GENERAL CHARACTERISTICS

Five basic versions are available:

- **BI20/S**   function 51 definite time + function 51N definite time
- **BI20/I**   function 51 inverse time + function 51N definite time
- **BI20/VI** function 51 very inverse time + function 51N definite time
- **BI20/EI** function 51 extremely inverse time + function 51N definite time
- **BI20/IM** function 49 thermal image + function 51N definite time

On request all versions are fitted with blocking input and output on the definite time element of the second level and with time start signalling relay.

SETTINGS

Settings are made on front face by means of four 4-pole DIP SWITCHES that allow to obtain a wide and accurate setting range for the following regulations:

- Trip level of the F51 (F49) element I_1
- Trip time delay of the F51 (F49) element T_1
- Trip level of the F51N element I_0
- Trip time delay of the F51N element T_0

SIGNALIZATIONS

- 1 Green led for signalization of auxiliary supply presence and relay regular operation.
- 1 Red led for F51 (F49) trip signalization.
- 1 Yellow led for F51N trip signalization.

COMMANDS

- Test spring lever switch: when pressed it simulates a current flow of 5 times the rated input current and allows the complete functional check of the relay and of the trip time delays. In one position test function does not operate the output relays; in the other it also operates the output relays.

- The output relays reset after trip can be:
  - manual by reset push button on front face;
  - manual by remote push button connected to the relevant terminals provided on relay terminal board;
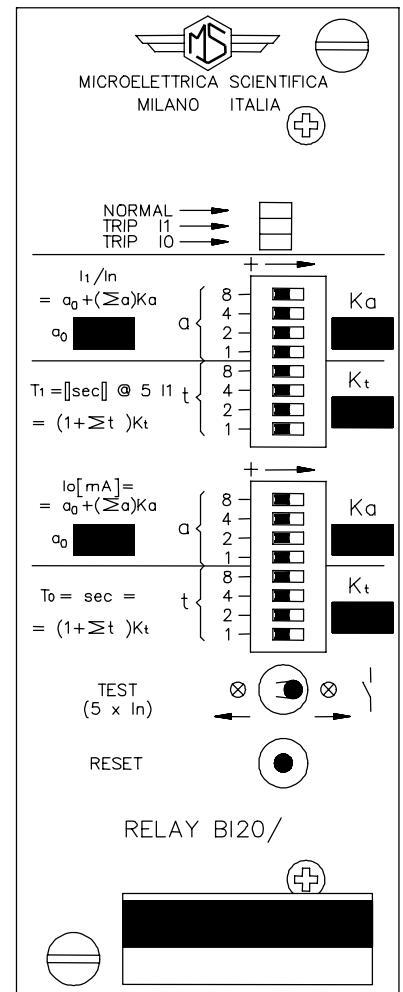 - automatic by connecting a bridge on remote reset terminals.

The trip memory LED can be reset only by the front face reset push button.

OUTPUT RELAYS

Three output relays are provided:

- R1+R2, always included, each with the following choice of contacts combination: 1 NO + 1 NC (standard version) or, on request, 2 NO or 2 NC.

- R3, on request, with 1 contact NO (standard) or 1 NC.

The output relays are normally deenergized and are energized on tripping.
On request the relays R1 and R2 can be in the normally energized version and deenergized on tripping.

RELAY BI20/

ORDERING DATA

- Relay type

- Rated Input Current

- Auxiliary Power Supply

- Setting Ranges

- Output Relays Configuration

- Execution

- Options on request

OPTIONS
On request the following options are provided:

❑ Blocking Output **(BO)** relay R3.
❑ Starting Time Output **(TO)** relay R3.

OVERALL DIMENSIONS
See Overall Dimensions - **1 Module Relay**.

ELECTRICAL CHARACTERISTICS

Rated input current	: 1A or 5A		Burden on input current	: 0.02VA@1A ; 0.2VA@5A
			Burden on supply voltage	: 3W(d.c.); 6VA(a.c.)
Aux. Power Supply	:		Type 1 : 24-110 V d.c./a.c. $\pm$ 20% permanent	
			Type 2 : 90-220 V d.c./a.c. $\pm$ 20% permanent	

STANDARD SETTING RANGES (Different on request) – time/current curves (page 78-79)

RELAY TYPE	CURRENT SETTING	step of	TIME DELAY SETTING	step of
BI20/S F51-Definite time	F51= 0,5-2 xIn	0,1xIn	T1= 1-16 sec.	1sec.
	F51= 0,25-4 xIn	0,25xIn	T1= 0,5-8 sec.	0,5sec.
	F51= 0,5-8 xIn	0,5xIn	T1= 0,1-1,6 sec.	0,1sec.
BI20/IM F49-Thermal image	F49= 0,5-2 xIn	0,1xIn	T1= 2-32 s @ 5xI1	2sec.
	F49= 0,25-4 xIn	0,25xIn	T1= 0,5-8s @ 5xI1	0,5sec.
BI20/I F51-Inverse time	F51= 0,5-2 xIn	0,1xIn	T1= 1-16 s @ 5xI1	1sec.
	F51= 0,25-4 xIn	0,25xIn	T1= 0,5-8s @ 5xI1	0,5sec.
BI20/VI F51-Very inverse time	F51= 0,5-2 xIn	0,1xIn	T1= 0,5-8 s @ 5xI1	0,5sec.
	F51= 0,25-4 xIn	0,25xIn	T1= 0,1-1,6s@ 5xI1	0,1sec.
BI20/EI F51- Extremely inverse time	F51= 0,5-2 xIn	0,1xIn	T1= 0,5-8 s @ 5xI1	0,5sec.
	F51= 0,25-4 xIn	0,25xIn	T1= 0,1-1,6s@ 5xI1	0,1sec.
F51N- Definite time	F51N= 10-160 mA	10mA	To= 0,05-0,8 sec.	0,05sec.
	F51N= 50-800mA	50mA	To= 0,1-1,6 sec.	0,1sec.
	F51N= 100-1600mA	100mA	To= 0,5-8 sec	0,5sec.

WIRING DIAGRAM

MS−SCE1191−R3