## ELECTRICAL DESIGN, SWITCH CABINET MANUFACTURING, SOFTWARE DEVELOPMENT AND VISUALIZATION

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**Solutions and services from a single source**

Comprehensive solutions ranging from problem analysis to commissioning are applied effectively and help to reduce resources. We not only provide approved components for plant construction and automation technology – together with our experienced team of professionals we also design and implement individual master plans for material flow and assembly techniques.

All solutions are based on our flexible modular system consisting of profiles, linear guides and elements for ergonomic workplace design. These are complemented by components of pneumatic and control technology, conveyors, workpiece carrier transport systems and drives.

From these parts skilled professionals create modules which are then assembled into complete automation solutions for individual tasks.

Our objective is to find the best solution to every problem. Even during the planning phase our clients benefit from our extensive experience covering many branches of industry.

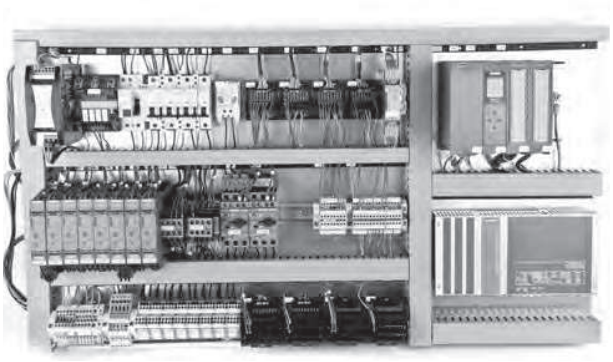
Our team provides comprehensive and professional follow-up from initial design to final implementation.

**Electrical design**

Basis of electrical engineering is hardware design. With our experience in all industry sectors and our long-term cooperation with efficient manufacturers, we are able to select the optimal configuration for each task.

We create the hardware plans using the latest CAD software E-Plan Electric P8. For each development an informative documentation is thereby generated. We generally create the control concepts modular with distributed intelligence.


According to the requirements of our customers and the job definition different bus systems such as Profinet or I / O link are used. The design of the drives is done by our specialists. Here, cost effectiveness and mechanics are considered. In our systems the latest servo technology with integrated safety functions is standard.



**Switch cabinet manufacturing**

Switch cabinets are equipped and wired as specified in electrical engineering design and after approval by our customers.

Intensive functional testing using the latest testing equipement guarantees quality and safe operation of our facilities.

**Software development**

The sequence programs of our systems are created for PLC or PC control. Programming is done with Simatic Step 7 and the TIA Portal to IEC standard. Manufacturer-independent CoDe-Sys programming is also possible.
The integration of our solutions into the customer's existing ERP can also be realized on request.


.... Your partner for complete design:

- Consulting
- Planning
- Mechanical and electrical project planning
- Software development and visualization
- Commissioning
- CE compliant versions
- Documentation
- Service such as remote maintenance

**Visualization - safely operate and monitor**

For safe operation of the plant the unique mapping of control processes is essential.  With WinCC flexible we create user interfaces which not only visualize the process, but also visually indicate alarms or display easy to understand help texts for the operator. The operation and setting up of complex systems is made much easier with our mobile HMI panels. The visualization can be individually adjusted by different user levels.

# MOTORS

## SPURE WHEEL BACK-GEARED MOTOR [TYPEE CB, B5]

**Technical Data**

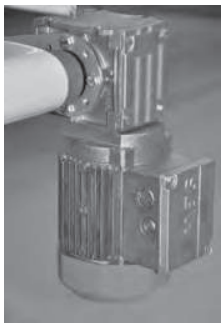
Flange version with recess for mounting on engine kit Ø 20
is still a motor flange for D120 part no. 29.5033/0 required.

- Nominal Voltage 230 / 400 V
- 50 Hz
- Protective system IP 44
- Weight 7 - 15 kg

Data given refer to the individual speeds; different levels for one type possible; data sheets upon request.
Can also be supplied with brake, heat detector or separate fan as an option; other equipment upon request.

| TYPE | PART NO. | POWER [W] | MIN. OUTPUT SPEED (FOR OUTPUT TORQUE) | MAX. OUTPUT SPEED (FOR OUTPUT TORQUE) |
|---|---|---|---|---|
| **DGM 120-00F** | 33.0050/1 | 120 | 23 U/min (50 Nm) | 430 U/min (2,7 Nm) |
| **DGM 120-0F** | 33.0060/1 | 120 | 17 U/min (68 Nm) | 57 U/min (20 Nm) |
| **DGM 180-00F** | 33.0051/1 | 180 | 28 U/min (62 Nm) | 412 U/min (4,2 Nm) |
| **DGM 180-0F** | 33.0061/1 | 180 | 16 U/min (106 Nm) | 61 U/min (28 Nm) |
| **DGM 250-00F** | 33.0052/1 | 250 | 38 U/min (62 Nm) | 405 U/min (5,9 Nm) |
| **DGM 250-0F** | 33.0062/1 | 250 | 23 U/min (105 Nm) | 114 U/min (21 Nm) |
| **DGM 370-00F** | 33.0053/1 | 370 | 75 U/min (47 Nm) | 430 U/min (8,2 Nm) |
| **DGM 370-0F** | 33.0063/1 | 370 | 36 U/min (99 Nm) | 360 U/min (9,8 Nm) |

## PLUG-ON MOTOR FOR CONVEYOR BELT SERIES 45



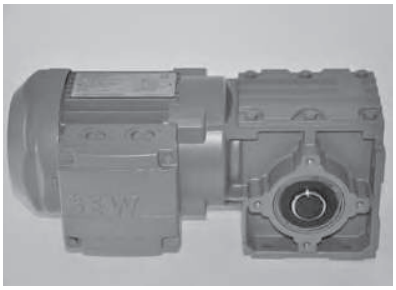
**Technical Data**

- Nominal Voltage 230 / 400 V
- 50 Hz
- Protective system IP 44
- Weight approx. 6 kg

For mounting on a drum bearing 45 a torque arm WA part no. 29.5040/0 is required.

| TYPE | PART NO. | POWER [W] | OUTPUTSPEED | OUTPUT TORQUE | CONVEYING SPEED |
|---|---|---|---|---|---|
| **WA10 DT56 M4 - 17** | 33.0015/0 | 90 | 17 U/min | 20 Nm | 2,6 m/min |
| **WA10 DT56 M4 - 22** | 33.0016/0 | 90 | 22 U/min | 18 Nm | 3,4 m/min |
| **WA10 DT56 M4 - 33** | 33.0017/0 | 90 | 33 U/min | 15 Nm | 5,1 m/min |
| **WA10 DT56 L4 - 67** | 33.0018/0 | 120 | 67 U/min | 13 Nm | 10,5 m/min |
| **WA10 DT56 L4 - 79** | 33.0019/0 | 120 | 79 U/min | 11 Nm | 12,4 m/min |
| **WA10 DT56 L4 - 127** | 33.0020/0 | 120 | 127 U/min | 7,7 Nm | 19,9 m/min |
| **WA10 DT56 L4 - 159** | 33.0021/0 | 120 | 159 U/min | 6,3 Nm | 24,9 m/min |

PLUG-ON MOTOR FOR CONVEYOR BELT SERIES 90*



**Technical Data**

- Nominal Voltage 230 / 400 V
- 50 Hz
- Protective system IP 44
- Weight approx. 7 – 13 kg

For mounting on a drum bearing 90 a torque arm is required.
Torque arm WA20 (part no. 29.5036/0) or torque arm WA30 (part no. 29.5037/0)

| TYPE | PART NO. | POWER [W] | OUTPUTSPEED | OUTPUT TORQUE | CONVEYING SPEED | TORQUE SUPPORT |
|---|---|---|---|---|---|---|
| **DSGM 180-60** | 33.0080/0 | 180 | 15 U/min | 48 Nm | 4.3 m/min | WA20 |
| **DSGM 250-48** | 33.0081/0 | 250 | 27 U/min | 44 Nm | 7.6 m/min | WA20 |
| **DSGM 370-39** | 33.0082/0 | 370 | 35 U/min | 63 Nm | 10 m/min | WA30 |
| **DSGM 370-27** | 33.0083/0 | 370 | 50 U/min | 49 Nm | 14.1 m/min | WA30 |
| **DSGM 370-19** | 33.0084/0 | 370 | 71 U/min | 38 Nm | 20 m/min | WA30 |
| **DSGM 550-24** | 33.0085/0 | 550 | 115 U/min | 32 Nm | 32.5 m/min | WA20 |

* other performances and conversions on request

# FREQUENCY TRANSFORMER FU 370 PP

**PART NO. 33.0126/0**

## Technical Data

- Built-in on / off switch
- Mode 1Q (without brake - Chopper)
- Powernet overvoltage and undervoltage monitoring
- motor load monitoring
- Short-circuit monitoring phase / phase, phase / earth
- Adjustable acceleration and deceleration ramp
- Adjustable voltage boost at low output frequency
- Power cord with safety plug 230 V and motor cable, ELPUR, 5m long orange safety plug, color
- EMC filter, Class B
- IP 66 / NEMA 4X enclosure
- Equipped with a control unit, which allows operating the drives without additional devices by default.
- Output power motor side max. Motor power 0.37 kW
- Rated output current max. 2.3 A
- Output voltage 3 x 0...230 V
- 150% overload for 60 seconds
- Input voltage powergrid side rated voltage 230V
- Input current 6.7 A
- Frequency 50 - 60 Hz
- General data Ambient temperature -10 ° C to + 40 ° C
- Heat loss at rated power 11 W
- Dimensions H / W / D: 232 x 161 x 179 mm

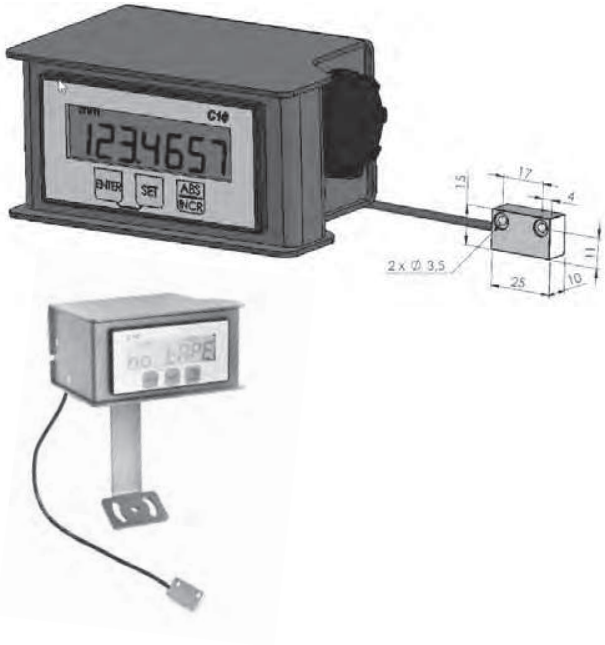
# MAGNETIC MEASURING SYSTEM

## MAGNETIC MEASURING SYSTEM ML

Length and stroke measurement is a standard task in machine and plant construction. A modern and economical solution is the ML magnetic length measurement system with magnetic tape, magnetic sensor, measurement display, or evaluation electronics. The advantages of this system are primarily the direct measurement procedure, being wear-resistant, the simple and economical installation, and the high precision that is possible. The core of this measurement system is the magnetic tape: a flexible, plastic band filled with magnetic particles. Using this tape, a magnetic sensor is moved along and the magnetic fields is probed at regular intervals without making contact. The direction of motion and increments are derived from these scanning signals and processed further in a control system or displayed via the measurement display.

**LCD meter display with battery operation**
**incl. Magnetic sensor (part no. 33.0038/0)**

- 6-digit LCD display with 14mm character height
- Surface mount housing, aluminum powder coated RAL 5010
- Dimensions W = 125mm, H = 65mm, depth = 85mm.
- Power Battery C (R14, 1.5V)
- Battery compartment on right side
- With mounted magnetic sensor (cable length 0.5m) for fitting to stop slide over Bracket
- Operating temperature -5 to to +45 ° C
- Speed max. 3m / sec, counting frequency to 1MHz
- Actual value memory / offset value, selectable
- Absolute - Incremental - Conversion
- Measuring tolerance ± 0.1 mm / m



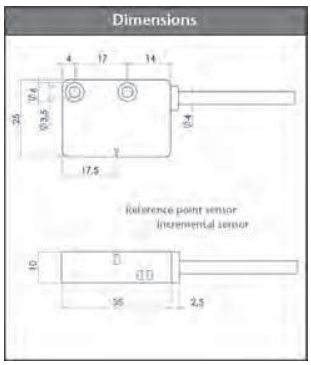


**Measuring display for 230V connection**
**part no. 33.0036/0**

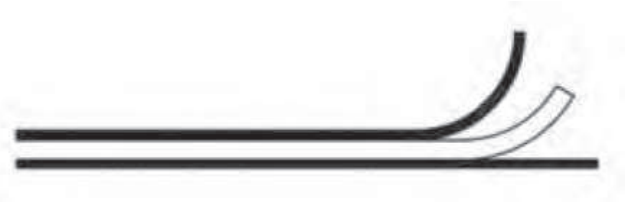
- 6-digit LCD display with 14mm character height
- Surface mount housing, aluminum powder coated RAL 5010
- Dimensions W = 1115mm, H = 70, depth = 120mm.
- Power supply 230V AC plug.
- 9-pin Sub-D sensor connection via plug-in, TTL 5VDC
- Operating temperature -5 to to +45 ° C
- Speed max. 3m / sec, counting frequency to 1MHz
- Actual value memory / offset value, selectable
- Magnetic Sensor part no. 33.0037/0
  Please order separately specifying the desired cable length

# MAGNETIC MEASURING SYSTEM

**Magnetic sensor with integrated processor**
**part no. 33.0037/0**




- Non-contact measuring scanning unit with integrated digital evaluation
- Detecting the magnetic signals, with index pulse, resolution 10 microns
- In connection with the above-depicted meter
- Suitable for MiniTec profiles, connecting cable integrated
- (2 m) and D-sub connector (larger cable lengths on request up to 20 m).



**Magnetic tape part no. 33.0028/0**

**Techn. data / Items supplied**

- Magnetic tape for installation on MiniTec profile surface, length max. 80 m, width 10 mm
- (optional: 5 mm tape width for sticking into the profile groove)

**Application**

- For all MiniTec linear guides with rails made from profiles
- Length measuring devices
- Material feeding

**Assembly**

- Stick magnetic tape on profile surface
- Attach sensor on slide
- Distance to the magnetic tape: 1.1 ±0.9 mm

**Please indicate desired measuring length (round up to full meters).**