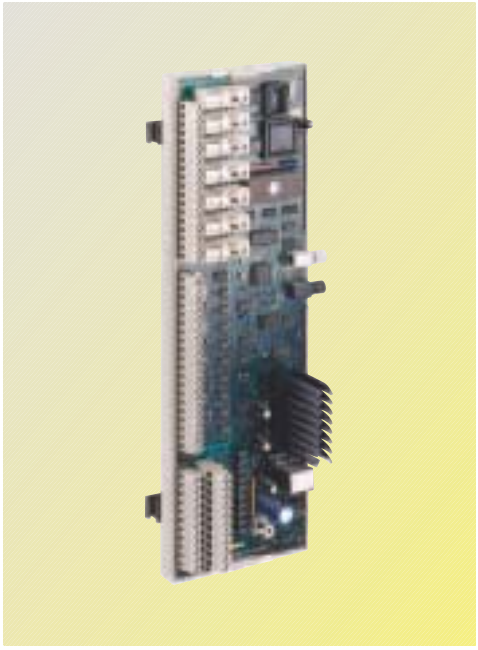
SCI1 and SCI2 interface boards

A serial I/O system using fiber-optic cables can be established with the SCI1 and SCI2 (Serial Communication Interface 1 or 2) interface boards and the SCB1 interface board. This allows the number of binary and analog inputs and outputs to be considerably expanded. In addition, the fiber-optic cables safely decouple the units in accordance with DIN VDE 0100 and DIN VDE 0160 (PELV function, e.g. for NAMUR).

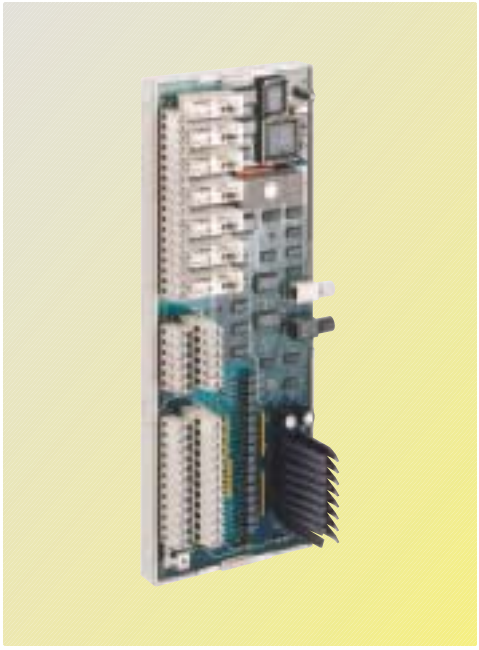
The fiber-optic cables, which can have a maximum length of 10 m (33 ft) and a minimum length of 0.3 m (1 ft), connect the boards in a ring structure. Both the SCI1 and the SCI2 require an external 24 V power supply (1 A each).

All the inputs and outputs of the interface boards can be parameterized.

The SCI1 and SCI2 interface boards can be snapped onto a DIN rail at a suitable place in the control cabinet.



SCI1 interface board



SCI2 interface board

Inputs and outputs Functions	SCI1	SCI2	Description
Binary inputs	10	16	Floating optocoupler inputs in 2 circuits 24 V DC, 10 mA
Binary outputs including: Relay changeover contacts Relay make contacts Transistor outputs	8 4 3 1	12 4 3 5	 Load capability 250 V AC, 2000 VA ($\cos \varphi = 1$) 100 V DC, 240 W 240 V DC, max. 100 mA, short-circuit-proof, open-emitter for driving the optocouplers or relays
Analog inputs	3	–	Voltage signals: 0 to ±10 V Current signals: 0 to ±20 mA; 4 mA to 20 mA, 250 Ω burden Non-floating inputs
Analog outputs	3	–	Output signals 0 V to ±10 V, 0 mA to ±20 mA, 4 mA to 20 mA, non-floating Max. cable length with shielded cables is 100 m (33 ft) Max. load 500 Ω
Supply voltage: Reference voltage +10 V – 10 V 24 V DC	 1 1 2	 – – 2	 5 mA load capability, short-circuit-proof 5 mA load capability, short-circuit-proof Short-circuit-proof output for binary inputs or outputs, load capability 280 mA

Technical data	
Mounting	DIN mounting rail (see Section 3)
Rated external input voltage	24 V DC (–17 %, +25 %), 1 A
Degree of protection	IP00
Dimensions H x W x D	SCI1: 95 mm x 300 mm x 80 mm (3.7 in x 11.8 in x 3.15 in) SCI2: 95 mm x 250 mm x 80 mm (3.7 in x 9.8 in x 3.15 in)

Control terminal strip on the SCI1 interface board for cabinet units with PMU or OP1S and the option "NAMUR terminal strip"

Terminal	No.	Type	Preassignment	Notes
X427	A1	P24		
	A2	M		
	A3	BE6	Setpoint lower	
	A4	BE7	Acknowledge	
	A5	BE8	Off 2	
	A6	BE9	Select counter-clockwise rotating field	
	A7	BE10	None	
	A8	M		
	A9	M		
	A10	M		
	A11	M		
X427	B1	P24		
	B2	BA8	None	Transistor output
	B3	BE1	On/Off 1	
	B4	BE2	Select BICO data set 2	Local/remote operation
	B5	BE3	None	
	B6	BE4	None	
	B7	BE5	Setpoint higher	
	B8	M		
	B9	P24		
	B10	P24		
	B11	P24		
X428	1	+10 V stab		
	2	–10 V stab		
	3	AE1 ±10 V	Main setpoint	Analog input 1
	4	M		
	5	AE1 ±20 mA		Load 250 Ω
	6	AE2 ±10 V	None	Analog input 2
	7	M		
	8	AE2 ±20 mA		Load 250 Ω
	9	AE3 ±10 V	None	Analog input 3
	10	M		
	11	AE3 ±20 mA		Load 250 Ω
	12	AA1 ±10 V	Speed	Analog output 1
	13	M		
	14	AA1 ±20 mA		Load, max. 500 Ω
	15	AA2 ±10 V	Output current	Analog output 2
	16	M		
	17	AA2 ±20 mA		Load, max. 500 Ω
	18	AA3 ±10 V	Torque	Analog output 3
	19	M		
	20	AA3 ±20 mA		Load, max. 500 Ω
X429	1	BA1	Ready for power-on	Relay contact
	2			
	3	BA2	Setpoint reached	Relay contact
	4			
	5	BA3	Off 2 signal	Relay contact
	6			
	7	BA4	Fault	Changeover contact: common
	8			break contact NC
	9			make contact NO
	10	BA5	None	Changeover contact: common
	11			break contact NC
	12			make contact NO
	13	BA6	None	Changeover contact: common
	14			break contact NC
	15			make contact NO
	16	BA7	None	Changeover contact: common
	17			break contact NC
	18			make contact NO

Relay contacts, maximum loading 100 V DC, 2.4 A or with 250 V AC, 8 A.