AMETEK
AUTOMATION & PROCESS TECHNOLOGIES

FIXED SEQUENCY PANELS

These arrangements minimize installation time and costs by combining 2 or 3 control functions into a single control panel. All wiring connections between the BIW relays are made in our shop. Field wiring is made to the rugged terminals of the BIW relays and a system wiring diagram is provided which clearly shows all required external connections to the electrodes and other devices.

The standard enclosure is rated Nema 3R for location indoors or outdoors. It is made of steel with baked enamel finish and has knockouts in the bottom for conduit fittings. The Nema 4 watertight enclosure is fiberglass. It meets the Nema 4X corrosion resistance standards and suitable aluminum conduit hubs are furnished loose for field mounting. Nema 12 enclosures are available to meet industrial requirements, or the relays can be furnished as open chassis on a back plate for field mounting into an electrical panel.

Several of the most common control combinations are listed below and identified with catalog numbers. However, any combination of relays can be provided. Just tell us what you want.

Catalog Number Example

8040–FS2B–X–L1 — N12 — 5200-L–LF1

LINE VOLTAGE	
L1	115 Volt 50/60 Hz
L2	208-230 Volt 50/60 Hz
L3	460 Volt 50/60 Hz*
L4	575 Volt 50/60 Hz*

*Not available for Solid State

OPTIONAL FEATURES	
X	None

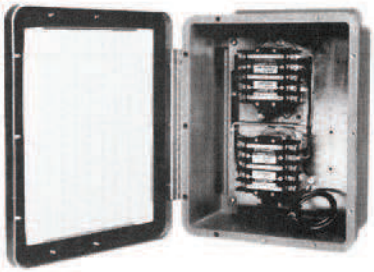
ENCLOSURE	
OC	Open Chassis
N1	Nema 1 & 3R
N4	Nema 4 or 4X
N12	Nema 12

RELAY SENSITIVITY	
S1-S11	Select from Chart Sec. 1500
LF1, HF2	Select from Chart Section 5200
LV1-2 HV3-4-5	Select from Chart Section 5200
V F1-F8	Select from Chart Section 5300

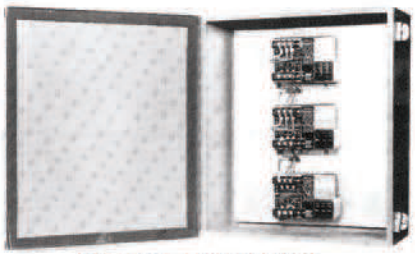
	NUMBER OF ELECTRODES[1]	TYPICAL CONTROLS WITH 2 RELAYS
FS2A	4	Single pump up with high level alarm contact
FS2B	4	Single pump up with low level alarm contact
FS2C	3 & 3	Single pump up control for reservoir with low level cut-off in suction tank or well
FS2D	4	Two pump, pump up fixed sequence-common stop
FS2E	5	Two pump, pump up fixed sequence-separate stops
FS2F	3	Two pump, pump up common stop for ice free electrodes
FS2G	5	Make-up valve control with low level cut-off
FS2H	4	Make-up valve control with low level cut-off and alarm contact
FS2I	4	Hydropneumatic tank control for one pump with low level alarm contact
FS2J	4	Single pump down with high level alarm contact
FS2K	4	Two pump, down fixed sequence with common stop
FS2L	5	Two pump, down fixed sequence with separate stops
FS2M	3	Single pump down with heater cut-off for ice-free electrodes
FS2N	3	High and low level alarm, 1 N.O. and 1 N.C. contact
FS2O	2	High and low alarm contacts for ice-free electrodes

	NUMBER OF ELECTRODES[1]	TYPICAL CONTROLS WITH 3 RELAYS
FS3A	5	Single pump up with high and low level alarm contacts
FS3B	6	Single pump up with high level alarm contact and low level cut-off and alarm contacts
FS3C	5	Single pump up with high and low level alarm contacts for ice-free electrode assembly
FS3D	5	Three pump, pump up with common stop electrode
FS3E	5	Single pump down with high and low level alarm contacts
FS3F	5	Two pump down common stop with high level alarm contact
FS3G	5	Three pump down fixed sequence with high level alarm contact when third pump is required
FS3H	5	Make-up valve control with high and low level alarm contacts
FS3I	4	Make-up valve control with high and low level alarm contacts for shallow tank ice-free electrode assembly
FS3J	4	Make-up valve control with high and low level alarm contacts for standard ice-free electrode assembly
FS3K	4	Three level indication with 1 N.O. and 1 N.C. contacts

RELAY TYPE	
1500	Induction Type 1500
5200-L	Series 5200-low sensitivity
5200-H	Series 5200-high sensitivity
5300-S	Series 5300-10 amp contacts
5300-P	Series 5300-25 amp contacts
5510	Series 5510-10 amp contacts



Two Type 1500 Relays In NEMA 4 Enclosure



Three Type 5200 Relays In NEMA 12 Enclosure

NOTES: 1. A common electrode is included and it may be omitted if a dependable ground return connection to the liquid is provided by other means.

2. The alarm contacts provided *close* on alarm condition. Other controls can be furnished with contacts that *open* on alarm condition.