

EL 500 EC K 01

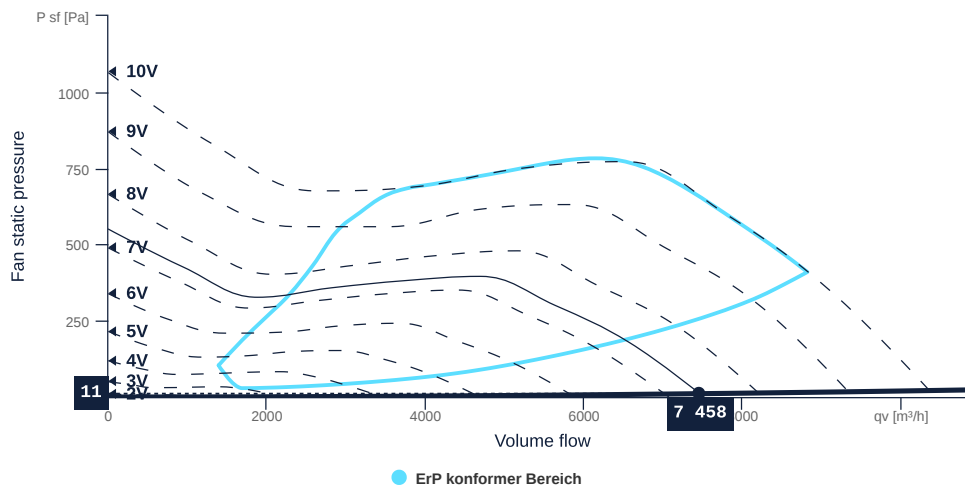
160059

- Innovative, high-efficiency diagonal fan
- Optimally tuned, CFD-optimized aerodynamics
- The benchmark for efficiency since 2007
- High efficiency EC motor, steplessly controllable
- Conveyed medium temperature up to 40 °C in continuous operation
- Housing made of aluminum



FAN CURVES

Name	Value	Unit
Volume flow	7458	m³/h
Pressure	11	Pa



to the product detail page

EL 500 EC K 01

160059



TECHNICAL SPECIFICATIONS

Name	Value	Unit	Formula symbol
Volume flow	7458	m³/h	QV _{calc}
Pressure	11	Pa	psf _{calc}
Fan pressure	77	Pa	pf
Fan static pressure	11	Pa	psf
Current consumption Motor	1	A	I _e
Electrical power consumption	745	W	P _{ek}
Control voltage	7	V	U _{ctrl}
Rotation speed	1503	1/min	N
Total static efficiency	3	%	etaFaPeK
Total efficiency	21	%	etatPeK
SFP (entire device)	359	W/(m³/s)	sfp _{device}
Sound power level inlet	83	dB(A)	LwA5
Sound power level outlet	87	dB(A)	LwA6
Sound power level housing radiation	75	dB(A)	LwA2

SOUND DATA

Sound power	mid-frequency tape										Unit	Formula symbol
	Σ	63	125	250	500	1000	2000	4000	8000	16000		
suction	83	40	72	72	76	78	77	75	63	47	dB(A)	LwA5
blowout	87	41	76	78	83	82	79	76	66	49	dB(A)	LwA6
Casing break out	76	38	54	67	70	72	68	65	51	40	dB(A)	LwA2

SOUND PRESSURE LEVEL CALCULATOR

Name	Value	Unit
Enveloping surface	Halphsphere	
Distance	3	m

Sound pressure	NR	mid-frequency tape										Unit	Formula symbol
		Σ	63	125	250	500	1000	2000	4000	8000	16000		
suction	61	66	23	54	55	59	60	60	58	46	29	dB(A)	LwA5
blowout	65	70	24	58	60	65	64	62	59	48	32	dB(A)	LwA6
Casing break out	54	58	21	36	50	52	54	51	47	34	22	dB(A)	LwA2



to the product detail page

EL 500 EC K 01

160059

ruck

GENERAL DATA

Name	Value	Unit	Formula symbol
Labeling	CE, UKCA		
Duct size	-		$W \times H_{duct}$
Pipe connection size (DN)	DN500		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	24.8	kg	m
Fan type	Diagonal		Fan _{type}
Category / Installation situation	B		cat

MAXIMAL DATA

Name	Value		Unit	Formula symbol
	50 Hz	60 Hz		
Max. power consumption (device)	2085	2085	W	$P_{ed, max}$
Max. operating current (device)	3.18	3.18	A	$I_{ed, max}$
Max. speed	2100	2100	1/min	n_{max}
Max. stat. efficiency	64.2	64.2	%	η_{es}
Max. fan efficiency	69.3	69.3	%	η_e
Max. flowrate	10430	10430	m ³ /h	$q_{v, max}$
Max. stat pressure	1060	1060	Pa	$p_{sf, max}$
Max. medium temperature	40	40	°C	$T_{m, max}$
Max. environment temperature	40	40	°C	$T_{amb, max}$
Min. environment temperature	-20	-20	°C	$T_{amb, min}$



to the product detail page

MOTOR DATA

Name	Value		Unit	Formula symbol
	50 Hz	60 Hz		
Rated frequency (device)		50		f
Motor type		EC		phase
Control type		stepless-controlled		ctrltype
Installation type		IRM (In)		install
Rotation direction		right		rotation
Isolation class		ISO F		ISOclass
Motor-protection		TEC		protectmotor
Protection class		IP55		IPmotor
Is pole-changeable		No		polexch
Type of power supply		AC 3~		pwsupmotor
Rated voltage	400		V	U _{rated, f1}
Rated current	4.28		A	I _{rated, f1}
Shaft power	2200		W	P _{out, f1}
Speed	3000		1/min	n _{f1}
Efficiency	86.4		%	η _{m, f1}
Min. temperature	-20		°C	T _{motor, min}
Cos Phi	0.900000	0.000000		cos φ
UL-Certification motor		None		ULcert

ERP DATA (LOT11)

Name	Value	Unit	Formula symbol
Speed at the energy efficiency optimum	2095	1/min	n _{opt}
Efficiency level	73.8	%	N
Efficiency category	total		cat _{efficiency}
Input power of the motor at the energy efficiency optimum	2.2	kW	P _{e, opt}
Overall efficiency	80.7	%	η _{ges}
Measurement category	B		meas cat
Fan pressure at energy efficiency optimum	783	Pa	p _{f, opt}
Flowrate at energy efficiency optimum	7011	m³/h	q _{v, opt}

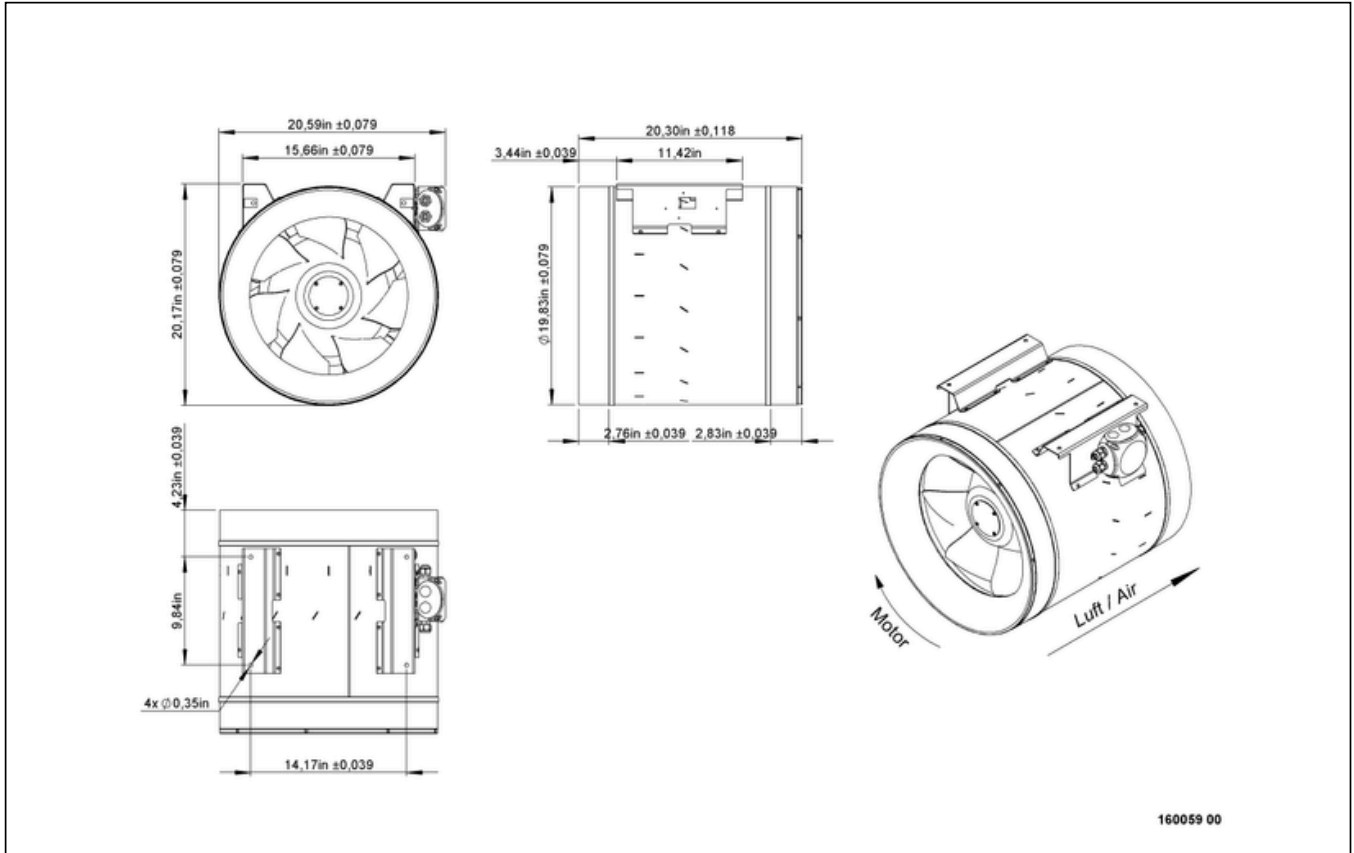


to the product detail page

EL 500 EC K 01

160059

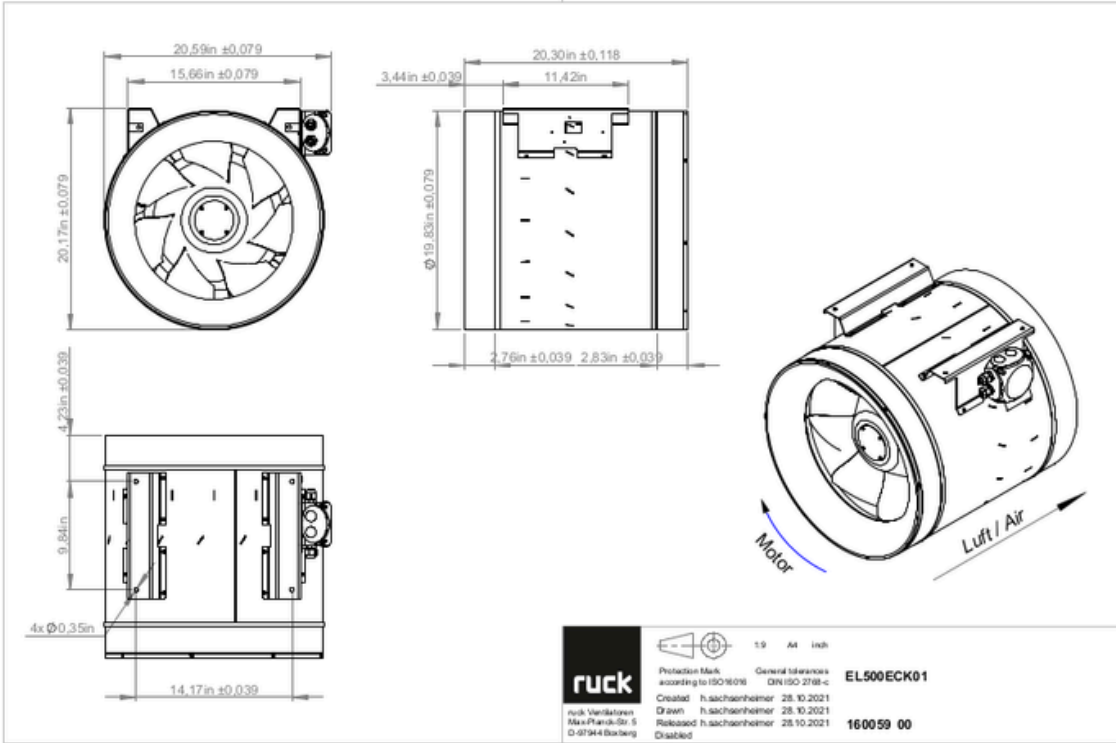
CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS



to the product detail page

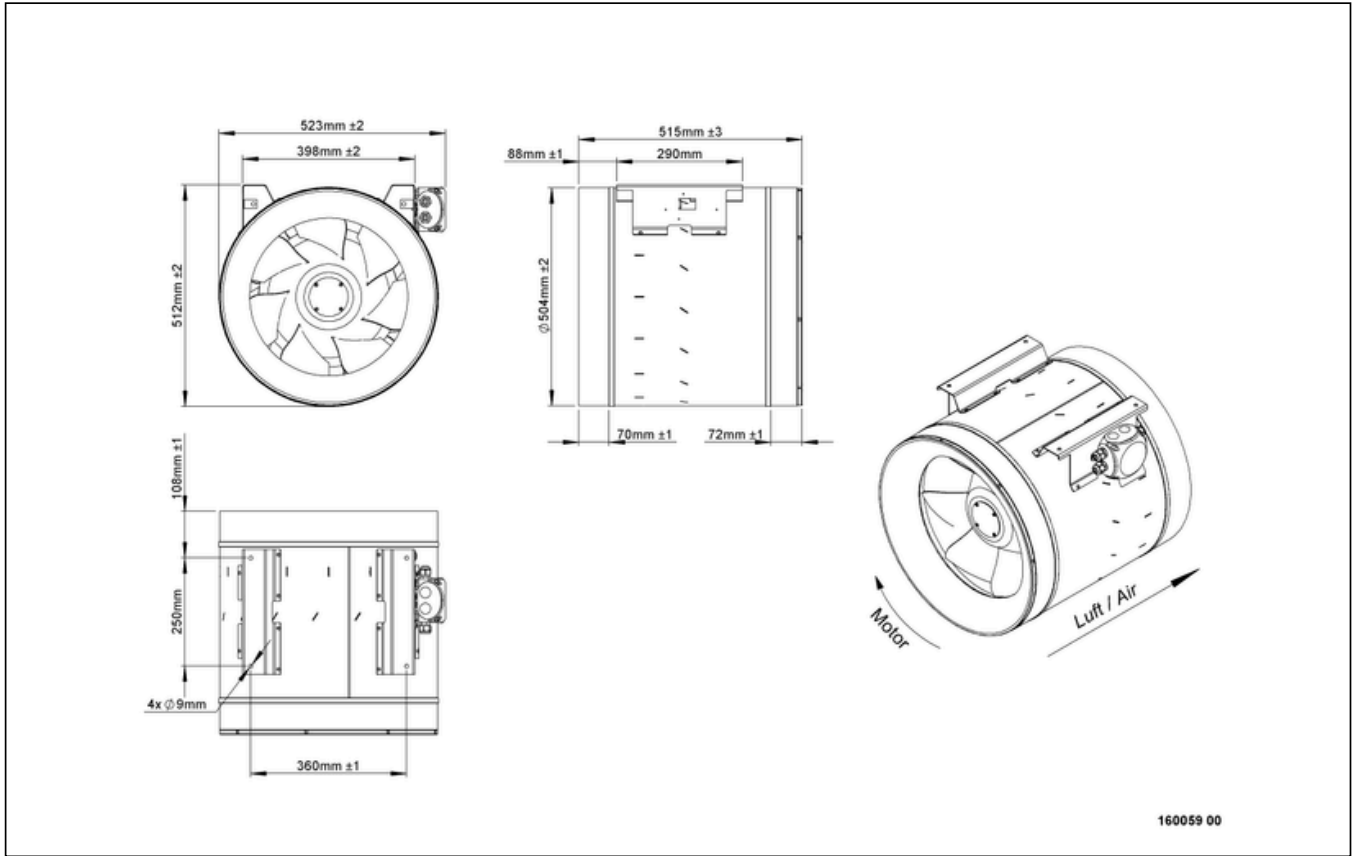
EL 500 EC K 01

160059



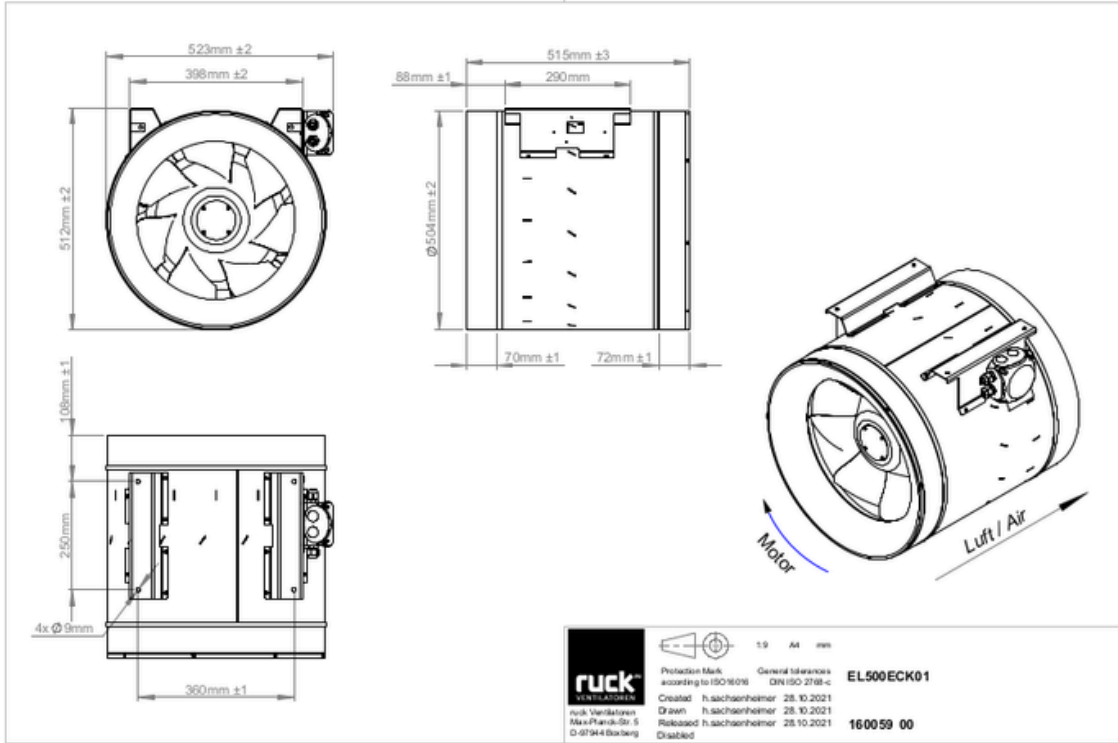
EL 500 EC K 01

160059



EL 500 EC K 01

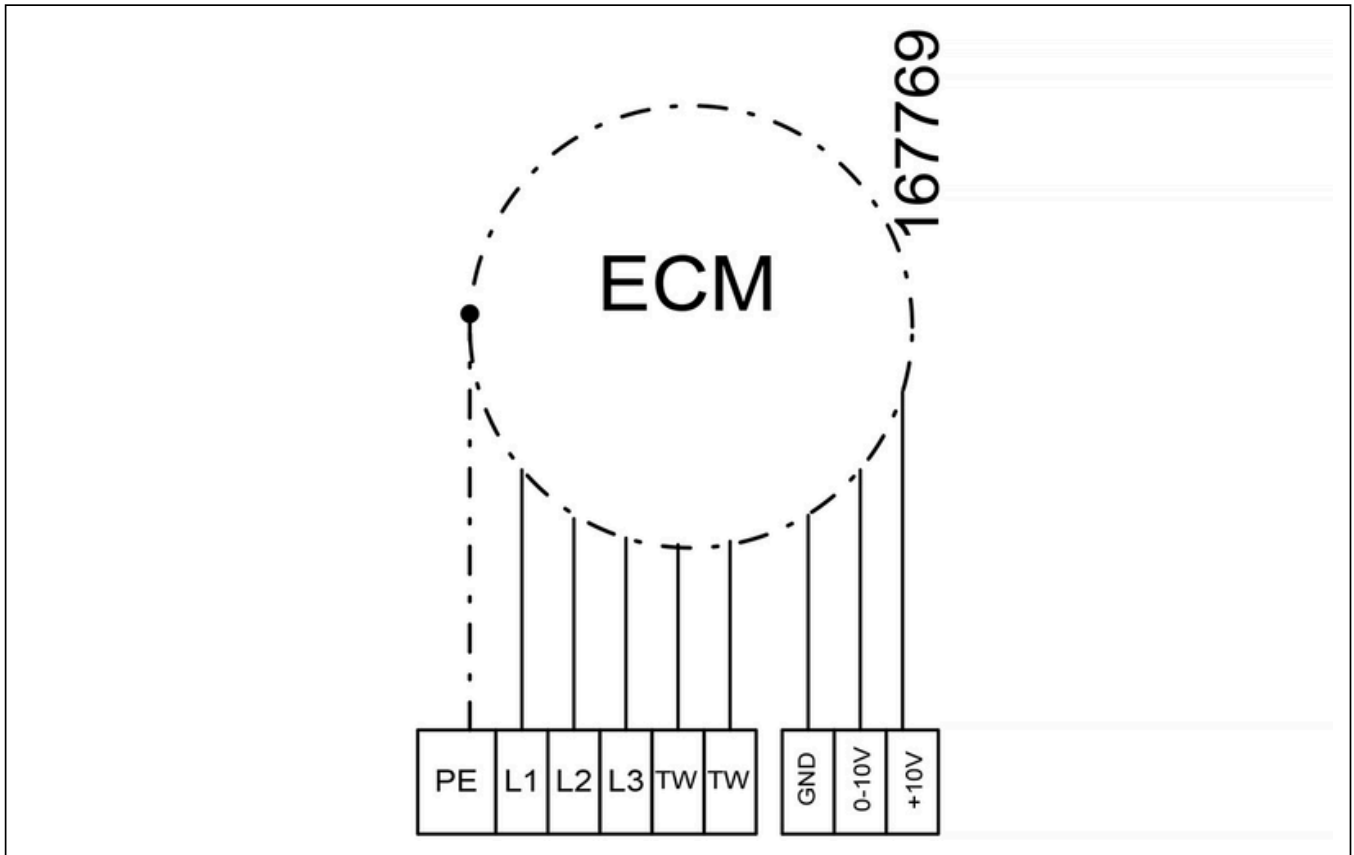
160059



to the product detail page

EL 500 EC K 01

160059



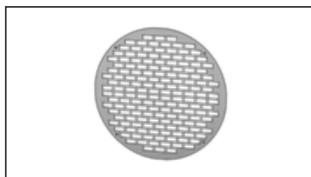
MECHANICAL ACCESSORIES

VM 500 | 118094



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

SG 500 02 | 119191



- Inlet protection grille for Etaline
- Galvanized steel sheet



ELECTRICAL ACCESSORIES

GS 03 | 107633



- Device switch
- $U_{max} = 400\text{ V}$, $I_{max} = 25\text{ A}$
- Switching capacity $400\text{ V } 3\sim = 7,5\text{ kW}$
- Protection class IP 55

MTP 20 | 128146



- Potentiometer $10\text{ k}\Omega$
- Switching contact $1\text{A}/250\text{V AC} - 2,5\text{A}/12\text{V DC}$
- Max. ambient temperature $50\text{ }^\circ\text{C}$
- VDE

MTP 30 | 143289



- Stepped potentiometer $10\text{ k}\Omega$
- Step 1 + 2 settable $10\% - 100\% \text{ Vdc}$
- Step 3 $100\% \text{ Vdc}$
- Supply voltage $+10\text{ Vdc}$

MTP 40 | 147359



- Potentiometer $10\text{ k}\Omega$
- Connection in terminal box
- Max. ambient temperature $50\text{ }^\circ\text{C}$
- PU: 20 pieces

CON P1000 | 115259



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

MTP 50 | 168752



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



to the product detail page