

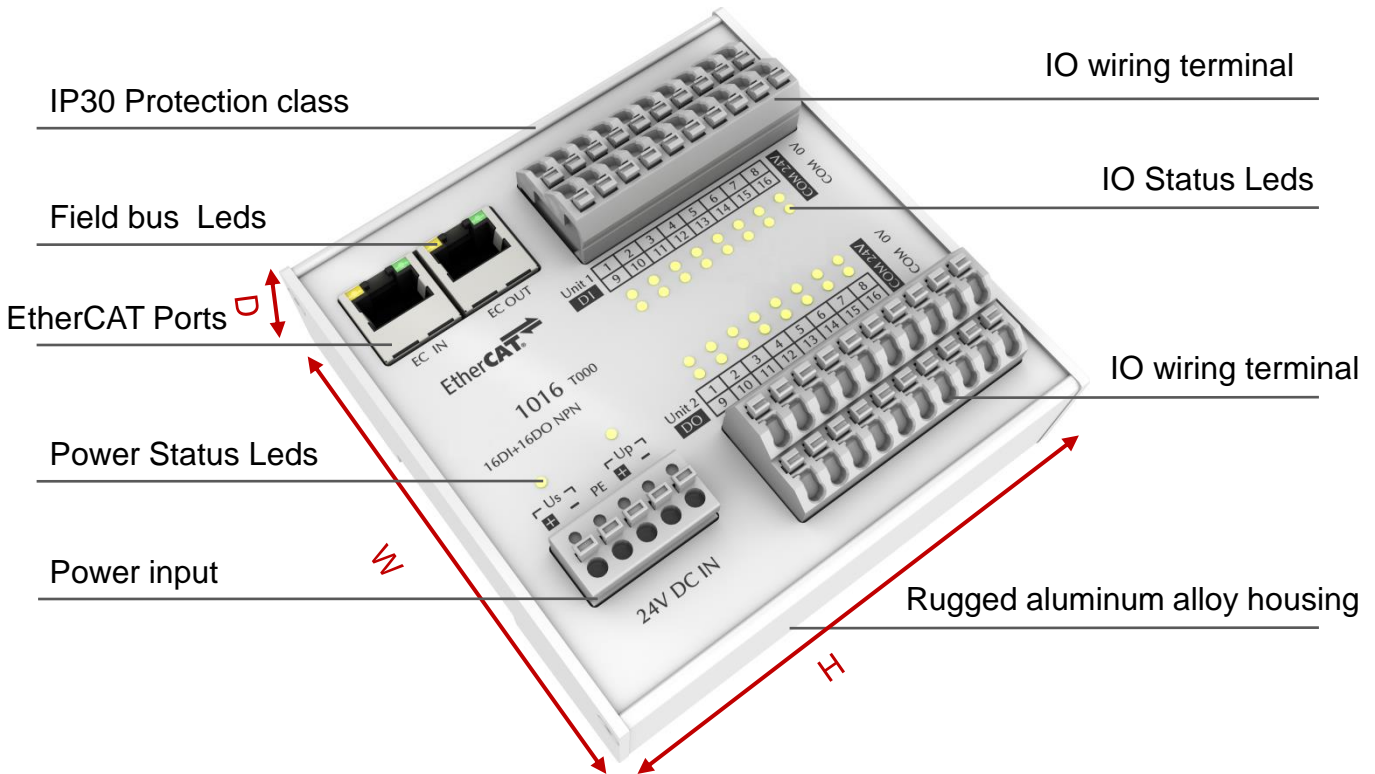


## Flat Integrated I/O Modules

# Agile Express I/O Selection Guide

- Rugged aluminum alloy housing
- High reliable spring terminal
- Independent power supply for signals and peripherals
- DIN-Rail mount

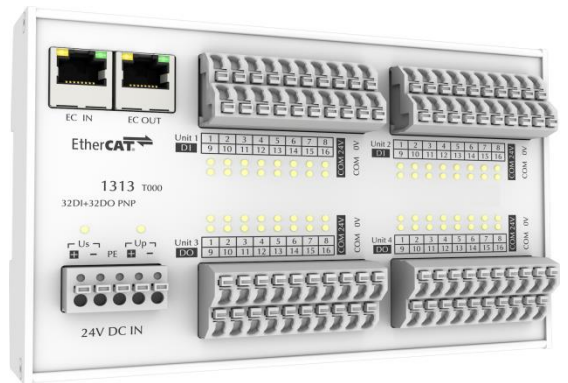
## Dimension and signal leds



(W x H x D)  
105 x 84 x 45mm



(W x H x D)  
105 x 104 x 45mm



(W x H x D)  
105 x 164 x 45mm

## ■ Digital Input: AX-1xxx

Signals	32 Channels		64 Channels
NPN	<b>AX-1010-T000</b> 32 x DI, filter: 3ms	<b>AX-1016-T000</b> 16 x DI, filter: 3ms 16 x DO, $I_{max}$ : 0.5A	<b>AX-1013-T000</b> 32 x DI, filter: 3ms 32 x DO, $I_{max}$ : 0.5A
	<b>AX-1020-T000</b> 32 x DI, filter: 10us	<b>AX-1026-T000</b> 16 x DI, filter: 10us 16 x DO, $I_{max}$ : 0.5A	<b>AX-1023-T000</b> 32 x DI, filter: 10us 32 x DO, $I_{max}$ : 0.5A
PNP	<b>AX-1310-T000</b> 32 x DI, filter: 3ms	<b>AX-1316-T000</b> 16 x DI, filter: 3ms 16 x DO, $I_{max}$ : 0.5A	<b>AX-1313-T000</b> 32 x DI, filter: 3ms 32 x DO, $I_{max}$ : 0.5A
	<b>AX-1320-T000</b> 32 x DI, filter: 10us	<b>AX-1326-T000</b> 16 x DI, filter: 10us 16 x DO, $I_{max}$ : 0.5A	<b>AX-1323-T000</b> 32 x DI, filter: 10us 32 x DO, $I_{max}$ : 0.5A

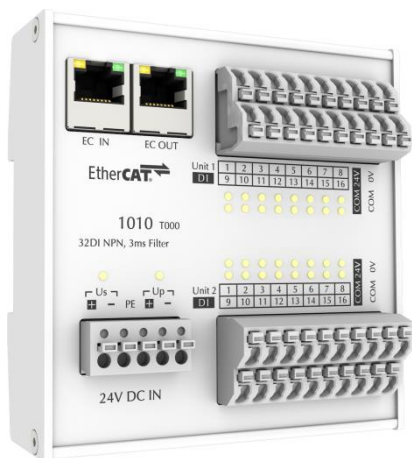
## ■ Digital Input and Output: AX-2xxx

Signals	32 Channels	
NPN	<b>AX-2010-T000</b> 32 x DO, $I_{max}$ : 0.5A	<b>AX-2015-T000</b> 8 x DI, filter: 3ms 24 x DO, $I_{max}$ : 0.5A
PNP	<b>AX-2310-T000</b> 32 x DO, $I_{max}$ : 0.5A	<b>AX-2315-T000</b> 8 x DI, filter: 3ms 24 x DO, $I_{max}$ : 0.5A

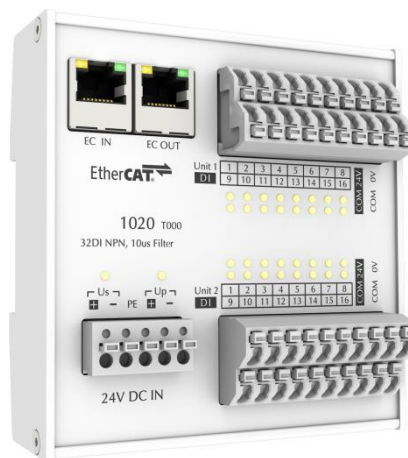
## ■ Analog Input and Output: AX-3xxx

Signals	8 Channels	
0V.. 10V	<b>AX-3125-T000</b> 4 x AI, 0...10V 4 x AI, 0...10V	<b>AX-3125-T042</b> 2 x AI, 0...10V+2 x AI, 0...20mA 4 x AO, 0...10V
-10V..+10V	<b>AX-3225-T000</b> 4 x AI, -10...10V 4 x AO, -10...10V	

## ■ Digital Input: 32-Channels, AX-1010, AX-1020, NPN



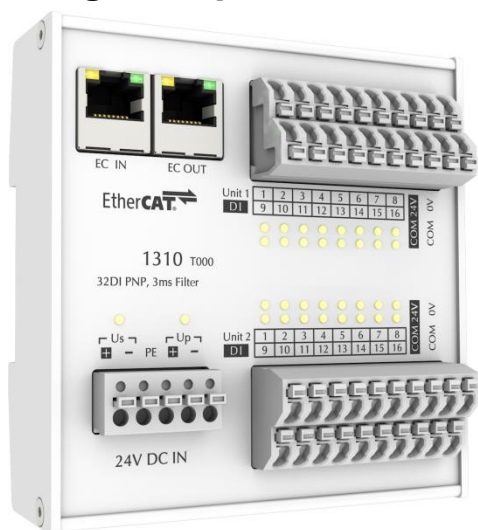
32 x DI, NPN, filter: 3ms, 24VDC



32 x DI, NPN, filter: 10us, 24VDC

Model Name	AX-1010-T000	AM-1020-T000
Field bus	EtherCAT	
Number of Inputs	32	
Nominal voltage of the inputs	24VDC(-15%/20%)	
Signal Type	NPN	
Signal voltage "0"	18V..30V	
Signal voltage "1"	0V..7V	
Input current	Typically 3mA	
Input filter	Typically 3ms	Typically 10us
Distributed Clocks	-	-
Module current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Operating temperature range	-25°C .. +60°C	
Storage temperature range	-40°C .. +85°C	
Relative humidity	95%, no condensation	
Dimensions(W x H x D)	105mm x 104mm x 45mm	
Weight	Approx. 300 g	
Mounting	DIN-Rail	
Approvals	CE	
Degree of protection	IP30	

## ■ Digital Input: 32-Channels, AX-1310, AX-1320, PNP



32 x DI, PNP, filter: 3ms, 24VDC

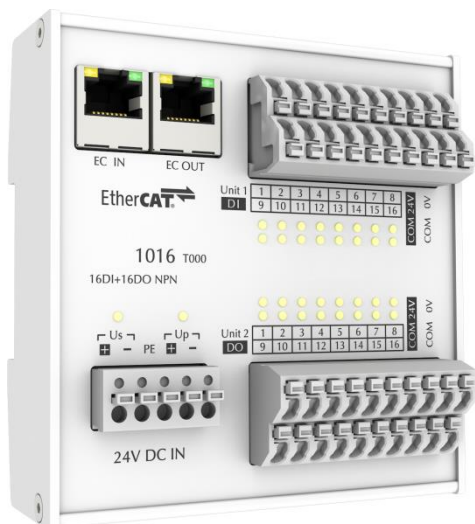


32 x DI, PNP, filter: 10us, 24VDC

Model Name	AX-1310-T000	AX-1320-T000
Field bus	EtherCAT	
Number of Inputs	32	
Nominal voltage of the inputs	24VDC(-15%/20%)	
Signal Type	PNP	
Signal voltage "0"	-3V..5V(EN61131-2, type 1/3)	
Signal voltage "1"	11V..30V	
Input current	Typically 3mA	
Input filter	Typically 3ms	Typically 10us
Distributed Clocks	-	-
Module current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Operating temperature range	-25°C .. +60°C	
Storage temperature range	-40°C .. +85°C	
Relative humidity	95%, no condensation	
Dimensions(W x H x D)	105mm x 104mm x 45mm	
Weight	Approx. 300 g	
Mounting	DIN-Rail	
Approvals	CE	
Degree of protection	IP30	



## ■ Digital Input and Output: 32-Channels, AX-1016, AX-1026, NPN



16 x DI, NPN, filter: 3ms  
16 x DO, NPN, I<sub>max</sub>: 0.5A, 24VDC



16 x DI, NPN, filter: 10us  
16 x DO, NPN, I<sub>max</sub>: 0.5A, 24VDC

Model Name	AX-1016-T000	AX-1026-T000
Number of Inputs	16	
Nominal voltage of the inputs	24VDC(-15%/20%)	
Input signal Type	NPN	
Signal voltage "0"	18V..30V	
Signal voltage "1"	0V..7V	
Input current	Typically 3ms	
Input filter	Typically 3ms	Typically: 10us
Number of Outputs	16	
Output signal Type	NPN	
Output current per channel	Max. 0.5A (short-circuit proof)	
Reverse voltage protection	Yes	
Switching times	T <sub>ON</sub> : typically 15us; T <sub>OFF</sub> : typically 300us	
Distributed Clocks	-	
Module current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Operating temperature range	-25°C .. +60°C	
Storage temperature range	-40°C .. +85°C	
Relative humidty	95%, no condensation	
Dimensions(W x H x D)	105mm x 104mm x 45mm	
Weight	Approx. 300 g	
Mounting	DIN-Rail	
Approvals	CE	
Degree of protection	IP30	

## ■ Digital Input and Output: 32-Channels, AX-1316, AX-1326, PNP



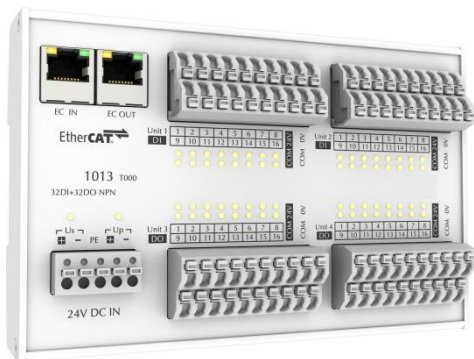
16 x DI, PNP, filter: 3ms  
16 x DO, PNP, I<sub>max</sub>: 0.5A, 24VDC



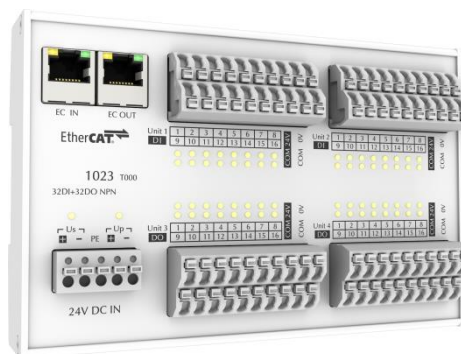
16 x DI, PNP, filter: 10us  
16 x DO, PNP, I<sub>max</sub>: 0.5A, 24VDC

Model Name	AX-1316-T000	AX-1326-T000
Number of Inputs	16	
Nominal voltage of the inputs	24VDC(-15%/20%)	
Input signal Type	PNP	
Signal voltage "0"	-3V..+5V	
Signal voltage "1"	11V...30V	
Input current	Typically 3mA	
Input filter	Typically 3ms	Typically: 10us
Number of Outputs	16	
Output signal Type	PNP	
Output current per channel	Max. 0.5A (short-circuit proof)	
Reverse voltage protection	Yes	
Switching times	T <sub>ON</sub> : typically 15us; T <sub>OFF</sub> : typically 300us	
Distributed Clocks	-	
Module current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Operating temperature range	-25°C .. +60°C	
Storage temperature range	-40°C .. +85°C	
Relative humidity	95%, no condensation	
Dimensions(W x H x D)	105mm x 104mm x 45mm	
Weight	Approx. 300 g	
Mounting	DIN-Rail	
Approvals	CE	
Degree of protection	IP30	

## ■ Digital Input and Output: 64-Channels, AX-1013, AX-1023, NPN



32 x DI, NPN, filter: 3ms  
32 x DO, NPN, I<sub>max</sub>: 0.5A, 24VDC

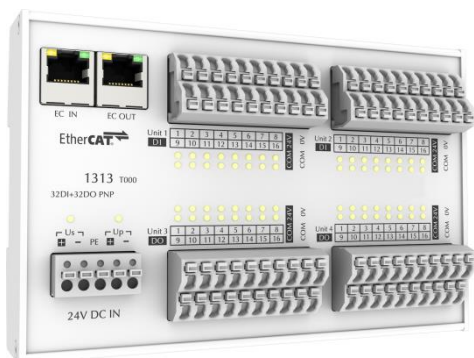


32 x DI, NPN, filter: 10us  
32 x DO, NPN, I<sub>max</sub>: 0.5A, 24VDC

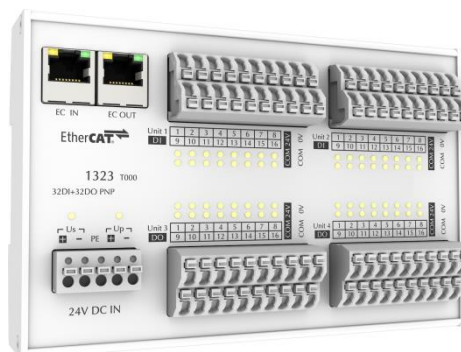
Model Name	AX-1013-T000	AX-1023-T000
Number of Inputs	32	
Nominal voltage of the inputs	24VDC(-15%/20%)	
Input signal Type	NPN	
Signal voltage "0"	18V..30V	
Signal voltage "1"	0V..7V	
Input current	Typically 3ms	
Input filter	Typically 3ms	Typically: 10us
Number of Outputs	32	
Output signal Type	NPN	
Output current per channel	Max. 0.5A (short-circuit proof)	
Reverse voltage protection	Yes	
Switching times	T <sub>ON</sub> : typically 15us; T <sub>OFF</sub> : typically 300us	
Distributed Clocks	-	
Module current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Operating temperature range	-25°C .. +60°C	
Storage temperature range	-40°C .. +85°C	
Relative humidity	95%, no condensation	
Dimensions(W x H x D)	105mm x 164mm x 45mm	
Weight	Approx. 300 g	
Mounting	DIN-Rail	
Approvals	CE	
Degree of protection	IP30	



## ■ Digital Input and Output: 64-Channels, AX-1313, AX-1323, PNP



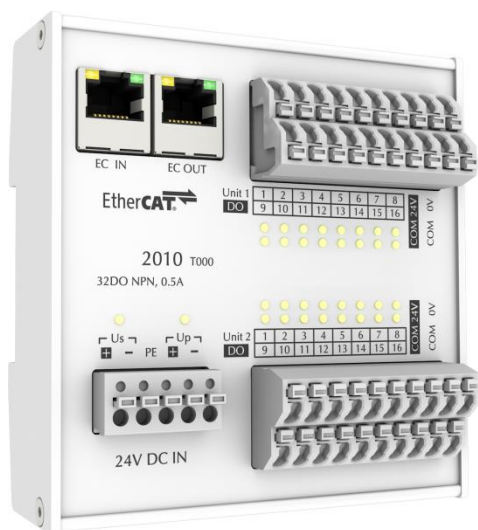
32 x DI, PNP, filter: 3ms  
32 x DO, PNP, I<sub>max</sub>: 0.5A, 24VDC



32 x DI, PNP, filter: 10us  
32 x DO, PNP, I<sub>max</sub>: 0.5A, 24VDC

Model Name	AX-1313-T000	AX-1323-T000
Number of Inputs	32	
Nominal voltage of the inputs	24VDC(-15%/20%)	
Input signal Type	PNP	
Signal voltage "0"	-3V..+5V	
Signal voltage "1"	11V...30V	
Input current	Typically 3mA	
Input filter	Typically 3ms	Typically: 10us
Number of Outputs	32	
Output signal Type	PNP	
Output current per channel	Max. 0.5A (short-circuit proof)	
Reverse voltage protection	Yes	
Switching times	T <sub>ON</sub> : typically 15us; T <sub>OFF</sub> : typically 300us	
Distributed Clocks	-	
Module current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Operating temperature range	-25°C .. +60°C	
Storage temperature range	-40°C .. +85°C	
Relative humidity	95%, no condensation	
Dimensions(W x H x D)	105mm x 164mm x 45mm	
Weight	Approx. 300 g	
Mounting	DIN-Rail	
Approvals	CE	
Degree of protection	IP30	

## ■ Digital Output: 32-Channels, AX-2010, AX-2320



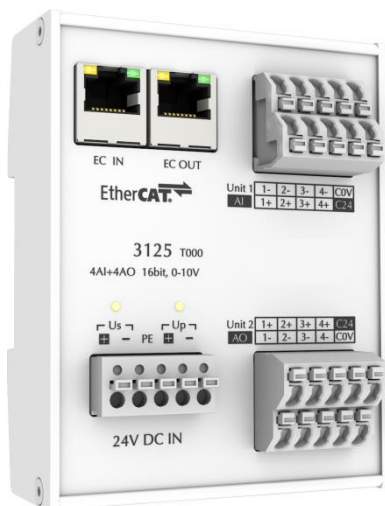
32 x DO, NPN,  $I_{max}$ : 0.5A, 24VDC



32 x DO, PNP,  $I_{max}$ : 0.5A, 24VDC

Model Name	AX-2010-T000	AX-2320-T000
Field bus	EtherCAT	
Number of Outputs	32	
Nominal voltage of the load	24VDC(-15%/20%)	
Output signal Type	NPN	PNP
Output current per channel	Max. 0.5A (short-circuit proof)	
Switching times	$T_{ON}$ : typically 15us; $T_{OFF}$ : typically 300us	
Reverse voltage protection	Yes	
Distributed Clocks	-	-
Module current consumption	Typically 100mA	
Electrical isolation	500V(EtherCAT/field voltage)	
Operating temperature range	-25°C .. +60°C	
Storage temperature range	-40°C .. +85°C	
Relative humidity	95%, no condensation	
Dimensions(W x H x D)	105mm x 104mm x 45mm	
Weight	Approx. 300 g	
Mounting	DIN-Rail	
Approvals	CE	
Degree of protection	IP30	

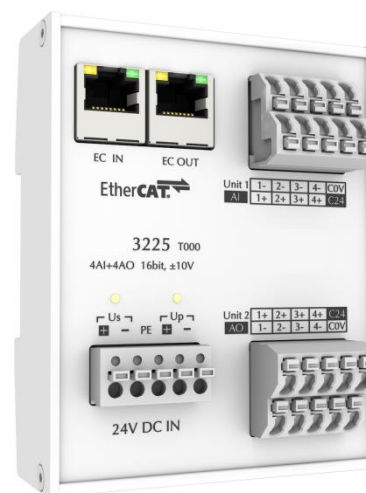
## ■ Analog Input and Output: 8-Channels, AX-3125, AX-3225



4 x AI, 0..10V, 16 bit  
4 x AO, 0..10V, 16 bit



2 x AI(0..10V), 2 x AI(0..20mA)  
4 x AO, 0..10V, 16 bit



4 x AI, ±10V  
4 x AO, ±10V

Model Name	AX-3125-T000	AX-3125-T042	AX-3225-T000
Number of voltage Inputs	4(single-ended)	2(single-ended)	4(single-ended)
Input signal voltage	0V..+10V	0V..10V	-10V..+10V
Number of current input	-	2(single-ended)	-
Input signal current	-	0mA..20mA	-
Resolution	16 bit		
Measure error	< 0.1% (at 0°C .. +55°C, relative to the full scale value)		
Conversion time	~200us		
Internal resistance	~10MΩ(Voltage)	~10MΩ(Voltage),200Ω (Current)	~10MΩ(Voltage)
Number of Outputs	4(single-ended)	4(single-ended)	4(single-ended)
Output signal Type	0V.. +10V	0V.. +10V	-10V.. +10V
Module current consumption	Typically 100mA	Typically 100mA	Typically 120mA
Distributed Clocks	-		
Electrical isolation	500V(EtherCAT/field voltage)		
Operating temperature range	-25°C .. +60°C		
Storage temperature range	-40°C .. +85°C		
Relative humidity	95%, no condensation		
Dimensions(W x H x D)	105mm x 84mm x 45mm		
Weight	Approx. 300 g		
Mounting	DIN-Rail		
Approvals	CE		
Degree of protection	IP30		

# Design for Your Automation

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