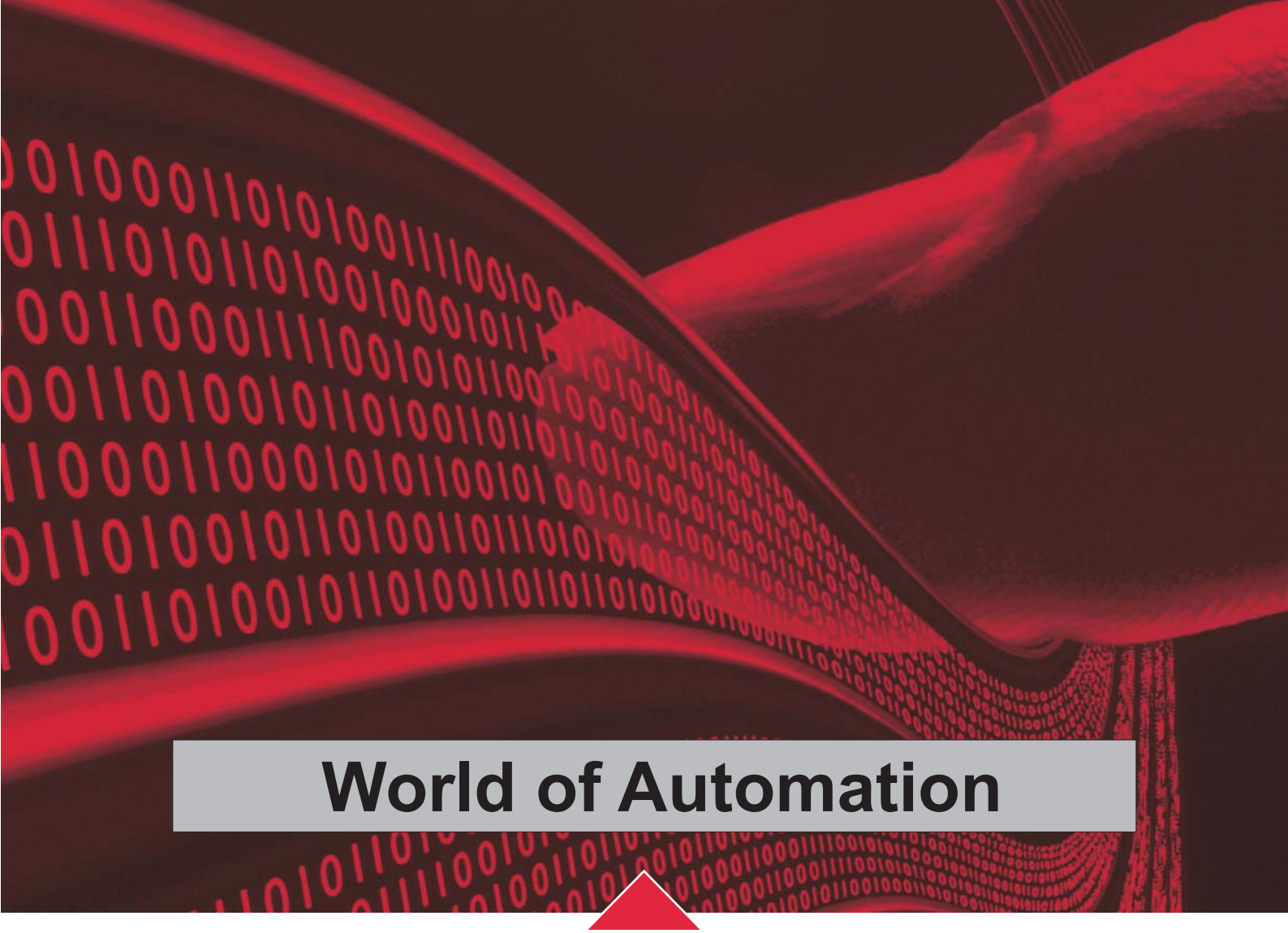

World of Automation

Chapter 5: Special purpose

HIQUEL®
HIGH QUALITY ELECTRONICS

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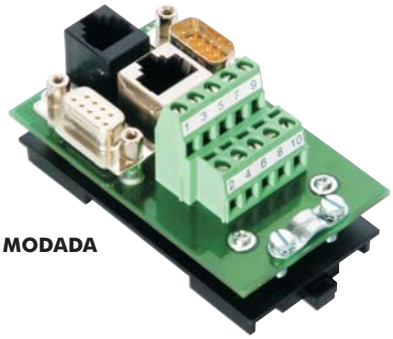
5 Chapter5 : special purpose

HIQUEL® HIGH QUALITY ELECTRONICS

MODADA / WT-SUB9

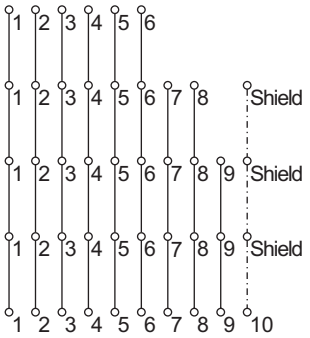
Übersicht



MODADA

MODADA
low cost universal DIN-rail mounting module to connect different connectors, the modular provides the following possibilities:
D-SUB9 male and female, MODULAR JACK 6, MODULAR JACK 8, screw terminals

WT-SUB9
low cost universal DIN-rail mounting module for DB-9 connector to screw terminals



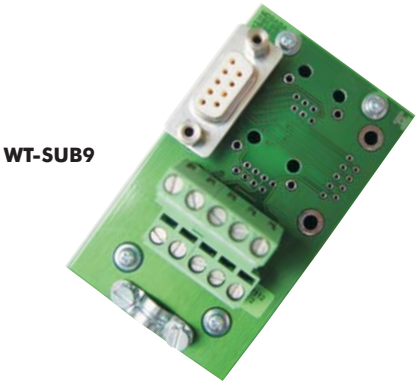
6 pin MODULAR JACK

8 pin MODULAR JACK

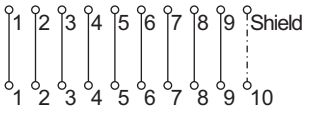
9 pin SUB-D female

9 pin SUB-D male

10 pin screw terminals



WT-SUB9



9 pin SUB-D female

10 pin screw terminals

specification

MODADA	
U max.	50V~/=
I max.	0,5A
dimensions	85 x 47,5 x 45mm

WT-SUB9	
U max.	50V~/=
I max.	0,5A
dimensions	77,5 x 45 x 51mm
screw tightening torque	0,5Nm

ordering information

part no	supply	output	relay type	cULus	housing type
MODADA	-	-	-	-	special
WT-SUB9	-	-	-	-	special

HIQUEL® HIGH QUALITY ELECTRONICS

ESG

overview

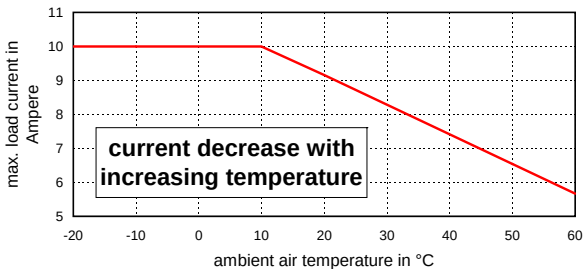
- **single-phase speed controller with control functions and external temperature inputs**
- **power supply 230V~**
- **load 0.5-2.2kW resistive or inductive**
- **2 digital inputs 12V= or 24V=**
- **up to 8 potentiometers**
- **up to 2 Pt1000 temperature sensors**
- **up to 2 analogue inputs 0-10V or 0-20mA**
- **up to 4 SPCO outputs**
- **DIN rail mounting (300x105x76mm)**

The ESG is typically used for controlling single-phase capacitor start motors in a variety of systems. Applications include heating, ventilation and pumping systems. The ESG can also be used for the control of lighting systems. In heating and ventilation systems, Pt1000´s are used to measure the temperature to regulate output levels (motor speed) and switch-points are controlled according to the levels set by potentiometers.
On standard models the load output is switched on within a range of 20-45°C and switched off within a range of 10-35°C. These ranges can be changed to suit specific applications. Additional potentiometers set the temperature set point and minimum and maximum load output level, thus controlling the motor speed. Depending on the model, additional potentiometers are also available to set alarm levels and external/ambient temperature levels. Output relays signal 'running' and 'alarm' conditions, with over temperature alarm and cooling start relays featured on some types.

specification

supply voltage	230V~ +10% / -15%	
frequency range	50-60Hz ±2Hz	
power	0,5 - 2,2 kW	
loads	resistive or inductive	
protection class	IP10 (IP54 on request)	
analogue values	0-10V, 0-20mA, 4-20mA	
actual values	Pt1000	
outputs	max 4 SPCO	
output relay specification	max. 5A 230V~/30V=	
relay type	1	
AC-15* 120V~	5A	
AC-15* 240V~	4A	
DC-13* 24V=	4A	
expected life time	DPCO	SPCO
mechanical	2×10^6 resp.	1×10^7 operations
electrical	1×10^5 resp.	1×10^5 operations
operating conditions	-10 to +50 °C non condensing	

* EN 60947-5-1 VDE 0453



ordering information

part no	supply		output	relay type	set points	temperatures	analogue output
ESG-S0	230V~	6W	-	-	7 potentiometers	-	0-10V, 0-20mA
ESG-S1	230V~	8W	2 x SPCO	2	5 potentiometers	1 x PT1000	0-10V, 0-20mA
ESG-S2	230V~	12W	3 x SPCO	1	6 potentiometers	1 x PT1000	0-10V, 0-20mA
ESG-S4	230V~	12W	4 x SPCO	1	8 potentiometers	2 x PT1000	0-10V, 0-20mA

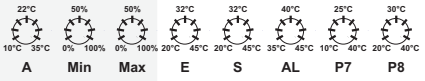
other voltages on request

stepless speed controller

HIQUEL® HIGH QUALITY ELECTRONICS

example 1

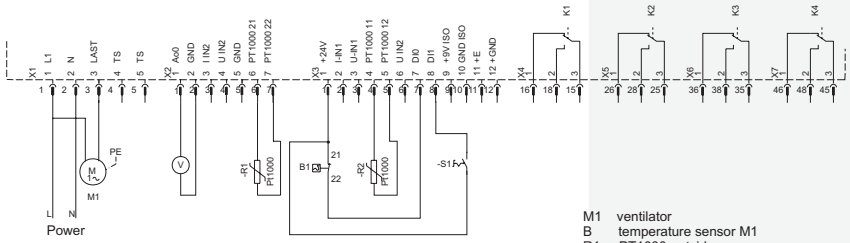
please note that the potentiometer ranges are for illustrative purposes only and can be set to meet individual customer requirements



A = switch off point
Min = min. rpm
Max = max. rpm
E = switch on point
S = set point value
AL = alarm
P7 = set point value outside temp.
P8 = set point value ambient temp.

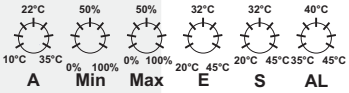
ESG-S4 230V AC

HIQUEL CE



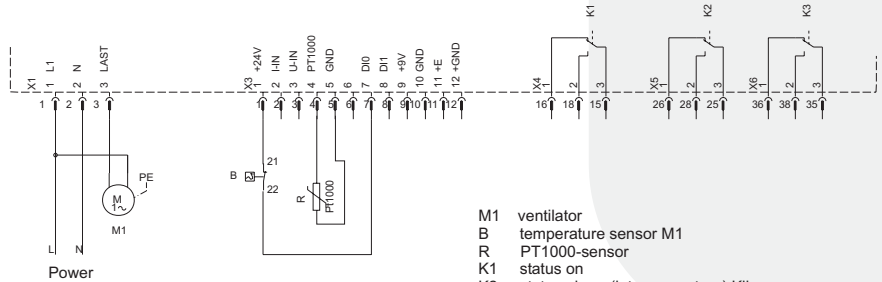
M1 ventilator
B temperature sensor M1
R1 PT1000-outside sensor
R2 PT1000-indoor sensor
K1 status on
K2 status alarm (intern or extern)
K3 overtemperature
K4 start aircondition
S1 switch to ambient temperature operation

example 2



A = switch off point
Min = min. rpm
Max = max. rpm
E = switch on point
S = set point value
AL = alarm

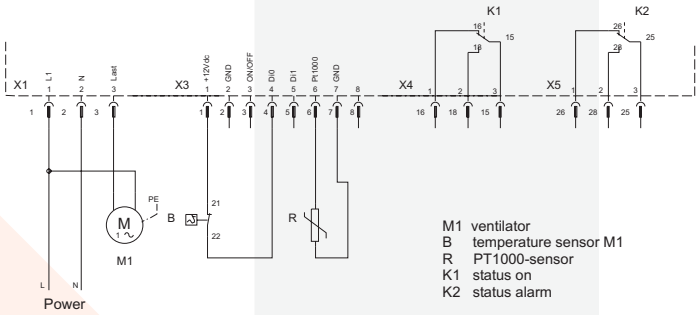
ESG-S 2



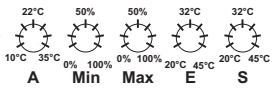
M1 ventilator
B temperature sensor M1
R PT1000-sensor
K1 status on
K2 status alarm (intern or extern) Klixon
K3 overtemperature

HIQUEL® HIGH QUALITY ELECTRONICS

example 3



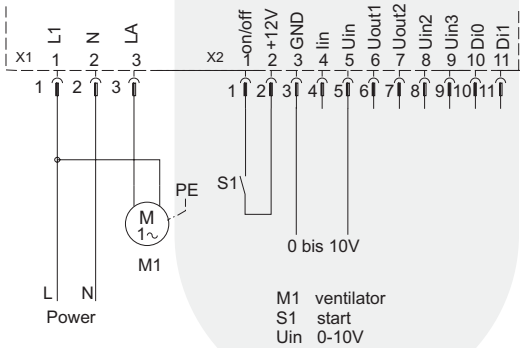
M1 ventilator
B temperature sensor M1
R PT1000-sensor
K1 status on
K2 status alarm



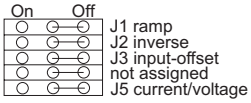
A = switch off point
Min = min. rpm
Max = max. rpm
E = switch on point
S = set point value

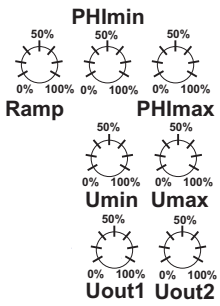
ESG-S 1

example 4



M1 ventilator
S1 start
Uin 0-10V
Iin 0-20mA





ESG-S0