

EL 450 D4 O 01

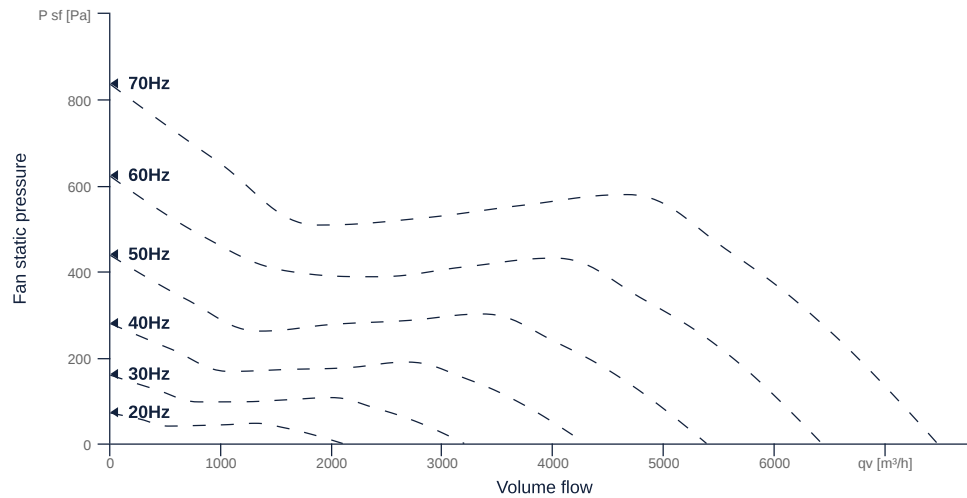
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- Innovative, high-efficiency diagonal fan
- The benchmark for efficiency since 2007
- Optimally tuned, CFD-optimized aerodynamics
- Efficient IE3 motor, frequency controllable
- Conveyed medium temperature up to 60 °C in continuous operation
- Housing made of aluminium AlMg3
- Attention! See note in the operating manual at FU-operation



FAN CURVES

Name	Value	Unit
Volume flow	0	m ³ /h
Pressure	0	Pa



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ruck

GENERAL DATA

Name	Value	Unit	Formula symbol
Labeling	CE, UKCA		
Duct size	-		$W \times H_{duct}$
Pipe connection size (DN)	DN450		DN
Rated voltage (entire device)	400	V	U_{rated}
Phases (entire device)	3~		phase
Electrical protection (entire device)	6 A		fuse
Housing material	Aluminium		matcasing
Impeller material	Aluminium		matimpeller
Weight	26.5	kg	m
Fan type	Diagonal		Fan _{type}
Category / Installation situation	B		cat

MAXIMAL DATA

Name	Value	Unit	Formula symbol
Max. power consumption (device)	1132	W	$P_{ed, max}$
Max. operating current (device)	2.16	A	$I_{ed, max}$
Max. speed	2070	1/min	n_{max}
Max. stat. efficiency	55	%	η_{es}
Max. fan efficiency	59.2	%	η_e
Max. flowrate	7470	m ³ /h	$Q_{v, max}$
Max. stat pressure	840	Pa	$p_{sf, max}$
Max. medium temperature	60	°C	$T_{m, max}$
Max. environment temperature	60	°C	$T_{amb, max}$
Min. environment temperature	-30	°C	$T_{amb, min}$



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MOTOR DATA

Name	Value		Unit	Formula symbol
	50 Hz	60 Hz		
Rated frequency (device)		50		f
Motor type		AC 3~		phase
Control type		frequency-controlled		ctrltype
Installation type		IRM (In)		install
Rotation direction		right		rotation
Isolation class		ISO F		ISOclass
Protection class		IP55		IPmotor
Is pole-changeable		No		polexch
Type of power supply		AC 3~		pwrsupmotor
Number of poles (1)		4.000000		num polesw1
Connection	Δ	Y		wiringw1
Connection (wiring 2)	Y			wiringw2
Rated voltage	230	460	V	U _{rated, f1}
Rated voltage (wiring 2)	400		V	U _{rated, f2}
Rated current	4.17	2.1	A	I _{rated, f1}
Rated current (wiring 2)	2.4		A	I _{rated, f2}
Shaft power	1100	1100	W	P _{out, f1}
Shaft power (wiring 2)	1100		W	P _{out, f2}
Speed	1455	1760	1/min	n _{f1}
Speed (wiring 2)	1455		1/min	n _{f2}
Starting current	31.7	17.9	A	I _{start, f1}
Starting current (wiring 2)	18.2		A	I _{start, f2}
Efficiency	84.8	86.5	%	η _{m, f1}
Efficiency (wiring 2)	84.8		%	η _{m, f2}
Efficiency class	IE3	IE3		IE _{motor}
Min. temperature	-20		°C	T _{motor, min}
Cos Phi	0.780000	0.760000		cos φ
UL-Certification motor		UL recognized		ULcert



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ERP DATA (LOT11)

Name	Value	Unit	Formula symbol
Speed at the energy efficiency optimum	2052	1/min	n_{opt}
Efficiency level	73.2	%	N
Efficiency category	total		cat _{efficiency}
Input power of the motor at the energy efficiency optimum	1.13	kW	$P_{e, opt}$
Overall efficiency	83.2	%	η_{ges}
Measurement category	B		meas cat
Fan pressure at energy efficiency optimum	557	Pa	$p_{f, opt}$
Flowrate at energy efficiency optimum	5008	m ³ /h	$Q_{v, opt}$

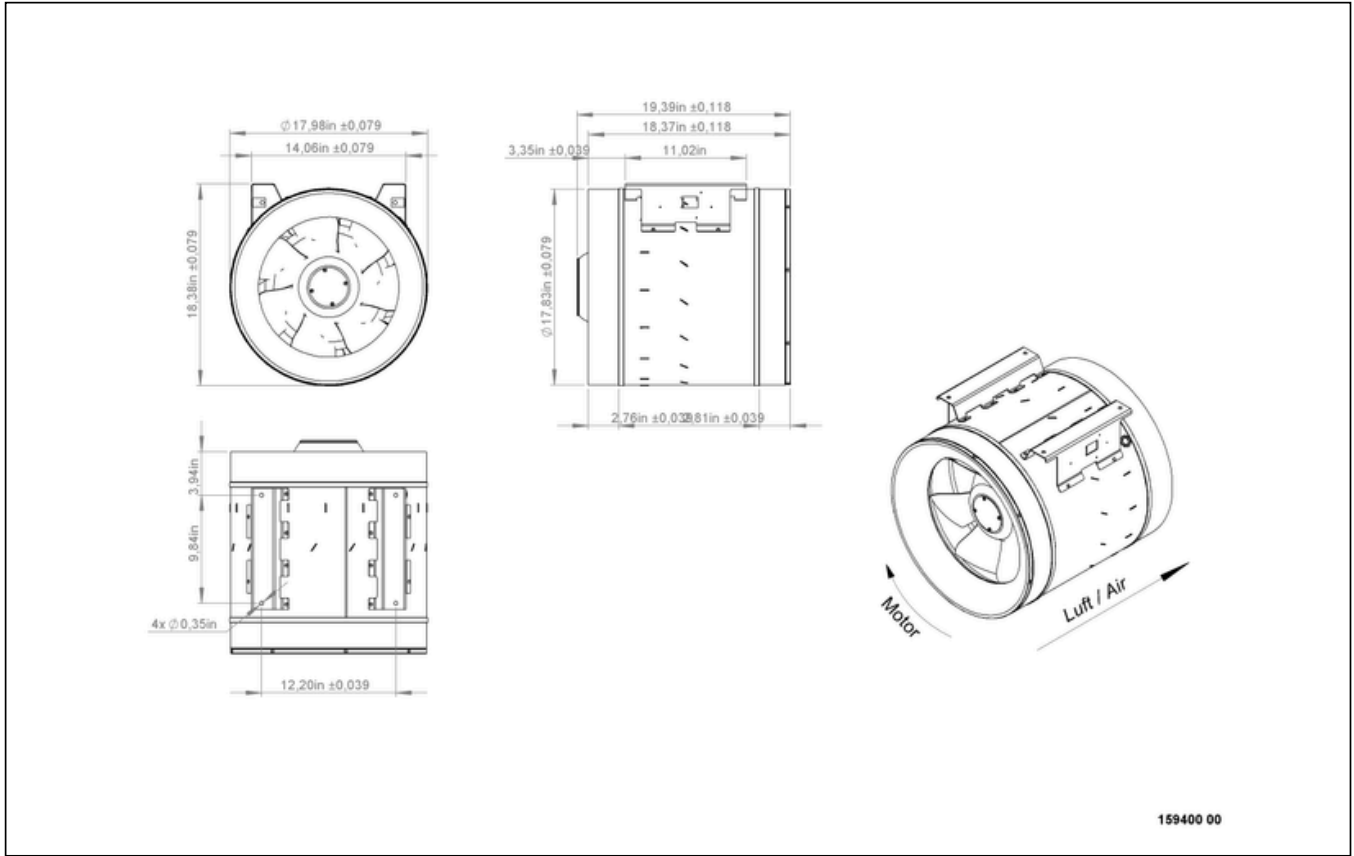


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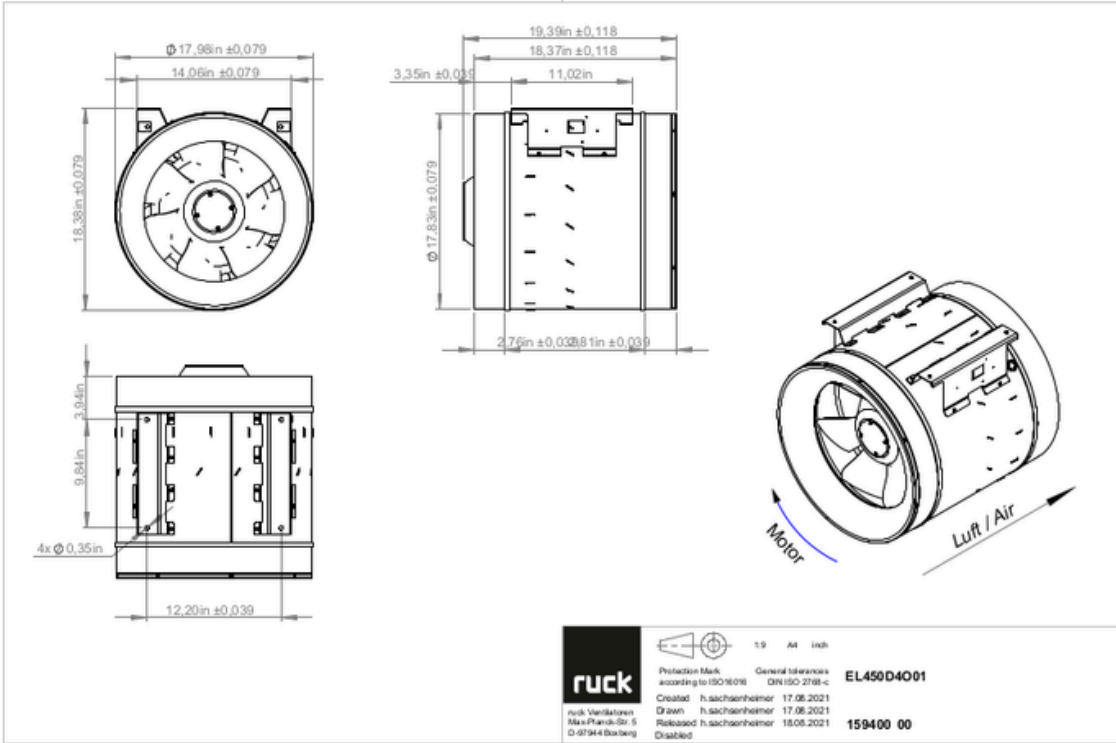
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CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS



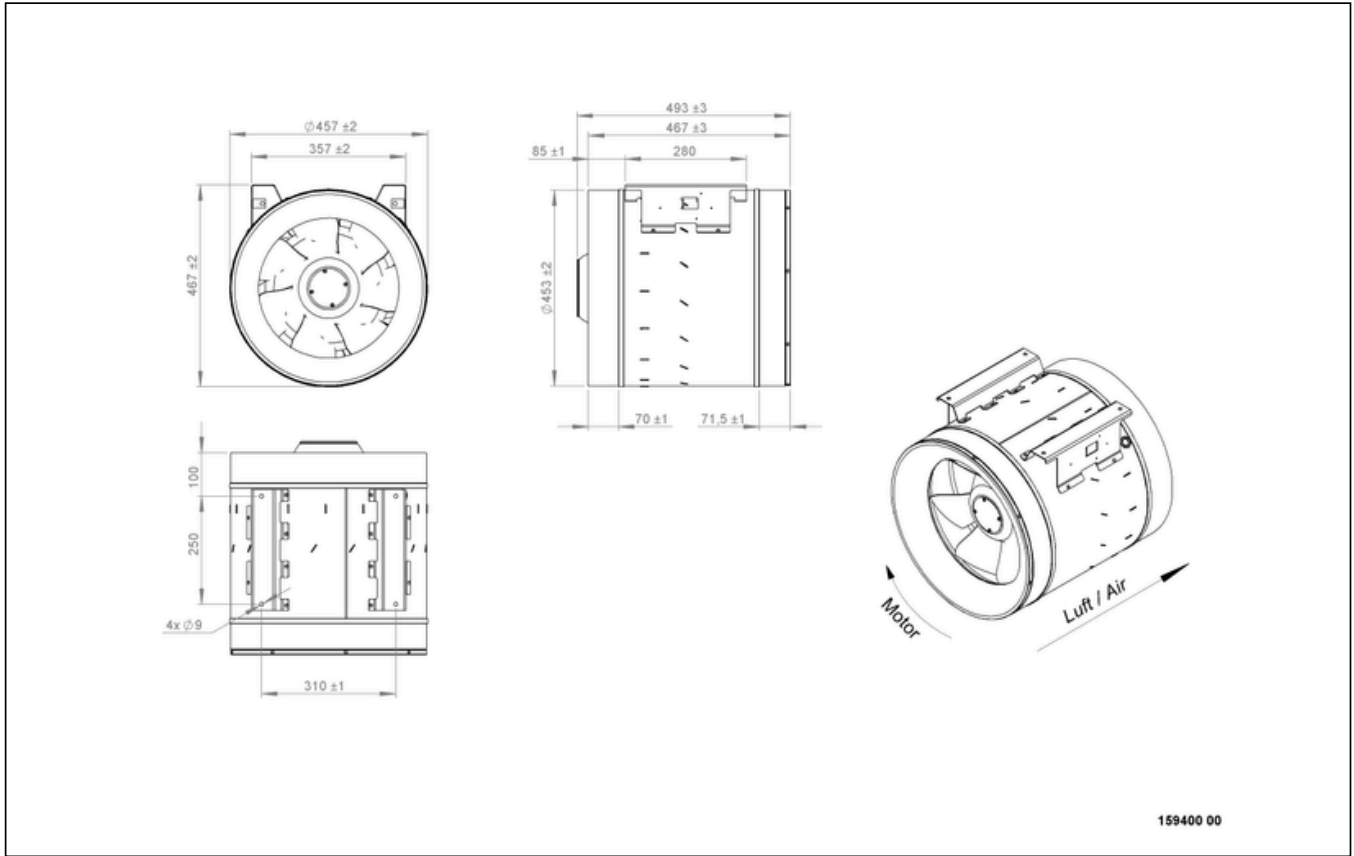
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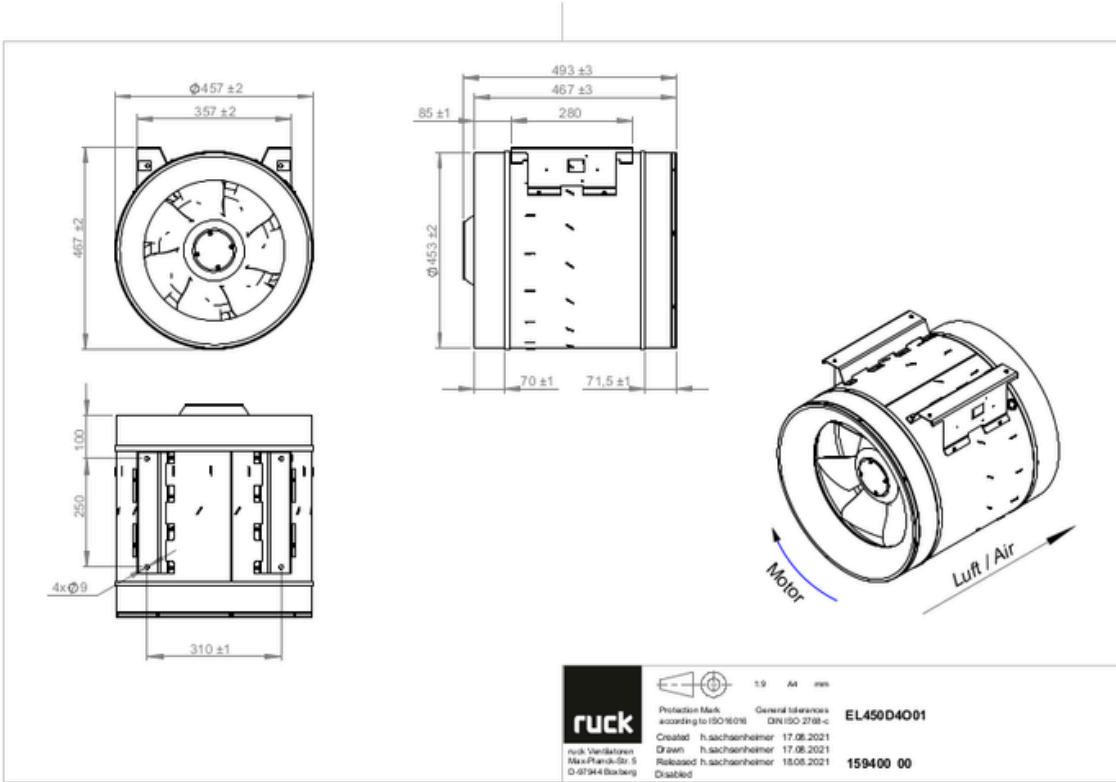
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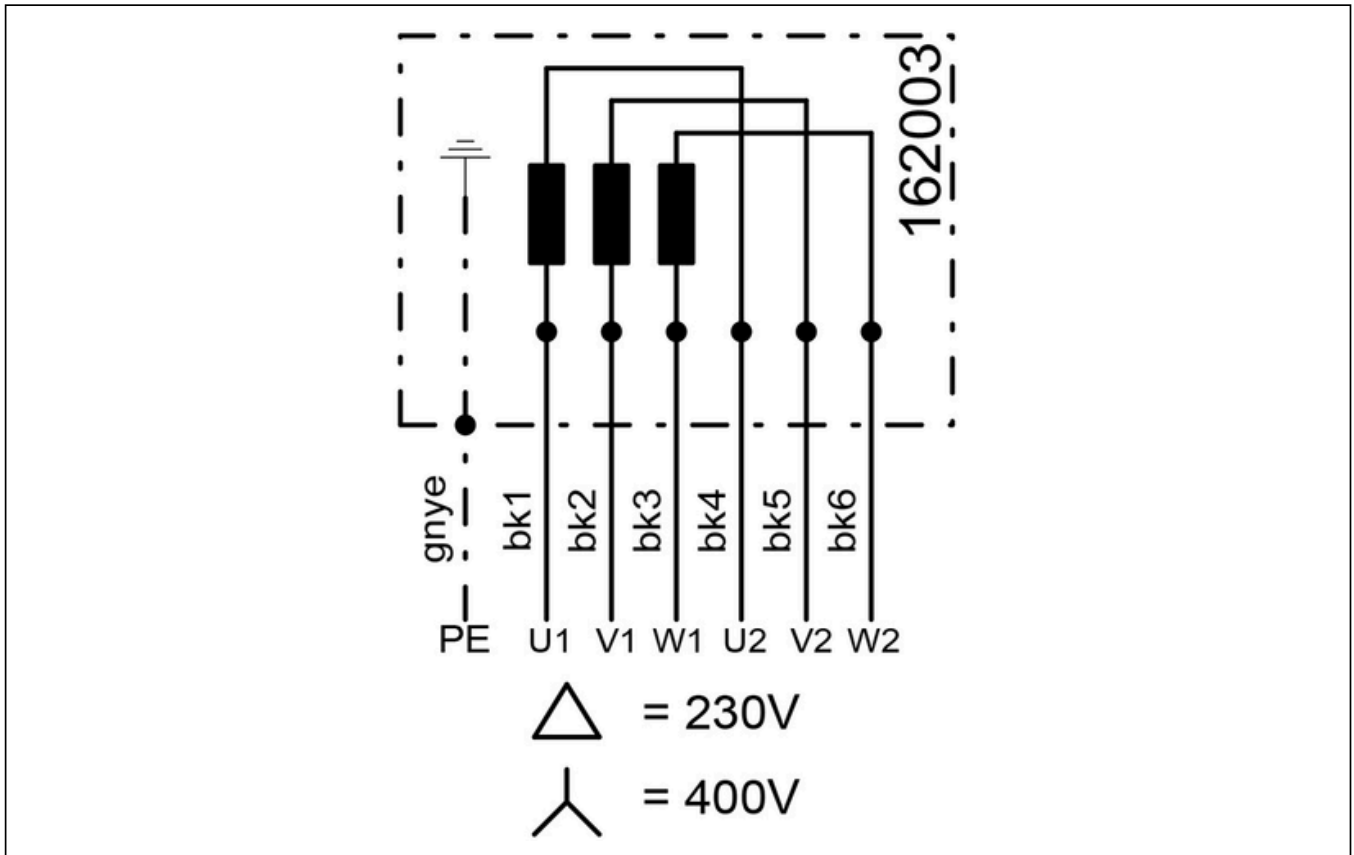
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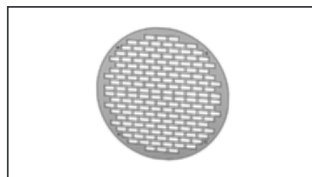
MECHANICAL ACCESSORIES

VM 450 | 119495



- Fast clamps for sound decoupling and sealing
- Galvanized steel sheet, 5 mm
- Neopren gasket
- 1 Pack = 2 pieces

SG 450 02 | 119411



- Inlet protection grille for Etaline
- Galvanized steel sheet

SDS 450 | 169613



- Rigid tube silencer
- Galvanized steel sheet
- Sound insulation packing 50 mm (mineral wool)



ELECTRICAL ACCESSORIES

MS 02 | 140409



- Motor protection switch with Isolator switchfunktion
- $I_{max} = 400\text{ V}$, 50/60 Hz
- Max. 1.5 kW
- Protection class IP 55

MTP 20 | 128146



- Potentiometer 10 kΩ
- Switching contact 1A/250V AC - 2,5A/12V DC
- Max. ambient temperature 50 °C
- VDE

MTP 30 | 143289



- Stepped potentiometer 10 kΩ
- Step 1 + 2 settable 10 % - 100 % Vdc
- Step 3 100 % Vdc
- Supply voltage +10 Vdc

MTP 40 | 147359



- Potentiometer 10 kΩ
- Connection in terminal box
- Max. ambient temperature 50 °C
- PU: 20 pieces

SEN AIR | 148641



- Airflow and temperature transducer
- Measuring range temperature 0...+50 °C
- With adjustable switching threshold (air speed)
- Measuring range air velocity up to 20 m/s

CON P1000 | 115259



- Constant pressure control
- Actual value display possible via optional control unit
- Output 0-10 V DC + FC enable + setpoint reached
- Pressure setting by means of decade switch

FU 15 44 | 161790



- Frequency converter
- Supply voltage 230 V 1~ 50/60 Hz
- Output voltage 0 - 230 V 3~
- Protection class IP 20, for switch cabinet

FU 15 45 | 161791



- Frequency converter IP66
- Supply voltage 230 V 1~ 50/60 Hz
- Output voltage 0 - 230 V 3~
- Fire mode function (smoke extract fans)

FU 15 46 | 161792



- Frequency converter
- Supply voltage 400 V 3~ 50/60 Hz
- Output voltage 0 - 400 V 3~
- Protection class IP 20, for switch cabinet

FU 15 47 | 161793



- Frequency converter
- Supply voltage 400 V 3~ 50/60 Hz
- Output voltage 0 - 400 V 3~
- Fire mode function (smoke extract fans)

MTP 50 | 168752



- Potentiometer with multifunction output
- 230 VAC ±10 % / 50-60 Hz
- Selectable output: 1-10 VDC / 2-20 mA / 10-100 % PWM
- Min. and max. output value adjustable

