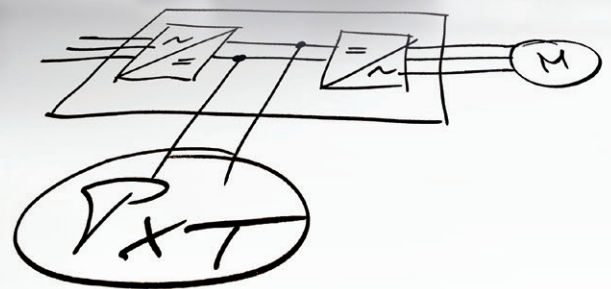# KOCH

Active Energy Management Device for Electric Drive Technology

Specially designed with UPS functionality in a closed housing (IP20)

PxTTX

Technical data PxTTX

Version August 25, 2024

Criteria	PxTTX
Weight	6.0 kg (stand-alone) 9.6 kg (stand-alone with 1 energy module) 13.3 kg (stand-alone with 2 energy modules)
Dimensions H x W x D	297 x 100 x 167 mm (stand-alone) 297 x 100 x 276 mm (stand-alone with 1 energy module) 297 x 100 x 385 mm (stand-alone with 2 energy modules)
Protection class	IP 20 - closed housing
Ambient temperature	-10°C up to +65°C (transport, storage)
	0°C up to +40°C (in operation)
Humidity	≤ 95% (transport, storage)
	≤ 85% (in operation)
Cooling	Heatsink convection. Monitoring heatsink temperature
Limitation for installations in elevated areas	<2000 m: No limitations / overvoltage category III >2000 m: reduction of performance / overvoltage category II
Min. starting voltage level for the system (DC link or Energy storage)	Approx. 45 VDC, e.g. to communicate with the system
Min. Operating voltage level U_{Zmin}	U_{ZStart} 180 VDC, e.g. to communicate with the system System ready for operation at U_Z >460 VDC
Max. Operating voltage level U_{Zmax}	1000 VDC (IEC)
Operation conditions	For start: $U_Z > U_C$
24 VDC In	Galvanically isolated For communication tasks with PxTTX without connecting it to DC link or energy storage, e.g. for setting parameters at the desk (Note: not protected against polarity reversal)
Energy of integrated capacities[1]	0 kJ (stand-alone) 2 kJ (stand-alone with 1 energy module) 4 kJ (stand-alone with 2 energy modules)
Expansion of capacities	Expandable with PxTEX for PxTTX in steps of 2kJ
Capacity monitoring	Parameterizable

[1] Data refer to connection to a DC link of a drive controller with 400 V AC supply voltage. Other data on request.

Technical data PxтTX

Version August 25, 2024

| Criteria	PxтTX
Max. Energy Storage current I$_c$	5 A (IEC) continuous 40 A for 3s (I$_{eff}$ = 5 A continuous current at t$_{Cycle}$ = 240s / maximum 4 times per hour)
Max. Power P$_{max}$[1]	2,25 kW (IEC) continuous 18 kW peak for 3s
Ground rule for power flow	P$_C$ = P$_Z$
Operation frequency level	15 kHz, in operation load-dependent reduction down to 7.5 kHz Manually adjustable up to 18 kHz (with reduction of power)
Load monitoring	DC link side and energy storage side (in each case I^{2}t)
Connection DC link	Front, top
Connection for PxтEX or NEV	Front, bottom
Communication	3 digital In 3 digital Out K-Bus interface for operating data output 4 LEDs SD-Card Reset-button for restart Boot-button for boot loading from SD-Card Option: PxтMX plug-on module for fieldbus communication etc.
Visualization	Charging indicator for each Energy module (flashing LED according to voltage level)
Firmware-Updates	On Koch company site (Fabrikle) or with SD-Card at customers site
Protection	Internal fuses Individual protection of each energy module
Precharging circuit	Connection directly to DC link interference-free possible, independent from further precharging circuits
Reverse polarity protection	To DC link: In case connecting with reverse polarity PxтTX blocks and disconnects the DC link side from energy storage side
Charging protection	To DC link in case of Uz < Uc

[1] Data refer to connection to a DC link of a drive controller with 400 V AC supply voltage. Other data on request.

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Technical data PxtTX

Version August 25, 2024

Criteria	PxtTX
Max. cable length to DC link	2 m
Max. cable length to energy storage modules	20 m
Parallel operation	Theoretically unlimited number of devices Self-adjusting Automated Master-/Slave-setting for communication
Retrofit	Can be retrofitted into existing systems
Typeplate/Device information	Electronic via QR-Code: Further device specific information Management-features
Internal digital storage	Operation hours meter

Installation dimensions
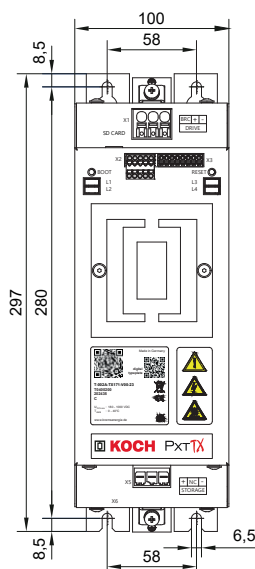
We look forward to hearing from you!

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