



INDUSTRIAL CONTROL COMMUNICATIONS, INC.

Sullair Master Driver Manual



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1 Sullair Master

1.1 Overview

This driver supports the Sullair Supervisor Protocol as a network monitor device (master). Some notes of interest are:

- The driver can automatically adapt to the Supervisor network configuration (sequencing or non-sequencing/slave mode).
- Any numerically-addressed parameter defined by the Supervisor protocol is directly accessible (machine type = parameter #1, etc.). However, some Supervisor data objects are not natively numerically-addressed. For these data objects, the additional parameter numbers indicated in Table 1 have been assigned.
- With the exception of the two display parameters (indexes 123 & 124), all parameters are mapped into the database as 2-byte (16-bit) values. This means that each parameter occupies two database addresses. Each display parameter is mapped into the database as a 20-byte ASCII character array. In other words, each display parameter occupies 20 database addresses. Note that because the display parameters differ in size from all other parameters, a single service object cannot access both types of parameters.
- The driver is primarily intended for system monitoring and configuration on the Supervisor network. As such, the following native Supervisor network commands are not available:

S – Stop	U – Unload
L – Load (modulate)	F – Full load
T – Trim (modulate)	E – Emergency stop
D – Display message	A – Auto run mode
C – Continuous run mode	
- Up to 123 parameters can be accessed per service object.

Table 1: Additional Supervisor Parameter Assignments

Parameter Number	Item	Note	Source
100	Capacity		Net / Quick Status
101	P2		
102	Sequence Hours		
103	Run Status	0 = E-stop 1 = Manual stop 2 = Remote stop 3 = Standby 4 = Starting 5 = Unloaded 6 = Loaded 7 = Trim 8 = Full load 9 = Remote disable	
104	Mode	0 = Auto (remote enabled) 1 = Continuous (remote enabled) 2 = Auto (remote disabled) 3 = Continuous (remote disabled)	
105	Fault Status	0 = No Fault 1 = Faulted	
106	Sequencing Status	0 = Not Sequencing 1 = Sequencing	
107	P1		
108	P2		
109	P3		
110	P4		
111	T1		
112	T2		
113	T3		
114	T4		
115	T5		
116	ID		
117	Analog Shutdown		
118	Relay Outputs		
119	Digital Shutdown		
120	Digital Inputs		
121	Run Time		
122	Load Time		
123	Display 1	1 st Line of Display	
124	Display 2	2 nd Line of Display	



1.2 Master Settings

Baud Rate

Fixed at 9600.

Parity

Fixed at No Parity (1 Stop Bit).

Address

Fixed at 0.

1.3 Service Object Settings

The Sullair Supervisor master driver uses service objects to describe what services the driver should perform. For each service object, the driver will continually read the parameters defined within the service object from the designated controller, storing the value(s) in the database (if the “Get Parameter” function is enabled). When data in the database changes where the parameters are mapped, a write request is generated to the designated controller notifying it of the changed value(s) (if the “Change Parameter” function is enabled).

Description

This 32-character (max) field is strictly for user reference: it is not used at any time by the driver.

Destination Address

Indicates the destination address (1...16) of the Supervisor controller on the network that will be accessed by this service object.

Start Parameter

Defines the starting parameter number (0...124) for a range of parameters associated with this service object.

Number of Parameters

Defines the number of parameters (1...123) to be targeted by this service object.

Database Address

Defines the database address where the first parameter of this service object will be mapped. The configuration studio will not allow entry of a starting database address that will cause the service object to run past the end of the database. The highest valid database address, therefore, will depend on the service object type (2-byte vs. 20-byte), as well as the number of items to be accessed.

Data Type

Fixed at either “16-Bit Unsigned” for parameters 0...122 or “20-Char String” for parameters 123 and 124.



Multiplier

Available only when parameters 0...122 are being accessed. The amount that associated network values are scaled by prior to being stored into the database or after being retrieved from the database. Upon retrieval from the database, raw data is multiplied by the multiplier to produce a network value (to be sent to a controller). Similarly, network values (read from a controller) are divided by the multiplier before being stored into the database.

Get Parameter Enable

This checkbox selects whether or not to allow the service object to issue G (Get Parameter) requests. When the Get Parameter function is enabled, the service object will continuously read from the controller unless a pending write exists.

Change Parameter Enable

This checkbox selects whether or not to allow the service object to issue P (Change Parameter) requests. When values encompassed by this service object change in the internal database and the Change Parameter function is enabled, these changes will be written down to the targeted controller.

1.4 Diagnostics Object

Each service object can optionally include a diagnostics object for debugging and diagnostics.

Diagnostics Database Address

Enter the database address at which to store the diagnostics information.



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