

B&R - X20 System**X20SI4100**

4-channel Safe Digital Input Module

Technical specifications

Safe inputs	4 type A digital inputs
Pulse outputs	4 push-pull diagnostic outputs
Nominal input voltage	24 VDC
Input circuit	Sink
Hardware input filter	≤150 µs
Software input filter	Configurable from 0 to 500 ms
Error detection time	100 ms
Maximum input line length	60 m unshielded; 400 m shielded
Functional safety	IEC 61508 SIL 3; IEC 62061 SIL 3; ISO 13849-1 Cat. 4 / PL e
Bus / internal I/O power	0.32 W / 1.25 W
Electrical isolation	Channel isolated from bus; channels not isolated from one another
Required terminal block	X20TB52, ordered separately
Required bus module	X20BM33 or X20BM36, ordered separately
Module pitch	25 mm +0.2 mm
Mounting orientation	Horizontal or vertical
Degree of protection	IP20

Documented role

B&R X20SI4100 is a SafeIO module with four safe type A digital inputs and four diagnostic pulse outputs for the X20 System.

Documented applications

- Emergency-stop and guard-switch input evaluation
- Dual-channel safety sensor monitoring with pulse diagnostics
- Machine safety functions requiring SIL 3 or Category 4 / PL e input processing

Selection and installation checks

X20SI4100 is a safety input module, not a standard digital input slice. Verify the safety function, sensor wiring, test-pulse assignment, filter settings, hardware revision, safety-keyed terminal and bus module, certified project, and machine validation before commissioning.