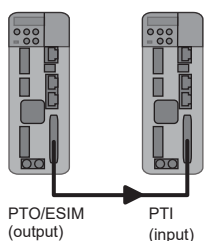
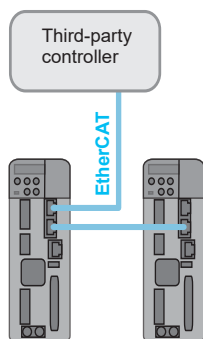


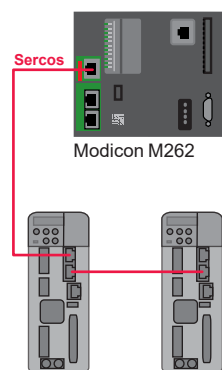
Example of architecture with two **LXM28A** servo drives controlled by Modicon M221 logic controller



Example of a **LXM28A** servo drive via PTO/ESIM interface, controlling another **LXM28A** servo drive with PTI interface



Example of **EtherCAT** architecture with two **LXM28E** servo drives controlled by a third-party controller



Example of **Sercos** architecture with two **LXM28S** servo drives controlled by a Modicon M262 Motion controller (2)

PTO: pulse-train-output
ESIM: encoder simulation output. The servo drive provides its motor position through this electrical interface to another device.
PTI: pulse-train-input interface

Main functions of Lexium 28 servo drives

- Automatic motor identification by the servo drive: the technical data related to the motor is provided from the motor to the drive via the encoder connection cable.
- Filtering: Anti-vibration function for suppression of resonance frequencies of the power train connected with the moving mass of the application
- Monitoring functions:
 - Status monitoring, I/O monitoring
 - Log function to memorize alarm and warning messages (in the drive)
 - Reset function of alarms and warnings
 - Monitoring of drive variables related to motor control and closed loop control
- **Additional main function:** Movement control with digital input interface directly in the servo drive:
 - Relative or absolute positioning mode
 - Velocity mode
 - Torque control mode
 - Position sequence mode: a sequence of up to 32 movements, controlled by a digital input interface

Control via I/O interface or fieldbus

LXM28A servo drives are controlled through “CN4 CAN” interface with a CANopen/CANmotion fieldbus control interface. They can also be controlled through numerous digital and analog signals, accessible by “CN1 I/O” interface:

- 2 digital inputs for high performance position capture
- 8 digital inputs
- 5 digital outputs
- 2 analog inputs
- 2 analog outputs
- 1 digital input channel (2 wires) for the safety function “Safe-Torque-Off”

LXM28E servo drives are controlled through “CN4 Eth” interface with an EtherCAT fieldbus control interface. They can also be controlled through numerous digital and analog signals, accessible by “CN1 I/O” interface:

- 2 digital inputs for high performance position capture
- 8 digital inputs
- 5 digital outputs

LXM28S servo drives are controlled through “CN4 Sercos” interface with a Sercos III fieldbus control interface. They can also be controlled through numerous digital and analog signals, accessible by “CN1 I/O” interface:

- 2 digital inputs for high performance position capture
- 8 digital inputs
- 4 digital outputs
- 1 digital input channel (2 wires) for the safety function “Safe-Torque-Off”

Drive functions activated by commissioning software or directly by the HMI interface

- Jog mode: Velocity movement
- “Easy tuning” one-button tuning mode: this function is used to optimize application performance.
- Additional tuning function, which can be activated by the SoMove Setup commissioning software or by the HMI interface: “Comfort tuning” with predefined settings for different mechanical systems such as spindle axes (e.g. portal axes), transportation belt, vertical axes (e.g. cantilever axes)

Operating modes

Operating modes for LXM28A/E/S servo drives via PTI/PTO interface

- Lexium 28 servo drives movement can be managed by a machine controller (Modicon M221 logic controller) with pulse-train-output (PTO) interface or the PTO interface from another (Lexium 28) servo drive.
- The corresponding pulse-train-input (PTI) of LXM28A/E/S servo drives is then electrically connected to CN1 I/O interface.

Operating modes for LXM28A servo drives (via the CANopen/CANmotion fieldbus), for LXM28E servo drives (via EtherCAT field bus) and for LXM28S servo drives (via the Sercos III fieldbus):

- Homing
- Point-to-point mode
- Position gear mode
- Cyclic synchronous position mode, cyclic synchronous velocity mode, cyclic synchronous torque mode

(1) Consult catalog Modicon M221 logic controller Ref. [DIA3ED2140106EN](#)

(2) Consult catalog Modicon M262 logic/motion controller Ref. [DIA3ED2180503EN](#)

Lexium 28 & Motors
Lexium 28 servo drives and BCH2 servo motors



BCH2 servo motors and Lexium 28 servo drives combinations												
Available power output		Nominal speed of rotation	Nominal torque		Maximum peak torque		Servo motor reference	Inertia (without holding brake)	Motor inertia type	Servo drive reference Fielbus interface		
kW	hp	rpm	Nm	ft lbf	Nm	ft lbf		kgcm²		CANopen	Ethercat	Sercos 3
Single-phase supply voltage: 200/240 VAC												
0.05	0.067	3,000	0.16	0.11	0.48	0.35	BCH2MBA53●●●5C	0.054	Medium	LXM28AUA5M3X	LXM28EUA5M3X	LXM28SUA5M3X
0.1	0.13	3,000	0.32	0.23	0.96	0.70	BCH2MB013●●●5C	0.075	Medium	LXM28AU01M3X	LXM28EU01M3X	LXM28SU01M3X
0.2	0.26	3,000	0.64	0.47	1.92	1.41	BCH2LD023●●●5C	0.16	Low	LXM28AU02M3X	LXM28EU02M3X	LXM28SU02M3X
0.3	0.41	1,000	2.86	2.10	8.59	6.33	BCH2MM031●●●6C	6.63	Medium	LXM28AU04M3X	LXM28EU04M3X	LXM28SU04M3X
0.4	0.53	3,000	1.27	0.93	3.81	2.81	BCH2LD043●●●5C	0.27	Low			
0.4	0.53	3,000	1.27	0.93	3.81	2.81	BCH2LF043●●●5C	0.67	Low			
0.5	0.67	2,000	2.39	1.76	7.16	5.28	BCH2MM052●●●6C	6.63	Medium			
0.6	0.80	1,000	5.73	4.22	17.19	12.67	BCH2MM061●●●6C	6.63	Medium			
0.75	1.00	3,000	2.39	1.76	7.16	5.28	BCH2HF073●●●5C	1.54	High	LXM28AU07M3X	LXM28EU07M3X	LXM28SU07M3X
0.75	1.00	3,000	2.39	1.76	7.16	5.28	BCH2LF073●●●5C	1.19	Low			
0.85	1.13	1,500	5.39	3.97	13.8	10.17	BCH2MM081●●●6C	13.5	Medium			
0.9	1.21	1,000	8.59	6.33	25.77	19.01	BCH2MM091●●●6C	9.7	Medium	LXM28AU10M3X	LXM28EU10M3X	LXM28SU10M3X
1	1.34	3,000	3.18	2.34	9.54	7.03	BCH2LH103●●●6C	2.4	Low			
1	1.34	2,000	4.77	3.51	14.3	10.54	BCH2MM102●●●6C	6.63	Medium			
1	1.34	2,000	4.77	3.51	14.3	10.54	BCH2HM102●●●6C	8.53	High			
1.5	2.01	2,000	7.16	5.28	21.48	15.84	BCH2MM152●●●6C	9.7	Medium	LXM28AU15M3X	LXM28EU15M3X	LXM28SU15M3X
3 phase supply voltage: 200/240 VAC												
0.05	0.067	3,000	0.16	0.11	0.48	0.35	BCH2MBA53●●●5C	0.054	Medium	LXM28AUA5M3X	LXM28EUA5M3X	LXM28SUA5M3X
0.1	0.13	3,000	0.32	0.23	0.96	0.70	BCH2MB013●●●5C	0.075	Medium	LXM28AU01M3X	LXM28EU01M3X	LXM28SU01M3X
0.2	0.26	3,000	0.64	0.47	1.92	1.41	BCH2LD023●●●5C	0.16	Low	LXM28AU02M3X	LXM28EU02M3X	LXM28SU02M3X
0.3	0.41	1,000	2.86	2.10	8.59	6.33	BCH2MM031●●●6C	6.63	Medium	LXM28AU04M3X	LXM28EU04M3X	LXM28SU04M3X
0.4	0.53	3,000	1.27	0.93	3.81	2.81	BCH2LD043●●●5C	0.27	Low			
0.4	0.53	3,000	1.27	0.93	3.81	2.81	BCH2LF043●●●5C	0.67	Low			
0.5	0.67	2,000	2.39	1.76	7.16	5.28	BCH2MM052●●●6C	6.63	Medium			
0.6	0.80	1,000	5.73	4.22	17.19	12.67	BCH2MM061●●●6C	6.63	Medium			
0.75	1.00	3,000	2.39	1.76	7.16	5.28	BCH2HF073●●●5C	1.54	High	LXM28AU07M3X	LXM28EU07M3X	LXM28SU07M3X
0.75	1.00	3,000	2.39	1.76	7.16	5.28	BCH2LF073●●●5C	1.19	Low			
0.85	1.13	1,500	5.39	3.97	13.8	10.17	BCH2MM081●●●6C	13.5	Medium			
0.9	1.21	1,000	8.59	6.33	25.77	19.01	BCH2MM091●●●6C	9.7	Medium	LXM28AU10M3X	LXM28EU10M3X	LXM28SU10M3X
1	1.34	3,000	3.18	2.34	9.54	7.03	BCH2LH103●●●6C	2.4	Low			
1	1.34	2,000	4.77	3.51	14.3	10.54	BCH2MM102●●●6C	6.63	Medium			
1	1.34	2,000	4.77	3.51	14.3	10.54	BCH2HM102●●●6C	1.54	High			
1.5	2.01	2,000	7.16	5.28	21.48	15.84	BCH2MM152●●●6C	9.7	Medium	LXM28AU15M3X	LXM28EU15M3X	LXM28SU15M3X
2.0	2.68	3,000	6.37	4.69	19.1	14.08	BCH2LH203●●●6C	4.28	Low	LXM28AU20M3X	LXM28EU20M3X	LXM28SU20M3X
2.0	2.68	2,000	9.55	7.04	28.65	21.13	BCH2MM202●●●6C	13.5	Medium			
2.0	2.68	2,000	9.55	7.04	28.65	21.13	BCH2MR202●●●6C	26.5	Medium			
2.0	2.68	2,000	9.55	7.04	28.65	21.13	BCH2HR202●●●6C	34.67	High			
3.0	4.02	1,500	19.1	14.08	57.29	42.25	BCH2MR301●●●6C	53.56	Medium			
3.0	4.02	2,000	14.32	10.56	42.97	31.69	BCH2MR302●●●6C	53.56	Medium	LXM28AU30M3X	LXM28EU30M3X	LXM28SU30M3X
3.5	4.69	2,000	16.7	12.31	50.3	37.09	BCH2MR352●●●6C	53.56	Medium			
4.5	6.03	1,500	28.65	21.13	71.62	52.82	BCH2MR451●●●6C	73.32	Medium			