Industrial Flow Computer

FC-5000 Flow Display

Badger Meter 3100 to FC-5000 Flow Display Wiring Interchange

BADGER METER 3100 TO FC-5000 FLOW DISPLAY CONNECTION EQUIVALENTS

- Function: Flow Display (Frequency Output)
- FC-5000 Part Number: FC5-FD-P3-FC6A-x

⚠CAUTION

AC POWER INPUT RANGE FOR THE FC-5000 IS 9…28V AC. DO NOT APPLY 120V AC OR 240V AC.
DC POWER INPUT RANGE FOR THE FC-5000 IS 10...40V DC.

FC-5000				3000	
Terminal Block		**Connection Pin and Function**	**Ref. Pin #**	**Function**	**Ref. Pin #**
TB1 - Power Input		1 - Positive (L+), Line(L)	1	LV AC/DC (+)	Power (1)
		2 - Shield (Chassis GND)	2	EARTH	Power (3)
		3 - Negative(–), Neutral(N)	3	LV AC/DC (-)	Power (2)
		4 - Digital I/O GND	4	—	—
TB2 - Digital I/O		1 - Excitation Voltage (5V DC Output)	5	—	
		2 - Digital I/O Ch 1	6		
		3 - Digital I/O Ch 2	7		
		4 - Digital I/O Ch 3	8		
		5 - Digital I/O Ch 4	9		
		6 - Digital I/O Ch 5	10		
		7 - Digital I/O Ch 6	11		
		8 - Digital I/O GND	12		
TB3 - Relay 1 (Form C)		1 - Normally Open (N.O.)	13	Relay 1 NO	Relay/Pulse Out (1)
		2 - Signal Common	14	Relay 1 COM	Relay/Pulse Out (3)
		3 - Normally Closed (N.C.)	15	Relay 1 NC	Relay/Pulse Out (2)
TB4 - Relay 2	Form C	1 - Normally Open (N.O.)	16	Relay 2 NO	Relay/Pulse Out (4)
		2 - Signal Common	17	Relay 2 COM	Relay/Pulse Out (6)
		3 - Normally Closed (N.C.)	18	Relay 2 NC	Relay/Pulse Out (5)
	Form A	1 - Connection Point 1	16	Relay 2 NO	Relay/Pulse Out (4)
		2 - Not Used (No Contact)	17	Relay 2 COM	Relay/Pulse Out (6)
		3 - Connection Point 2	18	Relay 2 NC	Relay/Pulse Out (5)
TB5 - Dual Pulse Inputs		1 - Sensor Excitation (12V DC Output)	19	Sensor PWR	Pulse/Analog In (12)
		2 - Sensor Input (+)	20	Sensor 1 IN	Pulse/Analog In (7)
		3 - Sensor Input/Common (–)	21	GND	Pulse/Analog In (8)
		4 - Shield (Chassis GND)	22	Sensor 2 IN	Pulse/Analog In (10)
		5 - Shield	23	Shield	Pulse/Analog In (9)
TB7 - Frequency Outputs		1 - Output 1 Signal	32	Pulse 1 Out	Relay/Pulse Out (13)
		2 - Output 2 Signal	33	Pulse 2 Out	Relay/Pulse Out (14)
		3 - Output GND	34	—	—
		4 - Shield (Chassis GND)	35	—	—
TB8 - RS485 Comms		1 - Shield (Chassis GND)	36	—	—
		2 - Negative Terminal (–)	37	RS485(-)	Comm/Analog Out (2)
		3 - Positive Terminal (+)	38	RS485(+)	Comm/Analog Out (1)
		4 - Output Ground	39	RS485 GND	Comm/Analog Out (3)

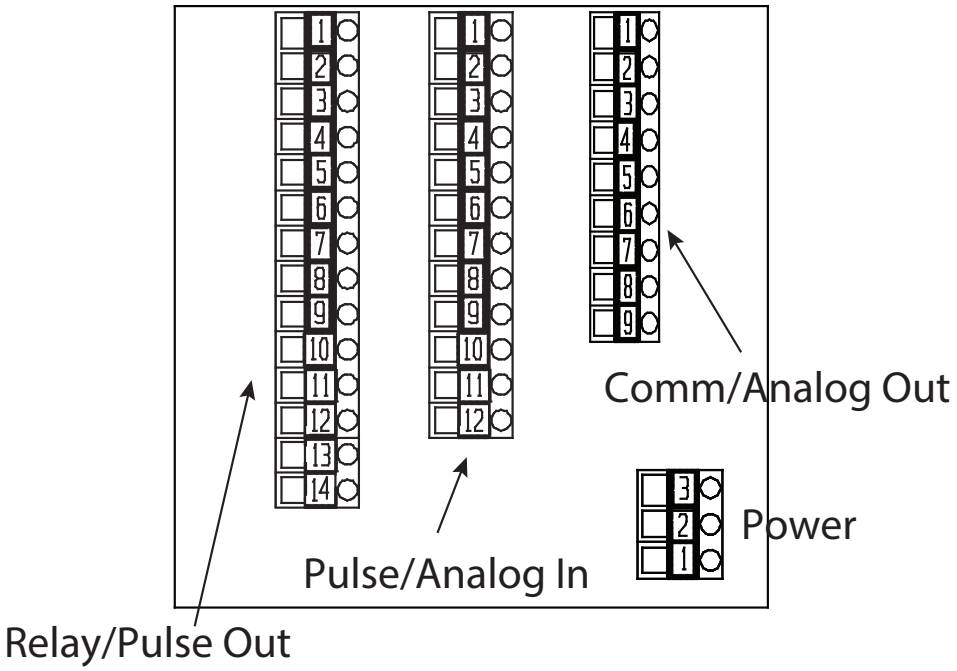

Figure 1: Badger Meter 3100 Rear Terminal

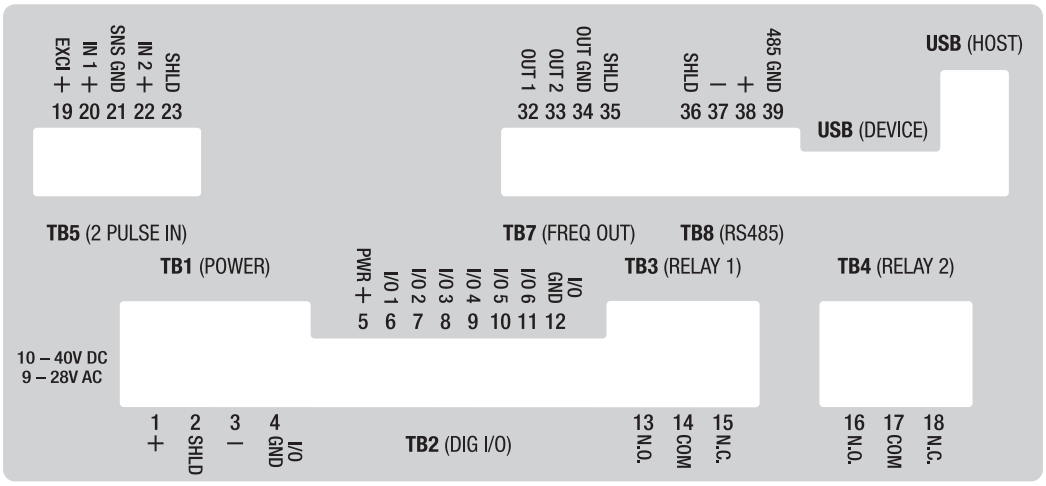

Figure 2: FC-5000 flow display rear terminal (frequency)

BADGER METER 3100 FC-5000 FLOW DISPLAY CONNECTION EQUIVALENTS

- Function: Flow Display (Analog Output)
- FC-5000 Part Number: FC5-FD-P2-AC6A-x

⚠CAUTION

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DC POWER INPUT RANGE IS FOR THE FC-5000 IS 10...40V DC.

FC-5000				3000	
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TB1 - Power Input		1 - Positive (L+), Line(L)	1	LV AC/DC (+)	Power (1)
		2 - Shield (Chassis GND)	2	EARTH	Power (3)
		3 - Negative(–), Neutral(N)	3	LV AC/DC (-)	Power (2)
		4 - Digital I/O GND	4	—	—
TB2 - Digital I/O		1 - Excitation Voltage (5V DC Output)	5	—	
		2 - Digital I/O Ch 1	6		
		3 - Digital I/O Ch 2	7		
		4 - Digital I/O Ch 3	8		
		5 - Digital I/O Ch 4	9		
		6 - Digital I/O Ch 5	10		
		7 - Digital I/O Ch 6	11		
		8 - Digital I/O GND	12		
TB3 - Relay 1 (Form C)		1 - Normally Open (N.O.)	13	Relay 1 NO	Relay/Pulse Out (1)
		2 - Signal Common	14	Relay 1 COM	Relay/Pulse Out (3)
		3 - Normally Closed (N.C.)	15	Relay 1 NC	Relay/Pulse Out (2)
TB4 - Relay 2	Form C	1 - Normally Open (N.O.)	16	Relay 2 NO	Relay/Pulse Out (4)
		2 - Signal Common	17	Relay 2 COM	Relay/Pulse Out (6)
		3 - Normally Closed (N.C.)	18	Relay 2 NC	Relay/Pulse Out (5)
	Form A	1 - Connection Point 1	16	Relay 2 NO	Relay/Pulse Out (4)
		2 - Not Used (No Contact)	17	Relay 2 COM	Relay/Pulse Out (6)
		3 - Connection Point 2	18	Relay 2 NC	Relay/Pulse Out (5)
TB5 - Dual Pulse Inputs		1 - Sensor Excitation (12V DC Output)	19	Sensor PWR	Pulse/Analog In (12)
		2 - Sensor Input (+)	20	Sensor 1 IN	Pulse/Analog In (7)
		3 - Sensor Input/Common (–)	21	GND	Pulse/Analog In (8)
		4 - Shield (Chassis GND)	22	Sensor 2 IN	Pulse/Analog In (10)
		5 - Shield	23	Shield	Pulse/Analog In (9)
TB7 - Analog Outputs		1 - Output 1 Signal	32	CH 1 Loop +	Comm/Analog Out (7)
		2 - Output 2 Signal	33	CH 2 Loop +	Comm/Analog Out (4)
		3 - Output GND	34	CH 1 Loop - and CH 2 Loop -	Comm/Analog Out (8) and Comm/Analog Out (5)
		4 - Shield (Chassis GND)	35	—	—
TB8 - RS485 Comms		1 - Shield (Chassis GND)	36	—	—
		2 - Negative Terminal (–)	37	RS485(-)	Comm/Analog Out (2)
		3 - Positive Terminal (+)	38	RS485(+)	Comm/Analog Out (1)
		4 - Output Ground	39	RS485 GND	Comm/Analog Out (3)

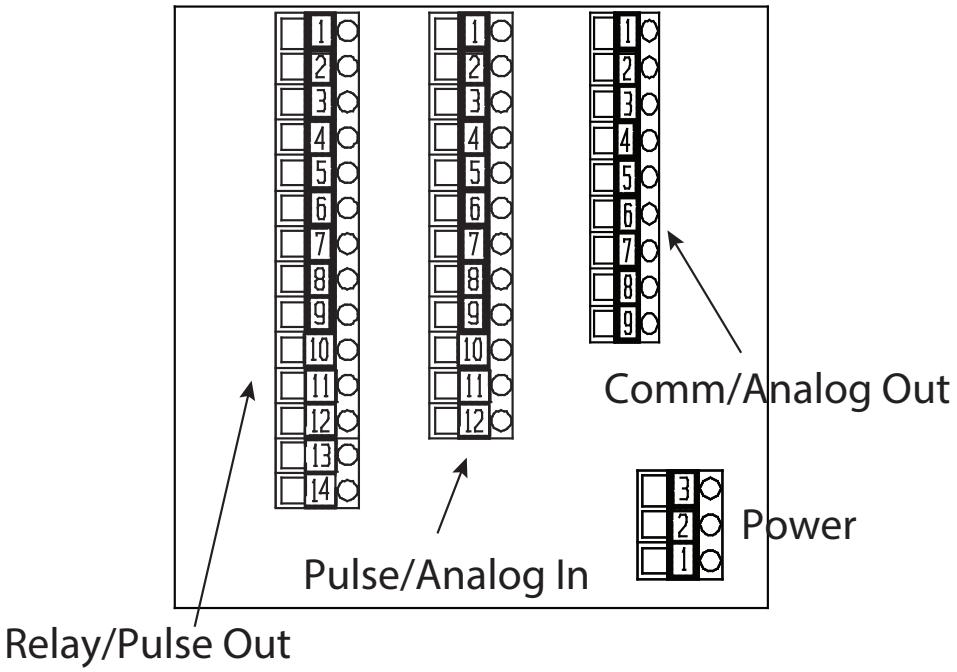

Figure 3: Badger Meter 3100 rear terminal

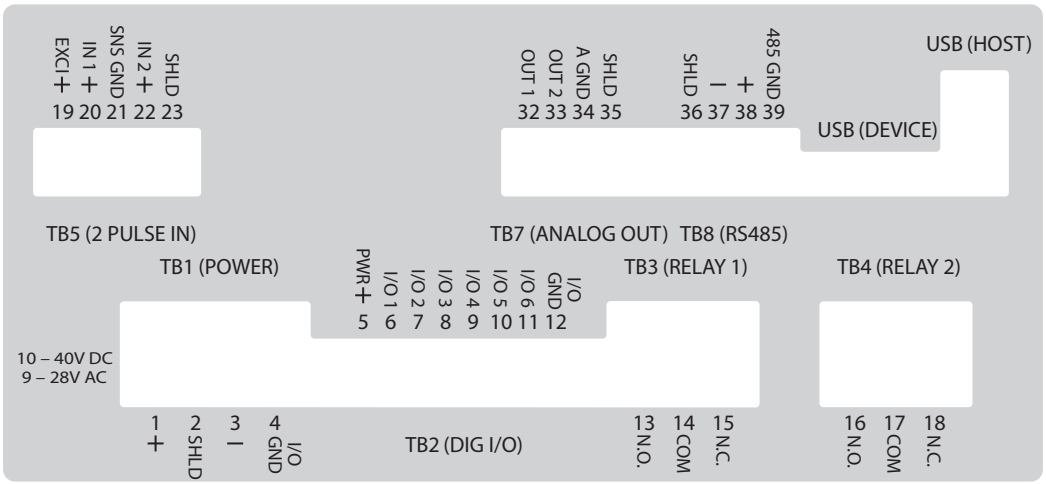

Figure 4: FC-5000 flow display rear terminal (analog)

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