



SINGLEFLOW SSDRDCV

Roof Mounted Direct
Drive Centrifugal Fan

SINGLEFLOW SSSDRDCV

Product Overview

- 5 standard sizes from 200mm to 500mm (7 models)
- Air volume flow rates up to 1.717 m³/s
- Static pressures up to 1023 Pa
- Suitable for operating temperatures up to +60°C
- Available in **EC**



Roof mounted Aluzinc single centrifugal fans with demand control. Designed to monitor and control one or more fan units simultaneously, with 6 pre-programmed fan applications. Supplied with a multi-function remote control panel with LCD display.

Easy Installation

All models are designed for direct connection to standard diameter flexible or rigid circular ducting with long spigots. Spigot is on the underside of the unit and can be fitted directly to the main duct.

Easy Commissioning

Minimum and maximum ventilation rates as well as control settings can all be setup easily via the wall display provided. Settings can be loaded from one display copying settings between units quickly.

Space Saving

External roof mounting outside of the building is ideal where space is a premium. Bird guard fitted as standard to stop damage done by wildlife.

Efficient Performance

High efficiency low tonal noise backward curved centrifugal impellers are directly driven by an EC external rotor motor, provide low specific fan powers and stepless speed control without tonal noise generation.

Weather Resistance

Integral louvered air discharge provides protection against ingress from the elements and is self draining. No additional outlet duct fittings are required.

Controllability

Advanced control features from the Demand Control Ventilation or DCV, provide an effective, efficient control to meet variable occupancy. This optimises the indoor air quality and energy use of the ventilation system. Available control, humidity, temperature, presence, CO₂ and constant pressure.

Warranty

Each SSSDRDCV has a 12 month warranty.

Construction

Featuring a robust 1.2mm natural finish aluzinc casing. Each casing provides a spigot to suit standard circular ducting on inlet and louvered air discharge. A removable lid is provided as standard to allow easy maintenance and cleaning.

Motor

EC external rotor motor fitted as standard. The motor contains sealed for life bearings with a Thermal Class to THCL 130 or 155 dependent on size. All motors are suitable for use in ambient air conditions up to +60°C.

Impeller

High efficiency low tonal noise backward curved centrifugal impeller, dynamically balanced to ISO 14694 Grade G6.3 and directly driven by the motor to provide a smooth airflow through the unit.

Typical Applications

- Industrial Building
- Banks
- Hospitals
- Offices
- Hotels and Shopping Malls

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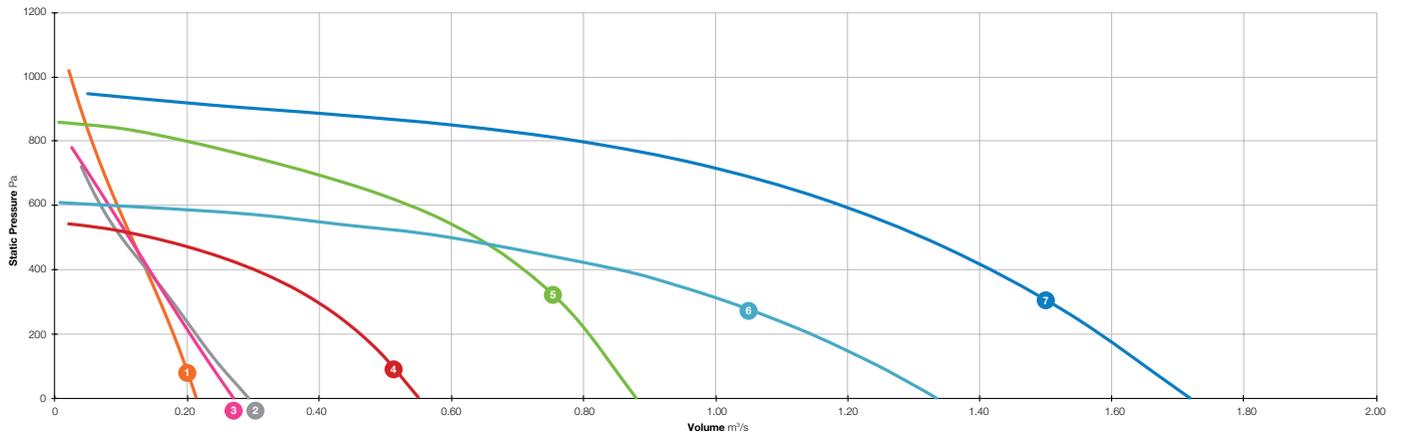
Product Coding

Code	Reference
SSDRDCV	Product Range
200	Diameter (200/250/315...)
-	
1	Voltage Supply (Single Phase / Three Phase)
AC	Motor Type (AC/EC)
A - Z	Additional Coding (A - Z) Product Variants
e.g.	SSDRDCV200 / 1AC

SINGLEFLOW SSSDRDCV



Performance Range Curves



- 1 SSDRDCV200 / 1EC
- 2 SSDRDCV250H / 1EC
- 3 SSDRDCV250L / 1EC

- 4 SSDRDCV315 / 1EC
- 5 SSDRDCV400 / 1EC
- 6 SSDRDCV500 / 1EC

- 7 SSDRDCV500 / 3EC

SINGLEFLOW SSSDRDCV



Performance, SFP & Electrical Data

Single Phase 220V to 277V / 50Hz or 60Hz

Product Code	Control Voltage V	Speed r/min	Airflow	Airflow m³/s @ Static Pressure Pa											At Best Efficiency Point		Electrical Data		dBA @ 3m	
				0	25	50	75	100	150	200	250	300	350	400	500	Overall Eff %	Input kW	Peak Amps		
SSDRDCV200-1EC	10	3990	m³/s	0.214	0.210	0.206	0.201	0.197	0.188	0.179	0.169	0.159	0.148	0.138	0.116	39.7	0.168	1.27	Inlet	55
			W/(L/s)	0.78	0.79	0.81	0.82	0.84	0.88	0.93	0.98	1.05	1.12	1.21	1.44				Outlet	50
	8	3845	m³/s	0.204	0.200	0.196	0.192	0.187	0.179	0.170	0.161	0.151	0.140	0.129	0.104	40.6	0.148	1.14	Inlet	52
			W/(L/s)	0.70	0.73	0.75	0.77	0.79	0.84	0.89	0.95	1.02	1.09	1.17	1.41				Outlet	48
	5	2285	m³/s	0.120	0.114	0.107	0.100	0.092	0.073	0.049	-	-	-	-	-	38.8	0.034	0.25	Inlet	42
			W/(L/s)	0.28	0.30	0.32	0.35	0.38	0.47	0.65	-	-	-	-	-				Outlet	40
2	735	m³/s	0.037	-	-	-	-	-	-	-	-	-	-	-	11.9	0.003	0.03	Inlet	25	
		W/(L/s)	0.09	-	-	-	-	-	-	-	-	-	-	-				Outlet	17	
SSDRDCV250H-1EC	10	2550	m³/s	0.293	0.282	0.271	0.260	0.250	0.231	0.213	0.195	0.177	0.159	0.139	0.100	37.9	0.169	1.47	Inlet	53
			W/(L/s)	0.57	0.59	0.62	0.64	0.67	0.73	0.79	0.86	0.95	1.06	1.21	1.68				Outlet	49
	8	2565	m³/s	0.295	0.282	0.271	0.260	0.250	0.232	0.214	0.197	0.179	0.161	0.140	0.088	38.1	0.170	1.42	Inlet	51
			W/(L/s)	0.58	0.60	0.62	0.64	0.67	0.73	0.79	0.87	0.95	1.06	1.20	1.75				Outlet	45
	5	1545	m³/s	0.180	0.166	0.151	0.135	0.118	0.078	-	-	-	-	-	-	37.4	0.039	0.39	Inlet	38
			W/(L/s)	0.24	0.26	0.29	0.32	0.35	0.48	-	-	-	-	-	-				Outlet	34
2	495	m³/s	0.055	-	-	-	-	-	-	-	-	-	-	-	13.3	0.004	0.05	Inlet	-	
		W/(L/s)	0.07	-	-	-	-	-	-	-	-	-	-	-				Outlet	-	
SSDRDCV250L-1EC	10	3300	m³/s	0.271	0.262	0.254	0.246	0.237	0.221	0.205	0.190	0.174	0.159	0.144	0.113	38.7	0.171	1.43	Inlet	57
			W/(L/s)	0.62	0.65	0.67	0.69	0.72	0.77	0.83	0.89	0.97	1.07	1.19	1.51				Outlet	54
	8	2965	m³/s	0.241	0.233	0.225	0.217	0.209	0.194	0.177	0.160	0.141	0.121	0.097	-	38.8	0.125	1.16	Inlet	52
			W/(L/s)	0.50	0.53	0.56	0.59	0.62	0.68	0.74	0.82	0.92	1.04	1.22	-				Outlet	49
	5	1750	m³/s	0.142	0.127	0.113	0.099	0.085	0.049	-	-	-	-	-	-	35.2	0.029	0.27	Inlet	42
			W/(L/s)	0.20	0.23	0.27	0.30	0.35	0.56	-	-	-	-	-	-				Outlet	39
2	565	m³/s	0.043	-	-	-	-	-	-	-	-	-	-	-	10.1	0.004	0.05	Inlet	-	
		W/(L/s)	0.09	-	-	-	-	-	-	-	-	-	-	-				Outlet	-	
SSDRDCV315-1EC	10	2014	m³/s	0.550	0.541	0.532	0.522	0.511	0.488	0.462	0.432	0.397	0.354	0.302	0.147	38.3	0.403	1.88	Inlet	53
			W/(L/s)	0.72	0.73	0.75	0.77	0.78	0.82	0.86	0.91	0.98	1.06	1.17	1.78				Outlet	53
	8	1607	m³/s	0.425	0.409	0.393	0.375	0.357	0.317	0.269	0.211	0.134	-	-	-	33.6	0.218	1.05	Inlet	47
			W/(L/s)	0.50	0.52	0.54	0.56	0.59	0.65	0.73	0.85	1.13	-	-	-				Outlet	47
	5	968	m³/s	0.249	0.223	0.193	0.155	0.105	-	-	-	-	-	-	-	26.1	0.058	0.30	Inlet	35
			W/(L/s)	0.23	0.25	0.29	0.35	0.47	-	-	-	-	-	-	-				Outlet	34
2	328	m³/s	0.081	-	-	-	-	-	-	-	-	-	-	-	4.1	0.014	0.10	Inlet	20	
		W/(L/s)	0.17	-	-	-	-	-	-	-	-	-	-	-				Outlet	18	
SSDRDCV400-1EC	10	2199	m³/s	0.880	0.872	0.864	0.856	0.847	0.829	0.810	0.788	0.765	0.739	0.710	0.638	42.9	0.908	4.20	Inlet	59
			W/(L/s)	1.02	1.03	1.04	1.06	1.07	1.09	1.12	1.15	1.19	1.22	1.27	1.37				Outlet	59
	8	1763	m³/s	0.691	0.673	0.656	0.637	0.619	0.579	0.538	0.493	0.440	0.391	0.330	0.168	36.1	0.486	2.32	Inlet	53
			W/(L/s)	0.70	0.72	0.73	0.75	0.77	0.82	0.87	0.93	1.01	1.10	1.23	1.91				Outlet	53
	5	1059	m³/s	0.413	0.384	0.353	0.318	0.278	0.180	-	-	-	-	-	-	28.8	0.131	0.61	Inlet	40
			W/(L/s)	0.32	0.34	0.36	0.40	0.44	0.61	-	-	-	-	-	-				Outlet	41
2	354	m³/s	0.136	-	-	-	-	-	-	-	-	-	-	-	2.8	0.047	0.20	Inlet	21	
		W/(L/s)	0.34	-	-	-	-	-	-	-	-	-	-	-				Outlet	24	

Data provided is at standard air density of 1.2 kg/m³.

Data in accordance with ErP 1253/2014 of the European Parliament. Product category is NRVU. Measurement category used to determine energy efficiency: C.

A variable speed drive is integrated within the fan.

Peak Amps @ 230V / 1PH / 50Hz.

The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20µPa and is presented for comparative purposes only.

SINGLEFLOW SSSDRDCV



Performance, SFP & Electrical Data

Single Phase 220V to 277V / 50Hz or 60Hz

Product Code	Control Voltage V	Speed r/min	Airflow	Airflow m ³ /s @ Static Pressure Pa												At Best Efficiency Point		Electrical Data	dBA @ 3m	
				0	25	50	75	100	150	200	250	300	350	400	500	Overall Eff %	Input kW	Peak Amps		
SSDRDCV500-1EC	10	1413	m ³ /s	1.334	1.313	1.291	1.269	1.246	1.196	1.143	1.083	1.017	0.941	0.851	0.595	51.2	0.787	3.40	Inlet	51
			W/(L/s)	0.53	0.55	0.56	0.57	0.59	0.62	0.66	0.70	0.74	0.80	0.87	1.12				Outlet	55
	8	1200	m ³ /s	1.054	1.022	0.989	0.955	0.919	0.841	0.755	0.656	0.539	0.391	0.169	-	42.7	0.474	2.24	Inlet	47
			W/(L/s)	0.42	0.43	0.45	0.47	0.50	0.55	0.60	0.68	0.78	0.96	1.56	-				Outlet	47
	5	725	m ³ /s	0.648	0.596	0.535	0.463	0.372	0.055	-	-	-	-	-	-	37.5	0.124	0.59	Inlet	34
			W/(L/s)	0.18	0.20	0.23	0.26	0.31	1.24	-	-	-	-	-	-				Outlet	38
	2	245	m ³ /s	0.231	0.036	-	-	-	-	-	-	-	-	-	-	3.6	0.051	0.23	Inlet	16
			W/(L/s)	0.19	1.29	-	-	-	-	-	-	-	-	-	-				Outlet	20

Data provided is at standard air density of 1.2 kg/m³.

Data in accordance with ErP 1253/2014 of the European Parliament. Product category is NRVU. Measurement category used to determine energy efficiency: C.

A variable speed drive is integrated within the fan.

Peak Amps @ 230V / 1PH / 50Hz.

The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20μPa and is presented for comparative purposes only.

SINGLEFLOW SSSDRDCV



Performance, SFP & Electrical Data

Three Phase 380V to 415V / 50Hz or 60Hz

Product Code	Control Voltage V	Speed r/min	Airflow	Airflow m ³ /s @ Static Pressure Pa												At Best Efficiency Point		Electrical Data Peak Amps	dBA @ 3m	
				0	50	100	150	200	250	300	400	500	600	700	800	Overall Eff %	Input kW			
SSDRDCV500-3EC	10	1799	m ³ /s	1.717	1.701	1.685	1.669	1.652	1.618	1.582	1.544	1.504	1.461	1.416	1.314	54.1	1.492	2.27	Inlet	57
			W/(L/s)	0.80	0.82	0.83	0.84	0.86	0.88	0.91	0.94	0.98	1.01	1.05	1.14				Outlet	61
	8	1455	m ³ /s	1.320	1.296	1.271	1.246	1.219	1.163	1.101	1.034	0.960	0.876	0.779	0.528	46.6	0.803	1.34	Inlet	51
			W/(L/s)	0.59	0.60	0.62	0.63	0.65	0.68	0.72	0.76	0.81	0.88	0.95	1.23				Outlet	55
	5	874	m ³ /s	0.766	0.729	0.689	0.643	0.590	0.445	0.190	-	-	-	-	-	41.7	0.200	0.49	Inlet	40
			W/(L/s)	0.24	0.25	0.27	0.30	0.33	0.41	0.71	-	-	-	-	-				Outlet	42
	2	292	m ³ /s	0.258	-	-	-	-	-	-	-	-	-	-	-	12.1	0.024	0.17	Inlet	16
			W/(L/s)	0.09	-	-	-	-	-	-	-	-	-	-	-				Outlet	23

Data provided is at standard air density of 1.2 kg/m³.

Data in accordance with ErP 1253/2014 of the European Parliament. Product category is NRVU. Measurement category used to determine energy efficiency: C.

A variable speed drive is integrated within the fan.

Peak Amps @ 400V / 3PH / 50Hz.

The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20μPa and is presented for comparative purposes only.

SINGLEFLOW SSSDRDCV



Sound Data

Single Phase 220V to 277V / 50Hz or 60Hz

Product Code	Control Voltage V		Sound Power Level dBW @ Octave Band Hz								Total dB
			63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
SSDRDCV200-1EC	10	Inlet	85	82	80	72	65	63	58	58	88
		Outlet	62	66	68	67	64	64	62	62	74
	8	Inlet	84	80	78	69	63	61	56	56	86
		Outlet	61	65	67	64	62	62	60	59	72
	5	Inlet	74	71	67	59	51	51	48	40	76
		Outlet	49	55	60	57	50	53	54	44	64
2	Inlet	63	54	50	40	33	30	15	22	64	
	Outlet	37	37	39	34	33	30	15	22	44	
SSDRDCV250H-1EC	10	Inlet	87	81	80	69	64	57	56	57	89
		Outlet	63	70	71	66	64	62	59	56	75
	8	Inlet	83	78	78	65	60	54	54	50	85
		Outlet	61	66	67	62	60	58	56	51	71
	5	Inlet	74	70	62	53	48	43	45	37	76
		Outlet	51	59	52	51	48	46	48	43	61
2	Inlet	-	-	-	-	-	-	-	-	-	
	Outlet	-	-	-	-	-	-	-	-	-	
SSDRDCV250L-1EC	10	Inlet	86	82	84	74	68	64	61	62	89
		Outlet	69	71	74	72	67	67	63	61	79
	8	Inlet	84	80	78	68	64	61	58	58	86
		Outlet	60	68	68	65	65	63	59	58	74
	5	Inlet	75	72	67	58	53	50	49	45	77
		Outlet	52	59	60	57	53	51	49	45	65
2	Inlet	-	-	-	-	-	-	-	-	-	
	Outlet	-	-	-	-	-	-	-	-	-	
SSDRDCV315-1EC	10	Inlet	84	79	78	69	61	67	61	55	86
		Outlet	72	75	74	69	68	66	63	59	80
	8	Inlet	80	75	69	62	54	62	55	48	82
		Outlet	68	72	67	63	62	60	56	51	75
	5	Inlet	70	65	58	49	41	48	38	26	71
		Outlet	58	58	54	49	50	47	39	29	62
2	Inlet	51	36	33	23	24	38	33	30	52	
	Outlet	38	39	30	23	32	31	30	33	43	
SSDRDCV400-1EC	10	Inlet	91	86	84	75	70	67	65	61	93
		Outlet	79	81	79	75	74	73	68	65	86
	8	Inlet	87	83	78	69	65	63	58	55	89
		Outlet	74	76	73	69	69	67	62	58	80
	5	Inlet	76	72	62	55	51	49	45	36	78
		Outlet	63	66	60	56	58	52	46	38	69
2	Inlet	63	41	39	40	34	25	18	24	63	
	Outlet	48	37	43	43	42	24	18	22	51	

Data provided at standard air density of 1.2 Kg/m³.
 Tests and preparation of the sound data have been carried out in accordance with BS 848 Part 2:1985 at 50% peak pressure.
 The Sound Power Level Spectra are in dB re-1pW.

SINGLEFLOW SSSDRDCV



Sound Data

Single Phase 220V to 277V / 50Hz or 60Hz

Product Code	Control Voltage V		Sound Power Level dBW @ Octave Band Hz								Total dB
			63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
SSDRDCV500-1EC	10	Inlet	80	80	74	69	61	61	57	55	84
		Outlet	73	79	76	73	70	66	62	59	82
	8	Inlet	80	75	69	62	54	62	55	48	82
		Outlet	68	72	67	63	62	60	56	51	75
	5	Inlet	71	63	57	53	44	42	38	30	72
		Outlet	62	63	59	55	54	49	39	34	67
	2	Inlet	48	50	33	33	23	23	10	11	52
		Outlet	44	51	38	39	36	26	15	21	52

Data provided at standard air density of 1.2 Kg/m³.
 Tests and preparation of the sound data have been carried out in accordance with BS 848 Part 2:1985 at 50% peak pressure.
 The Sound Power Level Spectra are in dB re-1pW.

SINGLEFLOW SSSDRDCV



Sound Data

Three Phase 380V to 480V / 50Hz or 60Hz

Product Code	Control Voltage V		Sound Power Level dBW @ Octave Band Hz								Total dB
			63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
SSDR500DCV-3EC	10	Inlet	85	83	80	76	68	68	64	61	88
		Outlet	77	81	81	78	77	72	68	65	86
	8	Inlet	80	81	74	70	61	61	57	57	84
		Outlet	73	78	76	73	71	66	62	59	82
	5	Inlet	73	67	62	56	47	56	46	37	74
		Outlet	66	66	63	59	57	55	46	39	71
	2	Inlet	50	44	37	35	28	30	14	17	51
		Outlet	41	46	42	39	41	32	19	16	50

Data provided at standard air density of 1.2 Kg/m³.
 Tests and preparation of the sound data have been carried out in accordance with BS 848 Part 2:1985 at 50% peak pressure.
 The Sound Power Level Spectra are in dB re-1pW.

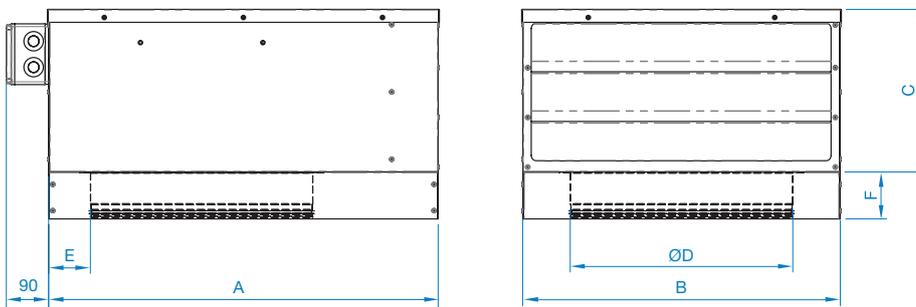
SINGLEFLOW SSSDRDCV



Dimensional Data

Single & Three Phase

Product Code	A	B	C	D	E	F	Weight kg
SSDRDCV200-1EC	509	350	205	200	75	85	14
SSDRDCV250H-1EC	584	396	205	250	75	85	17
SSDRDCV250L-1EC	584	396	205	250	75	85	17
SSDRDCV315-1EC	635	485	295	315	85	85	26
SSDRDCV400-1EC	700	570	295	400	75	85	36
SSDRDCV500-1EC	880	750	385	500	91	85	54
SSDRDCV500-3EC	880	750	385	500	91	85	54



Dimensions are in mm.

SINGLEFLOW SSSDRDCV



EcoDesign 1253/2014 - Information Requirements

REV2 01/05/2018

A	B	C*			D	E	F	G	H	I	J	K	L	N	O	P	Q	R	S
		C.1	C.2	C.3															
Elta Fans Ltd	SSDRDCV200-1EC	NRVU	UVU	2018	Variable-Speed	None	n/a	0.11	0.168	n/a	3.5	516	n/a	39.7	n/a	n/a	n/a	55	www.eltafans.com
Elta Fans Ltd	SSDRDCV250H-1EC	NRVU	UVU	2018	Variable-Speed	None	n/a	0.15	0.169	n/a	3.06	376	n/a	37.9	n/a	n/a	n/a	57	www.eltafans.com
Elta Fans Ltd	SSDRDCV250L-1EC	NRVU	UVU	2018	Variable-Speed	None	n/a	0.13	0.171	n/a	2.65	432	n/a	38.7	n/a	n/a	n/a	53	www.eltafans.com
Elta Fans Ltd	SSDRDCV315-1EC	NRVU	UVU	2018	Variable-Speed	None	n/a	0.294	0.35	n/a	3.78	407	n/a	38.3	n/a	n/a	n/a	53	www.eltafans.com
Elta Fans Ltd	SSDRDCV400-1EC	NRVU	UVU	2018	Variable-Speed	None	n/a	0.498	0.801	n/a	3.96	630	n/a	42.9	n/a	n/a	n/a	59	www.eltafans.com
Elta Fans Ltd	SSDRDCV500-1EC	NRVU	UVU	2018	Variable-Speed	None	n/a	0.767	0.722	n/a	3.9	440	n/a	51.2	n/a	n/a	n/a	51	www.eltafans.com
Elta Fans Ltd	SSDRDCV500-3EC	NRVU	UVU	2018	Variable-Speed	None	n/a	1.003	1.43	n/a	5.11	716	n/a	54.1	n/a	n/a	n/a	57	www.eltafans.com

- A** Manufacturer's Name
- B** Model Identifier
- C.1** RVU or NRVU
- C.2** UVU or BVU
- C.3** ErP Compliance
- D** Type of Drive (MSD or VSD)
- E** Type of HRS (Run Around or Other or None)
- F** Thermal Efficiency (% or N/A)
- G** Nominal Flow Rate (m³/s)
- H** Effective Electrical Power Input (kW)
- I** SFP Int (W/m³/s)
- J** Face Velocity (m/s)
- K** Nominal External Pressure (Pa)
- L** Internal Pressure Drop of Ventilation Components (Pa)
- N** Static Efficiency of Fan Used 327/2011
- O** Maximum External Leakage Rate (%)
- P** Energy Classification of Filters
- Q** Description of Visual Filter warning
- R** Casing Sound Power Level (LWA)
- S** Website for Disassembly Instructions

*Declared Typology C

SINGLEFLOW SSSDRDCV



Accessories

Single Phase

Product Code	Box Fan Flexible Connector (each)	Fast Clamps (each)	Spigot Silencer 300mm Long	Spigot Silencer 600mm Long	Spigot Silencer 900mm Long	Spigot Silencer 1200mm Long	Wiring Diagrams
SSDRDCV200-1EC	018-0200-FLEX	018-200-CLAMP	068-0200-JF1	068-0200-JF2	068-0200-JF3	068-0200-JF4	152-709
SSDRDCV250H-1EC	018-0250-FLEX	018-250-CLAMP	068-0250-JF1	068-0250-JF2	068-0250-JF3	068-0250-JF4	152-709
SSDRDCV250L-1EC	018-0250-FLEX	018-250-CLAMP	068-0250-JF1	068-0250-JF2	068-0250-JF3	068-0250-JF4	152-709
SSDRDCV315-1EC	018-0315-FLEX	018-315-CLAMP	068-0315-JF1	068-0315-JF2	068-0315-JF3	068-0315-JF4	152-709
SSDRDCV400-1EC	018-0400-FLEX	018-400-CLAMP	068-0400-JF1	068-0400-JF2	068-0400-JF3	068-0400-JF4	152-709
SSDRDCV500-1EC	018-0500-FLEX	018-500-CLAMP	068-0500-JF1	068-0500-JF2	068-0500-JF3	068-0500-JF4	152-709

Three Phase

Product Code	Box Fan Flexible Connector (each)	Fast Clamps (each)	Spigot Silencer 300mm Long	Spigot Silencer 600mm Long	Spigot Silencer 900mm Long	Spigot Silencer 1200mm Long	Wiring Diagrams
SSDRDCV500-3EC	018-0500-FLEX	018-500-CLAMP	068-0500-JF1	068-0500-JF2	068-0500-JF3	068-0500-JF4	152-709

DCV Accessories

DCV Accessories	CO ₂ Transmitter	DCV LCD Display	Humidity Transmitter	Presence Detector	Pressure Transmitter	Room Humidistat	Temperature Transmitter
All DCV products	149-DCV-CO2	149-DCV-MK3-CTRL	149-DCV-HRT	149-DCV-PIR	149-DCV-DPT150	149-DCV-H1	149-DCV-TRT

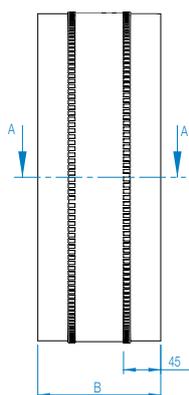
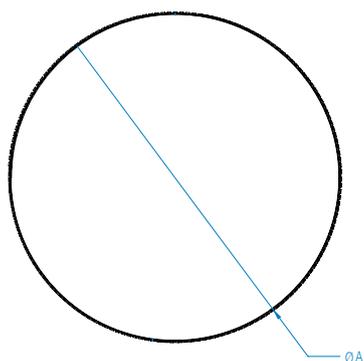
BOX FAN FLEXIBLE CONNECTOR

Accessories

- Fix directly on to spigot
- Provides flexible connection between fan and accessory or duct
- PVC coated polyester with galvanised sheet steel



Product Code	Fan Dia. A	B	Weight kg
018-0200-FLEX	200	150	0.3
018-0250-FLEX	250	150	0.4
018-0315-FLEX	315	150	0.5
018-0400-FLEX	400	150	0.7
018-0500-FLEX	500	150	1.0



Dimensions are in mm.

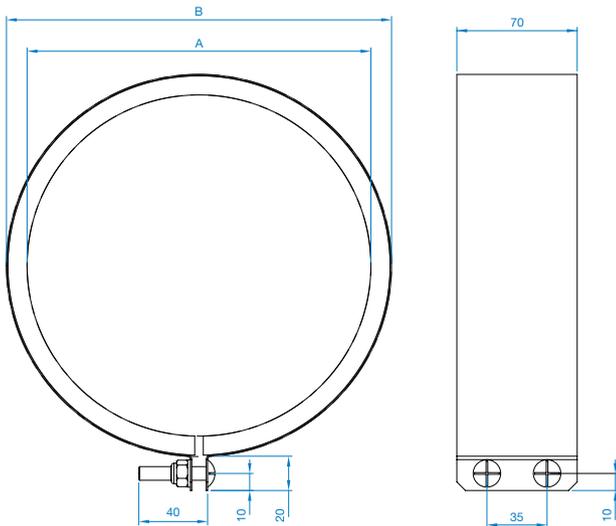
FAST CLAMPS

Accessories

- For quick connection of spigotted fans to circular duct or accessories
- Galvanised steel circular duct clamp with foam lining



Product Code	Fan Size	A Dia.	B Dia.	Weight kg
018-200-CLAMP	200	200	224	0.42
018-250-CLAMP	250	250	274	0.49
018-315-CLAMP	315	315	339	0.59
018-400-CLAMP	400	400	424	0.74
018-500-CLAMP	500	500	524	0.87



Dimensions are in mm.

SPIGOT SILENCER

Accessories

- Small metric range of attenuators with spigot connection
- Ideal for small fans
- Ideal for cross talk elimination
- Ideal for flexible or spiral ducting



Construction

Both types are rigidly constructed in galvanised sheet steel, with a highly absorbent sound attenuating lining between the outer casing and the inner perforated steel lining. The end faces of the silencer do not have threaded holes for fixings, but has a steel spigot for ease of mounting.

Melinex lined silencers must be used to prevent grease impregnation into the acoustic media for kitchen extract applications as prescribed in DW/172 HVAC Specification For Kitchen Ventilation Systems. For Melinex insertion losses, please contact Elta Fans. Silencers can be provided with differing lengths: 300, 600, 900 and 1200mm.

Silencer Attenuation

To determine the sound level of a fan fitted with a silencer, the dynamic insertion loss should be subtracted from the sound power level spectrum (dBW) of the fan. This should be done for the entire octave band mid-frequency spectrum. The fan dBW ratings and silencer attenuation apply equally to in duct applications, with a silencer connected between the fan and the duct system.

Dynamic Insertion Loss

The silencer attenuation is defined as the “dynamic insertion loss”. The values quoted in the tables represent the difference between the sound power level of a fan and silencer combination (dBW) and that of the fan alone (dBW). The dynamic insertion losses shown are the attenuations recorded under ideal working conditions. The achieved attenuation will vary according to the air velocity and flow pattern in the airways. Noise regeneration can occur at higher velocities, especially in EP silencers.

Square / Rectangular Silencers

In highly noise sensitive areas, where the circular silencers cannot achieve the necessary attenuation levels, Elta Fans can design and build optional splitter silencers for greater effect.

SPIGOT SILENCER

Dynamic Insertion Loss

Product Code	Length	Insertion Loss @ Octave band (Hz)							
		63	125	250	500	1K	2K	4K	8K
068-0200-JF1	300mm	-2	-3	-6	-13	-17	-20	-18	-9
068-0200-JF2	600mm	-4	-6	-10	-20	-27	-32	-20	-11
068-0200-JF3	900mm	-7	-9	-14	-32	-39	-36	-26	-15
068-0200-JF4	1200mm	-10	-12	-17	-35	-41	-44	-28	-16
068-0250-JF1	300mm	-2	-3	-6	-12	-16	-19	-17	-8
068-0250-JF2	600mm	-3	-6	-10	-19	-25	-29	-18	-10
068-0250-JF3	900mm	-5	-8	-12	-24	-30	-30	-22	-14
068-0250-JF4	1200mm	-7	-10	-15	-31	-37	-38	-26	-15
068-0315-JF1	300mm	-1	-3	-6	-12	-15	-18	-16	-8
068-0315-JF2	600mm	-3	-5	-8	-16	-21	-22	-16	-14
068-0315-JF3	900mm	-4	-7	-10	-20	-31	-28	-17	-14
068-0315-JF4	1200mm	-6	-9	-14	-23	-32	-32	-18	-15
068-0400-JF1	300mm	-1	-2	-4	-11	-15	-15	-12	-8
068-0400-JF2	600mm	-2	-4	-7	-14	-17	-18	-14	-11
068-0400-JF3	900mm	-3	-6	-9	-18	-26	-23	-15	-12
068-0400-JF4	1200mm	-5	-8	-13	-22	-30	-27	-17	-12
068-0500-JF1	300mm	-1	-1	-3	-10	-14	-14	-11	-7
068-0500-JF2	600mm	-2	-4	-6	-14	-16	-16	-13	-11
068-0500-JF3	900mm	-3	-6	-8	-17	-24	-21	-15	-11
068-0500-JF4	1200mm	-4	-8	-12	-19	-28	-23	-16	-12

SPIGOT SILENCER

Dimensional Data

Product Code	Fan Dia.	A	B	C	D	Weight kg
068-0200-JF1	200	198	305	300	40	4.2
068-0200-JF2	200	198	305	600	40	7.6
068-0200-JF3	200	198	305	900	40	11.0
068-0200-JF4	200	198	305	1200	40	14.5
068-0250-JF1	250	248	355	300	40	5.0
068-0250-JF2	250	248	355	600	40	9.1
068-0250-JF3	250	248	355	900	40	13.2
068-0250-JF4	250	248	355	1200	40	17.3
068-0315-JF1	315	313	420	300	40	6.1
068-0315-JF2	315	313	420	600	40	11.1
068-0315-JF3	315	313	420	900	40	16.1
068-0315-JF4	315	313	420	1200	40	21.0
068-0400-JF1	400	398	505	300	40	7.5
068-0400-JF2	400	398	505	600	40	13.6
068-0400-JF3	400	398	505	900	40	19.8
068-0400-JF4	400	398	505	1200	40	25.9



For 500 model, please contact Elta Fans.
Dimensions are in mm.

CO₂ TRANSMITTER

Accessories



- Power Supply 24V AC or DC
- CO₂ Level 0 - 2000ppm
- Temperature 0 - 50°C
- Excellent Long Term Stability
- Snap-in Cover

Overview

149-DCV-CO2 is a room transmitter for measuring carbon dioxide levels in air with an output signal 0 - 10V DC.

Function

149-DCV-CO2 with patented auto calibration process set new standards in CO₂ measuring for HVAC applications. The sensor is mounted in the cover-part of the casing. The cover is easy to detach from the back by means of snap-in grips and detachable terminals. This makes mounting easier. Furthermore, no cables have to be disconnected, which simplifies service and replacement.

Applications

The CO₂ level gives a direct indication of the indoor air quality. With this basic information, the ventilation can be controlled with high precision and the air quality improved. At the same time, the supply air will only be increased when necessary and the energy costs will thereby be reduced. 149-DCV-CO2 is suitable in environments such as cinemas, schools, conference rooms, assembly halls etc.

Measuring Principle

The CO₂ concentration is measured by means of infrared light, a technique that measures the absorption in gases. It has a reference measuring system that compensates values in relation to changes in light intensity.

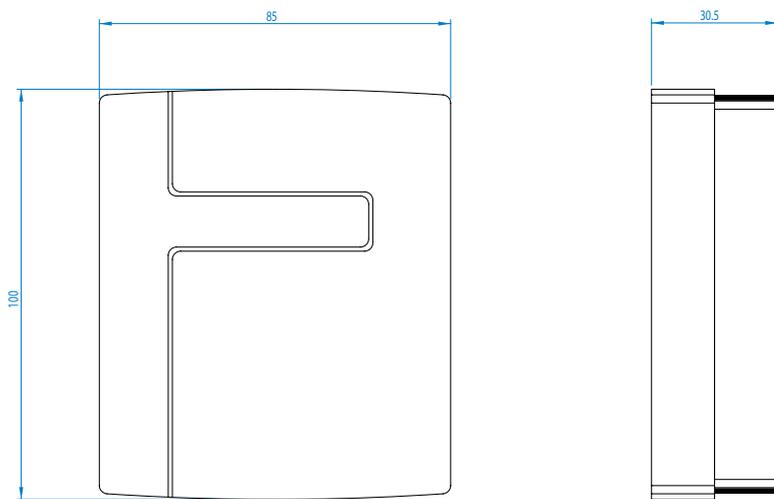
Advantages

- Very high accuracy
- Exact identification of detected gas
- Low risk for contamination
- Short response time
- High long term stability
- Long calibration interval (>5 years)

CO₂ TRANSMITTER

Accessories

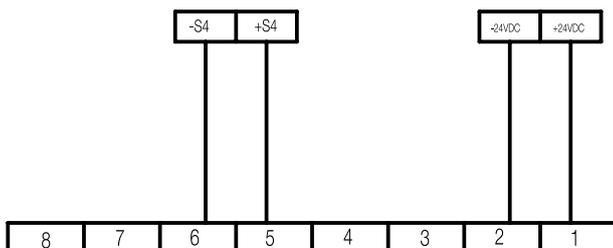
Product Code	Supply Voltage	Power Consumption W	Ambient Temperature °C	Ambient Humidity % RH	Temperature Dependence ppm CO ₂ /°C	Storage Temperature °C	Long Term Stability ppm/year
149-DCV-CO2	24V AC +/- 15%, 50/60Hz or 15/35V DC	3	-5 - +55	0 - 90 Not Condensating	typ. 5	-40 - 70	typ. 20
Product Code	Response Time	Warm-up Time	Protection Class	Measuring Principle	Working Range CO ₂ ppm	Accuracy CO ₂ ppm	Outputs Signal ppm
149-DCV-CO2	< 90s	< 5mins	IP30	NDIR (Non-Dispersive Infrared Technology)*	0 - 2000	< ± (50 +2% of measuring value)	CO ₂ 0 - V DC referring to 0 - 2000



Installation

149-DCV-CO2 should be mounted in a location with good air circulation and one that can be expected to give representative readings. 149-DCV-CO2 may be mounted either on a wall-box or straight on the wall. To remove the front cover, use a 3mm flat-blade screwdriver to depress the locking tongue in the lower part of the casing (see arrow figure). Press and twist the screwdriver and at the same time pull the bottom part of the front outwards. When the bottom end of the front is free from the casing bottom part, slide the cover towards the top of the casing to free the hooks holding the upper edge of the front cover.

Wiring Diagram



This product conforms with the requirements of European EMC standards CENELEC EN 61000-6-1 and EN 61000-6-3 and carries the CE mark. N.B. System neutral and signal neutral should be separately wired, because of current peaks in the supply wires. Screw terminal: Max. 1.5mm².

DCV LCD DISPLAY

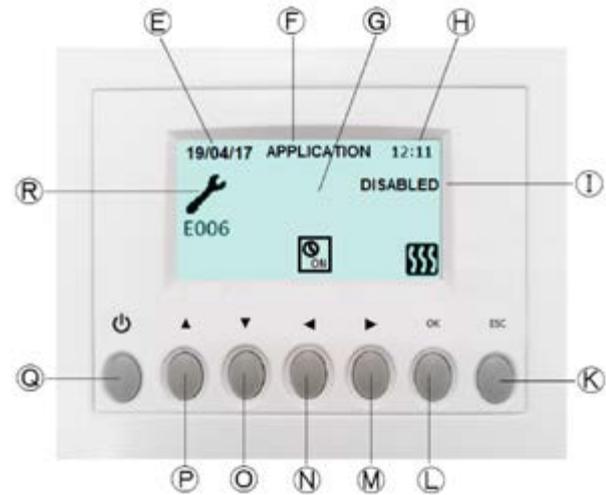
Overview

- Multi-function remote control panel with LCD display
- Supplied as standard with DCV products
- Suitable for surface mounting



Programmable Control Functions

Product Code	Main Menu
149-DCV-MK3-CTRL	Language
	Date / Time
	P00: Fan Mode
	P01: Application
	P02: Sensor Range MIN
	P03: Sensor Range MAX
	P04: Setpoint
	P05: PID Control
	P06: Fixed Speed Value
	P07: Run On Time (minutes)
	P08: Min Fan Speed
	P09: Max Fan Speed
	P10: Slave Min Fan Speed
	P11: Slave Max Fan Speed
	P12: Temperature Input
	Weekly Timer
	Working Hours Counter
	Save Settings
	Load Settings
	Restore Default Settings
Contrast	
Debug Page	



E	DATE: shows the current date
F	APPLICATION: shows the current application
G	MODE: shows auto fan [all modes except manual] or manual position
H	TIME: shows the time
I	Remote Enable: shows remote enable is disabled
K	ESC key: to exit and go back to the previous menu
L	OK key: to enter the selected menu
N	Menu scroll LEFT
O	To go DOWN in menus
P	To go UP in menus
Q	On / Off: power the unit (hold for 5 seconds)
R	FAULT: shows error alarm, refer to error codes

Sensors

The DCV systems various sensors provide continuous real time feedback monitoring of the ambient air conditions through temperature, humidity, CO₂ or pressure in the occupied space.

When powered in auto mode, the CTRL-DSP displays as follows (Auto mode refers to applications 0-10V, Pressure CO₂, RH and Temperature).

HUMIDITY TRANSMITTER

Accessories

- Output Signal 0 - 10 V DC
- Protection Class IP30
- Good Long Term Stability
- Snap-on Cover
- Resistant to contamination



Overview

The HRT room transmitters for use with our Demand Control Ventilation systems are for measuring humidity or temperature in a room.

Relative Humidity

149-DCV-HRT transmitters have a capacitive thin-film element which gives a signal that is proportional to the relative humidity. The measuring signal is converted by the built-in electronics to output signal 0...10V. The sensor element has rapid response to changes in humidity and excellent long-term stability. The element also has good durability in contaminated environments.

Supply Voltage

For output signal 0...10 V, the transmitter should be supplied with 24 V AC $\pm 10\%$ or 15...35 V DC. The transmitter has automatic adaptation to the connected voltage.

Accuracy at 20%

Humidity: $\pm 3\%$ RH, Temperature: $\pm 0.4^\circ\text{C}$ ($\pm 0.3^\circ\text{C}$ with temperature sensor PT1000).

Installation

The transmitter should be mounted in a location with good air circulation where it can be expected to give a representative reading. It may be mounted on a wall-box or directly on the wall. To remove the front cover, depress the locking tongue in the lower part of the casing using a 3 mm flat-blade screwdriver. Press and twist the screwdriver and at the same time pull the bottom part of the casing, slide the cover towards the top of the casing to free the hooks holding the upper edge of the front cover.

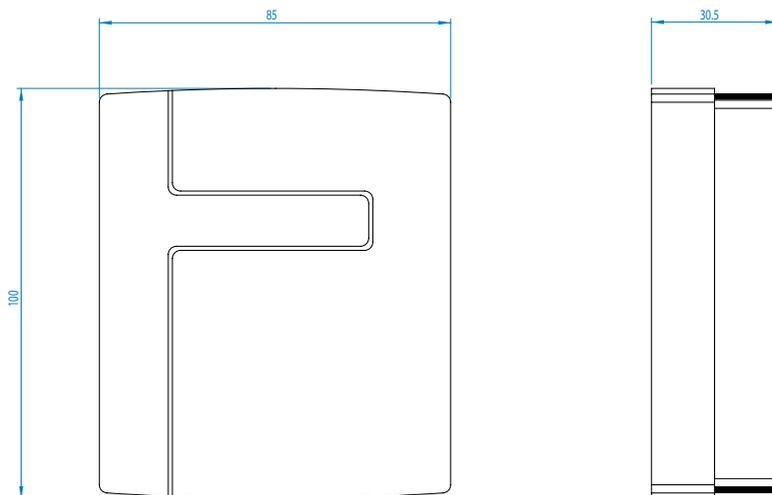
HUMIDITY TRANSMITTER

Accessories

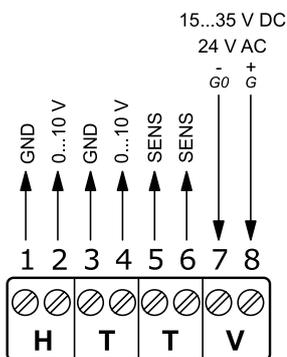
Product Code	Type	Output Signal V	Supply Voltage U_v	Power Consumption W	Electrical Connection mm ²	Storage Temperature	Protection Class
149-DCV-HRT	Humidity & Temperature Transmitter	0 - 10	24 V AC $\pm 10\%$ or 15...35 V DC	< 1 W	Screw terminals max 1.5 (AWG 16)	-25 - 60	IP30

Mode of Operation	Analogue Output	Working Range
Relative Humidity	0...10 V, IL < 1 mA (0...100% RH)	0...50% RH

Dimensions



Wiring Diagram



This product conforms with the requirements of European EMC standards CENELEC EN 61000-6-1 and EN 61000-6-3 and carries the CE mark.

PRESENCE DETECTOR

Accessories

- Power Supply 24V AC or DC
- Intended for wall or ceiling mounted
- Unobtrusive design
- Potential-free, changeover relay
- Both relay on-delay and/or relay off-delay, can be individually set



Overview

149-DCV-PIR is a presence detector designed for Demand Control Ventilation systems.

Function

The PIR is a presence detector designed for automatic ventilation control of DCV systems. It saves money and gives higher comfort in premises which require forced ventilation for shorter periods of time, such as conference rooms, assembly-halls etc. The unit provides a changeover relay signal output for start/stop of fan or similar equipment. It can be wall or corner mounted with 110°, 15m detection range.

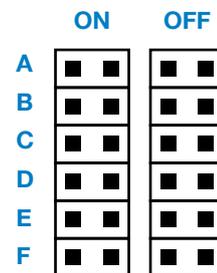
Range Adjustments

In order to suit different rooms or areas, the detection range of PIR can be adjusted by changing the direction of the sensor. To change the sensor direction, release the screw on the mounting bracket and then carefully move the sensor to the direction desired.

On / Off Delay

The ON and OFF delays are designed to provide smarter energy management of DCV systems. ON delay is the time given to the sensor to certify the occupancy, before it activates the output relay. OFF delay is the time that the relay is activated after the last detection. Both ON and OFF delays can be easily set by placing the jumper head on the corresponding pins as following.

	A	B	C	D	E	F
ON	0s	10s	30s	1min	5mins	10mins
OFF	10s	1min	5mins	10mins	20mins	30mins



Technical Data

Product Code	Infrared Sensor	Power Supply	Detection Range	Output Relay	Consumption	Mounting Height m
149-DCV-PIR	Dual Element	24 ± 2 V AC/DC	15 x 15m at 15°C	24 V DC, 0.2 A max.	5mA @24 V AC	1.8 - 3.6
Product Code	Mounting Bracket	Detectable Speed m/s	RFI Immunity	Ambient Temperature °C	Ambient Humidity RH max.	Dimensions mm
149-DCV-PIR	MB-99	0.1 - 3.0	Av. 20V/m (10 - 1000MHz)	-20- 50	95%	112 x 66 x 45

PRESENCE DETECTOR

Accessories

Operation

Standby

After the warm up time expires, the sensor enters into standby mode. The detector will check whether both delays are properly set. If not, the green LED will blink to indicate.

Relay ON Delay

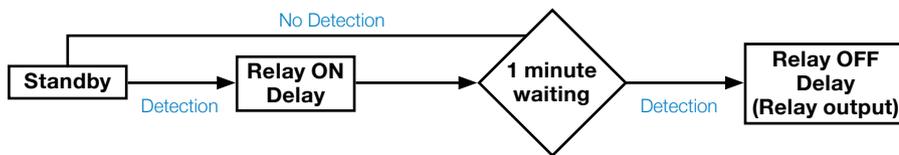
Relay ON delay is the time given to sensor to verify true occupancy before activating the relay output. Any further detection during ON delay will NOT reset the timer.

1 Minute Waiting

When Relay ON delay expires, the sensor enters into a 1 minute waiting time. If no detection occurs within 1 minute, the sensor will return to standby mode. If any detection occurs, then relay output will be activated and Relay OFF delay will be started.

Relay OFF Delay

Relay OFF delay is the time of relay activating. Every detection during this period will reset the timer.



Installation

Do not install where the detector is exposed to direct sunlight or directly above strong sources of heat. Make sure the detection area does not have any obstruction (plants, large pieces of furniture, curtains etc.) which may block the detection.

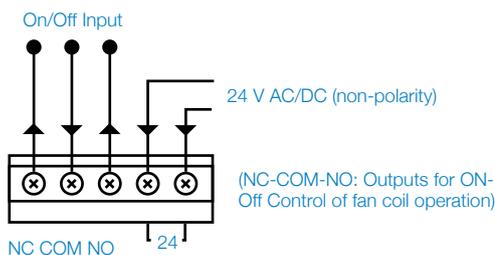
Installation

1. Mount the base of mounting bracket on the selected position. Lead the cable through the access tunnel of mounting bracket or through the knockout openings (see description-picture page 1).
2. Open the front cover by loosening the locking screw at the bottom. Lead the cable into the unit and assemble the mounting bracket with the unit.
3. Connect the cable to the corresponding terminals according to the instructions below.
4. Replace the front cover and then proceed with the walk test.

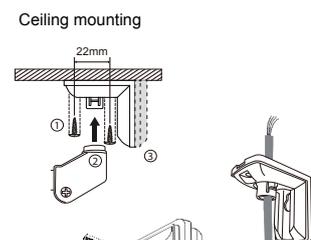
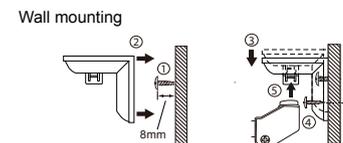
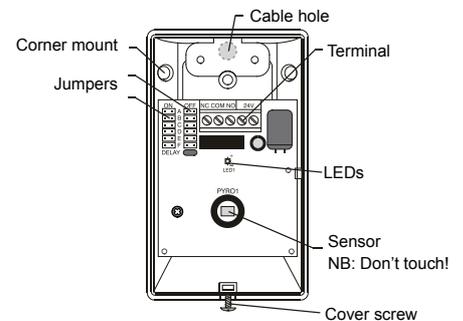
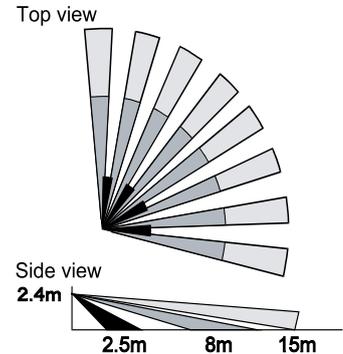
Walk Test

Apply power supply and allow 25 seconds for sensor to warm up. The green LED will blink during warm up period. Walk across the detection zones (invisible) at normal speed. The red LED will blink whenever the sensor detects the motion.

Wiring Diagram



This product conforms with the requirements of European EMC standards CENELEC EN 61000-6-1 and EN 61000-6-3 and carries the CE mark. N.B. System neutral and signal neutral should be separately wired, because of current peaks in the supply wires. Screw terminal: Max. 1.5mm².



PRESSURE TRANSMITTER

Accessories



- Three settable working ranges for each model 100/300/500Pa
- Output signal 0 - 10V
- High level of accuracy and stability
- Models with square root output signal
- Quick and easy mounting

Overview

DPT is a transmitter for use with our Demand Control Ventilation system for measuring differential pressure in air and neutral gases for controlling pressure in HVAC systems.

Function

The transmitter consists of a plastic sensor-housing and a membrane of silicon LSR. The differential pressure affects the membrane which is connected to the sensor element. The element is manufactured with state-of-the-art technology with a ceramic beam onto which thick-film resistors have been applied. The pressure on the membrane causes a movement which is transferred to the ceramic beam. Flexing of the beam gives changes in resistance. The changes in resistance are transmitted by means of built-in electronics to an analogue output signal. The measuring element gives a rapid response and a high level of accuracy. The properties of the ceramic element ensure that the transmitter has excellent long-term stability.

Sensor Housing

The sensor housing is made of transparent plastic. The cable input is on the left hand side with cable gland. The cover is closed by a single screw and can easily be detached from the hinges when mounting.

Setting the Working Range

The transmitter has three different working ranges depending on the model. The working ranges are set via two dip switches in the lower left corner of the circuit board according to the table shown below. The supply voltage must be disconnected. You can also change the zero point of the pressure measurement by pressing the button above the dip switches.



P		
0...500Pa	0	0
0...300Pa	0	1
0...100Pa	1	0

Mounting

The sensor should be mounted vertically using screws in the mounting holes on the back edge. There are also two mounting holes on the upper side of the sensor housing.

Connection Set

A connection set consisting of tubing and pressure outlets can be supplied as accessory to DPT.

PRESSURE TRANSMITTER

Accessories

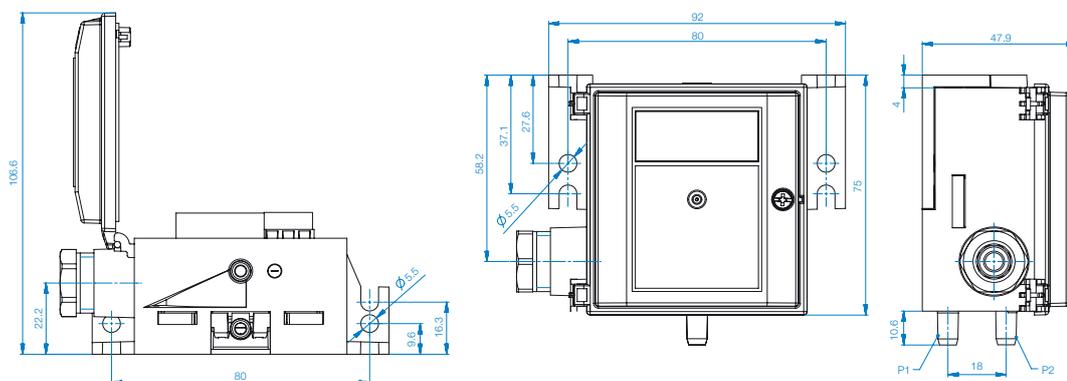
Product Code	Supply Voltage	Power Consumption	Output Signal V	Load Impedance	Maximum Differential Pressure Pa	Pressure Connection	Cable Connection	Cable	Mounting	Material Sensor	
										Housing	Membrane
149-DCV-DPT	24 VAC + 15/-10 or 18 - 33V DC	10mA (0 -10V)	0 - 10	> 10kohm (0 - 10V)	Up to 500	Connection pipes for 6mm tube	Screw terminals. Cable gland with built-in strain relief	Three wire. Flexible cable is recommended	Vertical with pressure connections downwards	Transparent plastic	LSR (Silicon)
Product Code	Form of Protection	Accuracy		Temperature Dependence °C	Ambient Temperature °C	Storage Temperature °C	Dynamic Response Time ms	Resolution	ANS	DTV-ANSLUTNING	
		Linerity	Hysteresis								
149-DCV-DPT	IP54	< +/- 1.0 % fs* for working ranges within 0...100 Pa, for higher working ranges +/- 0.7 % fs*	< +/-1.0% fs	< 0.04% fs	0 - 70	-10 - 70	< 20	Working ranges up to (and including) 100 Pa: < 0.2 % fs*, other working areas: < 0.1 % fs*	Mounting kit with 2m plastic tube & 2 pressure outlets	Pressure connection of metal, angled 90°	

Installation Arrangement

1. Recommended installation arrangement: vertical, with pressure connections facing downward, drain of possible condensed water (factory calibration).
2. Horizontal, cover facing downward. Signal approximately 14 Pa higher than actual pressure.
3. Horizontal, cover facing upward. Signal approximately 14 Pa below actual pressure.

Mount the transmitter with minimum 10mm distance to magnetic material. If this is not possible there is a failure of up to minus 1 Pa for transmitters mounted on sheet steel.

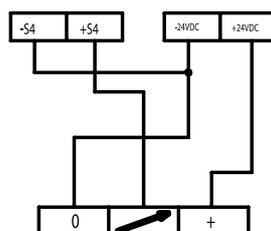
Dimensions



Wiring Diagrams

DTL 0 - 10V

- Supply Voltage 24V AC / 18 - 33V DC
- Output signal 0 - 10V DC
- System neutral



Dimensions are in mm.

* fs = fullscale, the complete sensor range

This product conforms with the requirements of European EMC standards CENELEC EN50081-1 and EN50082-1 and carry the CE-mark.

ROOM HUMIDISTAT

Accessories

- 1 Step
- High reliability and accuracy
- Protection class IP30
- Setpoint settings can be locked
- Changeover contact 250V AC, 5A



Overview

149-DCV-H1 is an electro-mechanical room humidistat for controlling humidification and/or dehumidification in HVAC systems.

Function

The humidistat uses a synthetic element as sensor medium. The synthetic element stretches as the humidity increases and shrinks as the humidity decreases. These changes are transmitted to a microswitch. The setpoint knob affects the position of the microswitch in relation to the synthetic element. The setpoint can be set at between 35...95% RH.

Synthetic Element

We have developed a new synthetic element that gives a high accuracy at a low cost. In order to eliminate the risk of tampering, the setpoint knob can be locked. In order to eliminate the risk of tampering, the setpoint knob can be locked by means of a locking screw under the cover.

Typical applications

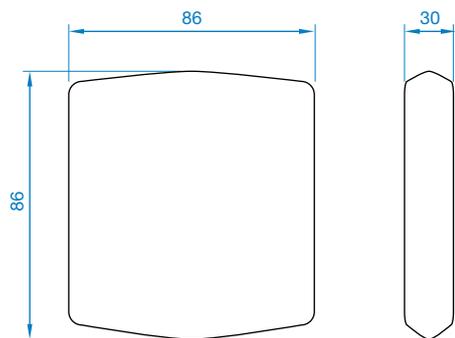
Can be used to control a humidifier or a dehumidifier or for on/off controlling of a fan. Can also be used to alarm when the humidity exceeds or falls below a pre-set level.

Technical Data

Product Code	Material Casing	Ambient Temperature °C	Mounting	Protection Class	Outputs Changeover Contact	Setpoint %	Hysteresis %
149-DCV-H1	Polycarbonate	0 - 40°C	Wall	IP30	250V AC, 5A	35 - 95 RH	+/- 4 RH

ROOM HUMIDISTAT

Accessories



Wiring

Humidification Closing contact between terminals 1 and 2

Dehumidification Closing contact between terminals 1 and 3

Dimensions are in mm.

This Product conforms with the requirements of European LVD standards EN 60730-1:2000+A11+A12, EN 60730-2-13:1998+A1 and carries the CE-mark

TEMPERATURE TRANSMITTER

Accessories

- Output Signal 0 - 10 V DC
- Temperature 0...50°C
- Good Long Term Stability



Overview

Room transmitters for measuring temperature in indoor environments. Transmitters intended for wall mounting in HVAC systems. The sensor is mounted in the cover-part of the casing. The cover is easy to detach from the back by means of snap-in grips and detachable terminals. This makes mounting easier. Furthermore, no cables have to be disconnected, simplifying service and replacement.

Supply Voltage

The transmitter uses a supply voltage of 24 V AC $\pm 10\%$ or 15...35 V DC. It automatically detects and adapts to the supply voltage connected.

Temperature Sensor

The unit has a built-in temperature sensor, working range 0...50°C.

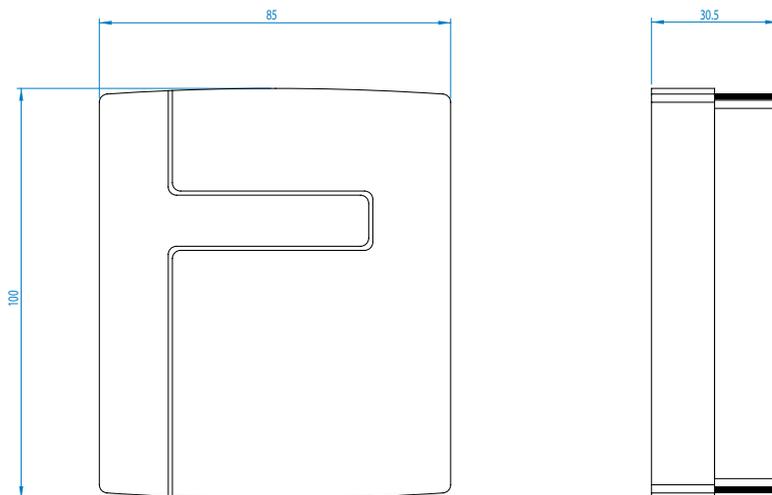
TEMPERATURE TRANSMITTER

Accessories

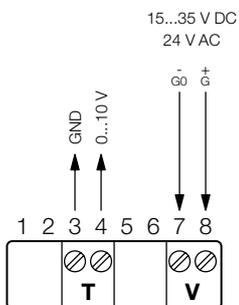
Product Code	Output Signal V	Supply Voltage U_v	Power Consumption W	Transformer Power VA	Electrical Connection mm ²	Ambient Temperature	Ambient Humidity	Storage Temperature	Protection Class
149-DCV-TRT	Analogue	24 V AC $\pm 10\%$ or 15...35 V DC	< 1 W	2	Screw terminals max 1.5 (AWG 16)	0...50°C	10...90 % RH non-condensing	-25 - +60°C	IP30

Analogue Output	Working Range	Accuracy at 20°C
0...10 V, I _L < 1 mA	0...50°C	$\pm 0.4^\circ\text{C}$

Dimensions



Wiring Diagram



GND and G0 are internally connected.

This product conforms with the requirements of European EMC standards CENELEC EN 61000-6-1 and EN 61000-6-3 and carries the CE mark.

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