## Power entry modules

## Types KD, KD-Bowdencable

- Panel mount: screw-on version, front or rear-side / snap-in version, front-side
4 functions: appliance inlet, line switch or line switch for Bowdencable actuation, fuseholder with interchangeable fuse drawer for $5 \times 20$ or $6,3 \times 32 \mathrm{~mm}$ fuses, with or without voltage selector (step switch)
- Version with line filter/shield see, ${ }^{\prime}$ āage $113^{-1}$



## Characteristics

- All single elements are allready wired
- the fuse drawer "Fingergrip" can be removed by hand
- For added safety "Extra-Safe" fuse drawers are available. Extra-safe fuse drawers satisfy international standards for medical equipment. The drawer can only be removed with the aid of a tool
- The fuseholder is accessible from the equipment front
- Available with or without voltage selector
- Qualified for use in equipment according to IEC/EN 60950


## Technical data

| Rated voltage | 250 VAC |
| :---: | :---: |
| Rated currents: | 10 A; VDE, SEV, Semko |
|  | 10 A ; UL, CSA |
| Type KD-Bowdencable | 6 A; SEV, VDE, Semko |
|  | $6 \mathrm{~A} / 250 \mathrm{VAC}, 8 \mathrm{~A} / 125 \mathrm{VAC}$; UL, CSA |
| Dielectric strength | > 3 kV between L-N/ |
| ( $50 \mathrm{~Hz}, 1 \mathrm{Min}$.) | $>4 \mathrm{kV}$ between L/N-PE |
| Allowable ambient air temperatures $\mathrm{T}_{\mathrm{a}}$ | $-25{ }^{\circ} \mathrm{C}$ to $+70{ }^{\circ} \mathrm{C}$ |
| Degree of protection (front-side) | IP40 acc. to IEC 60529 |
| Protection class | suitable for equipment with prot. cl. I, acc. to IEC 61140 |
| Terminals | quick-connect 4,8 $\times 0,8 \mathrm{~mm} /$ tin-plated |
| Panel thickness s | screw-on: max. 8 mm |
|  | snap-in: $1,5 / 2 / 2,5 \mathrm{~mm}$ |
| Materials: Housing | Thermoplastic, black, UL94 V-0 |
|  |  |
| Appliance-inlet | acc. to IEC/EN 60320-1/C14, <br> Protection class I, <br> pin-temperature $70^{\circ} \mathrm{C}$ (cold condition) |
| Fuseholder | 1- or 2-pole, shocksafe category PC2 acc. to IEC/EN 60127-6, for fuse-links $5 \times 20$ or $6,3 \times 32 \mathrm{~mm}$ |
| Rated power acceptance at ambient air temp. $\mathrm{T}_{\mathrm{a}} 23^{\circ} \mathrm{C}$ | $5 \times 20: 2,5 \mathrm{~W}(1$-pole)/2 W (2-pole) per p. 6,3 x 32 : 3,15 W (1-pole)/2,5 W (2-pole) per pole |
| Admissible power acceptance at higher $\mathrm{T}_{\mathrm{a}}$ | see derating curves. Take note of the information onıpage 197, |
| Line switch | 2 -pole, non-illuminated, |
| (Rocker switch) | acc. to IEC/EN 61058-1. |
| Line switch for Bowdencable | 2 -pole, non illuminated |
|  | Technical details see page 201, |
| Voltage selector | optional, step switch, 2-4 positions |

Dimensions Typ KD
Screw-on mounting


Snap-in mounting


Dimensions Typ KD Bowdencable
Screw-on mounting


Panel cut-outs see type KD

Snap-in mounting


Panel cut-out for the actuating part B1

Fuses 6,3 x 32 mm 1-pole


## Diagrams

without voltage selector


1-pole



Derating curves for fuseholder

2-pole
(per pole)


Fuses $5 \times 20 \mathrm{~mm}$
1-pole

Admissible power
acceptance in Watt


2-pole (per pole)


Ambient air temperature $\mathrm{T}_{\mathrm{a}}{ }^{\circ} \mathrm{C}$


2-pole



2-pole

Order Numbers to type KD: for socket (wired)
Fuse drawer must be_ordered separately.
Order nos see'page 55,


* can be used as 2-/3-position voltage selector - take only corresponding terminals

Order Numbers to type KD Bowdencable: for socket (wired)
Fuse drawer must be ordered separately.
Order no seé pagēs 55 (fuse drawer) and'59 (Bowdencable)!

| Fuseholder |  | Screw | Snap-in, panel thickness s |  |  | with voltage selector max. 4 pos* |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $1,5 \mathrm{~mm}$ | 2,0 mm | 2,5 mm |  |
| KD11.4199.151 | KD14.4199.151 | - |  |  |  | - |
| KD11.4199.105 | KD14.4199.105 |  | - |  |  | - |
| KD11.4199.107 | KD14.4199.107 |  |  | - |  | - |
| KD11.4199.109 | KD14.4199.109 |  |  |  | - | - |

* can be used as 2-/3-position voltage selector - take only corresponding terminals


## Other versions on request:

```
Type KD
- for protection class II
Type KD-Bowdencable
- for protection class II
- line switch, illuminated
- without voltage selector
- line switch with
    other rocker marking
- line switch 1-pole
```



## Bowden cable

for type KD/KG, CD/CG
Order details and
description

How to specify length of
Bowden cable:
R Mounting parallel to direction of actuation
B1 Actuating part
B2 Power entry module
Dimensions in mm (center of mounting hole [B1], outer surface to center of mounting hole [B2], outer surface)

| $\mathbf{R}$ | a / | b / | c / |
| :--- | :--- | :--- | :--- |

S Mounting $90^{\circ}$ to direction of actuation
B1 Actuating part
B2 Power entry module
Dimensions in mm (center of mounting hole [B1], outer surface to center of mounting hole [B2], outer surface)

| $\mathbf{S}$ | a / | b / | c / |
| :--- | :--- | :--- | :--- |

## Ordering example

The following 3 positions are necessary to place an order:

1. Order No.
socket
KD14.4199.151
2. Order No.
fuse drawer
4303.2024 .03
3. Bowden cable
(type of mounting /
dimensions in mm) *R a/200 b/180 c/40
*The Order No. for a customer specific
Bowden cable you'll get with the acknowledment.
Delivery time for a customer specific
Bowden cable sample approx. 2 weeks.
Standard Bowden cable sample,
Order No. 0886.0101, ex stock

## Remote Actuator Technology

The remote actuator cable assembly consists of a wire cable inside of a plastic insulated spiral wire casing. Identifying a proper routing of the cable assembly is important. Deviations from line to line placement will require bends in the cable with resulting losses in the overall assembly. These inefficiencies show up as friction losses and lost motion.
Frictional losses are increases in actuation force due to losses in the assembly. Lost motion is an undesirable difference between the input end of the assembly and the output end.
The principle element of lost motion is backlash and deflection.
Backlash is caused by the wire cable moving inside the casing with the change in direction of motion. It is the function of clearance between the wire cable and casing, plus the number of degrees of bend in the cable assembly. Deflection of the cable assembly, while usually low, can be minimized by anchoring the casing.
This is especially true in those applications of cable assemblies with long lengths and/or large degrees of bend in the system.
All of these losses and resulting inefficiencies can be reduced by the equipment designer through minimizing the total degress of bend in the assembly. Because of the number of variables effecting proper operation of any remotely actuated switch assembly, it is important that the ordering instructions shown above be used to determine proper cable length and to provide samples for customer approval.
Consult figure for minimum information required to describe cable assembly application.


Type S


Bowden cable assembly instruction
(1)

Drop Bowden barrel into seat of switch

(2) Slide clamp around cable

(3)

Bowden cable locked into assembly



Degrees of bend in assembly

