



Sinking/Sourcing Mode Selection for Safe Disable Inputs

When using the Safe Disable inputs, S3 can be used to select the type of inputs (Sinking or Sourcing) and whether an internal or external power supply is used for the Safe Disable inputs H1 and H2 (as shown in Table 4). To enable, remove jumpers for H1 and H2 Safe Disable.

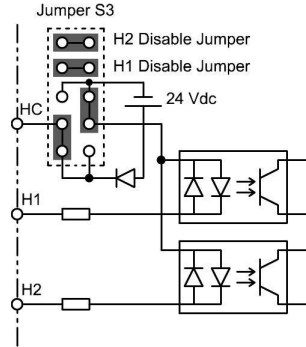


Figure 2: S3 Settings When not Using Safe Disable Inputs (Default)

Table 4: Safe Disable Input Sink/Source/External Power Supply Selection

Mode	Drive Internal Power Supply	External 24Vdc Power Supply
Sinking Mode (default)		
Sourcing Mode		



The table below outlines the functions of the S4IF interface card terminals.

Table 5: Control Circuit Terminals

Classification	Terminal	Signal Function	Description	Signal Level
Sequence Input Signal	S1	MFDI 1 (Run Forward)	Forward run when closed, stop when open (H01-01)	Photo-coupler isolation 120 VAC
	S2	MFDI 2 (Run Reverse)	Reverse run when closed, stop when open (H01-02)	
	S3	MFDI 3 (Speed 2)	Multi-function contact inputs (H01-03 to H1-08)	
	S4	MFDI 4 (Speed 3)		
	S5	MFDI 5 (Speed 4)		
	S6	MFDI 6 (Speed 5)		
	S7	MFDI 7 (External Fault)		
	S8	MFDI 8 (Microspeed Gain)		
	X2	MDFI Common	Multifunction input common	
Analog Input Signal	+V	Power supply for analog inputs	Positive supply for analog inputs	+10.5 VDC, 20 mA
	-V	Power supply for analog inputs	Negative supply for analog inputs	-10.5VDC, 20 mA
	A1	MFAI 1 (Master Frequency Reference)	Multi-function analog input reference (H03-02)	-10 to +10 V (20kΩ) 0 to +10 V (20kΩ)
	A2	MFAI 2 (Not Used)	Multi-function analog reference (H03-09)	-10 to +10 V (20kΩ) 0 to +10 V (20kΩ) 4 to 20 mA (250Ω)
	A3	MFAI 3 (Master Frequency Reference)	Auxiliary analog input (H03-05)	-10 to +10 V (20kΩ) 0 to +10 V (20kΩ)
	AC	Analog Common	0 V	0 V
	E(G)	Ground for shielded lines and option cards	Earth ground	0 V
Relay Output Signal	M0	MFDO (Brake Release)	Multi-function digital output	Form A Relay: 250 VAC, 1 A 30 VDC, 1 A
	M1			
	M2	MFDO (X-Press Programming)	Multi-function digital output	Form A Relay: 250 VAC, 1 A 30 VDC, 1 A
	M3			
	M5	MFDO (X-Press Programming)	Multi-function digital output	Form A Relay: 250 VAC, 1 A 30 VDC, 1 A
	M6			
	MA	Fault annunciate Terminals MA-MC: N/O Terminals MB-MC: N/C	Terminals MA & MC N/O; closed at major faults Terminals MB & MC N/C open at major fault	Form C Relay: 250 VAC, 1 A 30 VDC, 1 A
	MB			
MC				



Classification	Terminal	Signal Function	Description	Signal Level
Analog Output Signal	FM	MFAO 1 (Output frequency)	Multi-function analog monitor (H04-01 to H04-03)	-10 to +10 V, 2 mA 0 to +10 V, 2 mA 4 to 20 mA
	AC	Analog Common	Analog Common	0V
	AM	MFAO 2 (Output current)	Multi-function analog monitor 2 (H04-04 to H04-06)	-10 to +10 V, 2 mA 0 to +10 V, 2 mA
Pulse I/O Signal	RP	Multi-Function Pulse Train Input	Pulse input frequency reference (H06-01)	Input Freq: 0 to 32 kHz Duty Cycle: 30 to 70% High Level: 3.5 to 13.2 VDC Low Level: 0 to 0.8 VDC Input Impedance: 3kΩ
	MP	Pulse train output (Output frequency)	Pulse output frequency (H06-06)	32 kHz (max)
RS-485/422	R+	Receive (+)	For 2-wire RS-485, jumper R+ and S+ and jumper R- and S-	RS-485/422 Line Driver 115.2 kbps (max)
	R-	Receive (-)		
	S+	Transmit (+)		
	S-	Transmit (-)		
	IG	Shield connection	Isolated serial communication ground	0V
Safe Disable	H1	Safe Disable input 1	Safe Disable input 1	24 VDC, 8 mA Internal Impedance: 3.3kΩ
	H2	Safe Disable input 2	Safe Disable input 2	
	HC	Safe Disable common	Safe disable common	0 V
	DM+	Safety monitor output	Safety monitor output	48 VDC, 8 mA
	DM-	Safety monitor output common	Safety monitor output common	0 V

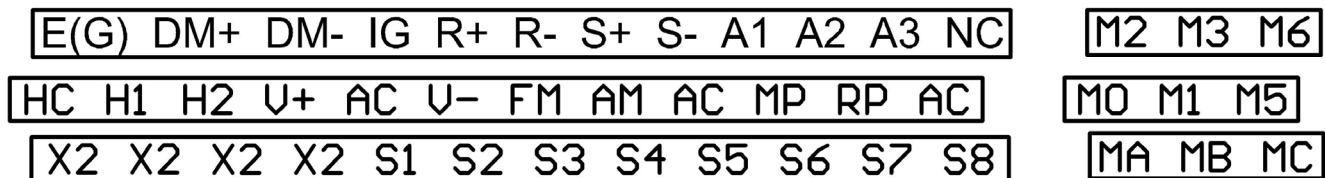


Figure 5: S4IF Circuit Terminal Diagram

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