

\*\*\* SPARE PART\*\*\* SIMATIC DP, DISTRIBUTED I/O ET200X:  
EM148-FC, FREQUENCY CONVERTER, 1.5KW INTEGR.  
NETWORK FILTER, CONNECTION TO DESINA, IP65

General information	
Protection function	
• Undervoltage protection	Yes
• Overvoltage protection	Yes
• Ground-fault protection	Yes
• Short-circuit protection	Yes
• Stall protection	Yes
• Temperature monitor for motor	Yes
• Temperature monitor for converter	Yes
Supply voltage	
Input voltage acc. to VDE	
• permissible range, lower limit (AC)	340 V
• permissible range, upper limit (AC)	500 V
Input voltage acc. to UL	
• permissible range, lower limit (AC)	340 V
• permissible range, upper limit (AC)	480 V
Line frequency	
• permissible range, lower limit	47 Hz
• permissible range, upper limit	63 Hz
Mains filter	
• integrated	Yes; Type A (to EN 55011)
Operations for mains buffering time (20 ms)	
• Maximum current for $U_e < 380 \text{ V}$	1.85 A; at 3.8 A approx. 8 ms
• Maximum current for $U_e \geq 380 \text{ V}$	2.1 A; at 3.8 A approx. 8 ms
Input current	
from load voltage L+ (without load), max.	125 mA
from backplane bus 5 V DC, max.	50 mA
Continuous current on continued looping of the supply voltage, max.	16 A
Output current	
Continuous output current at 40 °C	

• at 2 kHz and 4 kHz, max.	3.8 A; Continuous currents > 1.9 A are only permissible if at least one of the following conditions is met: - Ambient temperature < 50 °C - Input continuous current when looping through the load supply voltage < 8 A
• at 8 kHz, max.	3 A; Continuous currents > 1.9 A are only permissible if at least one of the following conditions is met: - Ambient temperature < 50 °C - Input continuous current when looping through the load supply voltage < 8 A
• at 16 kHz, max.	1.45 A
<b>Continuous output current at 55 °C</b>	
• at 2 kHz and 4 kHz, max.	2.1 A; Continuous currents > 1.9 A are only permissible if at least one of the following conditions is met: - Ambient temperature < 50 °C - Input continuous current when looping through the load supply voltage < 8 A
• at 8 kHz, max.	1.7 A
• at 16 kHz, max.	1.05 A

<b>Power</b>	
Efficiency	97 %

<b>Power loss</b>	
in intermittent operation, max.	70 W
in continuous operation, max.	42 W

<b>Interrupts/diagnostics/status information</b>	
Diagnostic functions	Yes
<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnostics indication LED</b>	
• Group error SF (red)	Yes
• Status indicator STAT (yellow)	Yes
• Monitoring the power supply, power module PWR (green)	Yes

<b>Drive technology</b>	
Motor output, cable length max.	10 m
Overload capability	150 %; for 60 s, relative to rated current
Output frequency, min.	0 Hz
Output frequency, max.	300 Hz
Output frequency, resolution	0.01 Hz
<b>Control/mode</b>	
• V/f characteristic	Yes
• four quadrants	Yes

<b>Motor</b>	
Power factor (cos phi), min.	0.7
Number of poles	2, 4 or 6

Motor brake	AC (rated voltage according to infeed supply voltage) / max. 1 A
• short-circuit proof	No; internal fuse 4 A provided
Thermistor	Response range about 4 to 5 kohms; channel-related error message: overload
Rated motor power at 3 x 400 V AC	
• acc. to VDE, max.	1.5 kW
• acc. to UL, max.	2 hp
Potential separation	
between the load voltages	Yes
between load voltage and all other switching components	Yes
Dimensions	
Width	120 mm
Height	265 mm
Depth	181 mm
Weights	
Weight, approx.	3 kg
<b>last modified:</b>	08/12/2017