



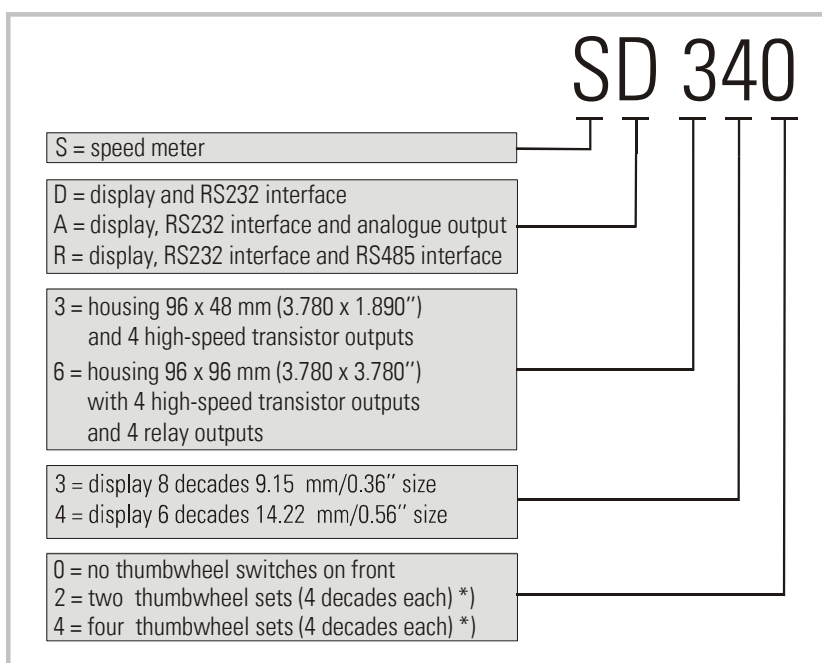
SA / SD / SR 330 to 644 series

Indicators for rpm, speed, baking & processing times, speed ratios, sum or differential speeds

Product Features:

- Simultaneous measuring of two independent speeds by means of incremental encoders, proximity switches or photocells
- Two encoder inputs for use with 1, 2 or 4 channels (A, /A, B, /B)
- Inputs individually scalable and with a frequency range from 0.1 Hz up to 1 MHz
- Operating modes for RPM, speed, baking time, summing or differential speed, speed ratios and percental difference
- 4 speed presets with high-speed power transistor outputs
- Models with relay outputs or front thumbwheel switches are available

Available Devices:



Variant 330



Variant 340



Variant 630



Variant 640



Variant 632



Variant 642



Variant 634



Variant 644



Technical specifications:		
Power supply:	Input voltage (AC): Power consumption (AC): Input voltage (DC): Protection circuit (DC): Ripple (DC): Consumption: Connections:	24 VAC (+/- 10 %) 15 VA 17 ... 40 VDC reverse polarity protection ≤ 10 % at 24 VDC approx. 100 mA (unloaded) AC: screw terminals, 2.5 mm ² / AWG 14 resp. DC: screw terminals, 1.5 mm ² / AWG16
Encoder supply:	Number of outputs: Output voltage 1: Output current 1: Output voltage 2: Output current 2: Connections:	je 2 x 24 V und 2 x 5.2 V 24 VDC max. 120 mA per output 5.2 VDC max. 150 mA per output screw terminals, 1.5 mm ² / AWG16
Incremental inputs:	Number of inputs: Input logic: Signal levels: Channels: Frequency: Internal resistance: Connections:	2 PNP/NPN/Namur HTL: LOW 0 ... 3.5 V, HIGH 10 ... 30 V / TTL: LOW 0 ... 0.8 V, HIGH 2.4 ... 5 V RS422: differential voltage > 1V A, /A, B, /B max. 1 MHz with RS422 / TTL symmetrical / max. 20 kHz with HTL / TTL asymmetrical Ri = 8.5 kOhm / channel (pull-down) screw terminals, 1.5 mm ² / AWG16
Control inputs:	Number of inputs: Input logic: Signal levels: Functions: Minimum pulse time: Internal resistance: Connections:	4 PNP/NPN/Namur HTL (standard): LOW 0 ... 2.5 V, HIGH 10 ... 30 V arbitrary (depends on operational mode) 50 µs Ri = 3.3 kOhm screw terminals, 1.5 mm ² / AWG16
Analog output: (only SA)	Voltage output: mA output: Resolution: Accuracy Reaction time: Connections:	-10 V ... +10 V / 0 V ... +10 V (max. 2 mA) 0 ... 20 mA / 4 ... 20 mA (burden: max. 270 Ohm) 14 bit (± 13 bit) 0.1 % < 1 ms screw terminals, 1.5 mm ² / AWG16
Control outputs:	Number of outputs: Signal levels: Output current: Reaction time: Protection circuit: Connections:	4 fast transistor outputs 5 ... 30 V / PNP max. 350 mA / channel < 1ms short circuit proof screw terminals, 1.5 mm ² / AWG16
Serial interface:	Format: Baud rates (selectable): Operational modes: Connections:	SD / SA series: only RS232 / SR series: RS232, switchable to RS485 (2-wire) 600, 1200, 2400, 4800, 9600, 19200, 38400 Baud PC or printer mode screw terminals, 1.5 mm ² / AWG16
Relay outputs: (only SA/SD/SR6xx)	Number of outputs: Switching capacity: Connections:	4 potential free changeovers 250 VAC / 1 A / 250 VA oder 100 VDC / 1 A / 100 W screw terminals, 2.5 mm ² / AWG14
Display:	Type: Characteristic: Digit height:	6 resp. 8 digit LED display high-efficiency orange 6 digits: 15 mm resp. 8 digits: 10 mm (0.59055 inch resp. 0.3937 inch)
Housing:	Type/Material: Mounting: Dimension 3xx series: Dimension 6xx series: Protection class: Weight:	Norly UL94-V-0 / plastic panel cut out: 91 x 44 mm / 3.59 x 1.73 inch (w x h) outer dimensions: 110 x 48 x 141 mm / 4.33 x 1.89 x 5.55 inch (w x h x d) cut out: 89 x 91 mm / 3.50 x 3.59 inch (w x h) outer dimensions: 110 x 96 x 141 mm / 4.33 x 3.78 x 5.55 inch (w x h x d) units without BCD switches: front: IP 65 / rear: IP20 units with BCD switches: front: IP 20* / rear: IP20)* by using the plexiglass cover part # 64026 also IP65 3xx series: approx. 250 g / 6xx series: approx. 480 g
Ambient temperature:	Operation: Storage:	0 °C ... +45 °C / +32 ... +113 °F (not condensing) -25 °C ... +70 °C / -13 ... +158 °F (not condensing)
Conformity and standards:	EMC 2004/108/EC: LV 2006/95/EC Guideline 2011/65/EU:	EN 61000-6-2, EN 61000-6-3, EN 61000-6-4 EN 61010-1 RoHS-conform