

# Technical Note No. 103

## Optimized Signal Channel Count for Slip Rings Using Spinning Amplifiers

### 10 Channel Slip Ring Assembly\*

	350 Ω BRIDGE		120 Ω BRIDGE		THERMOCOUPLES
	5 VDC EXCITATION	10 VDC EXCITATION	5 VDC EXCITATION	10 VDC EXCITATION	N/A
+ 15 V	1	1	1	1	1
- 15 V	1	1	1	1	1
Power Common	1	1	1	1	1
Calibration Control	1	1	1	1	N/A
Signal Common	1	1	1	1	1
Signal Channels	5	5	5	5	6
Max mA required from PS-DC	220	295	360	570	60

### 20 Channel Slip Ring Assembly\*

	350 Ω BRIDGE		120 Ω BRIDGE		THERMOCOUPLES
	5 VDC EXCITATION	10 VDC EXCITATION	5 VDC EXCITATION	10 VDC EXCITATION	N/A
+ 15 V	1	1	1	2	1
- 15 V	1	1	1	2	1
Power Common	1	1	1	2	1
Calibration Control	1	1	1	2	N/A
Signal Common	1	1	1	1	1
Signal Channels	15	15	14	12	17
Max mA required from PS-DC	665	885	1005	910	170

### 36 Channel Slip Ring Assembly\*

	350 Ω BRIDGE		120 Ω BRIDGE		THERMOCOUPLES
	5 VDC EXCITATION	10 VDC EXCITATION	5 VDC EXCITATION	10 VDC EXCITATION	N/A
+ 15 V	2	2	2	3	1
- 15 V	2	2	2	3	1
Power Common	1	2	2	3	1
Calibration Control	2	2	2	3	N/A
Signal Common	1	1	1	1	1
Signal Channels	28**	28**	28**	24**	32
Max mA required from PS-DC	620	820	1005	910	320

\* Slip Ring Assembly limit: 1 Amp per circuit connection

\*\* Requires more than one *Amplifier Control Unit (PS-DC)*

Maximum current per strain gage amplifier = (bridge V / bridge R) + 0.015A + (0.015A during shunt calibration)

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 Rev. A

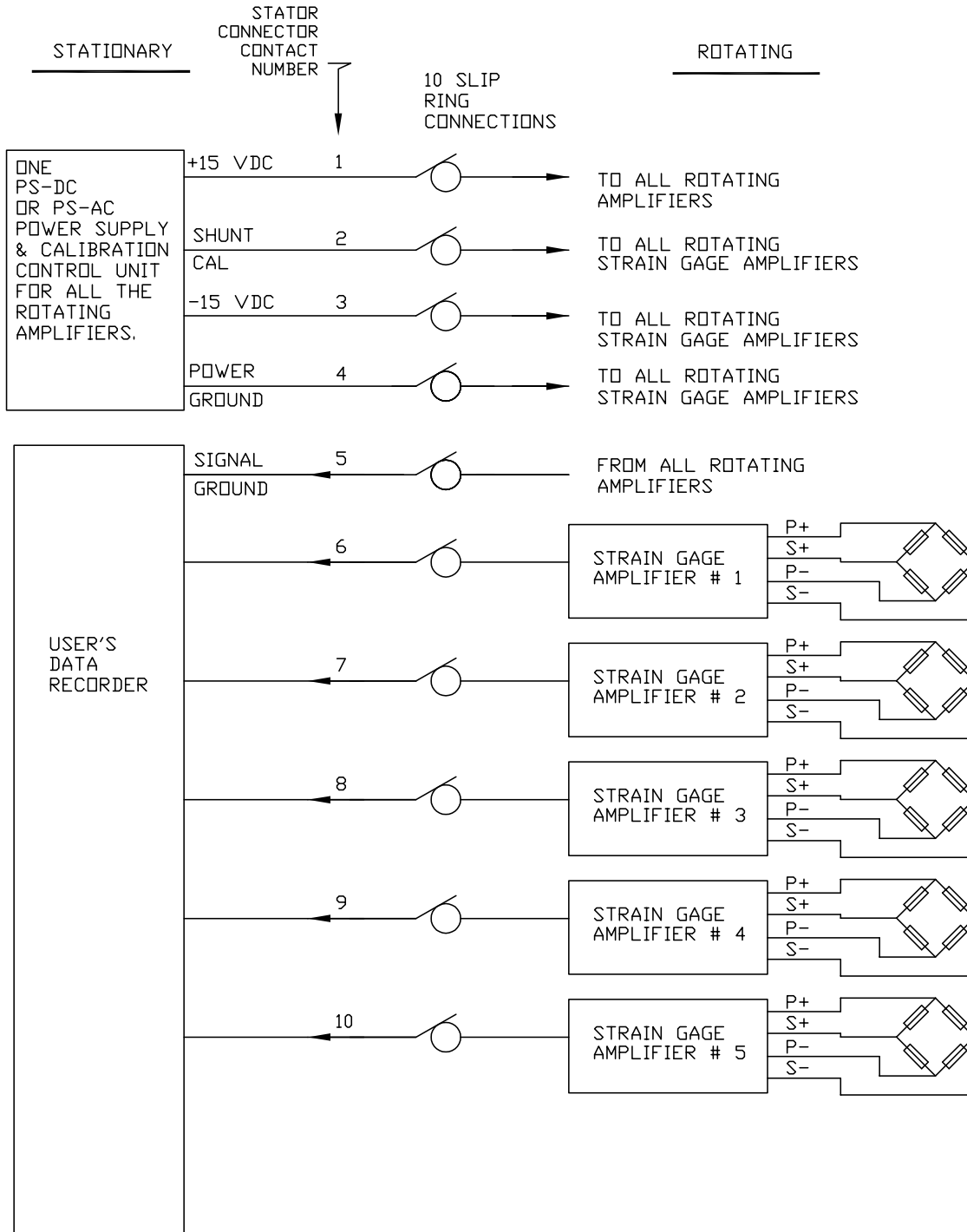
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## SYSTEM OVERVIEW FOR 10 SLIP RINGS & 5 STRAIN GAGE BRIDGES



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