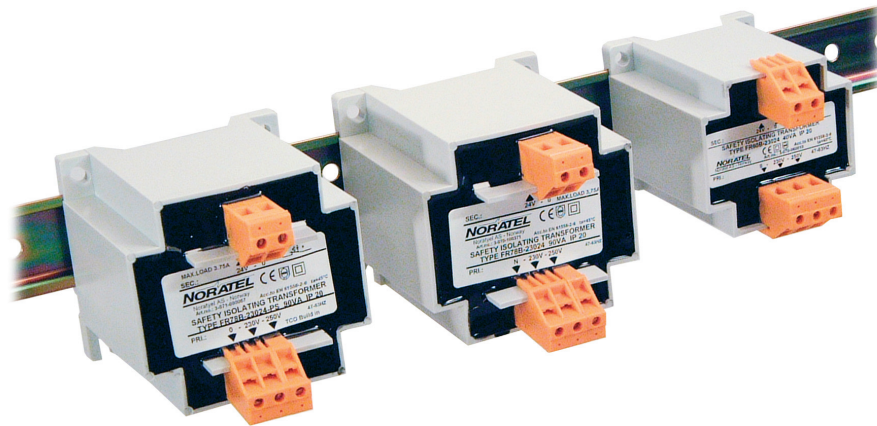


Isolating-/Control transformer, IP20



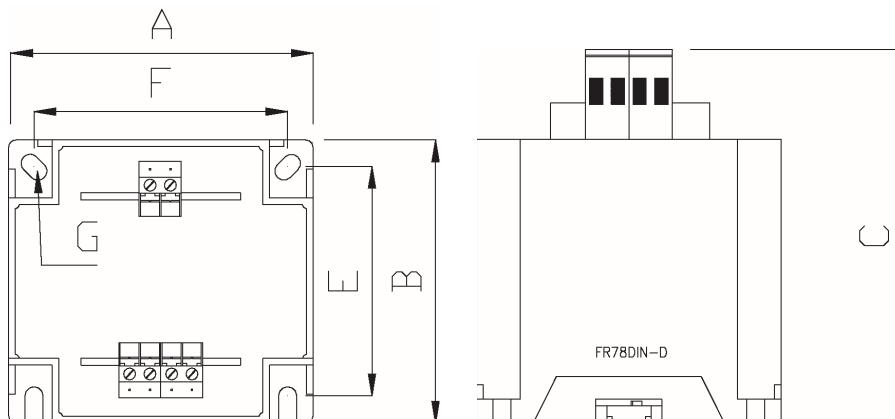
Type FR

Encapsulated single-phase isolating transformer designed and tested according to EN61558-2-4. The FR transformers have separate insulated windings, are moulded in self-extinguishing polyurethane and capsulated in plastic. For fixed installation, simple and easy assembly in cabinets or switchboards. Produced according to DNV, Lloyds register of shipping and Bureau Veritas regulations, which include 45°C ambient temperature. Construction class II. FR60B, FR78B and FR84B models are supplied with integrated optional DIN-rail mounting system. Protected against involuntary contact, designed for cabinet or switchboard mounting.

Applications:

Industrial isolating transformer designed for installation in processing industry, shipbuilding and switchboards. Suitable for installations which require protective separation between input and output. Custom designed models on request.

| Type | Dimensions (mm) | | | | | | Wt (Kg) |
|--------|-----------------|-----|-----|----|-----|-------|---------|
| | A | B | C | E | F | G | |
| FR60B | 68 | 63 | 95 | 50 | 56 | 4,4x5 | 0,9 |
| FR78B | 85 | 79 | 103 | 63 | 70 | 5x8 | 1,7 |
| FR84B | 90 | 84 | 110 | 68 | 76 | 5x7 | 2,3 |
| FR96B | 105 | 89 | 115 | 70 | 89 | 6x8 | 3,2 |
| FR96C | 130 | 115 | 119 | 87 | 105 | 8x10 | 4,4 |
| FR120B | 130 | 115 | 137 | 87 | 105 | 8x10 | 5,9 |



Technical specifications

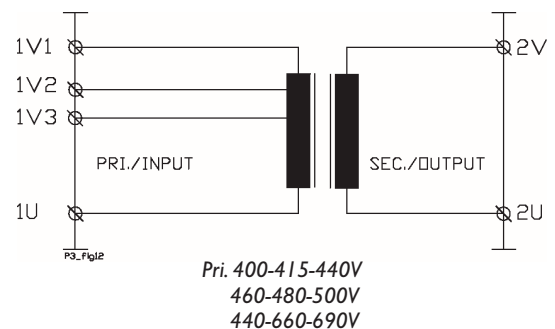
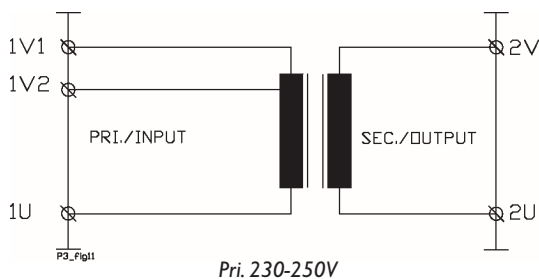
- Input voltage: 230-250V
400-415-440V
460-480-500V
440-660-690V
- Frequency: 47-63Hz
- Output voltage: 115V
230V
- According to: EN61558-2-4
- Test/insulating voltage: 4/5,2kV AC RMS
- Construction class: II
- Insulation class: B (130°C)
- Ambient temp. (t_a): 45°C
- Degree of protection: IP20

Terminals designed for 4mm² or 10mm² conductors and maximum voltage 750V.

The FR transformers must be protected against short circuit and overload with separate fuse arrangement. Information on losses and short-circuit currents on page I-18 & I-19

| Type | Voltage Sec. (V) | Current Sec. (A) | Power (VA) | Art. no. |
|-------------------------|------------------|------------------|------------|--------------|
| 230-250/115V | | | | |
| FR60B-230115 | 115 | 0,4 | 40 | 3-071-060020 |
| FR78B-230115 | 115 | 0,8 | 90 | 3-071-078040 |
| FR84B-230115 | 115 | 1,1 | 130 | 3-070-100390 |
| 230-250/230V | | | | |
| FR60B-230230 | 230 | 0,2 | 40 | 3-071-060030 |
| FR78B-230230 | 230 | 0,4 | 90 | 3-070-078030 |
| FR84B-230230 | 230 | 0,6 | 130 | 3-070-100566 |
| FR96B-230230 | 230 | 0,8 | 180 | 3-071-096120 |
| FR96C-230230 | 230 | 1,1 | 250 | 3-071-096130 |
| FR120B-230230 | 230 | 1,7 | 400 | 3-071-120040 |
| 400-415-440/115V | | | | |
| FR60B-400115 | 115 | 0,4 | 40 | 3-071-060570 |
| FR78B-400115 | 115 | 0,8 | 90 | 3-070-100676 |
| FR84B-400115 | 115 | 1,1 | 130 | 3-070-100677 |
| FR96B-400115 | 115 | 1,6 | 180 | 3-071-096010 |
| FR96C-400115 | 115 | 2,2 | 250 | 3-070-100678 |
| FR120B-400115 | 115 | 3,5 | 400 | 3-070-100679 |
| 400-415-440/230V | | | | |
| FR60B-400230 | 230 | 0,2 | 40 | 3-070-060020 |
| FR78B-400230 | 230 | 0,4 | 90 | 3-070-100686 |
| FR84B-400230 | 230 | 0,6 | 130 | 3-070-100687 |
| FR96B-400230 | 230 | 0,8 | 180 | 3-070-100688 |
| FR96C-400230 | 230 | 1,1 | 250 | 3-070-100689 |
| FR120B-400230 | 230 | 1,7 | 400 | 3-070-100690 |
| 460-480-500/230V | | | | |
| FR60B-460230 | 230 | 0,2 | 40 | 3-071-060560 |
| FR78B-460230 | 230 | 0,4 | 90 | 3-071-078510 |
| FR84B-460230 | 230 | 0,6 | 130 | 3-071-084020 |
| FR96B-460230 | 230 | 0,8 | 180 | 3-071-096270 |
| FR96C-460230 | 230 | 1,1 | 250 | 3-071-096090 |
| FR120B-460230 | 230 | 1,7 | 400 | 3-071-120055 |
| 440-660-690/230V | | | | |
| FR60B-660230 | 230 | 0,2 | 40 | 3-070-060030 |
| FR78B-660230 | 230 | 0,4 | 90 | 3-070-078020 |
| FR84B-660230 | 230 | 0,6 | 130 | 3-070-084010 |
| FR96B-660230 | 230 | 0,8 | 180 | 3-071-096030 |
| FR96C-660230 | 230 | 1,1 | 250 | 3-071-096040 |
| FR120B-660230 | 230 | 1,7 | 400 | 3-071-005900 |

Wiring diagram



Estimated values, subject to change