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CONTROL PRODUCT GUIDE



THE CROUZET CONTROL ADVANTAGE

ANALYSIS OF CUSTOMER REQUIREMENTS

UNDERSTANDING how applications work.

INTEGRATING environmental constraints and quality requirements.

PROPOSING technical and economical solutions that fully meet the needs of customers.

PRODUCTION

MEETING all needs, standard or specific, small-scale or mass production, thanks to the industrial flexibility of Crouzet's factories.

GUARANTEEING the quality and reliability of products: all Crouzet's production sites are certified ISO 9001 and ISO 14001, and use quality tools such as 6 SIGMA.

INTEGRATING eco-design into manufacturing processes to MINIMIZE the environmental impact of products throughout their life cycle.

LOGISTICS AND AFTER-SALES SERVICE

PROVIDING an optimum level of service and GUARANTEEING a prompt delivery schedule, no matter the type of order: small-scale or mass production, standard or custom products.

CROUZET CONTROL'S EXTENSIVE RANGE OFFERS PRODUCTS TO MEET ALL YOUR REQUIREMENTS!

Pumping Stations

- › Protecting the pump: detection of no-load operation by undercurrent monitoring, detection of jamming by overcurrent monitoring
- › Controlling the level of liquid in the main container

**Current Monitoring Relay
MIC, HIH**

**Liquid Level Relay
HNM, ENR**



Paper Cutting

- › Controlling the cutting length: an encoder sends pulses to a preset counter that controls the cutter
- › Emergency stop and guard monitoring

**Electronic Counter
CTR48**

**Safety Relay
KNA3-YS**



Cooking Ovens

- › Controlling the oven temperature
- › Monitoring the speed of conveyor belt

**Temperature Controller
CTD46**

**Speed Monitoring Relay
HSV**



BEHIND EVERY PROJECT, TECHNOLOGY AND EXPERTISE

With over 65 years of experience, and with manufacturing facilities and sales offices located around the world, Crouzet Control provides unparalleled excellence in quality, innovation, reliability, and customer service.

Our extensive line of convenient and easy to use control products are manufactured in compliance with international and environmental standards including: UL, CSA, GL, CCC, TUV, CE, RoHS and REACH.



APPLICATIONS

The following are some typical applications where Crouzet Control products can be used to satisfy your requirements:



HVAC Systems

- › Detection of phase sequence and failure during compressor startup
- › Delayed startup of compressors to reduce initial surge

3-Phase Monitoring Relay MWS

Electronic Timer MAR1, MUR1



Packaging

- › Controlling the sealing cycle time
- › Detection of motor jamming
- › Counting the operating time for maintenance purposes

Panel Mount Timer 814 Series

Current Monitoring Relay HIH, EIH

Hour Meter CTR24, CHM48



Cranes

- › Protecting the motor: monitoring of phase sequence, presence and imbalance on the hoist motor
- › Monitoring the main power supply: detection of undervoltage

3-Phase Monitoring Relay HWUA

Voltage Monitoring Relay HUH, MUS

TIMERS

DIN RAIL MOUNT



CHRONOS 2 SERIES, 17.5MM

- › Multi-function or Mono-function
- › 7 timing ranges available: 0.1s to 100h
- › Multi-voltage: 24 VDC/24-240 VAC, 12-240 VAC/DC, 12 VAC/DC
- › Two types of output available: SPDT 8A or Solid State 0.7A



CHRONOS 2 SERIES, 22.5MM

- › Multi-function or Mono-function
- › 7 timing ranges available: 0.1s to 100h
- › Multi-voltage: 24 VDC/24-240 VAC, 12-240 VAC/DC
- › 2xSPDT 8A relay output



ESSENTIAL SERIES

- › Multi-function or Mono-function
- › 7 timing ranges available: 0.1s to 20h
- › Multi-voltage and mono-voltage versions available
- › SPDT 5A relay output

PLUG-IN MOUNT



CHRONOS 2 SERIES, PLUG-IN

- › Available with 8-pin or 11-pin connectors
- › Multi-function or Mono-function
- › Multi-voltage: 24 VDC/24-240 VAC, 12-240 VAC/DC
- › SPDT 8A or 2xSPDT 8A relay outputs
- › Option of timed or instantaneous output



RTMA SERIES

- › Miniature (21x27mm) plug-in style
- › Delay on Make (ON Delay) function
- › Mono-voltage: 12 VDC, 24VDC, 24 VAC, 110 VAC, 230 VAC
- › DPDT 5A or 4PDT 5A relay output

FRONT PANEL MOUNT



812 - 814 - 815 - 816 SERIES

- › 1/16 DIN sized (48x48mm)
- › Available with 8-pin or 11-pin connectors
- › Dual-line LCD or LED/LCD (816 series) display
- › Multi-function or mono-function
- › Available with memory in case of power failure (815 series only)



TMR 48 SERIES

- › 1/16 DIN sized (48x48mm)
- › 14 timing ranges available: 0.02s to 300h
- › Multi-voltage: 12-240 VDC/24-240 VAC
- › 2xSPDT 5A relay output



MBA SERIES

- › 22mm diameter
- › Delay on Make (ON Delay) function
- › Solid state output
- › Voltage options: 24 VDC, 100-240 VAC/DC



TOP 2000 SERIES

- › 1/16 DIN sized (48x48mm)
- › Delay on Make function, with instantaneous NO contact and memory option
- › Progress of cycle displayed by rotating knob
- › Available with 8-pin plug-in connector or screw terminals

MONITORING RELAYS



3-PHASE MONITORING RELAYS



MWS/EMWS SERIES

- › DIN Rail Mounting, 17.5mm wide
- › Multi-voltage: 183 to 528 VAC
- › Monitors phase sequence and phase failure
- › SPDT 5A (EMWS) or SPDT 8A (MWS) relay output



MWU SERIES

- › DIN Rail Mounting, 17.5mm wide
- › Multi-voltage: 183 to 528 VAC
- › Monitors phase sequence, phase failure and undervoltage between phases
- › SPDT 5A relay output



HWUA SERIES

- › DIN Rail Mounting, 35mm wide
- › Multi-voltage: 194 to 528 VAC
- › Monitors phase sequence, phase failure, phase imbalance and over/undervoltage between phases
- › DPDT 5A relay output



H3US/H3USN SERIES

- › DIN Rail Mounting, 35mm wide
- › Multi-voltage
- › Monitors over/undervoltage between phases (H3US), or between phases and neutral (H3USN)
- › DPDT 5A relay output

VOLTAGE MONITORING RELAYS



MUS/MUSF SERIES

- › DIN Rail Mounting, 17.5mm wide
- › Monitors its own supply voltage (over/undervoltage)
- › Available in Window operating mode (MUSF)
- › SPDT 5A relay output



HUL/HUH SERIES

- › DIN Rail Mounting, 35mm wide
- › Multi-voltage: 24-240 VAC/DC
- › Monitors over/undervoltage
- › DPDT 5A relay output

CURRENT MONITORING RELAYS



HIL/HIH SERIES

- › DIN Rail Mounting, 35mm wide
- › Multi-voltage: 24-240 VAC/DC
- › Monitors over/undercurrent
- › DPDT 5A relay output



EI SERIES

- › DIN Rail Mounting, 22.5mm wide
- › Voltage options: 24 VDC, 24 VAC, 110 VAC, 230 VAC
- › Monitors over/undercurrent
- › SPDT 8A relay output



MIC SERIES

- › DIN Rail Mounting, 17.5mm wide
- › Multi-voltage: 24 to 240 VAC/DC
- › Integrated Current Transformer
- › SPDT 5A relay output

LIQUID LEVEL RELAYS



ENR/ENRM SERIES

- › DIN Rail Mounting, 22.5mm wide
- › Multi-function and Multi-voltage (24-240 VAC/DC)
- › Wide sensitivity range: 250Ω to 1MΩ (ENRM series)
- › SPDT 8A relay output



HNM/HNE SERIES

- › DIN Rail Mounting, 35mm wide
- › Multi-function and Multi-voltage (24-240 VAC/DC)
- › Sensing with resistive probes (HNM series) or with discrete sensors (HNE series)
- › DPDT 5A relay output

SPEED MONITORING RELAYS



HSV SERIES

- › DIN Rail Mounting, 35mm wide
- › Multi-voltage: 24-240 VAC/DC
- › Monitors over/underspeed
- › SPDT 5A relay output



FREQUENCY MONITORING RELAYS

HHZ SERIES

- › DIN Rail Mounting, 35mm wide
- › Monitors its own supply voltage (120-277 VAC)
- › Monitors frequency in Window mode
- › DPDT 5A relay output

COUNTERS



ELECTRONIC COUNTERS



CTR24 SERIES

- › 1/32 DIN sized (24x48mm)
- › 2 available functions: Totalizer or Hour Counter
- › LCD display with optional orange backlight
- › Lithium battery powered



CTR48 SERIES

- › 1/16 DIN sized (48x48mm)
- › Orange backlit or multi-colour LCD display
- › Multi-function (1 or 2 presets)
- › SPDT 5A and solid state (transistor) outputs

ELECTROMECHANICAL HOUR COUNTERS



CHM48 SERIES

- › 1/16 DIN sized (48x48mm)
- › Mono-voltage, AC (50 or 60 Hz) or DC
- › Capacity: 1 million hours (DC) or 100,000 hours (AC)
- › DIN Rail mount adapter available



CHM24 SERIES

- › 1/32 DIN sized (24x48mm)
- › Mono-voltage, AC (50 or 60 Hz) or DC
- › Capacity: 1 million hours (DC) or 100,000 hours (AC)
- › IP65 protection rating

ELECTROMECHANICAL IMPULSE COUNTERS



CIM24X48 SERIES

- › 1/32 DIN sized (24x48mm)
- › Mono-voltage, AC or DC
- › 5 or 6 digits readout
- › Option of front manual reset



CMM48 SERIES

- › 1/16 DIN sized (48x48mm)
- › Hour counter and Impulse counter in the same unit
- › AC (50Hz or 60Hz) or DC supply
- › Capacity: 1 million hours (DC) or 100,000 hours (AC)

Our experienced team of Application Engineers can assist you with everything you need, from selecting a Crouzet Control product to developing application-specific custom products

TEMPERATURE CONTROLLERS >>



CTD43/CTD46 SERIES

- > 1/16 DIN sized (48x48mm)
- > SMART auto tuning PID, heating or cooling action
- > Accepts thermocouple or RTD probe inputs
- > Single line (CTD43) or dual line (CTD46) display



MIC48 SERIES

- > 1/16 DIN sized (48x48mm)
- > SMART auto tuning PID, heating and/or cooling action
- > Universal input: thermocouple, RTD, voltage, current
- > Load break detection

SAFETY RELAYS >>



KNA3-YS/KNE3-YS SERIES

- > DIN Rail Mounting, 22.5mm wide
- > Emergency Stop and Safe Guard monitoring
- > Available with screw or removable spring terminals
- > Available for 1 (KNA3-YS) or 2 (KNE3-YS) channel applications



KZH2-Y2/KZH3-YS SERIES

- > DIN Rail Mounting, 22.5mm wide
- > Two-hand safety control
- > Screw terminal connections
- > Available with 2 or 3 contacts

THE EXTENSIVE CROUZET CONTROL PRODUCT OFFER INCLUDES:



TIMERS

Din Rail, plug-in and panel mount timers. Mono-function or multi-function models available, with more than 20 different functions and a broad timing range.



MONITORING RELAYS

Wide range of 3-phase, current, voltage, frequency, level and speed monitoring relays for reliable in-time detection of faults.



COUNTERS & RATEMETERS

Ideal for fast count applications with a high-speed counting frequency up to 50 kHz. Electronic range features a two-color or backlit LCD dual display for easy reading. Electromechanical and electronic ranges are space saving with dual-function models available.



TEMPERATURE CONTROLLERS

Adaptive tuning products which manage their parameters independently, paired with a sophisticated control algorithm and a dual display.



SAFETY RELAYS

Featuring a range to cover machine applications, and one especially for the lift market. Safety components with one or two channels, designed to detect problems through self-checking the integrity of control devices.

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