The module is used as an input and output module for continuous closed-loop control systems.

The controller functions are processed by the automation processor, whereby standard function blocks are used.

The number of channels and the number of free analog inputs and outputs depends on the type of process operation and visualization. Operation and visualization can be effected either on screen

(OM) or on screen and separate desk tiles.

Screen operation

   Controlling and monitoring of 4 continuous drives

   Drive limit position detection through 2 NO contacts per drive

   Monitoring of the manipulated variable by reading back to the module

   2 analog inputs for free disposal

   2 analog outputs for free disposal

Screen and desk-tile operation

   Controlling and monitoring of 2 continuous drives

   Drive limit position detection through 2 NO contacts per drive

   Monitoring of the manipulated variable by reading back to the module

   Connection of a manipulated variable and a setpoint desk tile per drive possible

Controller function on the FUM 280 module

   The module is used as a controller operating autonomously or as a subordinate controller (master controller in the AP). It operates with a fixed sampling time of 50 ms and is suitable for control systems with system time constants 100 ms. If the automation processor fails, the FUM 280 can continue to operate as an autonomous controller.

   Here again, process operation and visualization is possible through a screen or also through screen and separate desk tiles. The number of channels available is the same for both variations.

   Screen or screen and desk tile operation

   Controlling and monitoring of 2 continuous drives

   Drive limit position detection through 2 NO contacts per drive

   Connection of a manipulated variable and a setpoint desk tile per drive

   Setpoint adjuster to the module

   Controller on the module

   2 analog inputs per drive

Input 1: Reading in the actual value

Input 2: Reading in a disturbance, an external setpoint or for free disposal

2. Signal Output

A total of six analog outputs with the nominal output levels of 0/4 to 20 mA are available on the module for outputting the manipulated variables and additional displays for a conventional control desk tile. The analog output range can be parameterized for every output. The current outputs are stable at no load and

short-circuit-proof against the reference potential M.
Power dissipation without Approx. 7.26 W
inputs and outputs
Per analog input 20 mW
Per analog output 480 mW
Per sensor signal with sensor supply through the module

5) FUM232

1 Application

1.1 Utilization
The FUM 232 function module is a conditioning module for temperature
sensors. The module is used in the AS 620 B automation system. The AS 620
B forms part of the TELEPERM XP process control system.
1.2 Functions
Up to 14 Pt100 platinum resistance thermometers or up to 28 thermocouples
of diffrent types can be connected to the FUM 232 function module.
It is possible to combine different types of sensors.
Two function modules can be circuited parallelly in order to increase
availability while the measuring signals are being conditioned (redundancy).

The FUM 232 function module encompasses the following specific functions:
_ Electrical isolation of the measurement inputs
_ Constant-current source for Pt100
_ Acquisition and conditioning of the signals coming from up to 14 Pt100
resistance thermometers as a four-wire configuration 28 thermocouples of type
J, K, E, S, T;
_ Differential--temperature measurement at thermocouples
_ Monitoring of the sensors, measuring circuits and measuring signals
_ Linearization of the measuring signals
_ Time-tapped data generation
_ Limit-signal generation
_ Signal simulation via the software
The measuring inputs of the module are electrically isolated against the inner
circuit. The inputs have a high-resistance decoupling via optoelectronic relays.
Connected Pt100 units are supplied with a typical measuring current of 0.16
mA via a multiplexed electrically-isolated constant-current source.
The respective measuring channel selected by the module processor is
switched to a first-order passive filter via optoelectronic relays and is amplified
by a difference amplifier.
After pre-amplification the measuring signal is amplified further depending on
the parameterized measuring range, transferred to a voltage-to-frequency
converter (VFC) and digitized.