

# HR Series I/O modules

2



SPDSM04

## SPDSM04

The SPDSM04 pulse input module processes up to eight pulsed field inputs for a Symphony Plus controller. Each channel can be individually programmed for 5 VDC or 24 VDC contact input or 50 millivolts to 10 volts peak-to-peak. The SPDSM04 operates in four different modes depending on the function code being used: period, frequency, totalize or duration.

Technical data	
Power requirements	5 VDC, $\pm 5\%$ at 1.4 A typical 24 VDC, $\pm 10\%$ at 62 mA typical (from termination unit)
Pulse input channels	8 independently configured, optically isolated channels
Range 1	
• Voltage	4.0 VDC to 6.0 VDC
• Current	14.8 mA max. at 6.0 VDC
• Logic 1	4.0 VDC min., 6.0 VDC max.
• Logic 0	0 V min., 1.0 V max.
Range 2	
• Voltage	21.6 VDC to 27.0 VDC
• Current	8.4 mA max. at 24.0 VDC
• Logic 1	21.6 VDC min., 27.0 VDC max.
• Logic 0	0 VDC min., 1.0 VDC max.
Range 3	
• Voltage	50 mV <sub>pp</sub> to 10 V <sub>pp</sub> (pre-amplifiers)
• Current	0.4 mA max. at 10.0 V <sub>pp</sub>
• Logic 1	25.0 mVP min., 5.0 VP max.
• Logic 0	-5.0 VP min., -25.0 mVP max.
Max. input frequency	50 kHz (at 50% duty cycle)
Ambient temperature	0 °C to 70 °C (32 °F to 158 °F)



SPDSO14

## SPDSO14

The SPDSO14 digital output module processes up to 16 digital open-collector control outputs for a Symphony Plus controller. Each channel is optically isolated and can switch 24 VDC at 250 mA and 48 VDC at 125 mA. The module can cable-connect to solid state relays on the NTDO02 termination unit. Optionally, the module can also cable-connect to a relay assembly to drive electromechanical relays.

Technical data	
Power requirements	5 VDC, $\pm 5\%$ at 275 mA typical
Digital input channels	16 optically isolated, independently configured, open-collector channels
Load voltage	24 VDC at 250 mA max. 48 VDC at 125 mA max.
Ambient temperature	0 °C to 70 °C (32 °F to 158 °F)