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SUBJECT: DRFD Product Support plan

The Woodward DRFD product line is a very important product line to Woodward, however due to the lack of obtainable components, and the creation of the Servo Position Control (SPC), Woodward has resolved to cease production of all DRFD products. Woodward has produced and supported the DRFD product line for many years and will continue to offer support for it long term.

If a new or spare DRFD based driver is required, please refer to the below matrix to understand which SPC and or associated devices can be used to replace your current DRFD product. Please contact your local account manager to for related application questions or needs. Woodward will commit to the following DRFD product line support plan:

August 1, 2003 - 2008:
- Repairs based on parts availability
- Replacement Exchange with available Woodward Service Stock
- Replacement product utilizing same algorithms and logic where applicable

August 1, 2008 - 2023:
- Repairs based on parts availability
- Replacement Exchange with available Woodward Service Stock
- Replacement product utilizing same algorithms and logic where applicable
- Availability of design drawings such that customer can produce the part themselves (with signed "Proprietary Drawing and Assumption of Liability and Release Agreement")

DIGITAL REMOTE FINAL DRIVER REPLACEMENT MATRIX

8239-	Chan	PS	Xdcr	Shutdn	Action	Driver Ranges *(3)* (4)	Comments	SPC Replacement Comments
005	**1**	**redun**	**ac**	**nlatch**	**fwd**	± 20, 40, **125**, 250 mA	**(5) cascade control, pilot valve fb**	Two SPCs Cascaded together
006	**2**	**redun**	**ac**	**latch**	**fwd**	± 20, 40, **125**, 250 mA		2 SPCs will work - PS redundancy must be performed externally. SPC has 100mA range not 125mA range.
007	2	single	dc	nlatch	rev	± 10, 20, 100, 250 mA	lead/lag control	2 SPCs will work - May have to re-tune speed control loop.
008	**1**	**single**	**dc**	**nlatch**	**rev**	± 10, 20, 100, 250 mA	**lead/lag control**	1 SPC will work - May have to re-tune speed control loop.
009	**1**	**redun**	**ac**	**latch**	**fwd**	± 20, 40, **125**, 250 mA		1 SPC will work - PS redundancy must be performed externally. SPC has 100mA range not 125mA range.
010	1	redun	dc	latch	fwd	± 20, 40, **125**, 250 mA	redun reference	1 SPC will work - PS redundancy must be performed externally. SPC does not offer redundant ref (high signal select). SPC has 100mA range not 125mA range.
011	1	redun	ac	latch	fwd	± 20, 40, **125**, 250 mA	redun reference	1 SPC will work - PS redundancy must be performed externally. SPC does not offer redundant ref (high signal select). SPC has 100mA range not 125mA range.
014	2	redun	dc	nlatch	rev	± 10, 20, 100, 250 mA	lead/lag control	2 SPCs will work - PS redundancy must be performed externally. May have to re-tune speed control loop.

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016	1	redun	ac	nlatch	fwd	± 20, 40, **125**, 250 mA		1 SPC will work - PS redundancy must be performed externally. SPC has 100mA range not 125mA range.
030	2	redun	dc	latch	rev	± 10, 20, 100, 250 mA		2 SPCs will work - PS redundancy must be performed externally.
031	2	redun	dc	latch	fwd	± 10, 20, 100, 250 mA		2 SPCs will work - PS redundancy must be performed externally.
033	2	redun	none	latch	fwd	± 10, 20, 100, 250 mA	**proportional actuator *(1)***	2 SPCs will work - PS redundancy must be performed externally. SPC position readback only reflects sensed valve Xducer position.
035	1	single	ac	latch	fwd	± 20, 40, **125**, 250 mA		1 SPC will work - SPC has 100mA range not 125mA range.
036	2	single	ac	latch	fwd	± 20, 40, **125**, 250 mA		2 SPCs can work - SPC has 100mA range not 125mA range.
041	2	single	ac	latch	fwd	± 20, 40, **125**, 250 mA	PI Controller	2 SPCs can work - SPC has 100mA range not 125mA range.
063	2	single	dc	nlatch	rev	± 10, 20, 100, 250 mA	lead/lag control (EHPC) *(2)*	2 SPCs can work – Must use external power source for EHPC xducer. May have to re-tune speed control loop.
065	**2**	**redun**	**dc**	**nlatch**	**rev**	± 10, 20, 100, 250 mA	**lead/lag control (EHPC) *(2)***	2 SPCs can work – Must use external power source for EHPC xducer. PS redundancy must be performed externally. May have to re-tune speed control loop.
070	2	redun	dc	latch	fwd	± 20, 40, 100, 250 mA	SAE 8239-031, different driver ranges	2 SPCs will work - PS redundancy must be performed externally.
077	**1**	**redun**	**dc**	**nlatch**	**rev**	± 20, 40, 100, 250 mA	**lead/lag ctrl, redun reference (EHPC) *(2)***	1 SPC will work - Must use external power source for EHPC xducer. PS redundancy must be performed externally. SPC does not offer redundant ref (high signal select). May have to re-tune speed control loop.
078	1	single	dc	nlatch	rev	± 10, 20, 100, 250 mA	lead/lag control (EHPC) *(2)*	1 SPC will work – Must use external power source for EHPC xducer. May have to re-tune speed control loop.
079	**1**	**redun**	**dc**	**nlatch**	**rev**	± 10, 20, 100, 250 mA	**lead/lag control (EHPC) *(2)***	1 SPC will work - Must use external power source for EHPC xducer. PS redundancy must be performed externally. May have to re-tune speed control loop.
200	1	redun	dc	nlatch	fwd	± 10, 20, 100, 250 mA	lead/lag control (EHPC) *(2)*	1 SPC will work - Must use external power source for EHPC xducer. PS redundancy must be performed externally. May have to re-tune speed control loop.
201	2	single	dc	nlatch	fwd	± 10, 20, 100, 250 mA	lead/lag control (EHPC) *(2)*	2 SPCs will work - Must use external power source for EHPC xducer. May have to re-tune speed control loop.

Table Notes:

*(1) Meter is connected to **driver current** instead of position feedback.*

*(2) EHPC controls includes **+24Vdc transducer power supply.** All controls include **+/-15V transducer power supply.***

(3) Unipolar ranges are not shown. Example: ± 100 mA bipolar becomes 0-200 mA if unipolar is selected.

*(4) If all driver range jumpers are installed, the **maximum output current** is the sum of the ranges.*

(5) Nonlinear circuit is provided for pilot valve loop.

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Additional comments that apply to all units:
DRFD enclosures are NEMA 4 rated. The SPC is not.
Power input to DRFD is 120Vdc or ac. SPC is 18-32Vdc.
The SPC provides a NC status contact rather than a configurable one (NO or NC contact).
The status contact on the DRFD is rated for 125Vac – On the SPC it's only rated 18 to 32Vdc.
SPC only provides 18V transducer power.
SPC maximum output current is 250mA.

Parts obsolescence from electronic manufacturers can present a challenge to post-life support plans. Woodward strives to hold inventory, or look for alternative parts when components are obsoleted. However, there are times when components can simply not be obtained and where sufficient last-time buys cannot be made. In these cases, Woodward cannot always guarantee that we can maintain the rationalization support plan.

Regards,
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