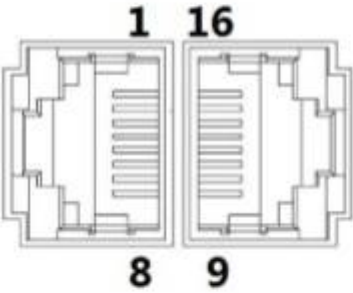


EtherCAT

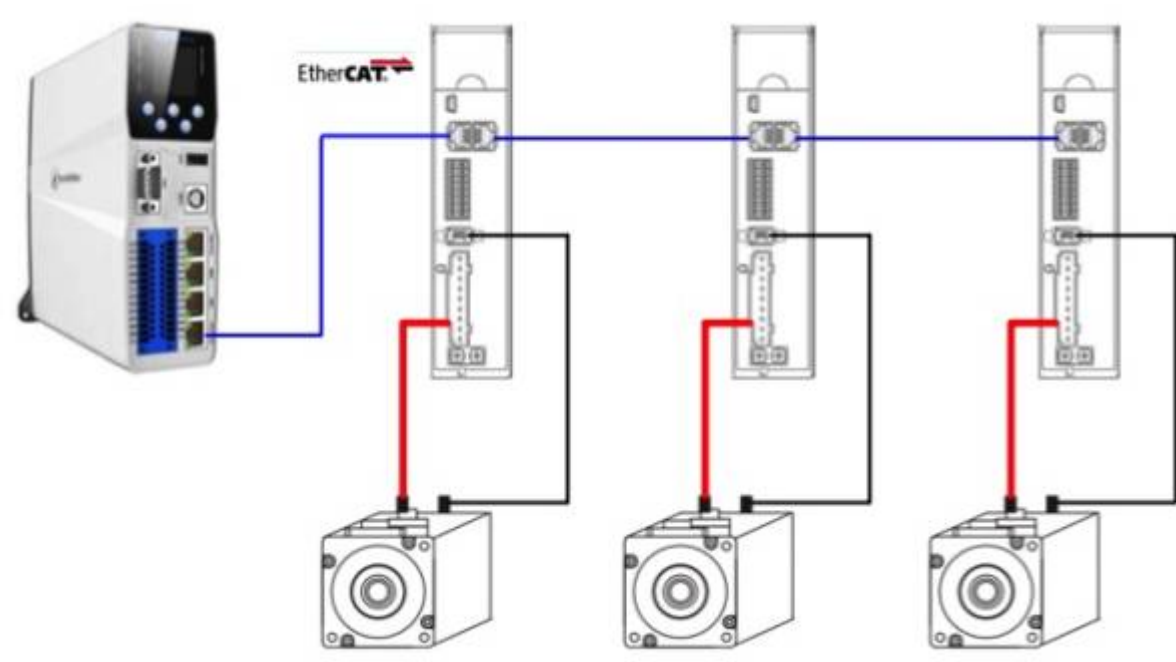
This page describes the **EtherCAT** communication of the NL7-EC servo drives. The drive provides two communication ports for the EtherCAT protocol.

Port pinout

CN3 and CN4 are communication ports for EtherCAT protocol. LAN cable from master device will be connected to CN3 (IN) and CN4 (OUT) will be connected to the next slave device.

Port	Pin	Signal	Description
	1, 9	E_TX+	EtherCAT Data sending positive terminal
	2, 10	E_TX-	EtherCAT Data sending negative terminal
	3, 11	E_RX+	EtherCAT Data receiving positive terminal
	4, 12	--	--
	5, 13	--	--
	6, 14	E_RX-	EtherCAT Data receiving negative terminal
	7, 15	--	--
	8, 16	--	--
	Frame	PE	Shielded ground

Example of EtherCAT communication cable connections between master and slave devices



Configuration File

XML File: [:nl7_servo:nl7_xml_file.zip](#)

4 Receive PDOs and 1 Transmitt PDO are available as standard configuration.

Generale	Seleziona uscite			Seleziona ingressi		
Dati di processo modalità esperta	Nome	Tipo	Indice	Nome	Tipo	Indice
Dati di processo	☒ 16#1600 Receive PDO 1			☒ 16#1A00 Transmit PDO 1		
Parametro di avvio	Control word	UINT	16#6040:16#00	Last error code	UINT	16#603F:16#00
Log	Profile target position	DINT	16#607A:16#00	Status word	UINT	16#6041:16#00
EtherCAT mapping I/O	Touch Probe Function	UINT	16#60B8:16#00	Modes of operation display	SINT	16#6061:16#00
EtherCAT Oggetti IEC	☐ 16#1601 Receive PDO 2			Actual motor position	DINT	16#6064:16#00
Stato	Control word	UINT	16#6040:16#00	Touch Probe Status	UINT	16#60B9:16#00
Informazione	Target velocity	DINT	16#60FF:16#00	Touch probe pos1 pos value	DINT	16#60BA:16#00
	Torque offset	INT	16#60B2:16#00	Digital inputs	UDINT	16#60FD:16#00
	Modes of operation	USINT	16#6060:16#00	☐ 16#1A01 Transmit PDO 2		
	☐ 16#1602 Receive PDO 3					
	Control word	UINT	16#6040:16#00			
	Target Torque	INT	16#6071:16#00			
	Torque slope	UDINT	16#6087:16#00			
	Modes of operation	USINT	16#6060:16#00			
	☐ 16#1603 Receive PDO 4					
	Control word	UINT	16#6040:16#00			
	Homing method	SINT	16#6098:16#00			
	Homing velocity (fast)	UDINT	16#6099:16#01			
	Homing velocity (slow)	UDINT	16#6099:16#02			
	Homing acceleration	UDINT	16#609A:16#00			
	Homing offset	DINT	16#607C:16#00			
	Modes of operation	USINT	16#6060:16#00			

Notes

- CN3 is the EtherCAT input (IN) from the master; CN4 is the output (OUT) to the next slave. - The XML file provides the standard EtherCAT configuration for the drive. - The default configuration offers 4 receive PDOs and 1 transmit PDO. - Refer to the configuration file and the CoE profile page for the PDO mapping.

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