Zone

1 21 2 22

R3002...R3006

IP 66

IK 09

T_a +40 -20

ATEX

EAC

IM2

- Enclosure in sheet steel
- 6 basic enclosure sizes
- Enclosures can be combined (modular system)
- Available as empty enclosures or as completely fitted and wired control and distribution units
- For use in underground mines
- Cable entries available:

Direct : Ex db cable glands

Indirect : via Ex eb enclosure multiwire bushing, conductor insulator





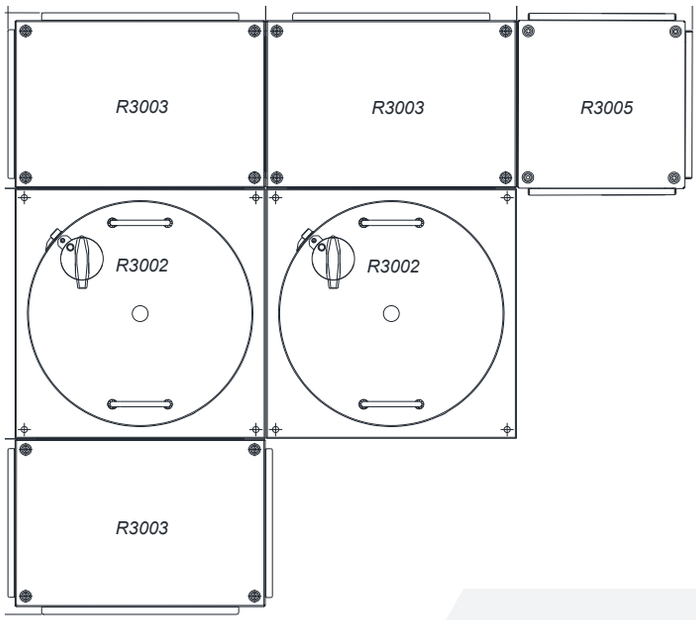
CONSTRUCTION

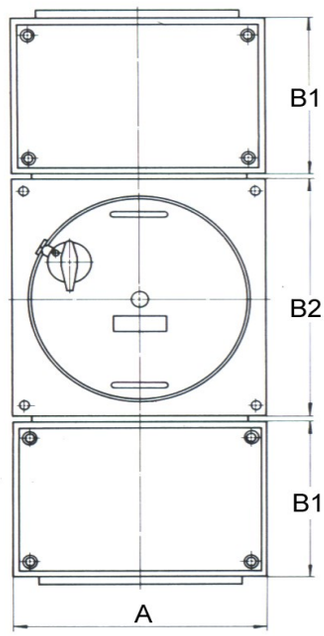
Enclosure: sheet steel (Ex db enclosure 12 mm thickness, Ex eb enclosure 3 mm thickness
Gasket: EPDM, neoprene, silicone

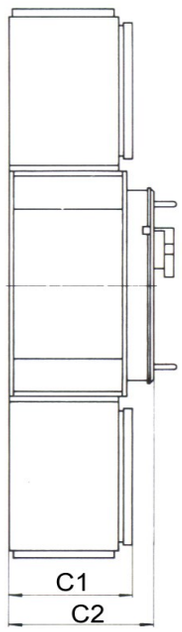
TECHNICAL DATA

Certificate:	Ex FIDI 19 ATEX 0058X , RU C-HR.HB07.B.00272/20
Marking:	CE 0722
Apparatus category:	II 2(1)GD I M2 (M1)
Marking of explosion protection:	Ex Ex db eb [ib] [ia Ga] ia/ib IIC T6 Gb Ex tb IIIC T80°C Db Ex db eb [ib] [ia Ma] ia/ib I Mb
Ambient temperature:	-20ºC ≤ T_a ≤ +40ºC [ATEX] -50ºC ≤ T_a ≤ +50ºC [EAC]
Degree of protection:	IP 66
Resistance to shock:	IK 09
Protection class :	I (protective earthing)
Rated voltage:	Up to 690 V AC
Rated current:	Up to 500 A (depends upon built-in device)
Terminal cross-section:	Up to 300 mm^2
Weight (empty enclosure): **- Enclosure R3002** **- Enclosure R3002-1** **- Enclosure R3003** **- Enclosure R3003-1** **- Enclosure R3004** **- Enclosure R3005** **- Enclosure R3006**	 76,0 kg 95,1 kg 14,0 kg 14,3 kg 42,2 kg 12,0 kg 7,0 kg
Color:	Yellow, RAL1016 (other colors on request)
Mounting types:	temporary wall-mounted free-standing (with or without protection canopy)

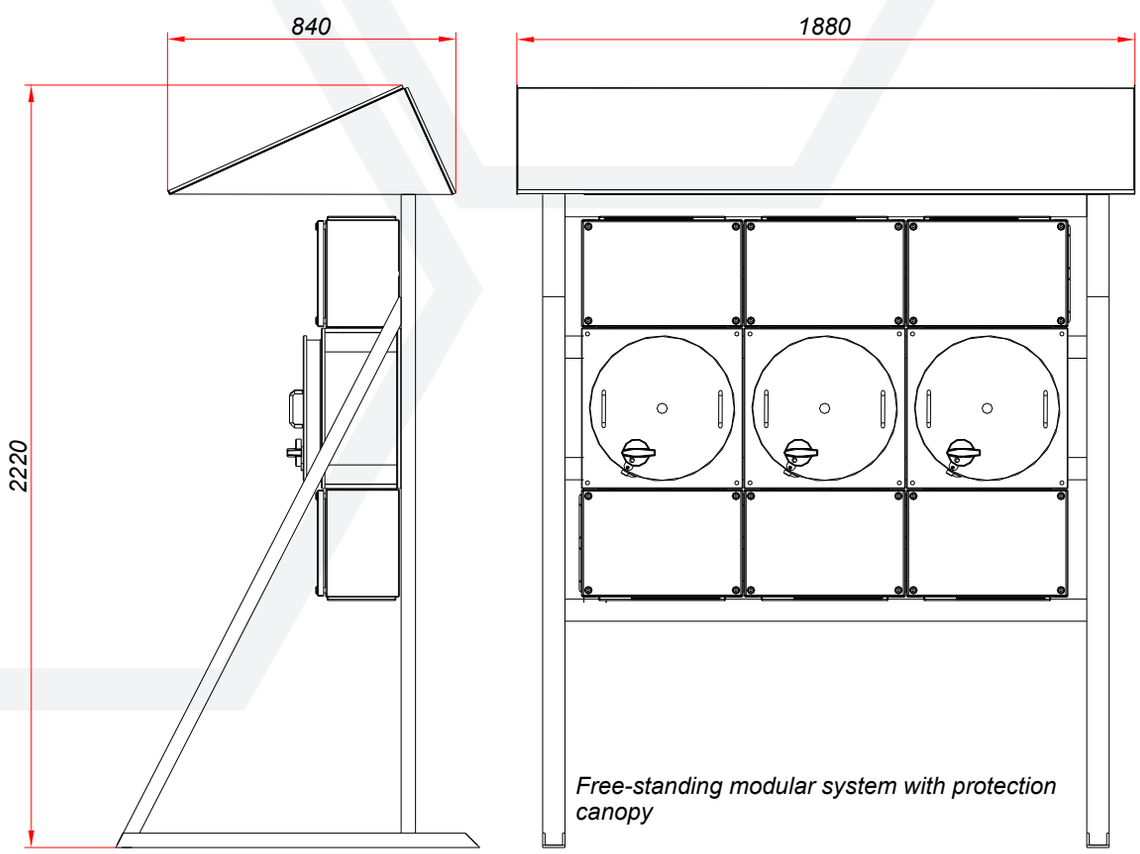
DIMENSION DRAWING (mm)







Type	A[mm]	B2[mm]	C2[mm]	Ex type
R3002	470	470	330	Ex db
R3002-1	470	470	480	
R3004	315	315	330	
	A[mm]	**B1**[mm]	**C1**[mm]	
R3003	470	315	240	Ex eb
R3003-1	470	315	390	
R3005	315	315	240	
R3006	315	240	200	



Free-standing modular system with protection canopy

All technical data is relevant at the time of print.

R3002...R3006

Distribution cabinets types R3002 and R3004 are made of high quality steel in Ex d flameproof protection type. Closing of the cabinets is of threaded type and is protected against opening by lock switch, so that it can be opened only when it is not energized. Corrosion protection is ensured with special paint which is applied both inside and outside of an enclosure. Ex d steel enclosures (type R3002 and R3004) and Ex e sheet steel enclosures (type R3003, R3005, R3006) can stand alone or can be interconnected in various combinations.

The dimensions of the enclosures have been created in the way that they match. Thus, a large number of combinations between enclosures can be made upon customer's request. A broad range of components, such as contactors, switches, instruments and PLCs can be built into these enclosures. Nevertheless, customer-supplied equipment can also be incorporated into the layout. The equipment layout is designed by us according to customer's requirements. Cable entry is either direct (cable glands or conduit entries) or indirect via Ex e enclosures type R3003, R3005, R3006.

The "flameproof" type protection 'Ex d' is based on the following principle. Electrical components that might cause sparks or arcing in normal operation (switches, contactors etc.) are mounted in an flameproof enclosure. If the concentration of explosive gas, vapour, mist or dust is high enough to trigger the explosion, the Ex d enclosure will not permit ignition of the surrounding explosive atmosphere. Therefore, the explosion would be suppressed and people and assets will not be jeopardized. Further, the temperature of the outside surface of the enclosure must not exceed the prescribed temperature limit for the appropriate temperature class. That means, the heat loss from the components fitted must not exceed a specified value.

Data required for the layout of control and distribution boards

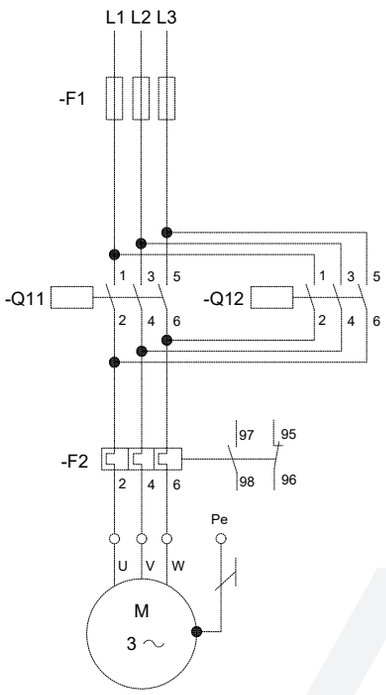
We produce distribution cabinets according to customer's requirements and basis to the project data:

- the required minimum type of protection
- as appropriate, details of the hazardous atmosphere for which the equipment must be suitable
- single line or wiring diagram
- schematic for control systems
- operating, auxiliary and control voltages
- frequency
- power and current ratings of connected loads
- quantities and types of components required, e.g. contactors, switches, circuit-breakers, fuses, thermal relays, instruments, terminals etc.
- quantity and types of cables
- number and size of conductors
- quantity and location of entries (from top, bottom, side, center)
- environmental conditions
- method of installation

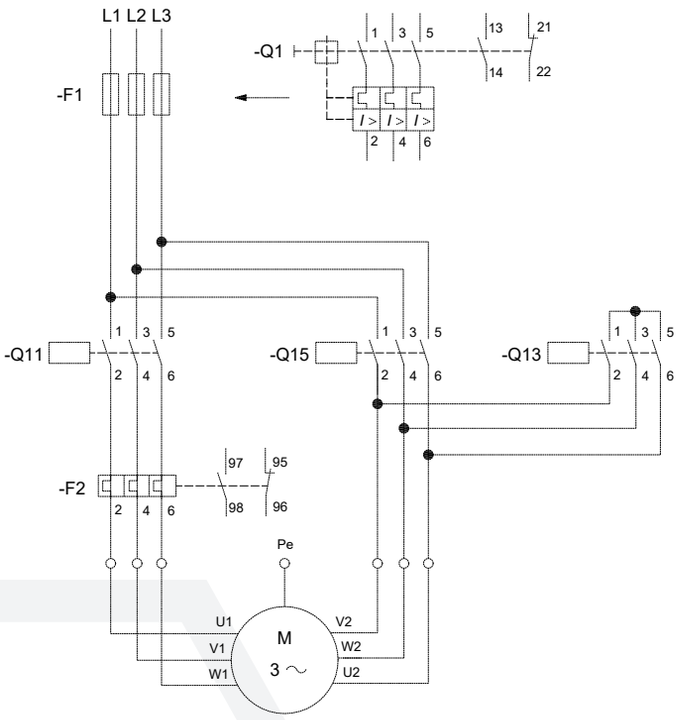
Examples of Ex distribution cabinets



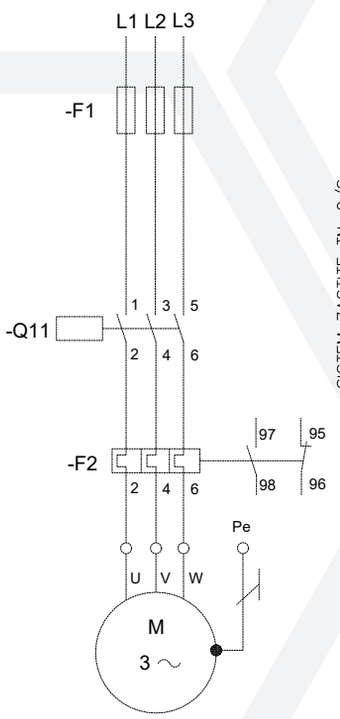
Examples of wiring diagram for distribution cabinets



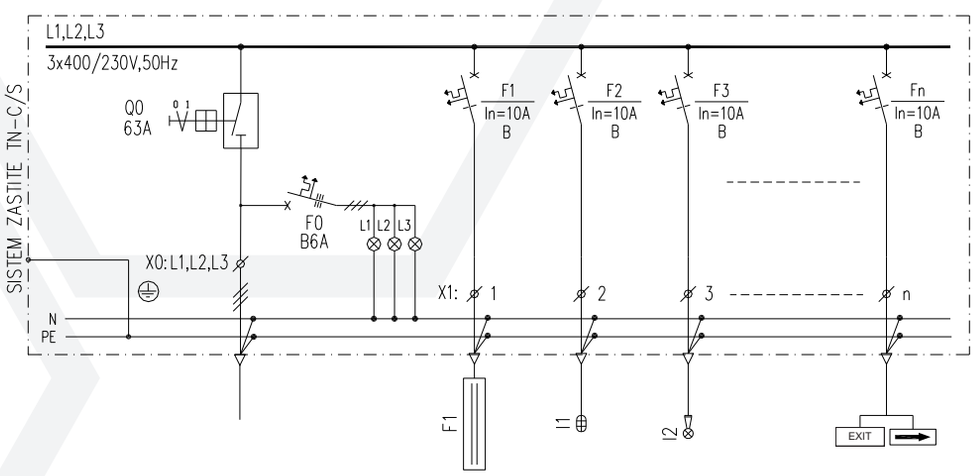
A) Direct on line start of tree phase motor; two directions of rotation



B) STAR-DELTA switching of three phase motor



C) Direct on line start of tree phase motor



D) Light fittings control panel