

# ADDRESSES OF ETHERCAT SAFETY TERMINALS

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Addresses of safety terminals have to be unique across the whole system. The address can contain up to 16 bits or 65535 addresses. The address 0 is invalid. Some of the Beckhoff EtherCAT devices (EL6900 and EL2904) only have 10 bits available to select an address which leads to 1023 addresses. The input terminals have 16 bits available and can therefore use the full address range. We are using bits 9 and 10 to select the interferometer. We can use bit 8 to distinguish test systems at LHO and LLO.

Address bit 10	Address bit 9	Address bit 8	Decimal offset	Usage
0	0	0	0	LHO test systems
0	0	1	128	LLO test systems
0	1	X	256	H1 interferometer
1	0	X	512	H2 interferometer
1	1	X	768	L1 interferometer

A list of addresses is presented below.

Address bits 8..1	Module	Location	Rail/Slot	Full address decimal	Full address hex
0	EL6900	H1 corner remote access	L2	256	0x0100
		H2 corner remote access	L2	512	0x0200
		L1 corner remote access	L2	768	0x0300
1	EL1904	H1 corner remote access	L3	257	0x0101
		H2 corner remote access	L3	513	0x0201
		L1 corner remote access	L3	769	0x0301
2	EL2904	H1 corner remote access	L4	258	0x0102
		H2 corner remote access	L4	514	0x0202
		L1 corner remote access	L4	770	0x0302
3	EL1904	H1 EX remote access	R1	259	0x0103
		H2 EX remote access	R1	515	0x0203
		L1 EX remote access	R1	771	0x0303
4	EL2904	H1 EX remote access	R2	260	0x0104
		H2 EX remote access	R2	516	0x0204
		L1 EX remote access	R2	772	0x0304
5	EL1904	H1 EY remote access	R1	261	0x0105
		H2 EY remote access	R1	517	0x0205
		L1 EY remote access	R1	773	0x0305
6	EL2904	H1 EY remote access	R2	262	0x0106
		H2 EY remote access	R2	518	0x0206
		L1 EY remote access	R2	774	0x0306

96	EL6900	LHO EtherCAT tester	1	96	0x0060
		LLO EtherCAT tester	1	224	0x00E0
97	EL2904	LHO EtherCAT tester	2	97	0x0061
		LLO EtherCAT tester	2	225	0x00E1
98	EL1904	LHO EtherCAT tester	12	98	0x0062
		LLO EtherCAT tester	12	226	0x00E2
99	EL1904	LHO EtherCAT tester	17	99	0x0063
		LLO EtherCAT tester	17	227	0x00E3
100	EL1904	LHO EtherCAT tester	22	100	0x0064
		LLO EtherCAT tester	22	228	0x00E4