

Type 4744 Electric Limit Switch

For hazardous areas



Application

Limit switch with type of protection Ex de IIC T6 for attachment to pneumatic control valves according to IEC 60534-6-1

Rated travels from 7.5 to 150 mm



The limit switch issues a limit signal whenever the valve travel exceeds or falls below a certain adjusted limit, especially when a valve has reached one of its end positions. This signal is suitable for transferring control signals, for example, to activate visible or audible alarms as well as for connection to centralized control or alarm systems.

Special features

- One or two electric limit switches (possible to override)
- High load capacity, for example, alternating current up to 500 V/10 A
- Attachment to control valves with cast yokes or rod-type yokes according to IEC 60534-6-1 (NAMUR)

Versions

- **Type 4744** (Fig. 1 and Fig. 2)
 - Limit switch with one or two momentary-contact limit switches designed as a position switch conforming to EN 50041.
 - Each contact is equipped with one NC contact and one NO contact, acting as a snap-action switch, which can also be switched as a single pole, double throw switch (SPDT).
 - Type of protection: flameproof enclosure
- **Type 4744-2** (Fig. 3)
 - Limit switch with one momentary-contact switch for mounting to the rod-type yoke of Series V2001 valves.
 - Type of protection: flameproof enclosure

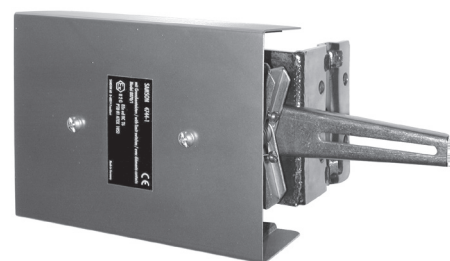


Fig. 1: Type 4744 Electric Limit Switch with protective cover

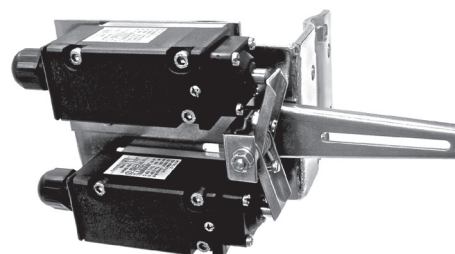


Fig. 2: Type 4744 Electric Limit Switch with two momentary-contact switches and protective cover removed



Fig. 3: Type 4744-2 Electric Limit Switch preferably for Series V2001 Valves

Principle of operation

When the limit switch is mounted to the control valve, the valve travel is transmitted by the long lever of the actuator stem to the adjusting lever on the momentary-contact limit switch. This lever actuates the snap-action contact of one of the momentary-contact limit switches when the valve travel reaches the adjusted limit. This switch can be overridden and is equipped with an overrange protection. For the initial adjustment of the limit (switching point), the momentary-contact switch is shifted on the base plate. The adjustment screw is used for fine adjustment. The terminal connection determines whether the limit contact is used either as an NO contact, an NC contact or a double-throw contact (Fig. 4).

For more information on the selection and application of positioners and limit switches, refer to Information Sheet

► T 8350.

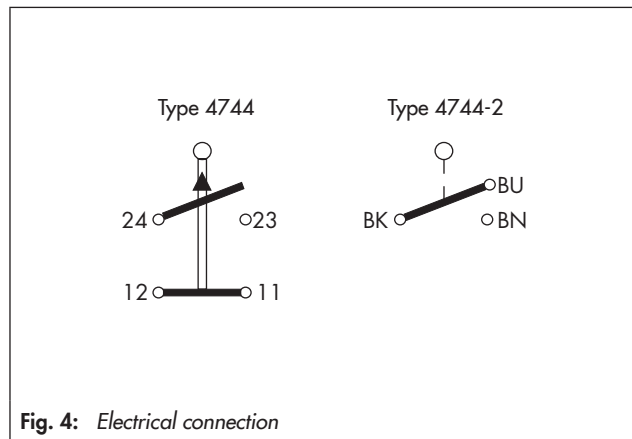


Fig. 4: Electrical connection

Table 1: Technical data

| Limit switch | Type | 4744 | 4744-2 |
|---|--------------|--|-----------------------|
| Momentary-contact switch | | 1 or 2 | 1 |
| Type of protection | | Flameproof enclosure, terminal space in increased safety | Flameproof enclosure |
| Load capacity (contact rating) | AC voltage | 500 V/10 A Utilization category AC-15 | 250 V/5 A |
| | DC voltage | 125 V/10 A 250 V/0.2 A Utilization category DC-12 | 250 V/0.4 A |
| Travel range | | 7.5 to 100 mm with extended lever up to max. 150 mm | 15 mm |
| Permissible ambient temperature ¹⁾ | | -55 to +70 °C | -20 to +75 °C |
| Compliance | | CE · EAC | |
| Degree of protection | | IP 65 | IP 66 |
| Weight | kg (approx.) | 1.75 | 0.4 |
| Enclosure material | | Glass-fiber-reinforced polyester | Thermosetting polymer |

¹⁾ Observe the limits specified in the relevant certificate additionally when the limit switch is used in hazardous areas.

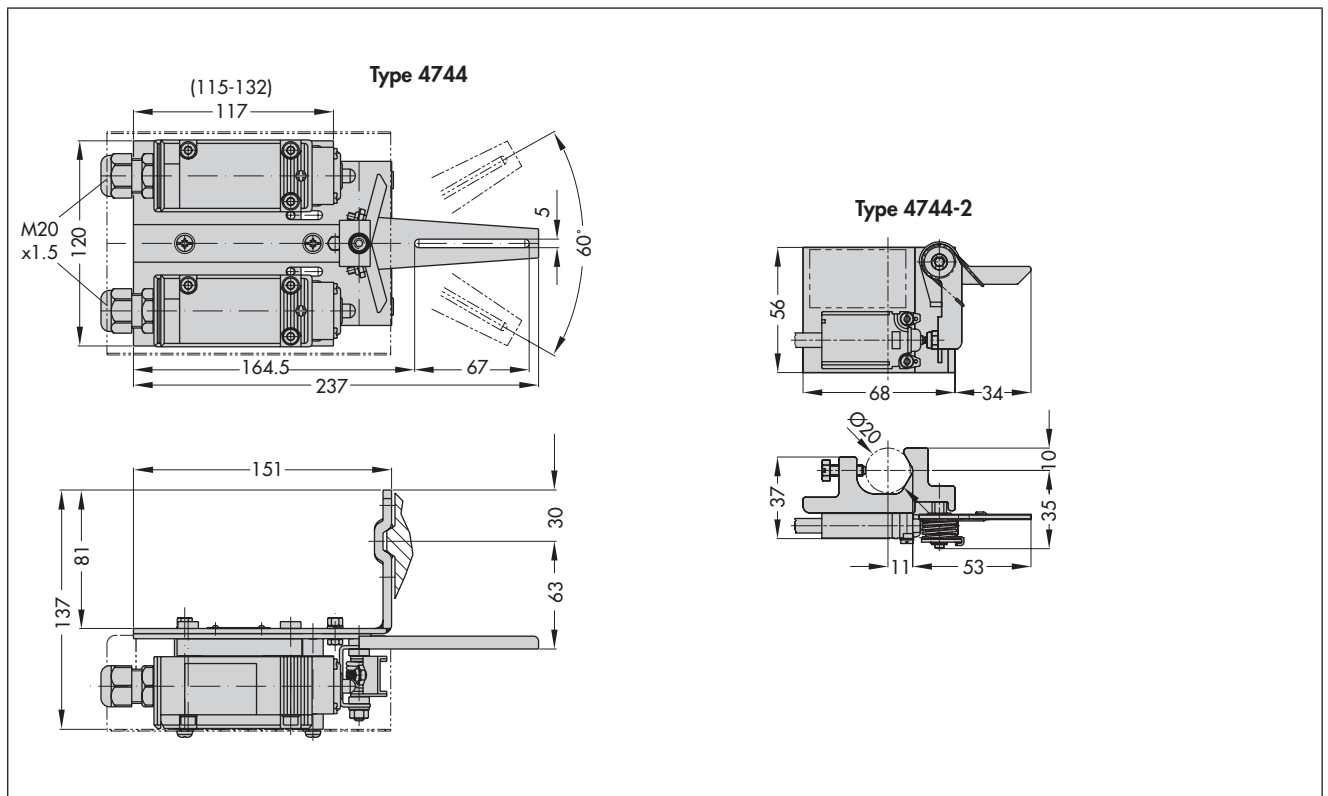
Table 2: Summary of explosion protection approvals

| Type | Certification | No. | Date | Type of protection/comments |
|--------|---------------|--------------------|--------------------------|--|
| 4744 | | DMT 01 ATEX E 178 | 2001-12-28 | II 2G Ex de IIC T6 Gb II 2D Ex tb IIIC IP65 T80°C |
| | | RU C-DE.08.B.00744 | 2015-01-27 2020-01-26 | 1 Ex ed IIC T6 Gb |
| | | | | |
| 4744-2 | | PTB 00 ATEX 1093 X | 2000-12-07 | II 2G Ex db IIC T6-T5 |

Article code

| Electric limit switch | Type 4744- | x | 0 | 0 | x | 1 | 0 | 0 | x |
|--------------------------------|------------|---|---|---|-----|---|---|---|---|
| Attachment | | | | | | | | | |
| To NAMUR rib | | 1 | | | 4/5 | | | | 1 |
| To rods for Type 3372 Actuator | | 2 | | | 1 | | | | |
| Version | | | | | | | | | |
| Without switches | | | 0 | 0 | 3 | | | | |
| One changeover switch | | | 0 | 0 | 1 | | | | |
| Two 8070/1-2-S switches | | | 0 | 0 | 4 | | | | 1 |
| One 8070/1-2-S switch | | | 0 | 0 | 5 | | | | 1 |
| Special version | | | | | | | | | |
| Without | | | | | | | | | 0 |
| GOST approval Ex de | | | | | | | | | 1 |

Dimensions in mm



Ordering text

| | |
|--------------------------|--|
| Electric limit switch | Type 4744 or Type 4744-2 |
| Momentary-contact switch | 1 or 2 functioning as NO contact or NC contact |
| For indicating | Valve OPEN/CLOSED or OPEN or CLOSED |

Specifications subject to change without notice



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