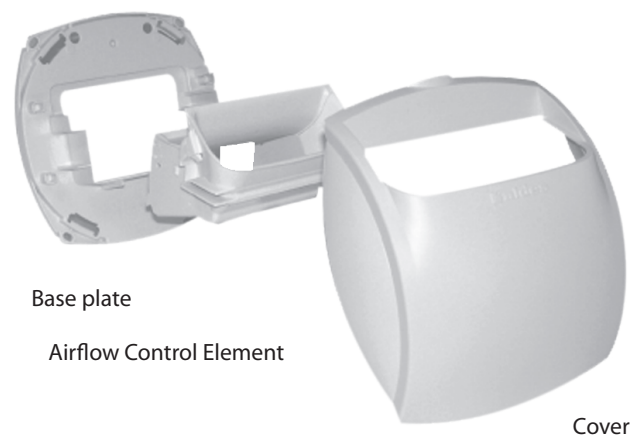
CEG-II and CEG-II Twin

The CEG-II Series is the latest generation of constant exhaust grilles by American ALDES. The CEG-II incorporates a modulating orifice that automatically regulates airflows in exhaust duct systems to constant levels. The passive control element responds to duct pressure and requires no electric or pneumatic sensors or controls.

The CEG-II compensates for changes in duct pressure caused by thermal stack effect, building pressure, dust-clogged filters, etc. The CEG-II also provides a low-cost solution to balancing airflows in multiple-point exhaust systems by eliminating the need for on-site damper adjustment.

The active control element of the CEG-II Series is housed in an aesthetically pleasing white molded cover that suits almost any architectural style. The cover and control element are easily removable for cleaning, if necessary. Each CEG-II and CEG-II Twin can be adjusted to three distinct, pre-calibrated airflow settings, making it easy for the contractor or end-user to make on-site adjustments if the ventilation demand changes.

CEG-II



CEG-II Twin



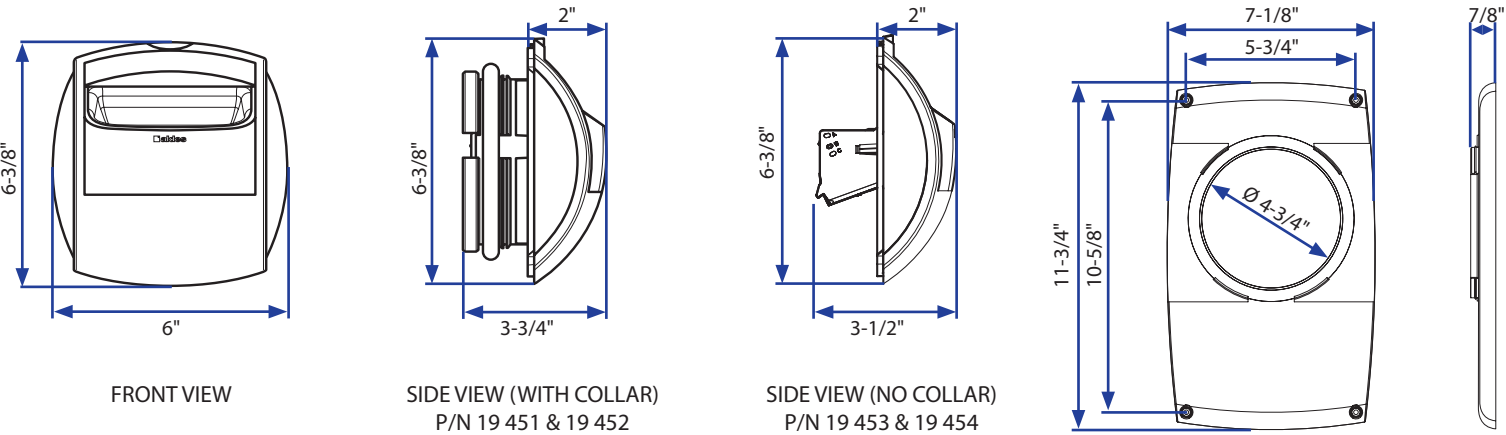
Features

- Removable control element for simple maintenance.
- Constructed of UV-resistant ABS plastic.
- Exceptionally quiet performance across the specified pressure range.
- Airflow regulator ensures constant airflow control over pressure range of 0.2 to 0.65 in. w.g. (50 to 160 Pa).
- Fits 5" (125 mm) round ducting or mounts directly over duct opening (depending on model).
- Removable grille held in place by a friction fit for easy access to control element.

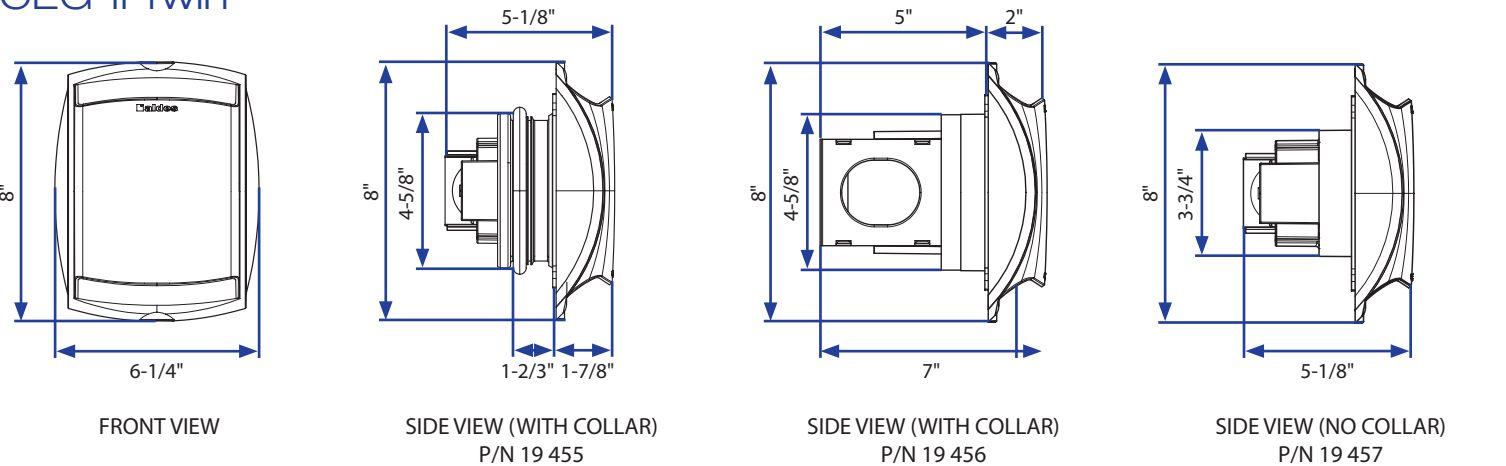
CEG-II MODELS		
PART NUMBER	DESCRIPTION	AIRFLOW SETTINGS
19 451	CEG-II - 5" Collar	10/20 CFM (15/30 m³/h)
19 452	CEG-II - 5" Collar	20/30/40 CFM (30/45/60 m³/h)
19 453	CEG-II (Wall Mount)	10/20 CFM (15/30 m³/h)
19 454	CEG-II (Wall Mount)	20/30/40 CFM (30/45/60 m³/h)
19 455	CEG-II Twin - 5" Collar	40/55/65 CFM (60/75/90 m³/h)
19 456	CEG-II Twin - 5" Collar	75/85/95 CFM (100/120/150 m³/h)
19 457	CEG-II Twin (Wall Mount)	40/55/65 CFM (60/75/90 m³/h)
19 458	CEG-II Twin (Wall Mount)	75/85/95 CFM (100/120/150 m³/h)
ACCESSORIES		
19 460	Wall Adapter Plate (CEG-II or CEG-II Twin)	
19 429	Sound-Absorbing Ring Insert	

Dimensions

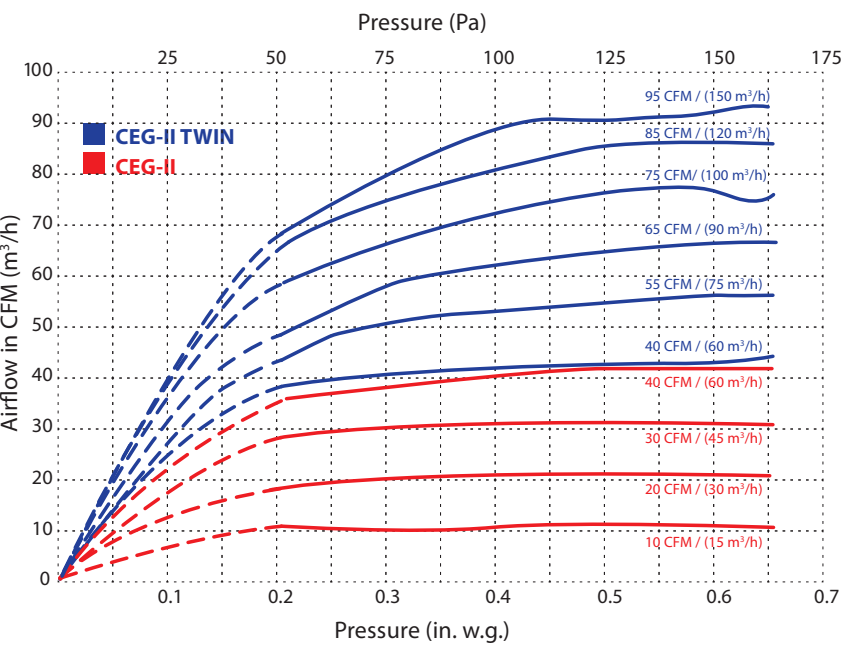
CEG-II



CEG-II Twin



Airflow Performance



ACOUSTIC PERFORMANCE								
MODEL	AIRFLOW (CFM) *	FREQUENCY (Hz)						OVERALL Lw (dB(A))
		125	250	500	1000	2000	4000	
CEG-II	10	24	25	19	24	16	26	32
	20	25	27	20	23	22	16	31
	30	28	35	25	28	27	22	38
	40	39	40	36	35	36	31	41
CEG-II TWIN	40	43	43	41	41	31	28	43
	55	45	48	45	44	35	30	47
	65	45	50	46	44	37	32	49
	75	47	47	47	43	38	32	48
	85	51	50	49	44	39	34	50
	95	53	52	50	44	41	35	51

* Airflow measured at 0.55 in. w.g. (136 Pa)

The HCG humidity-controlled grille is a variable airflow exhaust terminal that automatically adjusts the airflow rate according to the relative humidity of the space. Designed for mechanical exhaust systems in residential and institutional applications, this grille provides airflow directly proportionate to the presence of and activity level of occupants in the space.

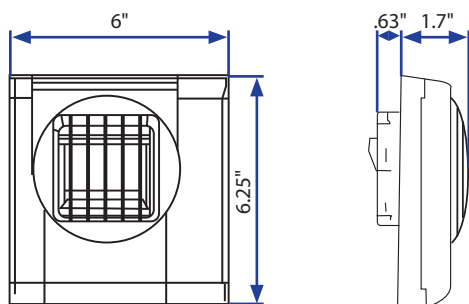
This control of the airflow rate permits ventilation when and where it is necessary, responds to the health and comfort requirements of the occupants, reduces moisture damage, and reduces energy costs by avoiding unnecessary ventilation.

Fresh air in a complete humidity-controlled ventilation system is provided in each main living space, bedroom offices, etc., by fresh air inlets, or a separate supply ventilation system. Transfer grilles permit air circulation from the main living areas to the rooms with specific pollutants (bathrooms, kitchens, laundry rooms, etc.).

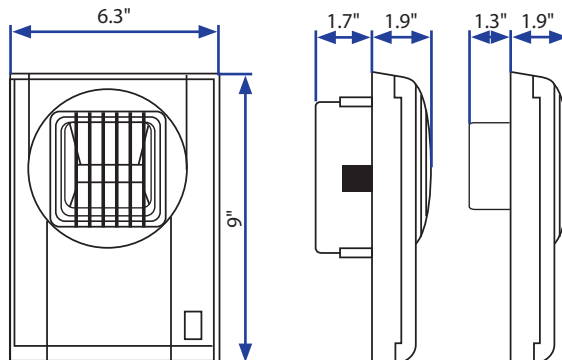
Stale air is exhausted from rooms with specific pollutants through the exhaust grilles (HCG) by means of a central exhaust fan.

Dimensions

HCG and HCGM



HCG+ and HCGM+



Features

- Energy conservation by demand-controlled ventilation.
- Comfort and quality of air.
- Reduced moisture and condensation damage to the building.
- Extremely low sound levels.
- Simple maintenance because all functioning parts are easily removed and designed to permit cleaning in a dishwasher.
- Large pressure range for the design airflow rates: from 0.3 - 0.6 in. wg. (70-150 Pa).

Components

The HCG is composed of:

- Face cover in white ABS plastic.
- White grille (yellow, dark gray, red, and green available by special order).
- Duct connection (for 3" or 5" duct), with a brush gasket to provide a tight seal.
- Humidity-sensitive activator, in nylon ribbon, that expands and contracts in response to the relative humidity of the space.
- Damper mechanism(s) connected to the nylon elements by a mechanical linkage, so as to operate the dampers in direct proportion to the humidity level of the space.
- Motorized actuator for timer models (requires 9V battery) opens the damper for 30 minutes of higher airflow (Timer models require a separate momentary contact switch).
- All mechanical control elements are located behind the face plate of the HCG.

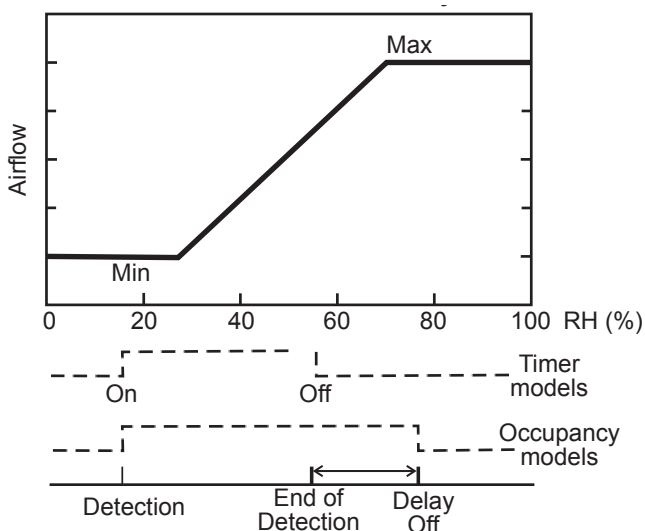
Airflow Characteristics & System Design Considerations

Ducting, sizing and fan selection must be appropriate to provide a duct pressure behind the grille of 70 to 150 Pascals (0.3 to 0.6 in. wg). Rated airflows are based on 0.4" wg. (100 Pa). At 70 Pa, the airflow is 14% lower than rated. At 150 Pa, the airflow is 22% higher than rated. As a matter of effectiveness in removing humidity, a lower flow will cause the unit to remain open longer; at higher pressures, the humidity will be controlled earlier, and the damper will close sooner. On small systems, this may be achieved economically using fans with a flat pressure/airflow characteristic curve, and variable-speed motors or dampers adjusted for constant static pressure on large systems.

The duct system and fan must be selected to permit the maximum airflow likely to be obtained in actual use. This design airflow condition occurs in summer, the season in which the fresh outdoor air admitted to the building contains the highest level of absolute humidity, on the order of 60% to 65%, depending on climatic zone. This consideration is necessary so as to obtain the required duct pressures at the grilles when all are open to the maximum setting.

The HCG may be installed in a ceiling assembly, suspended ceiling, or on a partition wall. It may be connected to rigid duct or flexible duct with a metal sleeve in 3" (75 mm) or 5" (125 mm) diameter, depending on the model. Model HCG+ (P/N: 17 373) has a 5" round duct connector with a brush seal. All other models must be secured by screws to the mounting surface. A gasket provides a tight seal.

AIRFLOW VS. RELATIVE HUMIDITY



ACOUSTIC DATA

The levels of acoustic power (L_w) emitted by an exhaust grille at 65% relative humidity are shown in the table below. In the average airflow range in actual use, with lower humidity levels, these acoustic power levels are diminished by 3 dB(A).

HCG					
P in Pa	70	90	110	130	150
L_w in dB(A)	24	27	30	31	35
L_w w/acoustic ring in dB(A)	28	30	31	32	34
HCG M+					
L_w in dB(A)	27	29	32	34	35
L_w w/acoustic ring in dB(A)	29	31	34	36	37

Note: The acoustic ring provides attenuation of duct-borne noise. As the table indicates, it slightly increases the self noise generated by the grille. It should only be used when the fan/duct-borne noise is too high and needs attenuation.

ORDERING INFORMATION

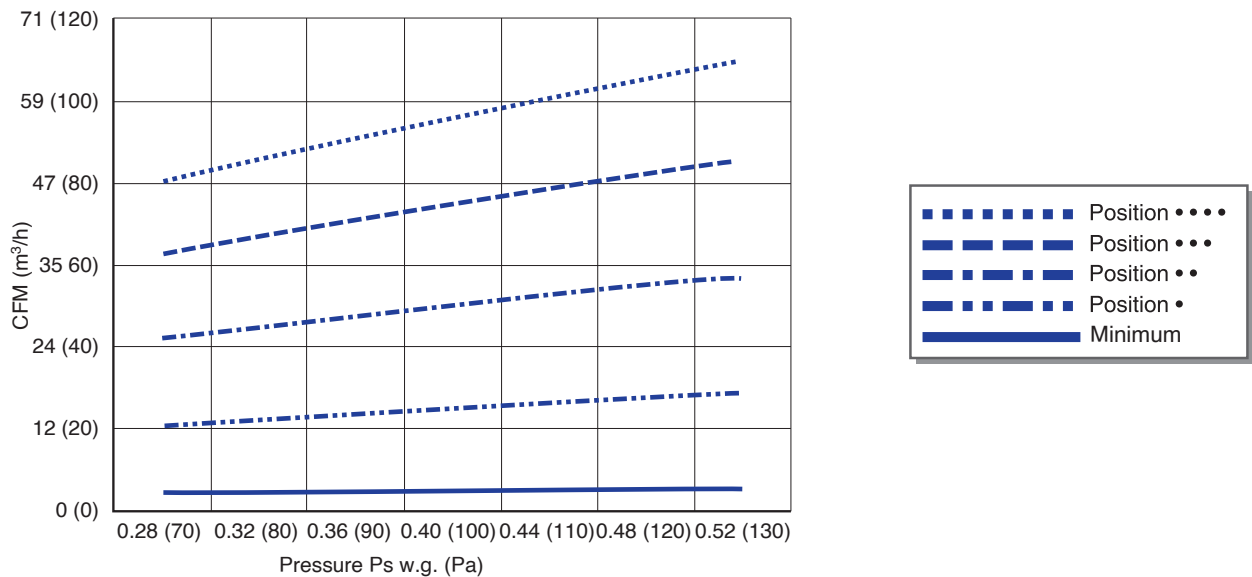
PART NUMBER	DESCRIPTION	OPERATING RH %	AIRFLOW RANGE (CFM) @ 0.4 w.g.	BOOST AIRFLOW (CFM)	TIMER DURATION
15 349	HCG (Automatic Control)	22-69	3-25	--	N/A
15 352	HCGM (Battery Operated)	22-69	3-30	20	20 min.
17 373	HCG+ (Automatic Control)	30-75	12-90	--	N/A
15 376	HCG M+ (Battery Operated)	36-76	6-30	80	25 min.

ACCESSORIES

15 275	12 VAC plug-in circuit board to convert 9V DC powered units (6 VA requirement, transformer provided by electrician)
15 018	Flush-Mount Gasket for use when round collars are not used
15 274	4" Duct Collar for round duct attachment
15 017	5" Duct Collar for round duct attachment
15 276	Retrofit Adapter Plate
19 429	Sound Absorbing Ring Insert

The OSG Occupancy-Sensing Grille is a stand-alone terminal that automatically boosts the exhaust airflow when a room is occupied. A lens detects movement and triggers circuit opening (instantaneous) and closing (after a 20-minute time out). During installation, the grille is manually set for a boost flow rate of 15, 30, 45, or 60 CFM. The minimum airflow rate is 3-5 CFM when the space is unoccupied.

Airflow Performance



Features

- Basic flow rate manually adjustable by the switch: 15, 30, 45 or 60 CFM.
- Flow rate automatically reduced to 3-5 CFM when the room is unoccupied.
- Airflow rates are based on 0.40 in. w.g. (100 Pa).
- The OSG operating range is from 0.28-0.52 in. w.g (70-130 Pa). Under these usage conditions, the relative variation of the flow at each ventilation orifice is limited to 15%.
- Manually adjustable maximum airflow setpoints based on the switch table.

Switch

A switch allows the user to set the basic airflow according to the standard occupancy level of the room.



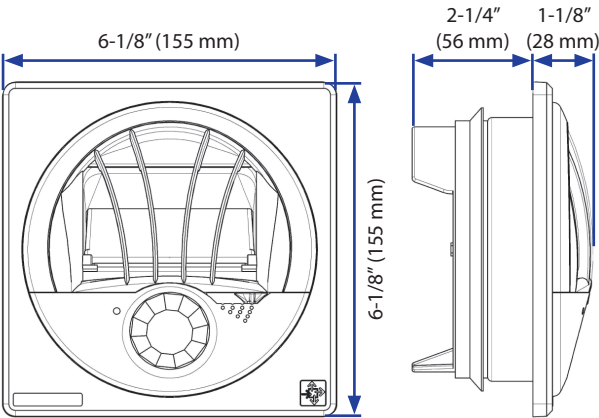
Switch

Switch Position	Corresponding Flow Rate
.	15 CFM
..	30 CFM
...	45 CFM
....	60 CFM

ACOUSTIC PROPERTIES				
Duct Pressure	Decibels (dB)			
	Switch Position			

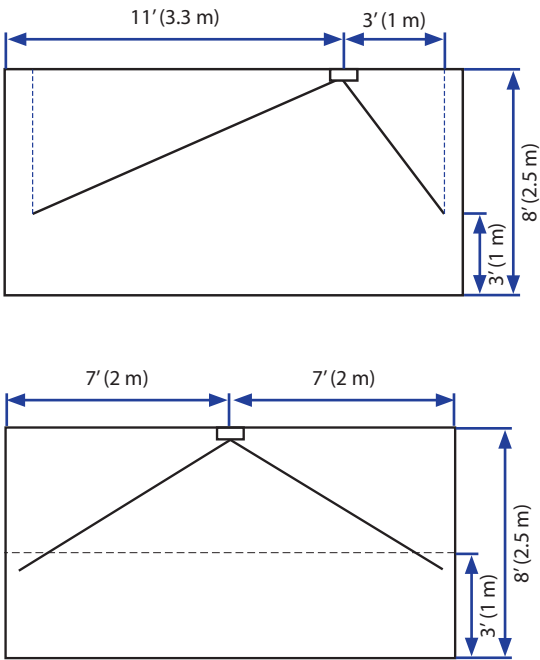
0.4" in.w.g (100 Pa)	30	30.3	32.2	33.3

Dimensions

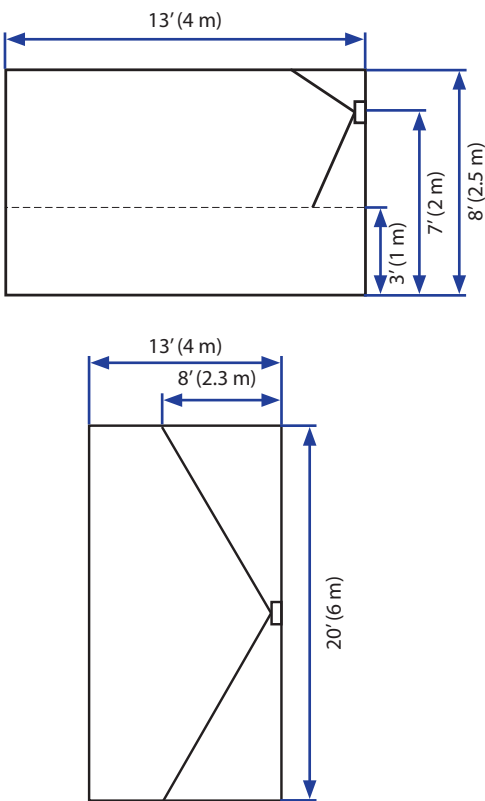


FIELD OF DETECTION

Ceiling Mounted



Wall Mounted



OSG MODELS

Part Number	Model	Timer	Power Supply	Connection to Relay	Type of Relay (Not Included)
17 105	OSG-9V	20-minute	Connector for standard 9V alkaline 6LR61 battery (battery supplied)	--	--
17 106	OSG-12V	20-minute	12 VAC (black cable)	--	--
17 126	OSG-12V+	20-minute	12 VAC (black cable)	Cable for relay (gray cable)	6V DC relay, coil current, 100mA max.
17 107	OSG-F	--	--	--	--

ACCESSORIES

17 110	12 VAC Transformer, 12 VAC Fuse
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www.aldes.us

To find out more about Grilles and other related products
visit **www.aldes.us**.

Distributed By:



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