

## Multichannel - Temperature - Controller Series MCSe



### 1. Introduction

The **MCS** series of hot runner temperature controllers is a consistent development of the well known and a proven history in the market place of hot runner controllers from **FELLER ENGINEERING**. The power of the **MCS** Series controllers is based on long time close working relation and experience within the plastic processing industry. Special efforts were made to design a state of the art temperature controller which fulfills user friendliness. The **MCSe** series combines proven technology of hundreds of controllers in a slim designed unit for limited number of channels. **MCSe** is available for 2 up to 16 control-loops without losing technical comfort and a light level of safety with a most attractive pricing. The stackable version **MCSe plus** enables the operation for up to 48 zones from the 1st unit, the master. The accessories include the electrical and mechanical connectors.

### 2. Description

The main features are:

#### a) Enclosure / Configuration

- Closed steel housing, IP20

- Color: cover RAL 6005, moss-green, frame zinc steel
- Ambient temperature 60°C (140°F) max.
- Number of control zones 2 up to 16

#### b) Features

- Potential free alarm output via plug
- Maximum power per zone 230VAC / 16A at 80% duty cycle
- Cooling fans rated for 80% duty cycle
- NSS fuses (line voltage protection for sensor input >10V)
- Power cord 3 m (10ft.)
- Safety shut-off wire main power relay 400V/50/60Hz
- Fuse for control voltage 4A medium blow
- Fuses for power outputs, 16A fast blow
- Power triacs
- Multi-pin connectors, separated for sensor and power
- Designed for Y-power supply
- 50 or 60 cps (Hz)
- Stackability, external bus-interface, joint function, up to 6 devices

#### c) Control electronics

- Alarms for low/high temperature, broken/shorted out/reversed polarity on sensor, system error
- Selectable Start-up ramp
- Internal resolution 1/4°C (0.45°F)
- Output activation by software-switch
- Microprocessor control
- Classification of zones with the start
- Current leakage detection with intelligent dry-out routine
- Parameter settings protected by password lock
- Control range up to 700°C (1292°F)
- Stable self optimizing control structure
- Soft-start function
- Storage capacity for 4 Set-point programs including stand-by and Boost-mode
- Manual operation available
- Thermocouple input Fe-CuNi type J
- Temperature display selectable in °C or °F
- Combined heating-up mode

#### **d Operation**

- Easy operation via proven foil key pad
- Selectable on over-all display: set point, actual value, deviation and regulation rate
- Separate operation keys for entering set point and viewing actual value

### **3. Operational description**

Easy operation, with clear positioning of keys and displays combined with a stable control structure in a solid designed construction are the basis for the controllers of **MCS** series.

After the power is switched on, the **MCS**e controller drives towards the chosen set point



recognizing whether it is necessary to dry out the heaters at 100°C (212°F). To avoid unequal heating of the different components during the dry out phase all zones are blocked at 100°C (212°F). Following, the combined heating routine enables to reach the set point nearly simultaneously. Continuous control of the slow heaters substitutes heat up via fixed ramps.

The function of combined heating-up mode in **MCS**e replaces manual adaption of ramps for the nozzles of different hot runner systems. Even in case of mold change, there is no need of readaptions.



Error messages (broken sensor, reversed polarity on sensor, over/under temperature, current leakage, and system fault) are displayed on the front panel.

### **4. Dimensions (H x W x D) / Weight**

**MCS**e2...8 165 x 230 x 340 mm (6½ x 9 x 13½")  
approx. 8 kg (18 lbs.)

**MCS**e9...16 165 x 420 x 340 mm (6½ x 16½ x 13¾")  
approx. 14 kg (31 lbs.)

### **5. Ordering Information**

- Number of zones
- Plug configuration

### **6. Price**

Depending on configuration and number of control zones. The detailed prices are to find in the price list of **MCS** temperature controllers.

### **7. Delivery**

Standard version 3 weeks after order is received. For delivery time of custom version please contact the nearest office.

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