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**Nominal data**

| Type                     | 412               |          |
|--------------------------|-------------------|----------|
| Nominal voltage          | VDC               | 12       |
| Nominal voltage range    | VDC               | 10 .. 14 |
| Speed                    | min <sup>-1</sup> | 6000     |
| Power input              | W                 | 0.9      |
| Min. ambient temperature | °C                | -20      |
| Max. ambient temperature | °C                | 70       |
| Air flow                 | m <sup>3</sup> /h | 10       |
| Sound power level        | B                 | 3.8      |
| Sound pressure level     | dB(A)             | 18       |

ml = max. load · me = max. efficiency · fa = running at free air · cs = customer specs · cu = customer unit  
Subject to alterations



## Technical features

|                              |   |
|------------------------------|---|
| <b>General description</b>   | <p>Particular design features:<br/>           Compact fan with low power consumption.<br/>           Some models suitable for use at high ambient temperatures.</p> <p>General features:<br/>           Material: fibreglass-reinforced plastic. Impeller PA, housing PBT.<br/>           Electronic commutation completely integrated.<br/>           Protected against reverse polarity and locking.<br/>           Connection via single strands AWG 28, TR 64, bared and tin-plated.<br/>           Air exhaust over bars. Direction of rotation counter-clockwise seen on rotor.<br/>           Masse: 17 g.</p> |
| <b>Mass</b>                  | 0.027 kg  |
| <b>Dimensions</b>            | 40 x 40 x 20 mm   |
| <b>Material of impeller</b>  | Fiberglass-reinforced PA plastic  |
| <b>Housing material</b>      | Fiberglass-reinforced PBT plastic   |
| <b>Direction of air flow</b> | Air exhaust over bars   |
| <b>Direction of rotation</b> | Left, looking at rotor  |
| <b>Bearing</b>               | Sintec sleeve bearing   |
| <b>Lifetime L10 at 20 °C</b> | 50000 h   |
| <b>Lifetime L10 at 60 °C</b> | 20000 h   |
| <b>Connection line</b>       | Single strands AWG 28, TR 64, bared and tin-plated.   |
| <b>Motor protection</b>      | Protected against reverse polarity and locking.   |
| <b>Approval</b>              | VDE, CSA, UL  |



## Charts: Air flow

