

General Specifications

Model LFS2433
PLC-5/SLC 500 Communication
Package (for ALE111)

CENTUM
ES3000 R3

GS 33Q03L41-34E

■ GENERAL

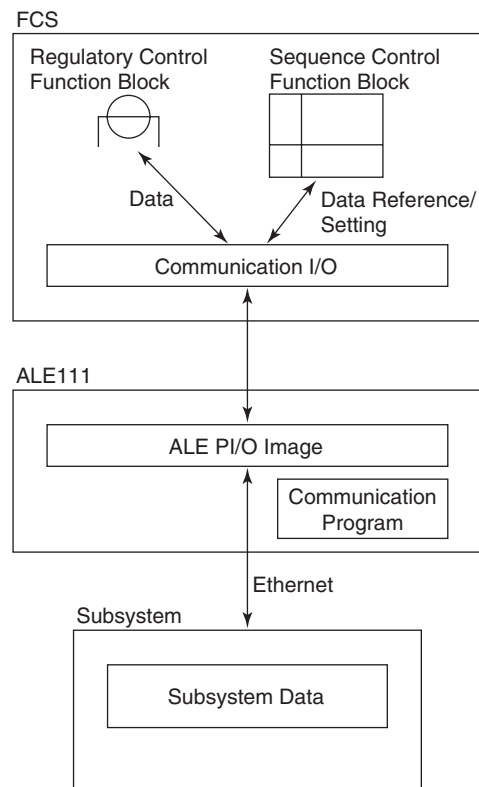
The Field Control Station (FCS) can communicate with subsystems such as PLC-5 and SLC 500 via ALE111 communication module installed in a Local Node, Remote Node (*1) or Compact Field Control Unit (for FIO). It acquires subsystem data and performs control. This GS covers the specifications of PLC-5/SLC 500 Communication Package (for ALE111).

- *1: Requirements for installation of communication modules in a Remote Node.
Communication modules can be installed in a Remote Node when the firmware revision of EB401 is R3 or later and any one of the following is met.
- When the FCS model name is AFG30□, AFG40□, or AFG8□□ and the software revision is R3.03 or later.
 - When the FCS model name is AFF50□ and the software revision is R3.04 or later.
 - When the FCS model name is AFV10□ and the software revision is R3.05 or later.

■ SUBSYSTEM COMMUNICATION (FOR ALE111) SPECIFICATIONS

● Communication with Communication Blocks

Subsystem data stored in the PI/O image area in ALE111 is transmitted to the communication I/O data area of the FCS, and connected – like analog or digital I/O signals – to the I/O terminals of the communication blocks.



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Flow of Data in a Subsystem

● Subsystem Connection Specifications

Subsystems are connected to the FCS via ALE111 Ethernet communication module.

Number of ALR111, ALR121, ALE111 and ALP111:

For control function for standard field control station:
6 max.

For control function for enhanced field control station:
16 max.

For control function for compact field control unit (for FIO):
8 max.

For control function for basic field control unit (for FIO,
for Vnet/IP):
16 max. (*1)

*1: When not using Application Capacity Expansion Package, the maximum total number is 8/FCS. For details, refer to GS 33P03K10-31E “Control Function for Basic Field Control Unit (for FIO, for Vnet/IP).”

The total installable number of ALE111, ALR111, ALR121 and ALF111 is 8 per ER bus segment.

Number of Communicable I/O Data:

Max. 4,000 words per FCS (1 word = 16 bits)

Note: The amount includes the data from other communication packages.

■ ALE111 COMMUNICATION MODULE SPECIFICATIONS

Number of Communicable Data:

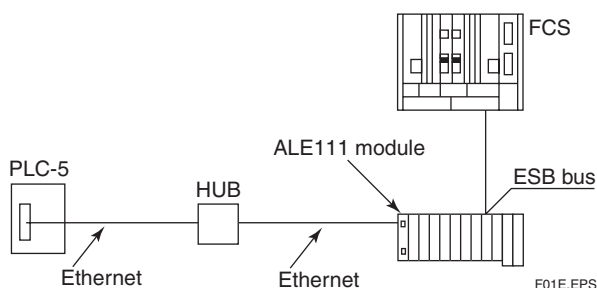
Max. 1,000 words per ALE111

Connection Method:

one to one connection using a crossing cable or star connection via HUB

LAN Specifications:

IEEE802.3 Compliant
Physical Layer: 10BASE-T
Transmission Speed: 10 Mbps
Number of Physical Port: one port
Maximum Distance: 100m (within a radius of 100m from HUB center)
Access Control: CSMA/CD
Communication Protocol: ARP, ICMP, UDP/IP, TCP/IP



PLC-5 Connection Example

■ PLC-5/SLC 500 COMMUNICATION PACKAGE (FOR ALE111) SPECIFICATIONS

Connected Device:

PLC-5/SLC 500 CPU modules (CPU modules with communication ports)

How to Connect:

Ethernet connection via HUB
(Relay a HUB because PLC-5 communication port is 10BASE-T, 10BASE-2, or 10BASE-5, but SLC 500's port is 10BASE-T. A HUB is not necessary for one to one connection using a 10BASE-T crossing cable.)

Applicable Device:

PLC-5/SLC 500 CPU module

PLC-5:	PLC-5/20E, PLC-5/40E, PLC-5/80E
SLC 500:	SLC 5/05

Protocol:

CSP protocol (binary)
Not supporting CIP protocol.

Transferable Internal Data:

Bit file:	Output image file (*1)
	Input image file (*1)
	Status file (*1)
	Bit file
Word file:	Timer
	Counter
	Control
	Integer file
	Floating point

*1: There are restrictions in the output image file and the input image file as below:
 PLC-5: read-only (write inhibited)
 SLC 500: both read and write inhibited
 There is a restriction in the status file as below:
 PLC-5 and SLC 500: read-only
 (write inhibited)

Communication Protocol:

TCP/IP

Data Transferable in One Communication:

Bit file:

File	Word (point (*2))	
	PLC-5	SLC 500
Output image file	12 (192)	-
Input image file	12 (192)	-
Status file	8 (128)	8 (128)
Bit file	600 (600)	256 (256)

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*2: Bit point

Word file:

File	Word (data (*3))	
	PLC-5	SLC 500
Timer	300 (3)	300 (3)
Counter	600 (3)	600 (3)
Control	600 (3)	600 (3)
Integer file	600 (1)	256 (1)
Floating point	600 (2)	512 (2)

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*3: Number of word per data

Number of Communicable PLC-5/SLC 500 Station:

Max. 30 stations/ALE111

(Maximum number of communicable station per FCS: 30
X 6 = 180)

Note: The mix of PLC-5 and SLC 500 is possible.
Only the station connected with ALE111 is
communicable. Cannot access via DH+ (etc.).

■ OPERATING ENVIRONMENT**●Hardware requirements**

AFF50S, AFF50D, AFS30S, AFS30D, AFS40S, AFS40D,
AFS81S, AFS81D, AFS82S, AFS82D, AFS83S, AFS83D,
AFS84S, AFS84D, AFG30S, AFG30D, AFG40S, AFG40D,
AFG81S, AFG81D, AFG82S, AFG82D, AFG83S,
AFG83D, AFG84S, AFG84D, AFV10S, AFV10D

●Software requirements

LFS1300 Control Function for Standard Field Control
Station (for FIO)

LFS1330 Control Function for Enhanced Field Control
Station (for FIO)

LFS1350 Control Function for Compact Field Control Unit
(for FIO)

LFS1500 Control Function for Basic Field Control Unit (for
FIO, for Vnet/IP)

●Engineering requirements

LHS5100 or LHM5100 Standard Builder Function

■ MODEL AND SUFFIX CODES

		Description
Model	LFS2433	PLC-5/SLC 500 Communication Package (for ALE111) [Media model: LHSKM02-C11]
	-S1S	Basic Software License
Suffix Codes	-C1C	Multiple Software License (for 2 or more)
	1	English Version

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■ ORDERING INSTRUCTIONS

Specify model and suffix codes.

■ TRADEMARKS

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