



MINISTAR 80 control

/// Data Sheet

The new MINISTAR series by IKA: Developed using the latest cutting-edge technology, this high-tech overhead stirrer with its compact design is ideal for special applications.

Combining high performance with particular excellence, they require minimum space and come with a lifetime guarantee. See for yourself:

"The Power Pack" in the high-tech mini class, small and as strong as an ox, reaches up to 500 RPM!

- Hardened glass enclosed, fast response display for maximum visibility and chemical resistance









- State-of-art vibration sensors detect deviations from permissible thresholds and automatically stop the process
- Clear display for all essential information at a glance
- Integrated timer / counter for the control of kinetic sensitive reactions and reminders
- Viscosities up to 60,000 mPas and volumes of up to 50 I
- Continuously adjustable speed between 0/30 500 rpm
- USB interface, e.g. for documenting parameters using labworldsoft® or installing firmware updates
- Intuitive and simple handling; touch-sensitive surface for long service life
- Temperature reading on display
- Chemical resistant housing
- Key lock function
- Microprocessor-controlled speed governor for constant rotational speed, even with changes in viscosity









Technical Data

Strining quantity max. per strining position (H2O) [I] 50 Motor rating quutut [W] 46 Motor principle Brushless DC Speed display LCD Speed min. [rpm] 30 Speed min. [rpm] 60000 Speed min. [rpm] 60000 Speed min. [rpm] 60000 Viscosily max. [mPas] 60000 Output max. at strining shaft [W] 42 Permissible On Nime [%] 100 Torque max. at strining shaft at 60 1/min (overload) [Ncm] 80 Torque max. at strining shaft at 100 1/min [Ncm] 80 Torque max. at strining shaft at 100 1/min [Ncm] 80 Torque max. at strining shaft at 100 1/min [Ncm] 80 Speed range [60 Hz] [rpm] 30 - 500 Speed range [60 Hz] [rpm] 30 - 500 Speed range [60 Hz] [rpm] 30 - 500 Speed range [60 Hz] [rpm] 30 - 500 Speed range [60 Hz] [rpm] 30 - 500 Speed range [60 Hz] [rpm] 30 - 500 Speed control Turning knob Stitring element fastening chuck	Technical Data	
Motor princip Simulses DC		50
Motor principle Brushless DC Speed min. [rpm] 30 Speed min. [rpm] 0730 Speed min. [rpm] 6000 Viscosity max. [mPas] 60000 Viscosity max. [mPas] 60000 Output max. at string shaft [W] 42 Permissible ON time [%] 100 Torque max. at string shaft at 100 1/min [Nom] 80 Torque max. at string shaft at 100 1/min [Nom] 80 Torque max. at string shaft at 100 1/min [Nom] 80 Torque max. at string shaft at 100 1/min [Nom] 80 Torque max. at string shaft at 100 1/min [Nom] 80 Speed range [160 Hz] [rpm] 30 - 500 Speed range [160 Hz] [rpm] 30 - 500 Speed range [160 Hz] [rpm] 11 Speed range [160 Hz] [rpm] 30 - 500 Speed range [160 Hz] [rpm] 30 - 500 Speed range [160 Hz] [rpm] 30 - 500 Setting accuracy speed [±rpm] 1 Deviation of speed measurement n > 300rpm [±%] 1 Deviation of speed measurement n < 300rpm [±%]	Motor rating input [W]	60
Speed display LCD Speed min. [rpm] 30 Speed min. [rpm] 0730 Speed max. [rpm] 600 Viscosity max. [mPas] 600000 Output max. at stirring shaft [W] 42 Permissible ON time [%] 100 Torque max. at stirring shaft at 100 I/min [Ncm] 80 Torque max. at stirring shaft at 100 I/min [Ncm] 80 Torque max. at stirring shaft at 100 I/min [Ncm] 80 Speed range [160 Hz] [rpm] 30 - 500 Speed range [160 Hz] [rpm] 30 - 500 Speed range [160 Hz] [rpm] 30 - 500 Speed range [160 Hz] [rpm] 1 Setting accuracy speed [±pm] 1 Deviation of speed measurement n < 300rpm [±m] 1 Setting accuracy speed [±pm] 1 Connection for ext. temperature sensor PT1000 Temperature fastering chuck Chuck range diameter [mm] 8.5 Hollow shaft [wish-through - when stopped) yes Fastering on stand extension arm length [mm] 160 Extension arm length [mm] 160	Motor rating output [W]	46
Speed min. [rpm] 30 Speed min. [rpm] 030 Speed min. [rpm] 500 Viscosity max. [rpm] 60000 Viscosity max. [rpm] 42 Permissible ON time [%] 100 Torque max. at stirring shaft [Ncm] 80 Torque max. at stirring shaft at 100 f/min [Ncm] 80 Torque max. at stirring shaft at 1.000 f/min [Ncm] 80 Torque max. at stirring shaft at 1.000 f/min [Ncm] 80 Torque max. at stirring shaft at 1.000 f/min [Ncm] 80 Torque max. at stirring shaft at 1.000 f/min [Ncm] 80 Torque max. at stirring shaft at 1.000 f/min [Ncm] 80 Torque max. at stirring shaft at 1.000 f/min [Ncm] 80 Speed range [(60 Hz) [rpm] 30 - 500 Speed range [(60 Hz) [rpm] 30 - 500 Speed cange [(60 Hz) [rpm] 11 Deviation of speed measurement n < 300rpm [±x]		Brushless DC
Speed mix. [rpm] 030 Viscosily max. (mPas) 60000 Output max. at stirring shaft [W] 42 Permissible ON time [%] 100 Torque max. at stirring shaft [Nom] 80 Torque max. at stirring shaft at 100 1/min (overload) [Nom] 80 Torque max. at stirring shaft at 100 1/min [Nom] 80 Torque max. at stirring shaft at 1000 1/min [Nom] 80 Speed range [160 Hz) [rpm] 30 - 500 Speed range [160 Hz) [rpm] 30 - 500 Speed range [160 Hz) [rpm] 30 - 500 Speed range [160 Hz) [rpm] 1 Speed range [160 Hz) [rpm] 30 - 500 Speed range [160 Hz) [rpm] 30 - 500 Speed range [160 Hz) [rpm] 1 Speed range [160 Hz) [rpm] 30 - 500 Speed control 1 Connection for ext. temperature sensor Privote Temperature display yes Speed control 9.5	Speed display	LCD
Speed max. [rpm] 500 Viscosity max. [mPas] 60000 Output max. at stirring shaft [W] 42 Permissible ON time [%] 100 Torque max. at stirring shaft [Ncm] 80 Torque max. at stirring shaft at 60 1/min [overload] [Ncm] 80 Torque max. at stirring shaft at 1.000 1/min [Ncm] 80 Torque max. at stirring shaft at 1.000 1/min [Ncm] 80 Speed range [160 Hz] [rpm] 30 - 500 Speed range [160 Hz] [rpm] 30 - 500 Speed range [160 Hz] [rpm] 30 - 500 Speed range [160 Hz] [rpm] 1 Deviation of speed measurement n < 300rpm [zmm]	Speed min. [rpm]	30
Viscosity max. [mPas] 60000 Output max. at stirring shaft [W] 42 Permissible ON time [%] 100 Torque max. at stirring shaft [Nom] 80 Torque max. at stirring shaft at 100 1/min (overload) [Nom] 80 Torque max. at stirring shaft at 100 1/min [Nom] 80 Torque max. at stirring shaft at 1.000 1/min [Nom] 80 Speed range I (50 Hz) [rm] 30 - 500 Speed range I (50 Hz) [rm] 30 - 500 Speed control Turning knob Setting accuracy speed [±rm] 1 Deviation of speed measurement n < 300rpm [±m]	Speed min. [rpm]	0/30
Output max. at stirring shaft [W] 42 Permissible ON time [%] 100 Torque max. at stirring shaft [Ncm] 80 Torque max. at stirring shaft at 60 1/min [Ncm] 80 Torque max. at stirring shaft at 1000 1/min [Ncm] 80 Torque max. at stirring shaft at 1000 1/min [Ncm] 80 Itorque I max. [Nm] 80 Speed range I (50 Hz) [rpm] 30 - 500 Speed range I (50 Hz) [rpm] 30 - 500 Setting accuracy speed [±pm] 1 Deviation of speed measurement n > 300rpm [±%] 1 Stirring element fastening chuck Connection for ext. temperature sensor PT1000 Temperature display yes Chuck range diameter [mm] 0.5 - 8 Hollow shaft [nore diameter [mm] 8.5 Hollow shaft [wish-through - when stopped) yes Extension arm diameter [mm] 13 Extension arm diameter [mm] 16 Torque display yes Speed control extension arm Nominal torque [Nm] 0.8 Torque display 9	Speed max. [rpm]	500
Permissible ON time [%] 100 Torque max. at stirring shaft at 60 1/min (overload) [Nom] 80 Torque max. at stirring shaft at 100 1/min [Nom] 80 Torque max. at stirring shaft at 100 1/min [Nom] 80 Torque max. at stirring shaft at 100 1/min [Nom] 80 Torque max. at stirring shaft at 100 1/min [Nom] 80 Speed range [160 Hz] [rpm] 30 - 500 Speed range [160 Hz] [rpm] 30 - 500 Speed range [160 Hz] [rpm] 1 Speed range accuracy speed [±rpm] 1 Deviation of speed measurement n > 300rpm [±rym] 3 Setting accuracy speed [±rpm] 1 Deviation of speed measurement n < \$00rpm [±rym]	Viscosity max. [mPas]	60000
Torque max. at stirring shaft at 60 1/min (overload) [Nom] 80 Torque max. at stirring shaft at 100 1/min [Nom] 80 Torque max. at stirring shaft at 1000 1/min [Nom] 80 torque I max. [Nom] 80 Speed range I (50 Hz) [rpm] 30 - 500 Speed range I (60 Hz) [rpm] 30 - 500 Speed range I (60 Hz) [rpm] 30 - 500 Speed cange I (60 Hz) [rpm] 1 Deviation of speed measurement n > 300rpm [±%] 1 Deviation of speed measurement n < 300rpm [±mm]	Output max. at stirring shaft [W]	42
Torque max. at stirring shaft at 60 1/min (overload) [Ncm] 80 Torque max. at stirring shaft at 100 1/min [Ncm] 80 Torque max. at stirring shaft at 1,000 1/min [Ncm] 80 Torque max. at stirring shaft at 1,000 1/min [Ncm] 80 Speed range I (50 Hz) [rpm] 30 - 500 Speed range I (60 Hz) [rpm] 30 - 500 Speed control Turning knob Setting accuracy speed [±rpm] 1 Deviation of speed measurement n < 300rpm [±%]	Permissible ON time [%]	100
Torque max. at stirring shaft at 60 1/min [Ncm] 80 Torque max. at stirring shaft at 100 1/min [Ncm] 80 Torque max. INcm] 80 Speed range I (60 Hz) [rpm] 30 - 500 Speed range I (60 Hz) [rpm] 30 - 500 Speed range I (60 Hz) [rpm] 1 Deviation of speed measurement n > 300rpm [±%] 1 Deviation of speed measurement n > 300rpm [±%] 1 Deviation of speed measurement n > 300rpm [±mp] 3 Stirring element fastering chuck Connection for ext. temperature sensor PT1000 Temperature display yes Chuck range diameter [mm] 0.5 - 8 Hollow shaft, inner diameter [mm] 8.5 Hollow shaft (push-through - when stopped) yes Fastension arm diameter [mm] 160 Hollow shaft (push-through - when stopped) yes Fastension arm diameter [mm] 160 Extension arm diameter [mm] 160 Extension arm length [mm] 160 Torque measurement I [±Ncm] 8 Speed control electronic Nominal torque [max [mail [ma	Torque max. at stirring shaft [Ncm]	80
Torque max. at stirring shaft at 100 1/min [Ncm] 80 Torque max. at stirring shaft at 1,000 1/min [Ncm] 80 Speed range I (50 Hz) [rpm] 30 - 500 Speed range I (60 Hz) [rpm] 30 - 500 Speed control Turning knob Setting accuracy speed [±rpm] 1 Deviation of speed measurement n < 300rpm [±%]		80
Torque max. at stirring shaft at 1.000 1/min [Ncm] 80 torque I max. [Ncm] 30 - 500 Speed range I (60 Hz) [rpm] 30 - 500 Speed range I (60 Hz) [rpm] 30 - 500 Speed control Turning knob Setting accuracy speed [±rpm] 1 Deviation of speed measurement n > 300rpm [±%] 1 Deviation of speed measurement n < 300rpm [±rpm]		80
torque I max. [Nom] 80 Speed range I (60 Hz) [rpm] 30 - 500 Speed control Turning knob Setting accuracy speed [±rpm] 1 Deviation of speed measurement n > 300rpm [±%] 1 Deviation of speed measurement n < 300rpm [±rpm]		80
Speed range I (50 Hz) [rpm] 30 - 500 Speed cange I (60 Hz) [rpm] 30 - 500 Speed control Turning knob Setting accuracy speed [±rpm] 1 Deviation of speed measurement n > 300rpm [±rpm] 3 Stirring element fastening chuck Connection for ext. temperature sensor PT1000 Temperature display yes Chuck range diameter [mm] 0.5 - 8 Hollow shaft, inner diameter [mm] 8.5 Hollow shaft (push-through - when stopped) yes Fastening on stand extension arm Extension arm diameter [mm] 13 Extension arm length [mm] 160 Torque display yes Speed control electronic Nominal torque [Nm] 0.8 Torque measurement [±Ncm] deviation of torque measurement [±Ncm] 8 Timer display LCD Timer display LCD Timer display LCD Temperature measuring range [°C] +10 - 350 Temperature measuring range [°C] +10 - 350 </td <td></td> <td>80</td>		80
Speed range I (60 Hz) [rpm] 30 - 500 Speed control Turning knob Setting accuracy speed [±rpm] 1 Deviation of speed measurement n > 300rpm [±rbm] 3 Stirring element fastening chuck Connection for ext. temperature sensor PT1000 Temperature display yes Chuck range diameter [rmm] 8.5 Hollow shaft (push-through - when stopped) yes Fastening on stand extension arm Extension arm diameter [mm] 13 Extension arm length [mm] 160 Torque display yes Speed control electronic Nominal torque [Nm] 0.8 Torque measurement trend deviation of torque measurement I [±Ncm] 8 Timer yes Time setting range [min] 0-6000 Temperature measuring range [°C] -10 - 350 Temperature measurement resolution [K] 4.0.05 + tolerance PT1000 (DIN IEC 751 Class A) Extinction temperature ensor [K] 4.0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature measurement [*C]<	· · · · · · · · · · · · · · · · · · ·	30 - 500
Speed control Turning knob Setting accuracy speed [±rpm] 1 Deviation of speed measurement n > 300rpm [±%] 1 Deviation of speed measurement n < 300rpm [±rpm]		30 - 500
Setting accuracy speed [±rpm] 1 Deviation of speed measurement n > 300rpm [±w] 1 Deviation of speed measurement n < 300rpm [±rpm] 3 Stirring element fastening chuck Connection for ext. temperature sensor PT1000 Temperature display yes Chuck range diameter [mm] 0.5 - 8 Hollow shaft, inner diameter [mm] 8.5 Hollow shaft (push-through - when stopped) yes Extension arm diameter [mm] 13 Extension arm length [mm] 160 Torque display yes Speed control electronic Nominal torque [Nm] 0.8 Torque measurement trend deviation of torque measurement I [±Ncm] 8 Rimer yes Timer display C.CD Timer display 0.00 Timer display 0.00 Torque measurement [±Ncm] 0.1 Accuracy [min] 0.500 Timer display 0.00 Timer display 0.00 Temperature measuring range [°C]		
Deviation of speed measurement n > 300rpm [±%] 1 Deviation of speed measurement n < 300rpm [±rpm]		
Deviation of speed measurement n < 300rpm [±rpm]		
Stirring element fastening chuck Connection for ext. temperature sensor PT1000 Temperature display yes Chuck range diameter [mm] 0.5 - 8 Hollow shaft, inner diameter [mm] 8.5 Hollow shaft (push-through - when stopped) yes Fastening on stand extension arm Extension arm diameter [mm] 13 Extension arm length [mm] 160 Torque display yes Speed control electronic Nominal torque [Mm] 0.8 Torque measurement trend deviation of torque measurement [±Ncm] 8 Timer yes Timer setting range [min] 0 - 6000 Temperature measuring range [°C] -10 - 350 Temperature measurement resolution [K] ± 0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ± 0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ± 0.01 + 0.002xITI) housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 70 x 193 x 154 <	· · · · · · · · · · · · · · · · · · ·	
Connection for ext. temperature sensor PT1000 Temperature display yes Chuck range diameter [mm] 0.5 - 8 Hollow shaft, inner diameter [mm] 8.5 Hollow shaft (push-through - when stopped) yes Fastening on stand extension arm Extension arm diameter [mm] 13 Extension arm length [mm] 160 Torque display yes Speed control electronic Nominal torque [Nm] 0.8 Torque measurement trend deviation of torque measurement [±Ncm] 8 Timer display LCD Time setting range [min] 0 - 6000 Temperature measuring range [°C] -10 - 350 Temperature measurement resolution [K] 0.1 Accuracy of temperature sensor [K] ± 0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ± (0.15 + 0.002xITI) housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 70 x 193 x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] <td></td> <td></td>		
Temperature display yes Chuck range diameter [mm] 0.5 - 8 Hollow shaft, inner diameter [mm] 8.5 Hollow shaft (push-through - when stopped) yes Fastening on stand extension arm Extension arm diameter [mm] 13 Extension arm length [mm] 160 Torque display yes Speed control electronic Nominal torque [Nm] 0.8 Torque measurement trend deviation of torque measurement [±Ncm] 8 Timer display LCD Timer setting range [min] 0 - 6000 Temperature measuring range [°C] -10 - 350 Temperature measurement resolution [K] 0.1 Accuracy of temperature measurement [K] ±0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ≤ ± (0.15 + 0.002xITI) housign material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 7x yas x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] 5 - 40		
Chuck range diameter [mm] 0.5 - 8 Hollow shaft, inner diameter [mm] 8.5 Hollow shaft (push-through - when stopped) yes Fastening on stand extension arm Extension arm diameter [mm] 13 Extension arm length [mm] 160 Torque display yes Speed control electronic Nominal torque [Nm] 0.8 Torque measurement trend deviation of torque measurement I [±Ncm] 8 Timer yes Timer display LCD Time setting range [min] 0 - 6000 Temperature measuring range [°C] -10 - 350 Temperature measurement resolution [K] 0.1 Accuracy of temperature measurement [K] ±0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ≤ ± (0.15 + 0.002xlTI) housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 70 x 193 x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] 5 - 40		
Hollow shaft, inner diameter [mm] 8.5 Hollow shaft (push-through - when stopped) yes Fastening on stand extension arm Extension arm diameter [mm] 13 Extension arm length [mm] 160 Torque display yes Speed control electronic Nominal torque [Nm] 0.8 Torque measurement trend deviation of torque measurement I [±Ncm] 8 Timer yes Timer display LCD Time setting range [min] 0 - 6000 Temperature measuring range [°C] -10 - 350 Temperature measurement resolution [K] 0.1 Accuracy of temperature measurement [K] ±0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ≤ ± (0.15 + 0.002xITI) housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 70 x 193 x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] 5 - 40		
Hollow shaft (push-through - when stopped) yes Fastening on stand extension arm Extension arm diameter [mm] 13 Extension arm length [mm] 160 Torque display yes Speed control electronic Nominal torque [Nm] 0.8 Torque measurement trend deviation of torque measurement I [±Ncm] 8 Timer yes Timer display LCD Time setting range [min] 0 - 6000 Temperature measuring range [°C] -10 - 350 Temperature measurement resolution [K] 0.1 Accuracy of temperature measurement [K] ±0.05 + tolerance PT 1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ≤± (0.15 + 0.002x TI) housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 70 x 193 x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] 5 - 40		
Extension arm diameter [mm] 13 Extension arm length [mm] 160 Torque display yes Speed control electronic Nominal torque [Nm] 0.8 Torque measurement trend deviation of torque measurement I [±Ncm] 8 Timer yes Timer display LCD Time setting range [min] 0 - 6000 Temperature measurement resolution [K] 0.1 Accuracy of temperature measurement [K] ±0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ≤ ± (0.15 + 0.002xITI) housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 70 x 193 x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] 5 - 40		
Extension arm diameter [mm] 13 Extension arm length [mm] 160 Torque display yes Speed control electronic Nominal torque [Nm] 0.8 Torque measurement trend deviation of torque measurement I [±Ncm] 8 Timer yes Timer display LCD Time setting range [min] 0 - 6000 Temperature measuring range [°C] -10 - 350 Temperature measurement resolution [K] 0.1 Accuracy of temperature measurement [K] ±0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ≤ ± (0.15 + 0.002xITI) housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 70 x 193 x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] 5 - 40		<u> </u>
Extension arm length [mm] 160 Torque display yes Speed control electronic Nominal torque [Nm] 0.8 Torque measurement trend deviation of torque measurement I [±Ncm] 8 Timer yes Timer display LCD Time setting range [min] 0 - 6000 Temperature measuring range [°C] -10 - 350 Temperature measurement resolution [K] 0.1 Accuracy of temperature measurement [K] ±0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ≤ ± (0.15 + 0.002xITI) housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 70 x 193 x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] 5 - 40		
Torque display yes Speed control electronic Nominal torque [Nm] 0.8 Torque measurement trend deviation of torque measurement I [±Ncm] 8 Timer yes Timer display LCD Time setting range [min] 0 - 6000 Temperature measuring range [°C] -10 - 350 Temperature measurement resolution [K] 0.1 Accuracy of temperature measurement [K] ±0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ≤ ± (0.15 + 0.002x TI) housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 70 x 193 x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] 5 - 40		
Speed control electronic Nominal torque [Nm] 0.8 Torque measurement trend deviation of torque measurement I [±Ncm] 8 Timer yes Timer display LCD Time setting range [min] 0 - 6000 Temperature measuring range [°C] -10 - 350 Temperature measurement resolution [K] 0.1 Accuracy of temperature measurement [K] ±0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ≤ ± (0.15 + 0.002xITI) housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 70 x 193 x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] 5 - 40		
Nominal torque [Nm] 0.8 Torque measurement trend deviation of torque measurement I [±Ncm] 8 Timer yes Timer display LCD Time setting range [min] 0 - 6000 Temperature measuring range [°C] -10 - 350 Temperature measurement resolution [K] 0.1 Accuracy of temperature measurement [K] ±0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ≤ ± (0.15 + 0.002xITI) housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 70 x 193 x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] 5 - 40		
Torque measurementtrenddeviation of torque measurement I $[\pm Ncm]$ 8TimeryesTimer displayLCDTime setting range $[min]$ 0 - 6000Temperature measuring range $[^{\circ}C]$ -10 - 350Temperature measurement resolution $[K]$ 0.1Accuracy of temperature measurement $[K]$ $\pm 0.05 + \text{tolerance PT1000 (DIN IEC 751 Class A)}$ Limit deviation temperature sensor $[K]$ $\leq \pm (0.15 + 0.002x TI)$ housing materialalu-cast coating / thermoplastic polymerDimensions $(W \times H \times D)$ $[mm]$ $70 \times 193 \times 154$ Weight $[kg]$ 1.72Permissible ambient temperature $[^{\circ}C]$ $5 - 40$		
deviation of torque measurement I [±Ncm]8TimeryesTimer displayLCDTime setting range [min]0 - 6000Temperature measuring range [°C]-10 - 350Temperature measurement resolution [K]0.1Accuracy of temperature measurement [K]±0.05 + tolerance PT1000 (DIN IEC 751 Class A)Limit deviation temperature sensor [K]≤ ± (0.15 + 0.002xITI)housing materialalu-cast coating / thermoplastic polymerDimensions (W x H x D) [mm]70 x 193 x 154Weight [kg]1.72Permissible ambient temperature [°C]5 - 40		
TimeryesTimer displayLCDTime setting range [min]0 - 6000Temperature measuring range [°C]-10 - 350Temperature measurement resolution [K]0.1Accuracy of temperature measurement [K]±0.05 + tolerance PT1000 (DIN IEC 751 Class A)Limit deviation temperature sensor [K]≤ ± (0.15 + 0.002xITI)housing materialalu-cast coating / thermoplastic polymerDimensions (W x H x D) [mm]70 x 193 x 154Weight [kg]1.72Permissible ambient temperature [°C]5 - 40	·	
Timer display LCD Time setting range [min] 0 - 6000 Temperature measuring range [°C] -10 - 350 Temperature measurement resolution [K] 0.1 Accuracy of temperature measurement [K] ±0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ≤ ± (0.15 + 0.002xITI) housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 70 x 193 x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] 5 - 40		
Time setting range [min] Temperature measuring range [°C] Temperature measurement resolution [K] Accuracy of temperature measurement [K] Limit deviation temperature sensor [K] housing material Dimensions (W x H x D) [mm] Dimensions (W x H x D) [mm] Permissible ambient temperature [°C] O - 6000 -10 - 350 0.1 ±0.05 + tolerance PT1000 (DIN IEC 751 Class A) ± (0.15 + 0.002xITI) alu-cast coating / thermoplastic polymer 70 x 193 x 154 1.72 Fermissible ambient temperature [°C]		
Temperature measuring range [°C] Temperature measurement resolution [K] Accuracy of temperature measurement [K] Limit deviation temperature sensor [K] housing material Dimensions (W x H x D) [mm] Weight [kg] Permissible ambient temperature [°C] -10 - 350 0.1 ±0.05 + tolerance PT1000 (DIN IEC 751 Class A) ≤ ± (0.15 + 0.002xITI) alu-cast coating / thermoplastic polymer 70 x 193 x 154 1.72 5 - 40		
Temperature measurement resolution [K] 0.1 Accuracy of temperature measurement [K] ±0.05 + tolerance PT1000 (DIN IEC 751 Class A) Limit deviation temperature sensor [K] ≤ ± (0.15 + 0.002xITI) housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] 70 x 193 x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] 5 - 40		
Accuracy of temperature measurement [K]		
Limit deviation temperature sensor [K] $\leq \pm (0.15 + 0.002x TI)$ housing material alu-cast coating / thermoplastic polymer Dimensions (W x H x D) [mm] $70 \times 193 \times 154$ Weight [kg] 1.72 Permissible ambient temperature [°C] $5 - 40$		
housing materialalu-cast coating / thermoplastic polymerDimensions (W x H x D) [mm]70 x 193 x 154Weight [kg]1.72Permissible ambient temperature [°C]5 - 40		· · · · · · · · · · · · · · · · · · ·
Dimensions (W x H x D) [mm] 70 x 193 x 154 Weight [kg] 1.72 Permissible ambient temperature [°C] 5 - 40		
Weight [kg]1.72Permissible ambient temperature [°C]5 - 40		
Permissible ambient temperature [°C] 5 - 40		
Permissible relative humidity [%] 80		
	Permissible relative humidity [%]	80





Protection class according to DIN EN 60529	IP 54
USB interface	yes
Voltage [V]	100 - 240
Frequency [Hz]	50/60
Power input [W]	69
DC Voltage [V=]	24
Current consumption [mA]	2900

