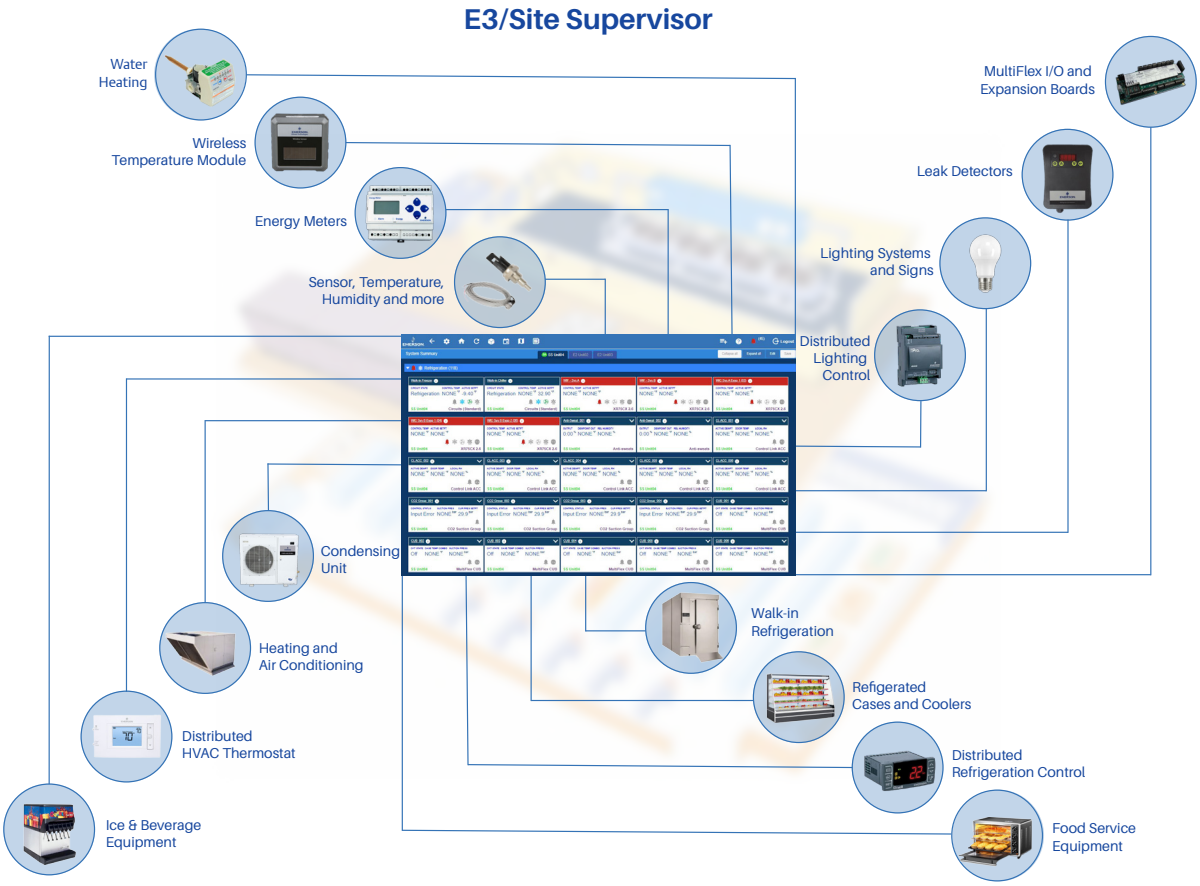
Supervisory Control Application Matrix

Product Information Sheet



Important Note:

The tables in the following pages are designed to give a general overview of the application capabilities of Supervisory controllers.

Customers are cautioned that the figures in each cell of the following tables may only be interpreted as a general rule-of-thumb number. Values, where appearing in any cell, are intended to represent the designated maximum number for particular application types (as shown in rows) for each Supervisor model/series (as shown in columns), but independent of other application types. In other words, these figures are not indicative of the maximum number of combined applications that can be read by a single Supervisory controller.

Supervisory controllers are designed (and required) to handle a combination of multiple applications at the same time. The extent of such combinations that can be added to each Supervisory controllers should only be determined by a qualified support specialist and will be governed by customized store requirements. In general, just as with computers, each additional input/memory requirement imposed on the Supervisory controller would reduce the memory available for other applications.

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**The number of suction groups indicated equals the total number of combined suction groups allowed. Both Enhanced and Standard suction groups combined cannot exceed this number.

Application	Supervisor Small Format SF	Refrigeration Supervisor RXS	Refrigeration Supervisor Expanded* RXSe	Building Supervisor BXS	Building Supervisor Expanded* BXSe	Combination Supervisor CXS	Combination Supervisor Expanded* CXSe	Service Replacement SR	Site Aggregator SA	CO2-CXe	CO2-RXe
Email and Text Alarms	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
Graphical Defrost Summary	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
File Management	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
Site Inventory	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
Duplicate Application	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
Customer Roles and Permissions	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
Custom Summary Screens	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
Ethernet, 3 Ports	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
USB, 2 Ports	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
SD, 1 Port, 1 GB Provided	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
Site Aggregator	*	*	*	*	*	*	*	*	✓	-	-
Smart Alarms	*	*	*	*	*	*	*	*	✓	-	-
Performance Meter	*	*	*	*	*	*	*	*	✓	-	-
Floor Plan	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-
AHU Large	-	-	-	6	8	6	8	9	-	8	0
AHU Small	4	-	-	-	-	-	-	-	-	-	-
Analog Combiner	64	128	128	128	128	128	128	130	-	128	128
Analog Sensor Control	12	64	72	64	72	24	48	80	-	72	72
Anti-Sweat	4	16	64	16	48	8	16	70	-	16	64
Case Control Circuit	-	48	64	-	-	12	24	70	-	24	64
CO2 Suction Group	-	-	-	-	-	-	-	-	-	3	3
Condenser	-	1	2	-	-	1	2	2	-	2	2
CoreSense (Comm)	-	-	-	31	31	31	31	40	-	99	99
CoreSense Protection (Discus)	-	63	63	63	63	63	63	70	-	99	99
CoreSense (Large Ref Scroll)	-	31	31	-	-	-	-	-	-	99	99
CoreSense Diagnostics (ISD 2.0)	-	31	31	31	31	31	31	40	-	99	99
Control Link ACC	8	63	63	-	-	16	16	70	-	16	63
CT Drive	-	16	16	16	16	16	16	70	-	16	16
Demand Control	1	-	-	2	2	1	1	3	-	2	0
Digital Combiner	64	128	128	128	128	128	128	130	-	128	128
Digital Sensor Control	12	64	72	64	72	24	48	80	5	64	72
Emerson T-Stat	8	-	-	32	64	32	64	70	-	64	0
Emerson T-Stat TS	8	-	-	32	64	32	64	70	-	-	-

Table 1 - Supervisory Controller Application and System Capacity Matrix

Application	Supervisor Small Format SF	Refrigeration Supervisor RXS	Refrigeration Supervisor Expanded* RXSe	Building Supervisor BXS	Building Supervisor Expanded* BXSe	Combination Supervisor CXS	Combination Supervisor Expanded* CXSe	Service Replacement SR	Site Aggregator SA	CO2-CXe	CO2-RXe
Energy Meter	8	30	30	30	30	30	30	35	-	30	30
Enhanced Suction Control**	-	4	4	-	-	-	4	5	-	-	-
Flexible Combiner	64	128	128	128	128	128	128	130	-	128	128
HVAC Zone	4	-	-	32	40	6	12	45	-	12	0
Irrigation	2	-	-	-	-	2	2	3	-	2	0
Lighting Control	6	-	-	24	48	24	48	50	-	48	0
Logging Group	12	32	32	32	32	32	32	35	-	32	32
Loop/Sequence Control	8	16	24	16	28	16	28	30	-	28	16
M400	-	16	16	16	16	16	16	70	-	16	16
Modular Chiller Control (MCC)	-	1	2	-	-	-	-	-	-	0	2
MRLDS	24	24	24	24	24	24	24	30	-	24	24
MRLDS-250	24	24	24	24	24	24	24	30	-	24	24
MRLDS-450	24	24	-	-	-	-	-	-	-	24	24
MultiFlex 16AI	16	16	16	16	16	16	16	16	-	16	16
MultiFlex 4AO	2	16	16	16	16	16	16	16	-	16	16
MultiFlex 8DO	4	16	16	16	16	16	16	16	-	16	16
MultiFlex 8DO	16	32	32	32	32	32	32	32	-	16	16
MultiFlex ARTC/RTU	-	-	-	32	32	32	32	32	-	32	0
MultiFlex ESR	-	31	31	-	-	31	31	31	-	31	31
MultiFlex RCB/RBC-P	-	-	-	64	-	32	32	64	-	32	0
MultiFlex CUB	-	31	31	-	-	-	-	-	-	31	31
RLDS	1	16	16	16	16	16	16	20	-	16	16
Standard Circuit	6	48	64	-	-	12	32	70	-	32	64
Standard Suction Control**	-	4	4	-	-	1	4	5	-	-	-
TD Condenser Fan Control	-	64	64	16	28	16	28	70	-	28	64
Time Schedule	8	64	64	64	64	16	32	70	-	64	64
Utility Monitoring	8	16	16	32	64	8	16	35	-	64	64
Wireless Gateway	1	1	1	1	1	1	1	1	-	1	1
Wireless Module	99	99	99	99	99	99	99	99	-	-	-
ECB-VAV	-	-	-	25	25	25	25	-	-	25	0

Table 1 - Supervisory Controller Application and System Capacity Matrix

***The number shown for Supervisory controllers indicates the total number of Suction Group applications available. A controller can support any combination of standard Suction Groups and Enhanced Suction Groups that do not exceed the total number for either type. For example, an RX supports two (2) Enhanced Suction Controls and two (2) Standard Suction Controls (a total of 4) or three (3) Enhanced Suction Controls and one (1) Standard Suction Control (a total of 4).*

MODBUS Network (RS-485)

(Specified wiring: Belden 8641(24 AWG, 300V, Part numbers 135-8641); Belden 8761 (22 AWG, 300 V, not stocked by Copeland; or a 600V-shielded 22 AWG equivalent, part number 135-0600) supporting a maximum cable distance of 4,000 ft (1,219 m) between the Supervisory controller and end-device. Belden 9855 may be used as an alternative in noisy environments, and is not recommended in other situations.

Application	Supervisor Small Format SF	Refrigeration Supervisor RXS	Refrigeration Supervisor Expanded** RXSe	Building Supervisor BXS	Building Supervisor Expanded** BXSe	Combination Supervisor CXS	Combination Supervisor Expanded** CXSe	Service Replacement SR
Control Link® ACC	8	63	63	-	-	16	16	70
CT Drive	-	16	16	16	-	16	16	16
CoreSense (Comm)	-	63	63	63	63	63	63	70
CoreSense Protection (Discus)	-	63	63	63	63	63	63	31
CoreSense Large Ref Scroll (K5)	-	31	31	-	-	31	31	31
CoreSense Diagnostics (ISD 2.0)	-	31	31	31	31	31	31	31
Emerson Energy Meter	8	30	30	30	30	30	30	40
Emerson T-Stat (EOL)	8	-	-	32	32	32	64	70
DAC	-	-	-	32	32	32	32	55
RLDS	1	16	16	16	16	16	16	20
M400	-	16	16	16	-	16	16	20
MRLDS-250	24	24	24	24	24	24	24	30
MRLDS-450	24	24	24	24	24	24	24	30
Wireless Gateway	1	1	1	1	1	1	1	1
XR35_2.6, 5.6	32	99	99	-	-	99	99	99
XR75_2.6, 5.6	32	99	99	-	-	99	99	99
XR75_Case Display	32	99	99	-	-	99	99	99
XM670_3.4	-	99	99	-	-	99	99	99
XM678_2.5, 2.8	-	99	99	-	-	99	99	99
XM679_3.4, 4.2	-	99	99	-	-	99	99	99
XEV22_1.1, 1.5	-	99	99	-	-	99	99	99
XC645_2.5	-	99	99	-	-	99	99	99
Condensing Units	8	8	8	8	8	8	8	8

Table 2 - MODBUS Network RS-485

*** Supervisory controllers support four independent MODBUS networks – so the user can have multiple MODBUS addresses on the different networks. However, the total number of devices in both networks combined, cannot exceed 99.*

Supervisor I/O Network (RS-485)

Specified wiring: Belden #8761 (non-plenum), Belden #82761 and #88761 (plenum).

Application	Supervisor Small Format SF	Refrigeration Supervisor RXS	Refrigeration Supervisor Expanded* RXSe	Building Supervisor BXS	Building Supervisor Expanded* BXSe	Combination Supervisor CXS	Combination Supervisor Expanded* CXSe	Service Replacement SR
4AO	2	16	16	16	16	16	16	16
8RO	16	32	-	32	32	32	32	32
8DO	4	16	16	16	16	16	16	16
16AI	16	16	16	16	16	16	16	16
MultiFlex CUB	-	31	31	-	-	-	31	31
MultiFlex ESR	-	31	31	-	-	31	31	31
MultiFlex RCB	-	-	-	64	64	32	64	64
MultiFlex RTU/ ARTC	-	-	-	32	32	32	32	32

Table 3 - Supervisory Controller I/O Network RS-485

For more information about Site Supervisor including release notes and the full user manual, scan the QR code.

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