

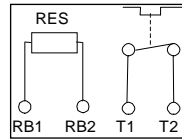


Type series FZM / FZZM / FZDM

65 – 3000 W with terminals



FZM 400x65



Cemented wirewound tubular fixed resistor in one-, two- or three-tube design, degree of protection IP20 if mounted on an appropriate surface, with side-panels and perforated cover. Fixing parallel to mounting surface, with two connections wired on porcelain terminals

- ① if mounted on an appropriate surface
- ② terminals protected against access to hazardous parts according to BGV A2
- ③ optional for D = 45 and 65, type designation then FZ.M.U or FZ.M.QU.. (version with device terminals G10/G5)

### Technologies

- with side-panels, perforated cover and terminals
- version protected against access to hazardous parts
- connections at two-pole porcelain terminal up to 20A
- integration into the switch cabinets

**Option: temperature switch (..Q)**  
- beginning with size D = 45 mm only!

This type can be equipped with a 180° C temperature switch (TS) for temperature monitoring. It is wired on porcelain terminals and monitors an overloading of the resistor by a normally closed contact free of potential (NCC). This signal has to be considered by the customer e.g. by a warning or disconnection of the mains. (Restrictions please look on page T105E)

**Warning:** There will not be a disconnection of the resistor!  
Type designation then: FZ.MQ ...

Contact rating of the signal contact:

- 2 A / 24 VDC (DC11)
- 2 A / 230 VAC (AC11)

You will find suggestions for the dimensioning of the resistor for continuous and short term load at chapter Technical Details, pages T106E and T107E.

### Application

An important application is the use as braking resistor for motor/generator drive of motors with frequency converters where small power ratings are required. Various applications derive from the compact construction form for integration into switch cabinets.

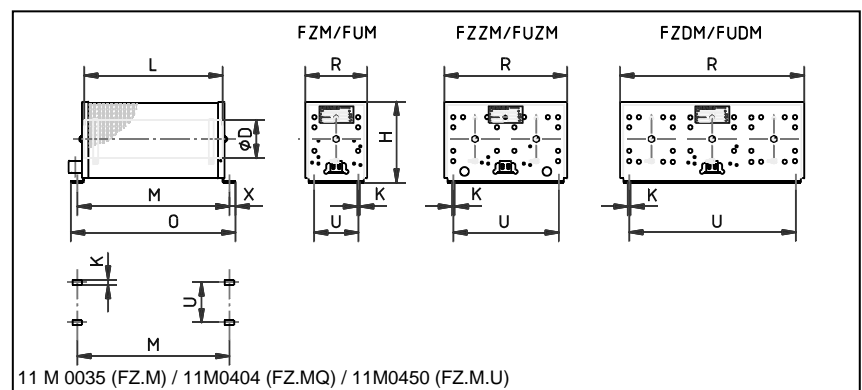
### Special design

- Version of low inductance by bifilar winding and therefore of low-noise

### Electrical and mechanical data

Type series FZ.M.. without TS	typical power in W at 40°C, 100% DCF	production range Ω-value		dimensions in mm							approx. weight in kg	
		from	up to	H	K	M	O*	R	U	X		
FZ.MQ.. with TS												
L x D												
FZM 100x35	65	0,22	18k	77	4,5	122	140	66	44	10	0,5	
FZM 135x35	100	0,33	10k	77	4,5	157	175	66	44	10	0,6	
FZM 200x35	150	0,56	6,8k	77	4,5	222	240	66	44	10	0,7	
FZM 330x35	250	1,0	4,7k	77	4,5	352	370	66	44	10	1,1	
FZM 160x45	150	0,47	6,8k	87	5,8	186	210	75	48	10	0,7	
FZM 200x45	180	0,68	5,6k	87	5,8	226	250	75	48	10	0,8	
FZM 300x45	300	1,2	3,9k	87	5,8	326	350	75	48	10	1,1	
FZM 200x65	300	4,7	3,9k	120	6,5	230	250	92	64	10	1,2	
FZM 300x65	430	6,8	2,7k	120	6,5	330	350	92	64	10	1,7	
FZM 400x65	600	10	1,8k	120	6,5	430	450	92	64	10	2,2	
FZM 500x65	800	12	1,5k	120	6,5	530	550	92	64	10	2,7	
FZM 600x65	1000	15	1,0k	120	6,5	630	650	92	64	10	3,3	
FZZM 300x65	860	3,9	1,2k	120	6,5	326	350	185	150	10	3,4	
FZZM 400x65	1200	5,6	1,0k	120	6,5	426	450	185	150	10	4,2	
FZZM 500x65	1600	6,8	680	120	6,5	526	550	185	150	10	5,1	
FZZM 600x65	2000	8,2	560	120	6,5	626	650	185	150	10	6,1	
FZDM 300x65	1300	3,3	820	120	6,5	326	350	275	240	10	5,4	
FZDM 400x65	1800	4,7	560	120	6,5	426	450	275	240	10	6,4	
FZDM 500x65	2400	6,8	470	120	6,5	526	550	275	240	10	7,4	
FZDM 600x65	3000	8,2	390	120	6,5	626	650	275	240	10	8,7	

\* for version FZ.MQ.. dimension O is 25 mm larger  
for version FZ.M.U.. dimension O is 35 mm larger



Example: Continuous dissipation 1200 W, resistance value 56 Ω with temperature switch  
Order designation: FZZMQ 400x65 – 56