

**Klima-Set
Differential pressure
switch for air**

KS...C2

5.20

DUNGS®
Combustion Controls

neuvità
nouveau

• RoHS 2002/95/EG



Technical description

Two separate pressure chambers with pressure-side connection to hose nipples.

Each pressure chamber has a stepped connection of 6 mm dia. to 4 mm dia.

Reference value (pressure difference) can be set directly. Reference value can be read off externally through the transparent hood.

Precise function through special switching system in a frictionless bearing. Contact switchover is performed when the set reference value is exceeded or undershot. Complete mounting kit enclosed.

Application

The equipment is used in ventilation and air-conditioning systems, DDC.

It is specially designed for monitoring air ducts, filters, drive units and blowers.

Approvals

EC type test approval as per EC Gas Appliance Directive:

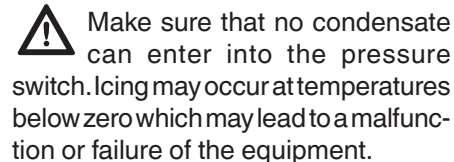
LGW C2

CE-0085 AQ 0693

Approvals in other important gas-consuming countries.

The differential pressure switch of the Klima-Set works without an auxiliary power.

This makes a subsequent DDC application impossible.



Max. operating pressure	50 mbar (5 kPa)
Pressure connection	Hose connecting piece suitable for hose $\varnothing$ 4 / $\varnothing$ 6
Temperature range	Ambient temperature -15 °C to +85 °C Medium temperature -15 °C to +85 °C Storage temperature -30 °C to +85 °C
Materials	Housing Polycarbonate Switching part Polycarbonate Diaphragms NBR Switching contact gold-plated silver (Au), suitable for DDC applications: 24 V DC; 0.02 A
Switching voltage	Au contact DC min. 5 V max. 24 V
Nominal current	Au contact DC 20 mA
Switching current	Au contact DC min. 5 mA max. 20 mA
Electrical connection	On terminal screws via cable duct PG* 11 (* = heavy-gauge conduit thread)
Protection type	IP 54 as specified in IEC 529 (EN 60529), optional IP 65
Setting tolerance	±15% switching point deviation referred to reference value, adjusted as pressure rises, vertical diaphragm position, KS 150 C2 and KS 300/1 C2 adjusted as pressure falls.

1. LGW...C2 differential pressure switch
2. Fixing bracket
3. Connection hose 4 x 1.5, 2 m
4. fixing screw
5. Drilling template for fixing bracket and hose connections
6. hose connection
7. Extension tube
8. Operating and assembly instructions

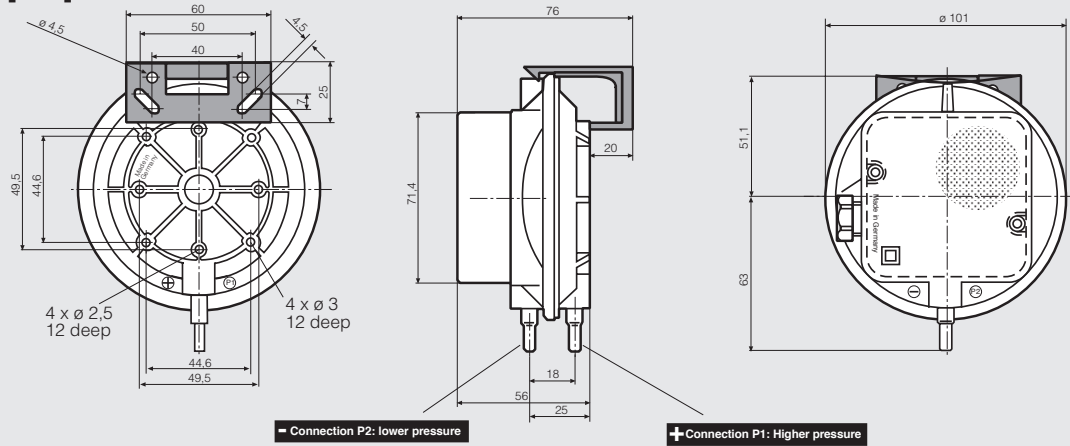
Order No. 230 306 (50 x)
Order No. 230 307 (50 x)
www.dungs.com

For KS 150 C2	Order No. 217 778
For KS 300 C2	Order No. 217 779
For KS 300/1 C2	Order No. 224 389
For KS 500 C2	Order no. 226 327
For KS 600 C2	Order No. 217 780
For KS 1000 C2	Order No. 217 781
For KS 3000 C2	Order No. 217 782

BEFESTIGUNGSWEISE

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837.

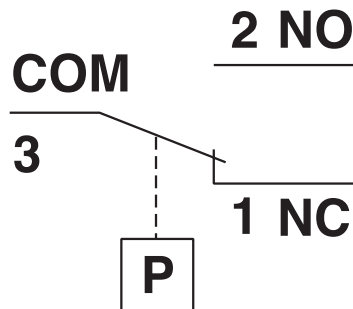
Dimensions [mm]



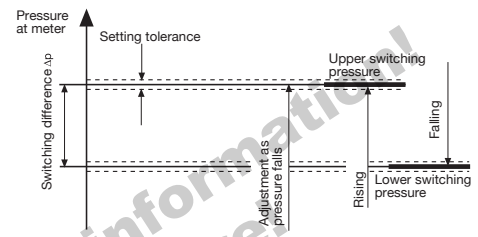
Switching functions

As differential pressure rises:
 1 NC opens
 2 NO closes

As differential pressure falls:
 1 NC closes
 2 NO opens



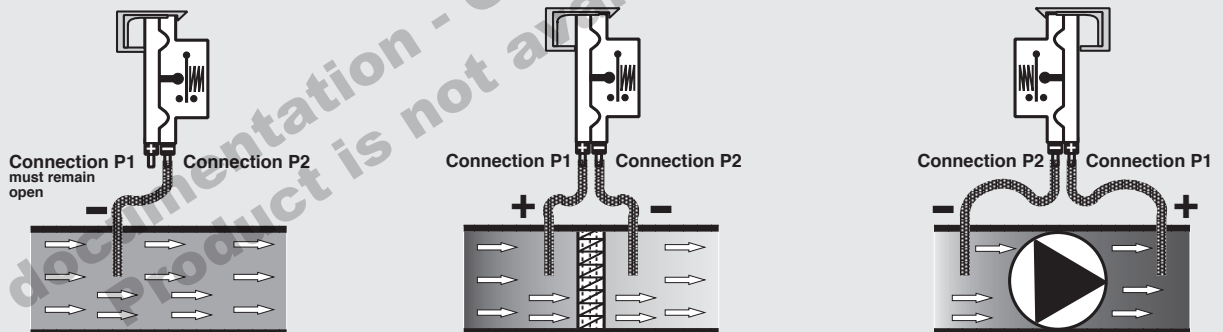
Switching difference Δp



The switching difference Δp is the pressure difference between the upper and lower switching pressures.

Schematic diagram

Application and connection examples



Monitoring system vacuum

To monitor the pressure in vacuum systems.

Connect Klima-Set to the air duct via connection p2 (-).

Do not connect connection p1 (+) to the air duct.

Do not close the hose connection sleeve of connection p1 (+), a connection to atmosphere must exist.

Important: No dirt must enter into the equipment through connection p1 (+).

Filter monitoring

To monitor filter fouling, Klima-Set can be connected as shown above. Connection p1 (+) is connected upstream of the filter and connection p2 (-) downstream of the filter with the air channel in flow direction of volumetric flow.

Blower monitoring

In the blower monitoring system, connection p1 (+) is connected on the pressure side downstream of the blower and connection p2 (-) is connected to the air duct upstream of the blower.

Always connect higher pressure to connection p1 (+).
Always connect higher vacuum to connection p2 (-).

Example - System pressure

Higher pressure:
 e.g. 240 Pa: Connection p1 (+)
 Lower pressure:
 e.g. 180 Pa: Connection p2 (-)

Example - System vacuum

Lower vacuum:
 e.g. -130 Pa: Connection p1 (+)
 Higher vacuum:
 e.g. -210 Pa: Connection p2 (-)

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Brief technical data

1 mbar = 100 Pa = 0.1 kPa ≈ 10 mm WS 1 Pa = 0.01 mbar ≈ 0.1 mm WS

| Type | Order No. | Measuring range,
adjustable [Pa] | Switching difference
Δp [Pa] | Max. operating
pressure
[kPa] |
|-------------|-----------|--|---|-------------------------------------|
| KS 150 C2 | 217 773 | 20 - 150  | ≤ 18 | 5 |
| KS 300/1 C2 | 224 390 | 20 - 300  | ≤ 20 | 5 |
| KS 300 C2 | 217 774 | 40 - 300  | ≤ 20 | 5 |
| KS 500 C2 | 226 885 | 30 - 500  | ≤ 25 | 5 |
| KS 600 C2 | 217 775 | 70 - 600  | ≤ 30 | 5 |
| KS 1000 C2 | 217 776 | 100 - 1000  | ≤ 40 | 5 |
| KS 3000 C2 | 217 777 | 300 - 3000  | ≤ 80 | 5 |

Accessories Klima-Set

Mounting kit display-LED 24 V yellow **231 774**

Mounting kit display-LED 24 V green **248 240**

Replacement set hood IP 54 **230 270**

Replacement set hood IP 65 **230 271**

Double adapter accessory kit

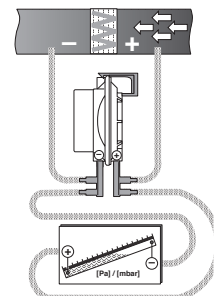
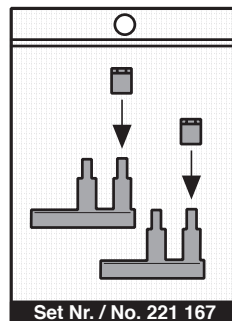
The double adapter permits the connection of additional service equipment, e.g. inclined tube pressure gauge.

Scope of supply of double adapter kit

2 double adapter

2 locking caps

Order No. 221 167



We reserve the right to make any changes in the interest of technical progress.

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