MODEL: FR-E700-SC-TM

TITLE: SPECIFICATIONS OF THE FR-E700-SC-TM INVERTER WITH THE EtherCAT COMMUNICATION PLUG-IN OPTION INSTALLED

1. Features

The FR-E700-SC-TM inverter, with the E7NECT_2P (EtherCAT communication plug-in option manufactured by HMS Industrial Networks AB) installed, supports network operations and monitoring via EtherCAT communication.

2. Communication specifications

Item	Specifications
Type	100BASE-TX (IEEE802.3)
Transmission speed	100 Mbps (Full duplex)
Interface	RJ45
Number of interfaces available	2 ports (IN port, OUT port)
Cable	CAT5e 4-pair STP (shielded twisted-pair) straight cable
Topology	Line, tree, star, ring, or a combination of them
Distance between stations	Maximum: 100 m
Number of nodes	Maximum: 65535
Number of connectable inverters	Maximum: 64
Compatible inverters	FR-E700-SC-TM (Only compatible with the EtherCAT communication plug-in option.)
EtherCAT communication specifications	IEC61158 Type12 CAN application protocol over EtherCAT (CoE), IEC61800-7 CiA402 Drive Profile

3. Control circuit terminal specifications

Type	Terminal symbol	Terminal name	Terminal function
24 V external power supply	+24	24 V external power supply	Even when the main circuit power supply is OFF, communication continues via the 24 V external power supply.
	SD	24 V external power supply common	
Safety stop function	S1	Safety stop input (Channel 1)	These terminals are used for the safety stop input signal for the safety relay module.
	S2	Safety stop input (Channel 2)	
	PC	Safety stop input terminal common	
Open collector output	Y0	Open collector output Y0	During inverter operation, signals are output. The terminal function can be selected by Pr.190 (Y0 terminal function selection).
	SE	Open collector output common	

Limitations: The parameter units FR-PU07 and FR-PU07BB and the enclosure surface operation panel FR-PA07 are not compatible with this inverter.

4. Lineup

Inverter	Inverter capacity										
	0.1	0.2	0.4	0.75	1.5	2.2	3.7	5.5	7.5	11	15
FR-E720-[ ]KSC-TM	●	●	●	●	●	●	●	●	●	●	●
FR-E740-[ ]KSC-TM	—	—	●	●	●	●	●	●	●	●	●

●: Applicable
-: Not applicable

MODEL: FR-E700-SC-TM

APPENDIX 1. Main differences between the FR-E700-SC and the FR-E700-SC-TM

Item		E700-SC	E700-SC-TM
Compatible plug-in option	E7NECT_2P *separate distributor	—	●
	FR-A7AX	●	—
	FR-A7AY	●	—
	FR-A7AR	●	—
	FR-E7DS	●	—
	FR-A7NC	●	—
	FR-A7ND	●	—
	FR-A7NL	●	—
	FR-A7NP	●	—
Parameter unit	FR-PU07	●	—
	FR-PA07	●	—
Operations of the plug-in options when powered by the 24 V external power supply		—	● (E7NECT_2P only)
External terminal specification	Terminal STF	●	—
	Terminal STR	●	—
	Terminal RH	●	—
	Terminal RM	●	—
	Terminal RL	●	—
	Terminal MRS	●	—
	Terminal RES	●	—
	Terminal FU	●	—
	Terminal ABC	●	—
	Terminal 2	●	—
	Terminal 4	●	—
	Terminal 5	●	—
	Terminal 10	●	—
	Terminal FM	●	—
Function	External operation	●	—
	External thermal relay input (OH signal)	●	—
	External inverter reset (RES signal)	●	—
	Inverter run enable (X10 signal)	●	—
	PU operation external interlock (MRS signal, X12 signal)	●	—
	PU/NET operation switchover (X65 signal)	●	—
	PID control (Pr.127 to Pr.134)	●	—
	Dancer control (Pr.127 to Pr.134, Pr.44, Pr.45)	●	—
	RS485 communication (Pr.117 to 124, Pr.549)	●	—
	MODBUS RTU communication (Pr.117 to 124, Pr.549, Pr.343)	●	—
	PU (Pr.145, Pr.990, Pr.991)	●	—

●: Supported

—: Not supported

For further details, refer to the Instruction Manual of this inverter.