



Type series FGHD 31..

1,0 – 12 kW with 2 terminals,
for integration into switch cabinet



Steel-grid fixed resistor, degree of protection IP 20 in fixed condition, in zinc plated steel sheet enclosure with 2 feed-through terminals for the resistor, that are integrated into the side-panel end plates, protected against contact according to BGV A2. Optional also with temperature switch (TS).

① if mounted on an appropriate surface

② optional, type designation would be FGHD.U 31..

Technologies

- low priced type, very compact design
- for middle power ratings up to 12 kW
- for space saving integration into a switch cabinet
- optional with temperature switch wired on two terminals. Type designation would be FGHDQ. 31...

The given power rating values are valid for 100%CD (continuous dissipation). For short time operation you will find the values in the following table as a function of the duty cycle factor (DCF). Just multiply by the corresponding overload factor (OLF).

DCF	60%	40%	25%	15%	6%
OLF	1,5	2,2	3,0	4,0	7,6

These overload factors are valid for a total cycle time of maximum 120 s

You will find further details in chapter Technical Details pages T613E to T620E.

Application

An important application is the use as braking resistor for motor/generator drive of motors with frequency converters, where middle power ratings are to be integrated into a switch cabinet in a space saving way.

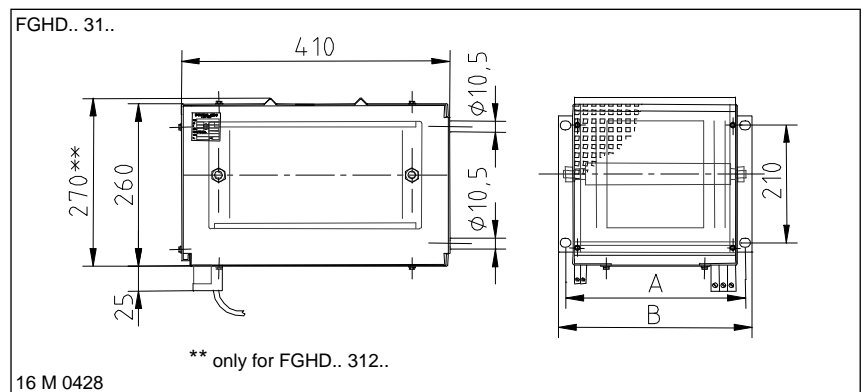
Warning

The user has to make sure that large dissipations are removed. We recommend an adequate forced ventilation.

Electrical and mechanical data

Type FGHD. 31.. without TS, FGHDQ. 31.. with TS	typical power in kW at 40°C and 100% DCF	production range Ω-value		max. number of steel-grids corresp. to given device size	dimensions in mm		max. weight in kg
		from	to		A	B	
FGHD..31502..	1,0	0,05	11	2	170	195	6,0
FGHD..31503..	1,5	0,07	16	3	170	195	6,5
FGHD..31504..	2,0	0,09	22	4	170	195	7,0
FGHD..31005..	2,5	0,11	28	5	270	295	7,5
FGHD..31007..	3,5	0,15	39	7	270	295	8,5
FGHD..31009..	4,5	0,20	50	9	270	295	9,5
FGHD..31112..	6,0	0,26	67	12	370	395	12
FGHD..31114..	7,0	0,31	78	14	370	395	13
FGHD..31216..	8,0	0,35	89	16	570	595	18
FGHD..31220..	10,0	0,44	112	20	570	595	20
FGHD..31224..	12,0	0,53	134	24	570	595	22

This table represents only a selection of our programm. All numbers of steel-grids corresponding to our types between 2 pc. (1,0 kW) und 24 pc. (12 kW) are available. Type code and selection of units see Technical Details pages T613E to T620E.



Example of dimensioning and selection of a specific unit:

One phase braking resistor for frequency converter drive with temperature switch, short time dissipation 24 kW at 15% DCF, total cycle time shorter than 120 s, intermediate voltage circuit 650V; resistance value 18 Ω; calculating of continuous dissipation: 24 kW : 4,0 = 6,0 kW; chosen: FGHDQ 3111204 - 18

FGHDQ 311 12 04 - 18

- ohmic value ± 10%
- no. of terminals(2) + 2 terminals for TS
- number of steel-grids
- type series