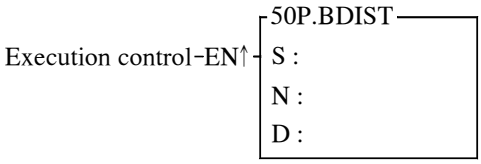
Data movement instruction

FUN50 BDIST	BYTE DISTRIBUTE	FUN50 BDIST



S ：Starting address of source register to be distributed

N ：Number of bytes to be distributed

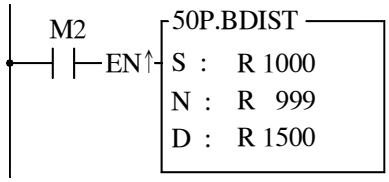
D ：Registers to store the distributed data

S，N，D may associate with V、Z index register to serve the indirect addressing application。

Range / Operand	HR	ROR	DR	K
	R0 | R3839	R5000 | R8071	D0 | D3071	
S	○	○	○	
N	○	○	○	1~256
D	○	○*	○	

- When execution control〝EN〞=1 or〝EN↑〞（P instruction）changes from 0→1，it will perform the byte distribution starting from S，length by N，and then store the results into D registers。
- This instruction will not act if invalid range of length。
- When communicating with intelligent peripheral in binary data format，this instruction may be applied to do byte distribution for data transmission。

Example：



Description：When M2 changes from 0→1，it will perform the byte distribution starting from R1000，the length is assigned by R999，and then store the results into registers starting from R1500。
It is supposed R999=9，the results of distribution will store into R1500～R1508。

S

	High Byte	Low Byte
R1000	Byte-0	Byte-1
R1001	Byte-2	Byte-3
R1002	Byte-4	Byte-5
R1003	Byte-6	Byte-7
R1004	Byte-8	Don't care

D

	High Byte	Low Byte
R1500	00	Byte-0
R1501	00	Byte-1
R1502	00	Byte-2
R1503	00	Byte-3
R1504	00	Byte-4
R1505	00	Byte-5
R1506	00	Byte-6
R1507	00	Byte-7
R1508	00	Byte-8