

PxT_{MX} - simply plugged onto a PxT device housing, the module offers a wide range of options:

System interface and communication

The PxT_{MX} module connects the PxT system with the internal Koch-bus to the outside world via fieldbus. The big benefit: Not every single device in the PxT system has to be addressed via the fieldbus. The one partner PxT_{MX} is sufficient.

Peak power reduction

After specifying a maximum input current, the PxT_{MX} module regulates the PxT system and thus the energy balance of the drive system highly dynamically below this limit. This happens either

- a) controlled by the drive system or
- b) independently via plug & play with freely definable, ampere-accurate mains current limitation.



PxT_{MX}

The PxT_{MX} plug-in module is available in two different heights depending on the customer application, depending on whether it is equipped with or without a fieldbus interface.

Ampere-accurate peak power reduction via plug & play

A reduction of power peaks is helpful when drives accelerate with a high load. Instead of drawing high power from the grid, power is supplied from a Pxt system. This not only saves expensive investments in the infrastructure (cables, fuses, transformers, feed-in points, etc.), but also significantly calms down the power grid.

Reduction of mains current almost to the av. effective current

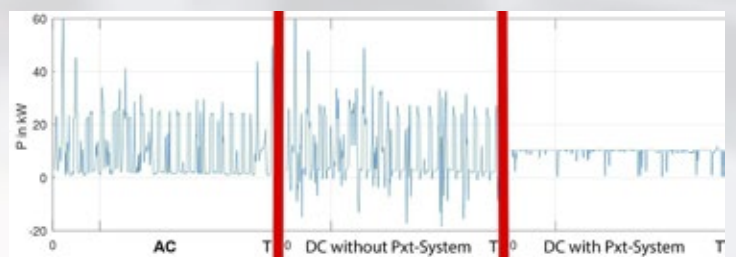
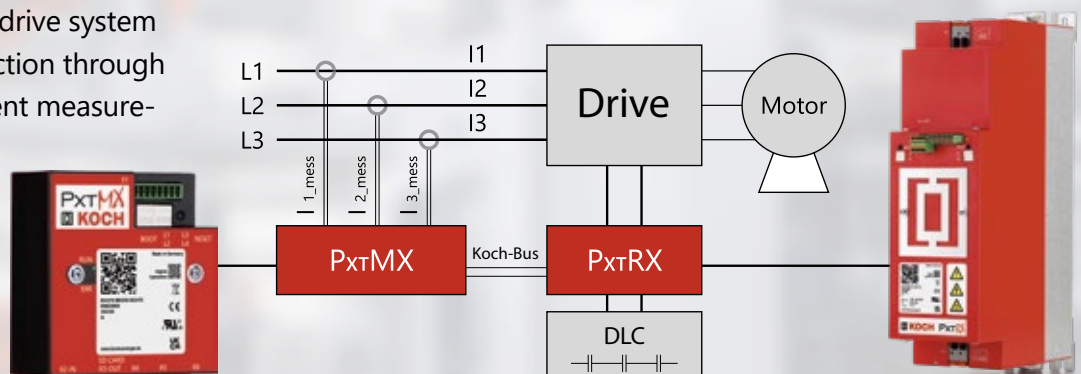
The PxtMX module, in conjunction with an active energy management device, enables the mains-side current consumption in cyclic applications to be reduced almost to the level of the required average effective current without any further action. Ampere-accurate!

The entire system is based on measuring the current directly from each phase at the mains-side input. The module is controlled depending on an effective current value between the power grid and the DC link of the drive. Highly dynamic, stable, reliable.!

Example structure of a drive system with peak power reduction through PxtMX and input current measurement in conjunction with PxtRX and double-layer capacitors.

The effect of peak power reduction can be very positive,

shown here using the example of a robot cell, whose connected load could be reduced from around 60 to 10 kW by using an active energy management system. On the left is the starting point of the mains load, in the middle is the current curve in the DC link, which also shows the regenerative energy flow, on the right is the greatly calmed result with the use of the active energy management system consisting of devices from the Pxt family.



Your advantages

- > Reduce connection costs
- > Increase energy efficiency
- > Process data in real time
- > Protect network quality
- > Simple installation via plug & play
- > Fieldbus communication

Technical data PxtMX



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Criteria	PxtMX
Weight	approx. 100 g / 120 g
Dimensions H x W x D	98 x 96 x 27 mm / 98 x 96 x 42 mm (with fieldbus, optional)
Protection class	IP 20
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)
Voltage Supply	24 VDC +/- 15% from active energy management device PxtFX or PxtRX via direct plug connection
Mounting	directly plugged and screwed onto PxtFX or PxtRX
Communication	3 digital inputs / 3 digital outputs / 4 LEDs / SD card Reset button for restarting Boot button for bootloading from SD card USB <--> connection to PxtTerminal (parameterization and visualization tool)
EPS (optional) („Enhanced Power Supply“: automated mains load peak reduction)	connection for the three supplied current measuring transformers for mains currents up to 120 amps/phase
Fieldbus (optional)	EtherCAT (according IEC61158, IEC61784, IEC 61800, ISO 15745, SEMI E54.20) 2 x RJ45 galvanically isolated Status LED - RUN & ERR
Firmware-Updates	in the factory (Fabrikle) or via SD card
Type plate	digital - visualization via PxtTypeplate tool
Operation/setting	via PxtTerminal (parameterization and visualization tool)

We look forward to hearing from you!



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