

### FlexXpand FXS Color Touch Screen PLC Controls - Intuitive, Reliable and Expandable

The powerful FlexXpand FXS control system provides a single, wall mounted, color touch screen control with a wide range of built-in capabilities. The basic FlexXpand FXS control provides control of up to 5 vacuum pumps, 32 material receivers with proportioning capability and 25 purge valves. Capabilities can be expanded with the addition of FlexXpand FXMS modules.

- **Touchscreen Control with Expansion Capability**  
Intuitive operation with the ability to expand using economical FlexXpand FXMS modules.
- **Easiest to Use**  
No need for special training... the color, icon driven, graphic display allows immediate understanding and efficient control over all conveying parameters.
- **Instantly Connect with any PC Online**  
Ethernet connection ability permits full control access from any PC, anywhere.
- **PLC Reliability**  
A powerful PLC is the heart of the system, supported by NovaNet communications expansion modules.
- **Low Cost Installation**  
FlexXpand FXMS modules connect to the main control with a simple Ethernet communications cable - modules can be conveniently located to minimize wiring to system components.
- **FlexXpand FXMS Modules**  
Control additional receivers, (including blowback and proportioning) pumps, purge valves or material selection stations where auto ID proofing is desired .
- **Ethernet Communications**  
Each FlexXpand FXS control includes a 3-Port Ethernet connection for local HMI, Remote HMI and FlexXpand modules.
- **Expansion Without Extra Programming**  
All modules are instantly recognized by the FXS control with no need for special programming.



FlexXpand FXS-532-25-10C

#### Plus:

- 24 VDC inputs & outputs standard
- 115 VAC control power standard (230/1/50-60) optional
- Audible and visual alarms on the control face
- 2-Year warranty

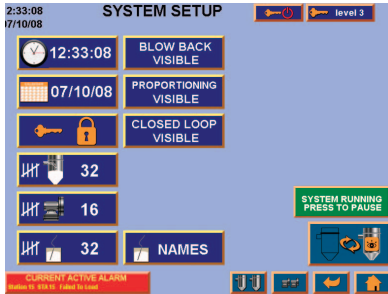


FlexXpand FXMS expansion modules can be wall mounted near the components being controlled.

# The PLC-driven FlexXpand FXS Touch Screen

...provides an extremely intuitive display of all conveying functions through the use of highly graphic and colorful interactive icons, personalized descriptive text and effective alarm

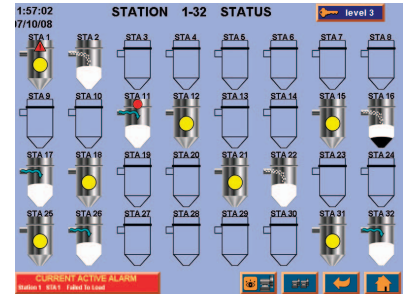
messages. Changes to operating parameters can be made easily, with assignable levels of security, on intuitive input screens with instant feedback of accepted changes and ultra logical screen navigation.



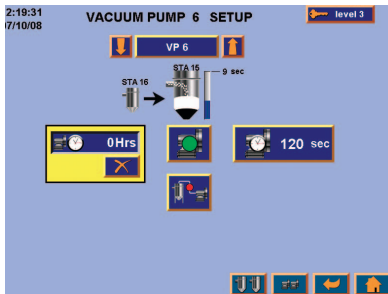
System Setup



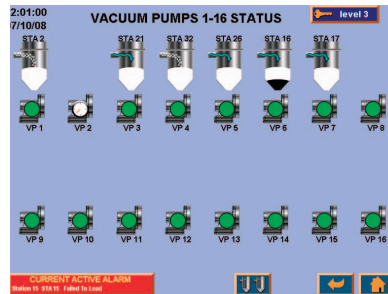
Station Setup



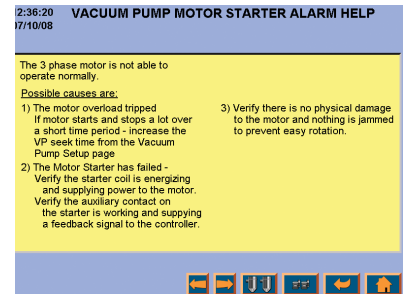
Station Status



Vacuum Pump Setup



Vacuum Pump Status



Built-in Help Pages

With the Ethernet capability of FlexXpand, all pages and all of the control's intuitive graphics can be accessed remotely on any PC. Monitor and make changes with the click of the mouse.

## System Component Capabilities

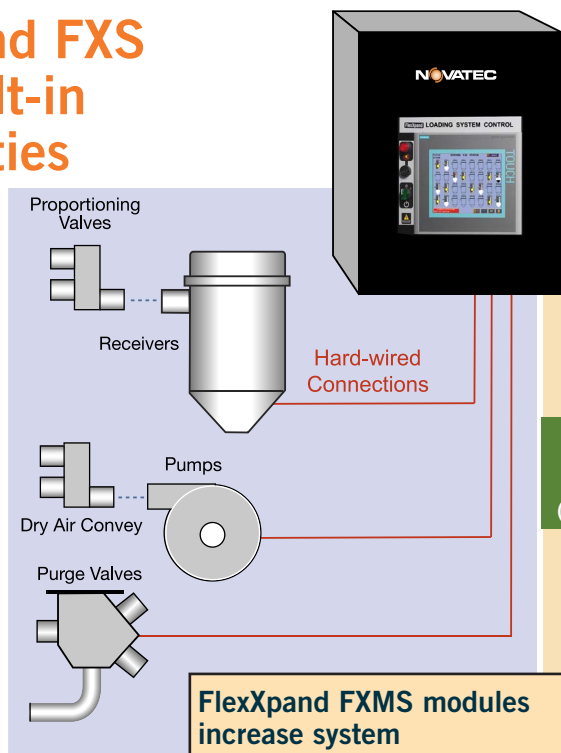
Component	Panel Input Voltage	Description	Pumps	Receivers	Purge Valves or Blowback	Proofing Lines
FXS-516-10-6C	115/230 VAC	5.7" Diagonal Color Touch Screen	5	16	10	0
FXS-532-25-6C	115/230 VAC	5.7" Diagonal Color Touch Screen	5	32	25	0
FXS-532-25-10C	115/230 VAC	10.4" Diagonal Color Touch Screen Control	5	32	25	0

## Specifications

Component	Dimensions W x H x D		Amps Required		Inputs	Outputs
	in.	mm	115V	230V		
FXS-516-10-6C	20 x 20 x 8	500 x 500 x 200	13	6.5	24VDC or 115VAC†	
FXS-532-25-6C	24 x 30 x 8	600 x 760 x 200	13	6.5		
FXS-532-25-10C	24 x 30 x 8	600 x 760 x 200	13	6.5		
FXMS-8-16	16 x 14 x 6	406 x 355 x 152	–	–	24VDC	24VDC
FXMS-8-16-12	16 x 16 x 6	406 x 406 x 152	8	4	115VAC	115VAC
FXMS-0-16	16 x 14 x 6	406 x 355 x 152	–	–	–	24VDC
FXMS-0-16-12	16 x 16 x 6	406 x 406 x 152	8	4	–	115VAC
FXMS-16-0	16 x 14 x 6	406 x 355 x 152	–	–	24VDC	–
FXMS-SILO4	16 x 16 x 6	406 x 406 x 152	8	4	24VDC	24VDC
FXMS-SILO4X	16 x 16 x 6	406 x 406 x 152	8	4	24VDC	24VDC

† Add - 12 to FXS model number for 115 VAC input/output

# FlexXpand FXS with Built-in Capabilities



**FlexXpand FXMS modules increase system components by up to:**

- 120 Total Receivers w/ Blowback
- 20 Total Pumps
- 64 Total Purge Valves
- 120 Total Material Destinations
- 64 Total Material Sources
- 12 Silos

The full-featured FlexXpand FXS provides detailed control and monitoring of these conveying devices:

**Receivers:** Load time, discharge time, *proportioning*<sup>1</sup> percentage, number of layers, blowback\* pulses, priority selection (standard and high), failed fill alarm. Receiver demands are serviced in the order they are received (FIFO).

**Pumps:** Pump on (starter), overload alarm, vacuum breaker valve function (NO or NC) and timer, dry air conveying closed loop valve, and run-time clock.

**Purge Valves:** Purge time setting with manifold *sharing capability*<sup>2</sup> (allows multiple pumps to work with common valves).

**Material Sources and Destinations:** Optional Auto ID material source to receiver destination proofing prevents conveying through mismatched manifold connections.

**Silo Monitoring:** Remote panel High/Low paddle switch indication plus high level alarm with silence. HMI displays paddle switch status and continuous material level through ultra-sonic devices and control, with user selectable high and low alert levels.

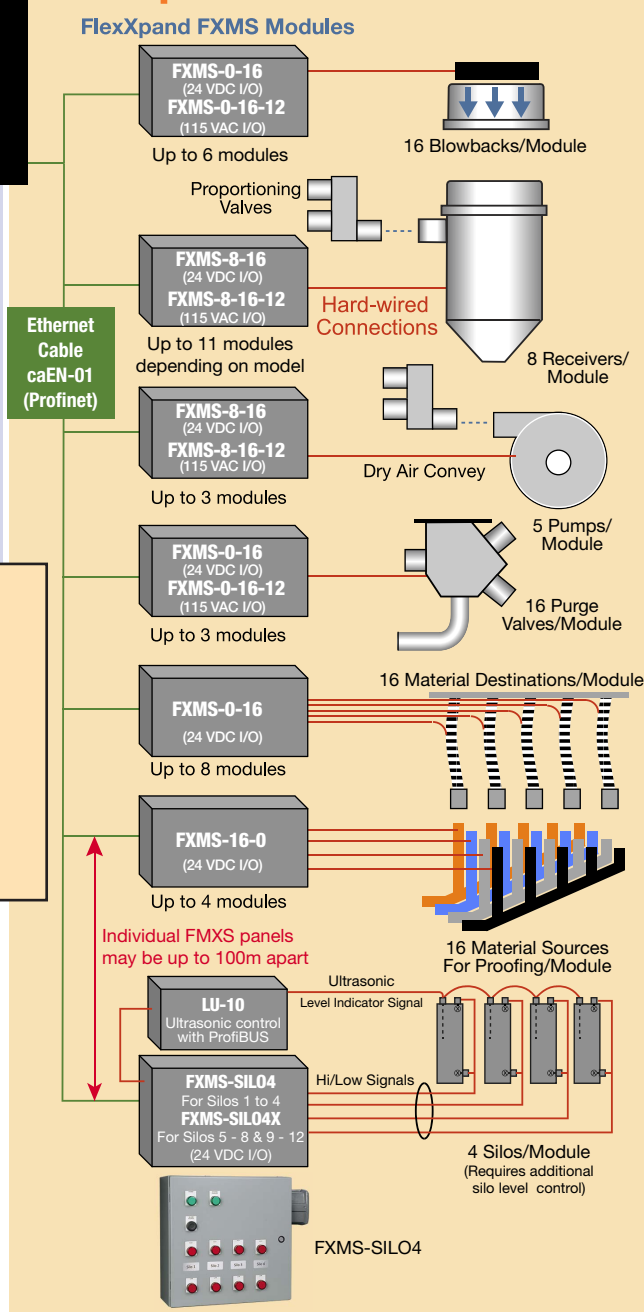
<sup>1</sup> Separate proportional settings may be made for each optional proportioning receiver within each pump system, but all valves in that system are connected with a common signal. In operation, all proportioning valves within that pump system operate at the same time. Discreet proportioning is included for receivers wired to FlexXpand FXMS modules.

<sup>2</sup> Novatec's unique manifold sharing capability provides 'traffic control' of multiple pump systems calling upon common purge valves. The control automatically senses the need for valve use, assigns valve function to one pump and allows waiting pump(s) to continue loading other receivers until the purge valve is accessible.

<sup>3</sup> Auto ID allows inputting of desired material source and destination information into the control, but the correct connection must be confirmed by the (optional) proofing connections at the manifold, or an alarm signal is generated and loading is not permitted.

\* Up to two blowback output cards for up to 16 receivers each can be factory installed in FXS control.

# FlexXpand FXS with FlexXpand FXMS Modules



**Options:** (Show as separate line item on order - see price list #353)

- **Blowback output card for up to 16 receivers:** Part# BBOM-FXS-16 (up to 2 cards can be factory installed and wired into FMX control)
- **Ethernet Switch, 5-port:** (for main panel - required for remote HMI use) (for RHI- use when extending Ethernet network)  
Part # ETHS-5-24
- **115 V I/O for existing systems:** Part# VOLT-FXS532-12 Part # VOLT-FTS-21
- **230 V Panel Input Power:** (all models, 24 VDC I/O only) Part # VOLT-FXS532 -21
- **Alarm strobe:** (must match panel I/O voltage) 24 VDC Part # kit-strobe-24 115 V Part # kit-strobe-12

**Accessories:** (Show as separate line item on order - shipped separately, see price list #353)

- **Receiver or Pump Xpand Module:** (up to 12 may be added depending on model)  
8 Inputs / 16 Outputs expansion panel for 8 receivers OR 5 pumps  
24 VDC I/O Part # FXMS-8-16  
115 VAC I/O Part # FXMS-8-16-12
- **Blowback or Purge Valve Xpand Module:** (up to 12 may be added for receivers: up to 3 for pumps)  
0 Inputs / 16 Outputs expansion panel for 16 purge valves  
24 VDC I/O Part # FXMS-0-16 115 VAC I/O Part # FXMS-0-16-12
- **Auto ID: (source) Xpand Module:** (up to 4 may be added)  
16 Inputs / 0 Outputs expansion panel for 16 Auto ID sources 24 VDC I/O Part # FXMS-16-0
- **Auto ID: (destination) Xpand Module:** (up to 8 may be added)  
0 Inputs / 16 Outputs expansion panel for 16 Auto ID destinations 24 VDC I/O Part # FXMS-0-16
- **Silo Level Monitoring with Horn Xpand Module:** (up to 3 may be added)  
16 Inputs / 8 Outputs / 4 Analog Inputs expansion panel for monitoring up to 4 silos  
24 VDC I/O Part # FXMS-SILO4 For Silos 1 - 4 Part # FXMS-SILOX For Silos 5 - 8 and 9 - 12
- **Ethernet Communication Cable:** Part # caEN-01
- **Ethernet Cable Connector:** Part # ehcETH-mfw
- **Ethernet Repeater Switch-Nema 4:** Stand alone installation 115VAC input power required.  
Required to extend single network greater than 100m Part # SCR-CNTL-010
- **Remote Touch-Screen HMI: (10.4" color)** Part # RHI-10S-12  
Requires Ethernet switch installed in main panel - Part # ETHS-5-24  
Extending Ethernet requires Ethernet switch installed in additional RHI panels - Part# ETHS-5-24  
Must specify total number of RH panels in use with network (including current order quantity)  
(Note: Must specify total number of RHI panels in use with network - including current order quantity)

**Ethernet Connects Your FlexXpand to the World**

Every FlexXpand control can be accessed via the web by any PC, anywhere in the world. Actual FlexMaster screens are displayed on the PC monitor and changes can be made easily with the click of a mouse. Multiple security levels and access are pre-programmed with selectable passwords to prevent unauthorized viewing or changes.

View alarm logs, program material changes, monitor pump run life... all on line, from anywhere and with the help of superintuitive graphics and self-explanatory icons. In addition, when programmed to do so, FlexXpand can automatically email system alarms to any email account on a PC, Blackberry® or iPhone.

