



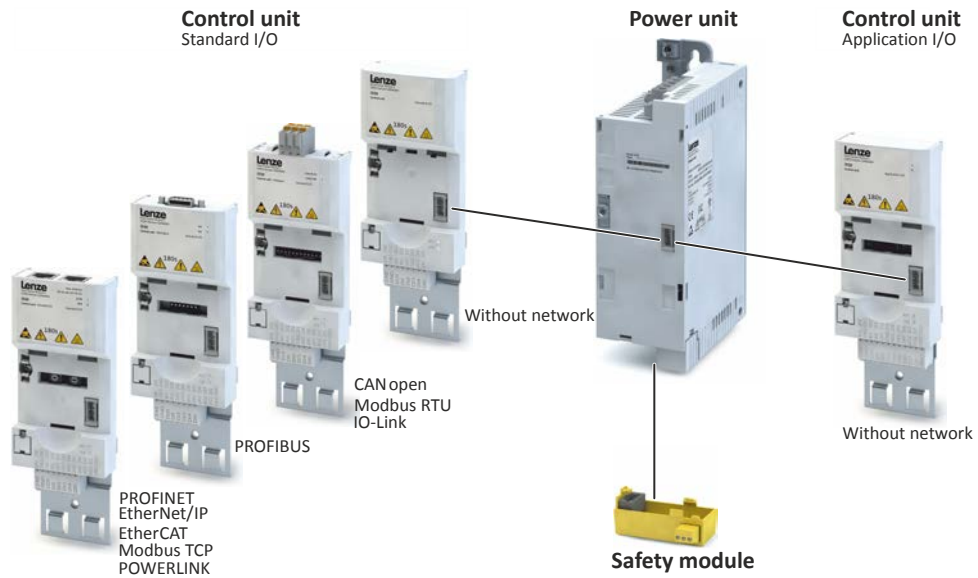
## Product extensions

### Overview

The inverters can easily be integrated into the machine. The scalable product extensions serve to flexibly match the required functions to your application.

The control unit with standard I/O can be extended with different networks.

The control unit with application I/O provides additional inputs and outputs (I/Os). A network component is not available.



# Product extensions

Networks  
EtherCAT



## EtherCAT

EtherCAT is a common fieldbus for the connection of inverters to different control systems in plants.

General information			
Design		Optional Integrated in standard I/O	
DC supply of the control electronics and optional fieldbus		Internally via the inverter	Mains-dependent
		Optionally: External supply	Mains-independent 24 V DC at X3/24E...GND

Terminal description		EtherCAT	
Connection		X246	X247
Connection type		RJ45	
Max. cable cross-section	mm <sup>2</sup>	-	-
Max. cable cross-section	AWG	-	-
Stripping length	mm	-	-
Stripping length	inch	-	-
Tightening torque	Nm	-	-
Tightening torque	lb-in	-	-
Required tool		-	

Technical data			
Communication profile		EtherCAT	
		CANopen over EtherCAT (CoE)	
Bus terminating resistor	Ω	Not required	
integrated bus terminating resistor		No	
Network topology			
Without repeater		Line, switch	
With repeater		-	
Station			
Type		EtherCAT slave	
Max. number		65535	In the entire network
Address			Adjustable via parameter
Max. cable length	m	-	Not limited The length between the nodes is decisive.
Max. cable length between two nodes	m	100	
Process data			
Transmit PDOs		16 words	Max. 32 bits (4 bytes) as a coherent PDO object
Receive PDOs		16 words	
Cycle times	ms	Integer multiple of 1	

Communication time			
Communication time depends on		Processing time in the inverter	Time between the start of a request and arrival of the response
		Telegram runtime (baud rate, telegram length)	
		Nesting depth of the network	
		Bus load	

Processing time of process data			
Update cycle	ms	1	In the inverter
Processing time	ms	0 ... 1	
Application task runtime of the technology application used (tolerance)	ms	1 ... x	

Other data			
Note		There are no interdependencies between parameter data and process data.	