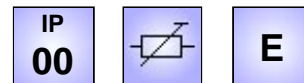




Type series FZ / FU
Type series FZB / FUB

12 – 1000 W for integration
12 – 300 W with threaded rod



Cemented (FZ) and uncemented (FU) wirewound tubular fixed resistor, degree of protection IP00.
Type series F.B. additionally with mounted threaded rod, fixing vertically to mounting surface.

Variable connections at the soldering, fast-on or screw clips* on the resistor.

*Particular specifications for „low ohmic values“ – for details please look on the following page

Technologies

- connection directly at the resistor
- optional, depending on construction size with screw, fast-on or soldering connection
- adjustable clips (Ags.) available (please mind the hints on this page and on the following one)
- with type series F.B.. only small mounting space is needed
- mounting in switch cabinets

We provide M3 screw connections for construction sizes with diameters D=16 and M4 with D=24/35/45 M5 with D=65. Also fast-on connections (6,3x0,8) are available for sizes with D=24/35/45.

For sizes with D=16 the soldering connections can also be used as fast-on connections (4,8x0,5).

You will find the electrical and mechanical data on the next page.

You will find indications for the relationship between load capacity and temperature on the surface as well as for the dimensioning of the resistor at short term load in chapter “Technical Details”, pages T103E-T108E.

Application

As ballast, limiting, filter or series resistors etc. for integration into devices and customised units. Our type series F.B.. is very well applicable in switch cabinets. We fix the threaded rod for you in a space-saving way. Efficient use in your manufacturing systems.

Special design

- various tube sizes as well as lower and higher ohmic values on request
- beginning with size D=24 also with temperature switch (TS) with fast-on connections 6,3 x 0,8
- soldering connections, pretinned

Type designation (standard)

Types with soldering connections (4,8x0,5)

size	without adjustable clips (Ags.)	with 1 Ags.	with n Ags.
D=16	FZ..x16A	FZ..x16AE	FZ..x16AnE

Types with fast-on connections (6,3x0,8, also solderable)

size	without adjustable clips (Ags.)	with 1 Ags.	with n Ags.
D=24	FZ..x24S	FZ..x24ST	FZ..x24SnT
D=35	FZ..x35S	FZ..x35ST	FZ..x35SnT
D=45	FZ..x45S	FZ..x45ST	FZ..x45SnT

Types with screw connections (M3 / M4 / M5)

size	without adjustable clips (Ags.)	with 1 Ags.	with n Ags.
D=16	FZ..x16	FZ..x16F	FZ..x16Fn
up to
D=65	FZ..x65	FZ..x65F	FZ..x65Fn

Hints for the versions with adjustable clips

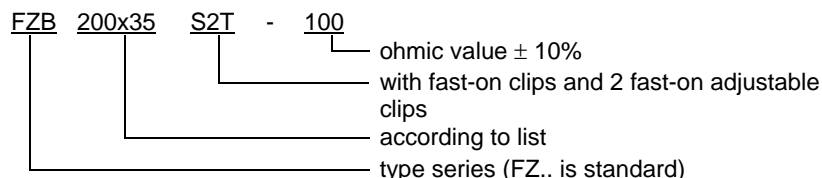
For the cemented fixed resistors with adjustable clip we decrease the available maximum ohmic value. Since otherwise while adjusting the clip, the danger of breaking the wire would be too large because of too thin wires. The adjustable clip may only be adjusted in a condition free of voltage and after sufficient loosening and cooling. All the adjustable clips of our fixed resistors in tubular version are equipped with silver contacts. When selecting please consider that the maximum surface temperature (ST) should not exceed 300°C.

Please consider as well that the resistance value may be reduced with versions where several adjustable clips are combined, especially in the lower range of ohmic values and with short tube lengths. In that case we have to select a higher total ohmic value.

Example of dimensioning and selection of a specific unit:

Adjustable power resistor for mounting into a switch cabinet with 2 additional taps: continuous dissipation 150 W; resistance value 100 Ω; rating 110 V DC, mounting by threaded rod on mounting plate, adjustable resistance taps by 2 adjustable clips, connection at fast-on clips,

Selected: FZB 200 x 35 S2T – 100 with continuous dissipation 150 W
Alternatively: FZB 160 x 45 S2T – 100 (continuous dissipation also 150W)





Type series FZ / FU
Type series FZB / FUB

12 - 1000 W for integration
12 – 300 W with threaded rod

Electrical and mechanical data

type series FZ.. (standard) /FU.. L x D	typical power in W at 40°C, 100% DCF and 300°C ST	production range Ω-Wert					dimension in mm						approx. weight in g
		for screw clips	for soldering and fast-on clips from	with adjustable clip	without adjustable clip	with adjustable clip(s) up to	B	E	only for types with screw clips F*		G	only type series FZB./ FUB. T	
F. 50x16..	12	0,27	0,27	0,68	6,8k	1,8k	20	34	33	M3	33	72	40
F. 63x16..	18	0,39	0,39	1,0	10k	2,7k	20	45	33		33	87	50
F. 100x16..	34	0,68	0,68	1,8	18k	4,7k	20	82	33		33	122	60
F. 75x24..	32	0,1	0,33	1,8	18k	3,9k	28	55	34	M4	44	97	100
F. 100x24..	44	0,15	0,47	2,2	27k	5,6k	28	78	34		44	122	120
F. 165x24..	80	0,33	1,0	3,9	39k	10k	28	137	34		44	190	190
F. 265x24..	140	0,56	1,8	8,2	68k	15k	28	237	34		44	290	300
F. 100x35..	65	0,22	0,68	1,0	22k	8,2k	38	78	44	M4	53	122	160
F. 135x35..	100	0,33	1,0	2,2	33k	12k	38	113	44		53	155	210
F. 200x35..	150	0,56	1,8	8,2	47k	15k	38	172	44		53	220	290
F. 330x35..	250	1,0	2,7	12	82k	27k	38	282	44		53	350	460
F. 160x45..	150	0,47	6,8	6,8	33k	10k	48	125	54	M4/ M5**	63	178	340
F. 200x45..	180	0,68	10	10	39k	12k	48	164	54		63	220	450
F. 300x45..	300	1,2	15	15	56k	18k	48	250	54		63	320	560
F. 300x65..	430	6,8	special design	20	47k	18k	68	250	80	M5	90	special design	1100
F. 400x65..	600	10		30	68k	22k	68	350	80		90		1400
F. 500x65..	800	12		39	82k	33k	68	450	80		90		1800
F. 600x65..	1000	15		47	100k	39k	68	550	80		90		2100

*when equipped with an additional adjustable clip, maximum dimension for the version with screw connection is dimension G instead of dimension F! (Comparable to types with fast-on connection) ** for smaller resistor values M5, more details on request

