

## MonoDAQ-E-DI4

Robust, isolated digital inputs are suitable for reading data off digital sensors as well as for demanding test automation tasks. Three power supply voltages (5V, 12V and device voltage supply level) available on the front connector. EtherCAT interface, signal and power over the same cable. ([www.monodaq.com](http://www.monodaq.com)).

Key features:

- 4 isolated TTL/CMOS digital inputs
- EtherCAT bus, daisy-chaining with single cable up to 50 m device-device
- DEWESoft X3 software support

Typical applications:

- Digital sensor interface
- Digital inputs in control cabinets



Digital input specification:

	Typ.	Unit
Number of input channels	4	
Max. sample rate	20	kS/s
Input type	TTL / CMOS Voltage levels	
Input low level	< 1	V
Input high level	> 2	V
Input high current @5 V Vin:	3	mA
Input high current @30 V Vin:	3	mA
Overvoltage protection	30 (continuous) 65 (peak)	V
Isolation	channel-channel, channel-ground	
Front connector	DSUB15HD male	

Non-isolated power supply (front connector) specification:

Output voltage +5 V	5 V ±10 %	
Max. output current +5 V	300	mA
Output voltage +12 V	12 V ±10 %	
Max. output current +12 V	100	mA
Output voltage +Vecat	Vecat (device EtherCAT cable power voltage)	
Max. output current +Vecat	200	mA

Note: Max. combined load on +5V and +12V pins: 1.5 W reduced by the load already present on +Vin pin

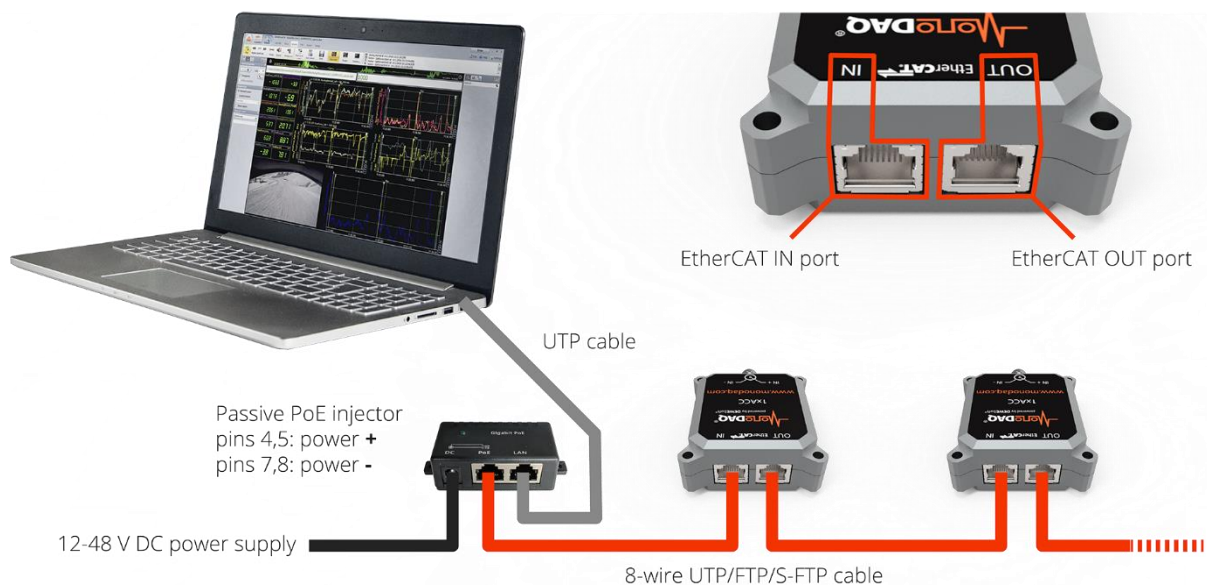
General specification:

Digital interface	EtherCAT
Data interface connectors	RJ45 (single cable for data, power and sync)
Power consumption	2.5 W
Supply voltage	12-48 V
Operating temperature	-20 ... 60 degC
IP rating	IP20
Weight	130 g
Dimensions	71 x 62 x 28 mm
Housing material	Aluminium

**Software support:** DEWESoft X3, any standard EtherCAT master

**Installation:** Devices are daisy chained with a standard network cable. It is recommended that the cable is shielded (SFTP, CAT5e) and has a minimum 24 AWG wire thickness. The cable must have 4 wire pairs. The maximum distance node-to-node is 50 m.

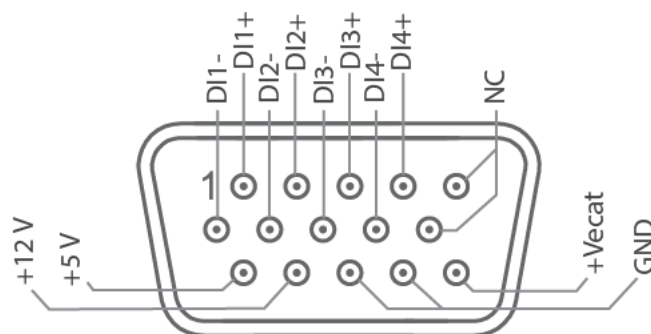
**Power supply:** Passive PoE power injector is necessary for merging the EtherCAT signal and power into a single cable.



Power supply voltage	Cable length device-to-device	Cable size	Max. number of devices from a single power supply
24 V	1 m	AWG 24	6
24 V	50 m	AWG 24	3
48 V	1 m	AWG 24	12
48 V	50 m	AWG 24	7

Note: this table applies if device consumes its typical power supply as specified in general specification. The max. nr. of devices from a single power supply can change if devices uses more/less power (depending primarily on sensor excitation and front end power supply load).

**Front end connector pinout**



Mechanical drawing

