



Safety Control Systems

杉山電機株式会社

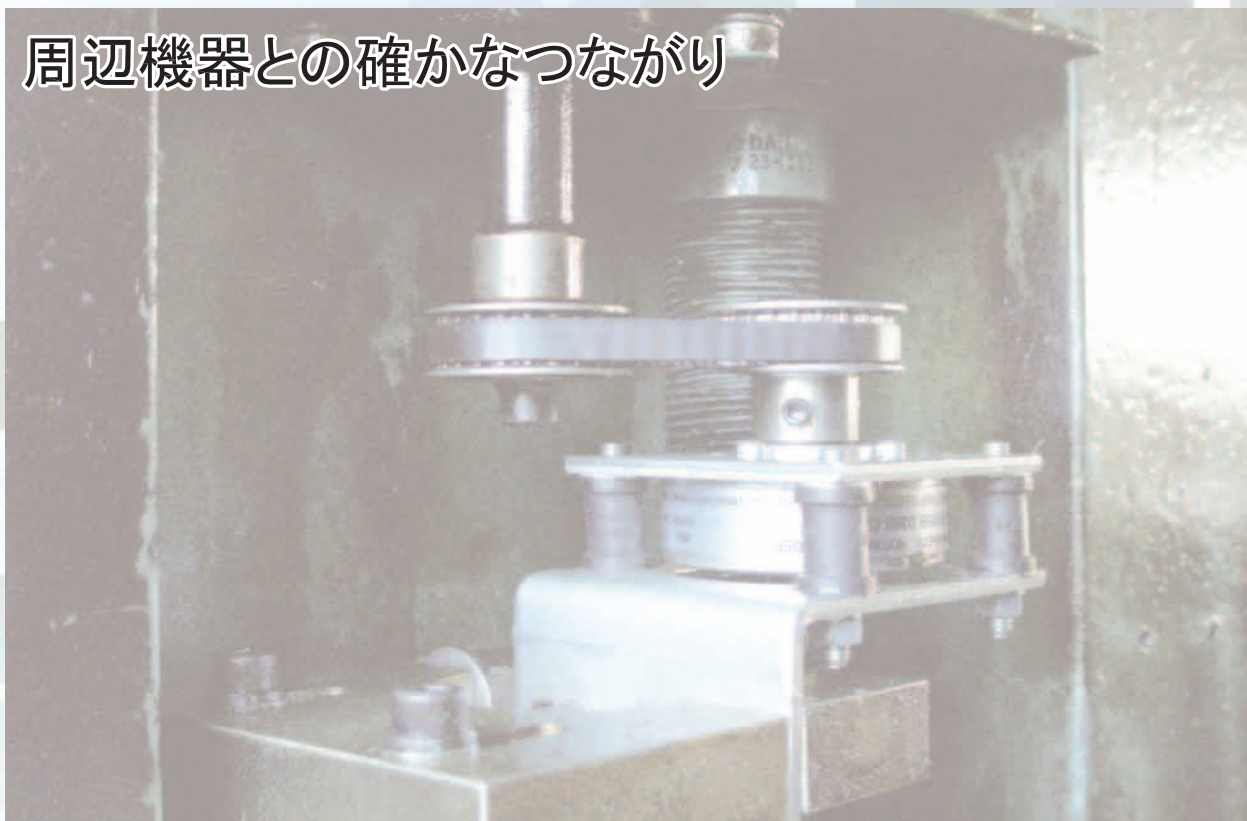
SUGIYAMA ELECTRIC CO., LTD

高性能電子式ロータリカム
High Performance Cam Controller

DCR-361

デジタルカム
DIGITAL CAM

周辺機器との確かなつながり



First development in the industry for "Switch On instantaneous Angle Adjustment" for both AC & DC. Most improved productivity supported by PhotoMOS relay.

Sugiyama's digital cam controller, DCR-361, made it possible to output equal or better contact signal than mechanical rotary cam, detecting the stamping press rotation speed with a magnetic encoder. Improved productivity can be realized by connecting its outputs to the peripheral devices like transferring system, ejector, malfunction detector, automation system.

Features

- High precision octuple cam
- Switch-On instantaneous Angle Adjustment function
Expedite the output angle to meet the stamping press actual speed, detecting any short delay of peripheral devices.
- PhotoMos relay for both AC and DC applications
Supports both AC and DC peripheral devices.
- Press die management, Bank function
8 channel outputs per press die can be memorized. Up to 100 press dies can be registered.
- Numeric keypads are made for very easy operation.
- Off command by the timer
- High performance of motion detecting function.
Encoder signals are continuously monitored to stop a stamping press when malfunction is found.
- "Sub" PhotoMOS relay for DC applications
Extra 8 channels are available at the rear side panel for spare outputs.
- Backlash absorbing function
Malfunction caused by the wobbling shaft where an encoder is mounted.
- Simultaneous angle indication
- Follow-up speed - Amazingly high speed of 3600 spm supported

Part Names of Cam Controller

BANK/CH (channel) display

Displays a press die number and a channel number.

FUNC (function) button

Push to select a function of the controller.

Numeric Value Changer Button

Channel output lamps

Lit while each cam outputs signal.

SPM (rotation speed)/DEG (angle) display

Angle Indicator (LDEs on circle)

BANK button

Push to change/register press die numbers.

ON/OFF buttons

Push to change angles.

ON/OFF angle display

TEACH button

Current angle of stamping press can be input into on/off angles

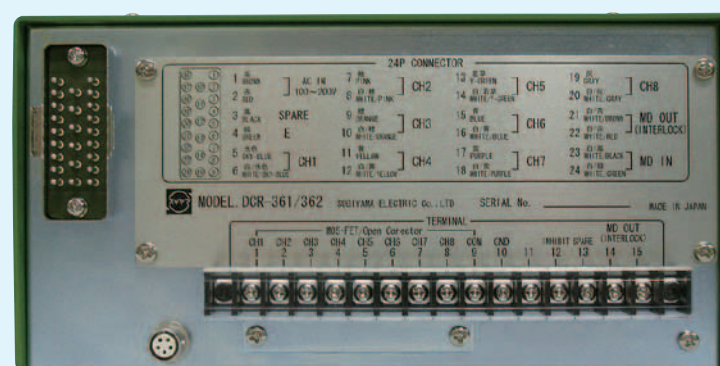
CLEAR button

Numeric keypad

TIMER button

Off command can be made with the timer. Used for timer ejector.

Rear Panel



Selection Guide, Part Number and Code Number

Example of part No.

DCR-361 - L05 05 - 10 210

① ② ③ ④

① 24-core power/output cable length

コード Code	24芯長さ 24-core length
05	5M
08	8M
10	10M
15	15M
20	20M

② 5-core encoder cable length

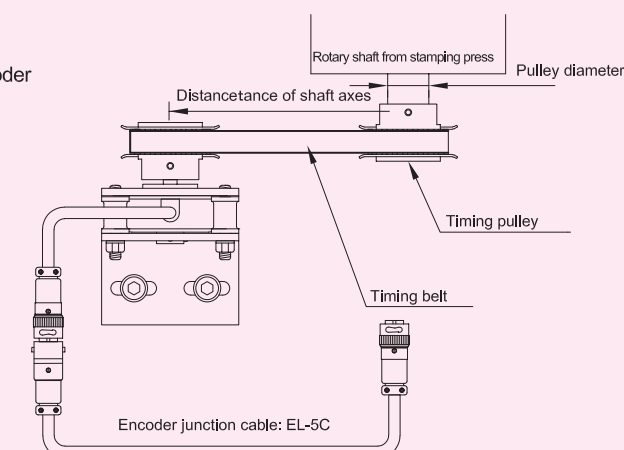
コード Code	5芯長さ 5-core length
05	5M
08	8M
10	10M
15	15M
20	20M

③ Pulley bore diameter for the shaft from stamping press

コード Code	軸穴径 Shaft hole diameter
06	6φ
08	8φ
10	10φ
15	15φ
16	16φ
18	18φ
20	20φ

④ Distance between shaft axes of Encoder and stamping press & Belt length

コード Code	軸間距離 Distance of Shafts
80	46mm
90	58mm
100	71mm
110	84mm
130	110mm
150	135mm
170	160mm
190	185mm
210	211mm
230	236mm





Specifications & Capability

Supply Voltage		AC100 to 240V \pm 10% 50/60Hz
Power Consumption		Less than 10W
Channel		8 channels
Bank		100 banks
Resolution		360ppr
Angle Display		0 to 359 (1°Step)
Output	Connector	AC240V 1A DC60V 1A
	Terminals	AC/DC 60V 1A
Roulette Display		10° Step
Follow-up Speed		3600SPM (※5000 Cam angle: 1 degrees)
Back-up memory life		10 years
Operating Temperature Range		0~+55°C No dew deposition and no freeze permitted.
Operating Humidity Range		35~85%RH No dew deposition permitted.
Weight		2.4Kg (including 0.8 kg. of bracket)
Main Body Dimensions excluding attachments		200(W) × 100(H) × 180(D)

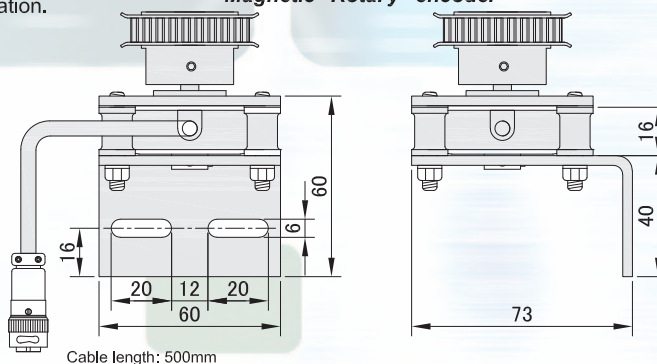
※ an actual measurement

Angle switching Rotary Encoder

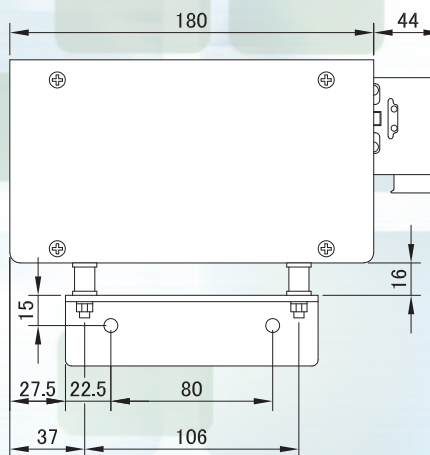
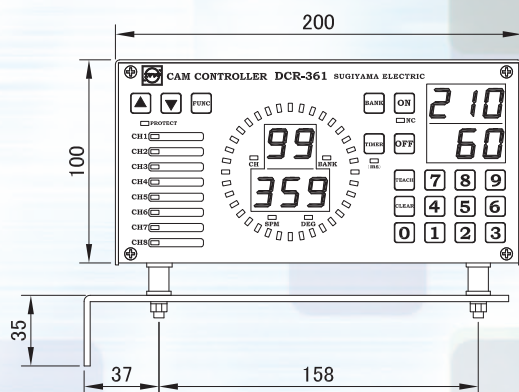
Long life by the magnetic encoder, strong against oil contamination.



Magnetic Rotary encoder



Main Body Configuration



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