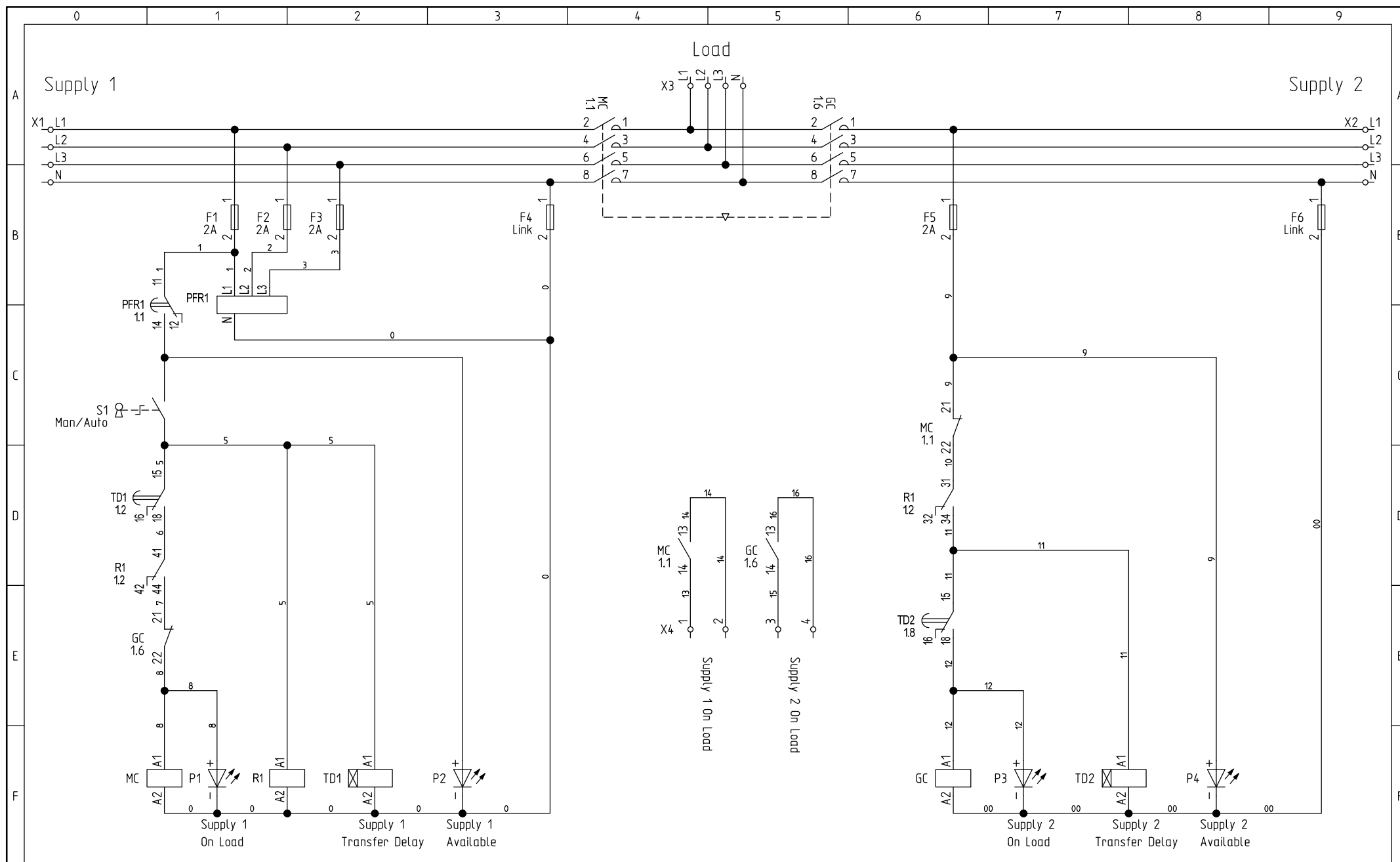




	0	1	2	3	4	5	6	7	8	9	
A											A
B											B
C											C
D											D
E											E
F											F

Function

Mains Failure (loss of phase(s)).

1. Supply 1 contactor drops out.
2. R1 closes for generator auto-start signal
3. Timer TD2 activates for transfer delay time
4. After delay Supply 2 contactor engages to supply the load

Mains out of limits (under/over voltage, assymetry).

1. Phase monitoring relay timer activates
2. If monitored values still out of limits Supply 1 contactor drops out.
3. Timer TD2 activates for transfer delay time
4. After delay Supply 2 contactor engages to supply the load

On Return of Supply 1.

1. Phase monitoring relay and relay R1 activate
2. Supply 2 contactor drops out
3. Timer TD1 activates for transfer delay
4. Supply 1 contactor activates to supply the load

Manual / Auto Switch.

Man Mode. Switches over to Supply 2 from Supply 1
Auto Mode. Supply 1 active unless phase failure conditions are present.

Connections

SUPPLY 1, SUPPLY 2, LOAD

1 conductor per clamp

Rigid – Solid / Stranded 0.5 ... 10 mm²
Flexible 0.5 ... 10 mm²
with non insulated ferrule 0.5 ... 10 mm²
with insulated ferrule 0.5 . 6 mm²

Wire stripping length 12 mm

Components

MC – Supply 1 contactor
GC – Supply 2 contactor
TD1 – Supply 1 to Supply 2 delay timer (0.1s–30hrs)
TD2 – Supply 2 to Supply 1 delay timer (0.1s–30hrs)
PFR1 – Phase monitoring relay
R1 – Relay
F1 TO F6 – Control circuit fuses



IO AUTOMATION

INDUSTRIAL CONTROL & AUTOMATION

IO Automation Limited
sales@motorstarters.co.uk
Tel: 01920 746386

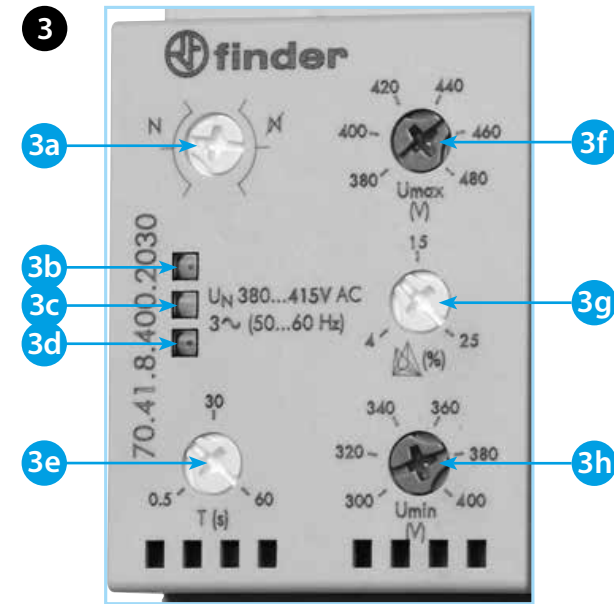
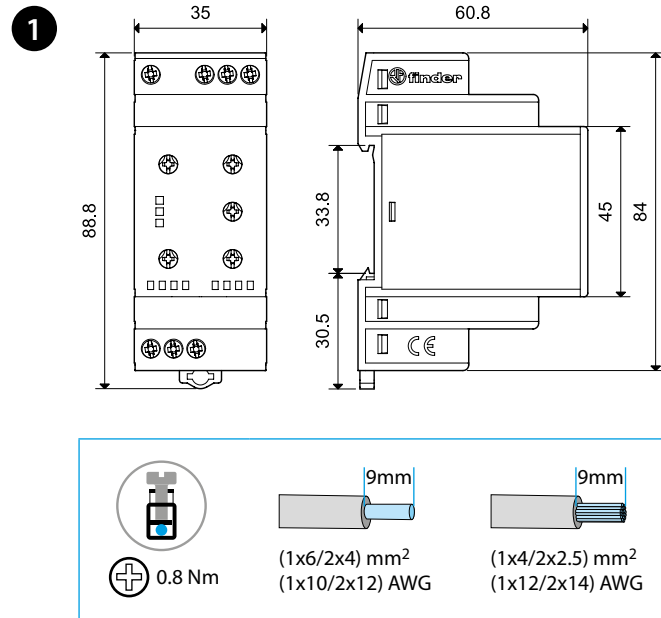
60A 3 Phase Automatic Transfer Switch

Project:	CS–R60–4P	Drawing no.:	00.001	Init.:	Rev.:	Sheet:	2
Date:	01/01/2018	Function:		Location:		Total sheets:	2
						Next sheet:	



70.41

	70.41.8.400.2030
	U_N (380...415) V AC (50/60 Hz) U_{min} 220 V AC U_{max} 510 V AC
	P 11 VA / 0.9 W
	1 CO (SPDT) 6 A 250 V AC
	AC1 1500 VA AC15 (230 V AC) 500 VA (230 V AC) 0.185 kW DC1 (30/110/220) V (6/0.2/0.12) A
	(-20...+60)°C
	IP20



ENGLISH

70.41

3 PHASE + NEUTRAL AC LINE MONITORING RELAY

1 OUTLINE DRAWING

2 WIRING DIAGRAM

11-14: output Make contact
11-12: output Break contact

3 FRONT VIEW (detail)

3a Function selector:

- (N) With N-line monitoring
- (X) Without N-line monitoring

3b LED 1 (green)

3c LED 2 (yellow)

3d LED 3 (red)

3e Switch-off delay time (T on function diagrams) adjustable (0.5...60)s

3f Maximum voltage selector (380...480)V

3g Asymmetry adjustable (4...25)% U_N

3h Minimum voltage selector (300...400)V

4 FUNCTIONS

4a Window mode (overvoltage + undervoltage)

4b Phase loss and rotation monitoring

4c Asymmetry and Neutral loss

NOTE

Hysteresis (H on function diagrams): 10 V.

Power-on activation time: 1s.

Switch-on lock-out time: 1s.

Positive safety logic - Make output contact opens if the relay detects an error.

