RUN-MY-ROBOT™

SPINDLE CONTROL ENCLOSURE



A pre-engineered, pre-wired spindle control enclosure for Run-My-Robot machining cells. One PROFINET drop and one 24 VDC feed replace the umbilical back to the main cell enclosure — controlling a single electrospindle through a DRIVE-CLiQ interface, an integrated pneumatic valve system and Siemens distributed I/O, while monitoring coolant flow, coolant temperature and air pressure.

Key features

- Controls and interfaces one electrospindle
- SINAMICS SME120 encoder interface with DRIVE-CLiQ connectivity
- Siemens SIMATIC ET 200SP distributed I/O over PROFINET
- Integrated pneumatic valve system — tool release, taper cleaning, part blow-off
- Tool locked / released and piston-back feedback
- Coolant flow and temperature monitoring; digital air pressure monitoring
- Spindle thermal alarm monitoring
- SITOP 24 VDC channel protection with diagnostics
- Spare digital and analog I/O for expansion
- M12 and M23 bulkhead connections for simplified field installation
- Type 3R enclosure with viewing window
- Designed to UL 508A and NFPA 79 (2024)

Specifications

Model number	**SRMR-KIT-01-CN60-E01**
Drawing / revision	**D10017 Rev 3**
Supply voltage	**24 VDC**
Full load current	**6 A**
Upstream protection	**6 A, by others**
Short-circuit current rating	**5 kA**
Enclosure rating	**Type 3R**
Enclosure	**Saginaw ELJ, viewing window**
Finish	**RAL 9011 sand texture black**

Overall dimensions	**17 × 16-1/2 × 8-5/16 in** **431.8 × 418.9 × 210.6 mm**
Fieldbus	**PROFINET, 2 × M12 D-coded**
Head module	**ET 200SP IM155-6PN Basic**
Digital inputs	**16 × 24 VDC (5 spare)**
Analog inputs	**4 × current, 2-/4-wire (2 spare)**
Digital outputs	**4 × 24 VDC / 2 A (1 spare)**
Conductor rating	**90 °C min; 14 AWG power, 18 AWG control**
Design standards	**UL 508A, NFPA 79 (2024)**
Country of origin	**USA — Winston-Salem, NC**

Instrumentation

Measurement	Device	Part number	Range
Coolant flow and temperature	ifm magnetic-inductive flow / temperature meter	SM6604	0.03–6.6 GPM; 14–158 °F
Air pressure	SMC 3-screen digital pressure switch	ISE70-F02-L2-L	0–145 psi

I/O assignment

Digital inputs — DI 16 × 24 VDC

Ch	Address	Signal
DI0	I200.0	Pressure switch output 1
DI1	I200.1	Pressure switch output 2
DI2–6	I200.2–.6	Spare (5 channels)
DI7	I200.7	DC circuits OK
DI8	I201.0	Tool locked — S1
DI9	I201.1	Tool released — S2
DI10	I201.2	Piston back — S5
DI11	I201.3	Thermal alarm

Analog inputs — AI 4 × current

Ch	Address	Signal
AI0	IW400	Coolant temperature
AI1	IW401	Coolant flow
AI2	IW402	Spare
AI3	IW403	Spare

Digital outputs — DQ 4 × 24 VDC / 2 A

Ch	Address	Signal
DQ0	Q200.0	Taper cleaning
DQ1	Q200.1	Tool release
DQ2	Q200.2	Part clean / blow-off
DQ3	Q200.3	Spare

External connections

Tag	Connector	Function
-CON1009	M12, 3-pole male straight	24 VDC power in-feed, 6 A FLC
-CON10115	M12 D-coded	PROFINET in-feed from main Run-My-Robot enclosure
-CON10119	M12 D-coded	PROFINET out
-CON2109	M23, field-wireable, 12-pole	Spindle signal I/O
-CON11112	M12 4-pin female to pigtail	Coolant flow / temperature sensor
—	SMC push-to-connect bulkhead unions	Air and coolant, 6 mm / 8 mm / 12 mm tube

Spindle services supported

Ref	Service	Tube	Pressure / flow
A, C, D, E	Air / hydraulic inlets 1–4	6 mm	6–6.5 bar
B, F	Liquid cooling in / out	10 mm	4.5 L/min
G	Taper cleaning / pressurisation	6 mm	4–4.5 bar
H	Release tool	8 mm	9.5–10.5 bar

Compatibility. Engineered around a single Hiteco HX-13/7 24 63F NL 3C ES electrospindle configuration. Final spindle, drive, motor, cooling, pneumatic and application compatibility should be verified by THINK-PLC prior to order. Not included: the spindle, upstream 6 A branch protection, PROFINET and 24 VDC field cables to the main enclosure, and pneumatic / coolant tubing.